

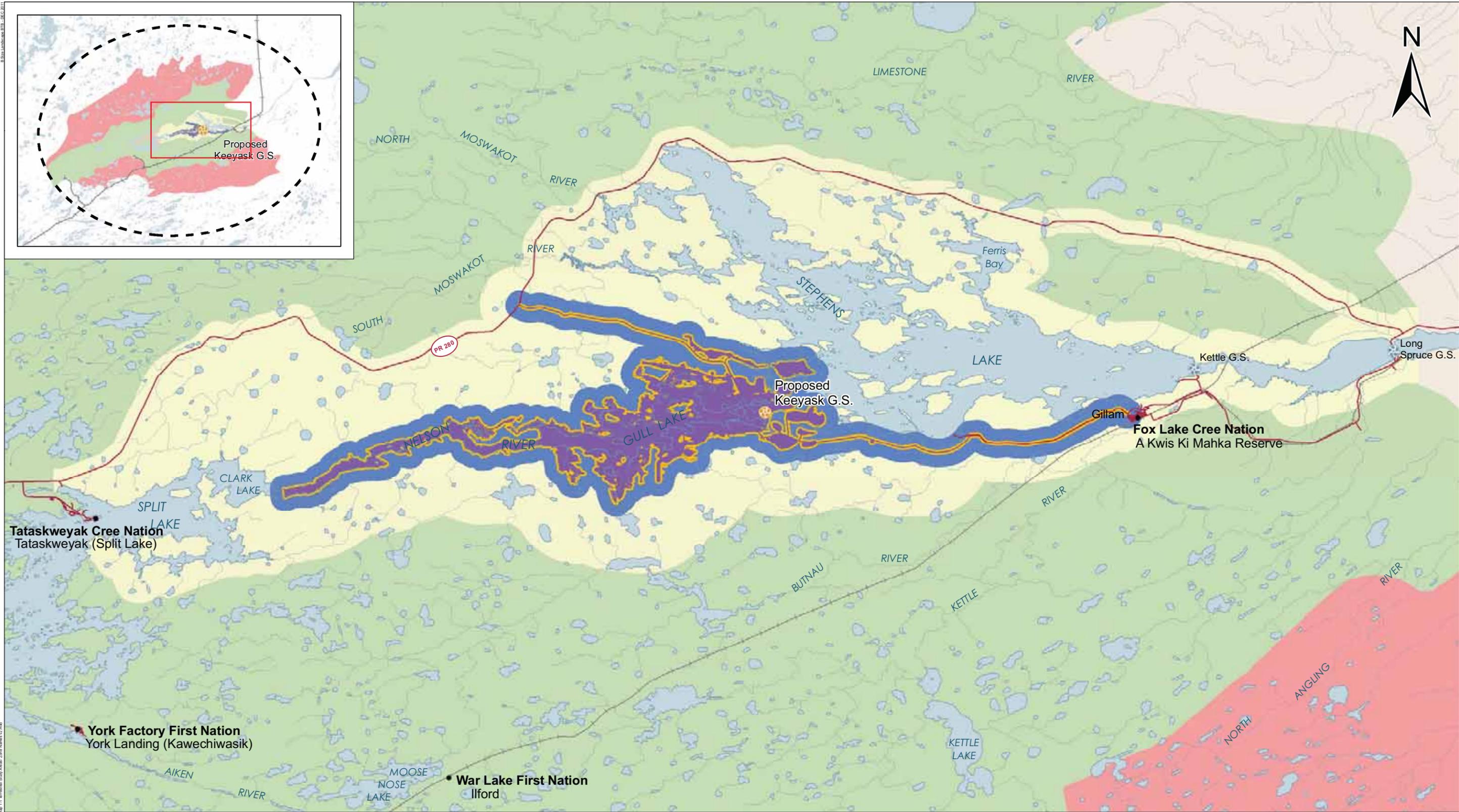
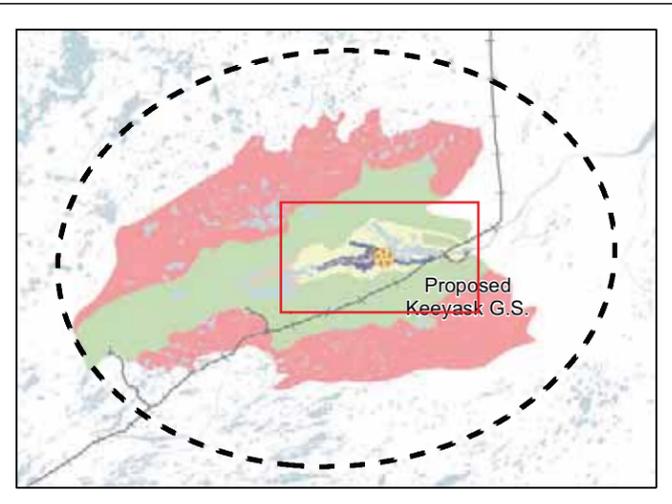


# Keeyask Generation Project Environmental Impact Statement

## Supporting Volume Terrestrial Environment



June 2012



<b>DATA SOURCE:</b> Study areas - ECOSTEM Ltd.; Water - NTS; Roads and rail - Manitoba Conservation.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 13-MAR-12	<b>REVISION DATE:</b> 18-MAY-12
0 2.5 5 Kilometres 0 3 6 Miles	<b>VERSION NO.:</b> 1.0	<b>DAIDC:</b> APPROVED

**Legend**

**Geographic Zones**

- Study Zone 1 (Project Footprint for Both Phases)
- Study Zone 2
- Study Zone 3
- Study Zone 4
- Study Zone 5
- Study Zone 6

**Project Areas**

- Keeyask Generation Project Area

Note: Each zone includes all of the smaller zones within its perimeter

## Geographic Zones Used for Terrestrial Study Areas



B:\GIS\BTD\_Landcover\_Oct\_2011  
 File Location: Z:\Workspaces\Keeyask\_GIS\Support\Mammals\Map 7-2-1\_Mammal Tracking Transects in the Sub-regional and Local Study Areas.wor



<b>DATA SOURCE:</b> Study areas and Nelson River shoreline - ECOSTEM Ltd.; Survey data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 04-APR-12	<b>REVISION DATE:</b> 28-MAY-12
		<b>VERSION NO:</b> 1.0
		<b>QA/QC:</b> APPROVED

- Legend**
- Mammal Thread Transect Types**
- Lake Perimeter
  - Coarse Habitat Mosaic
  - Riparian Shoreline
  - Access Road

- Study Areas**
- Mammals Local Study Area
  - Mammals Regional Study Area

## Mammal Tracking Transects

### 2001-2003



B:\GIS\BTD\_Landcover\_Oct\_2011  
 File Location: Z:\Workspaces\Keeyask\_GIS\Support\Mammals\Map 7-3\_1\_Lake\_perimeter\_and\_riparian\_shoreline\_tracking\_transects\_in\_the\_Local\_Study\_Area.mxd



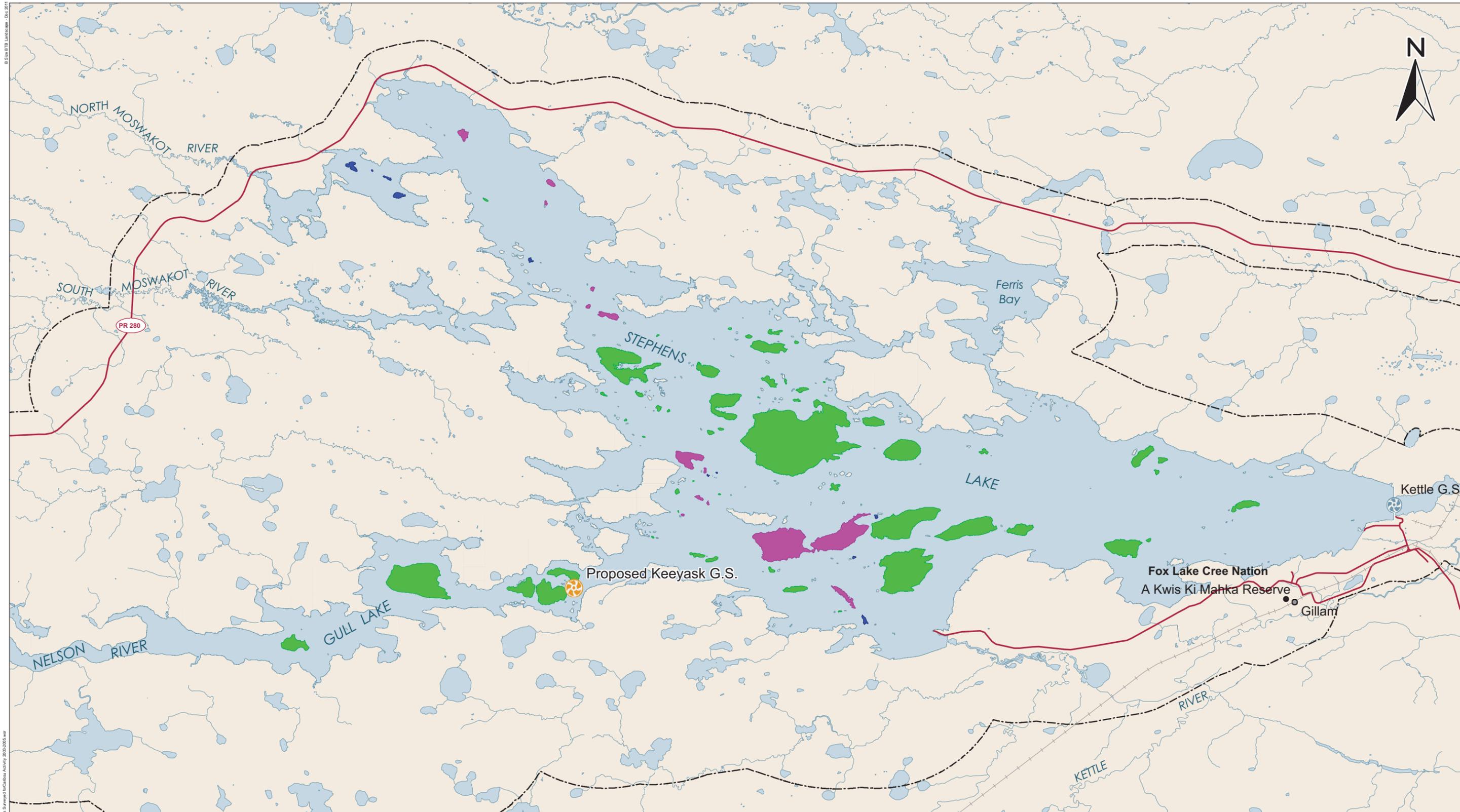
<b>DATA SOURCE:</b> Study areas and Nelson River shoreline - ECOSTEM Ltd.; Tracking data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 07-MAY-12	<b>REVISION DATE:</b> 07-MAY-12
	<b>VERSION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

- Legend**
- Mammal Thread Transect Types**
- Lake Perimeter
  - Riparian Shoreline

- Study Areas**
- Mammals Local Study Area
  - Mammals Regional Study Area

## Lake Perimeter and Riparian Shoreline Tracking Transects

2001-2003



B:\Site\ITD\_Landuse - Dec 2011  
 File Location: Z:\Workspaces\Keeyask\_GS\Support\Mammals\IEIS\Map - Islands\_Surveyed\_for\_Caribou\_Activity\_2003\_2005.wor



<b>DATA SOURCE:</b> Study areas, calving islands and Nelson River shoreline - ECOSTEM Ltd.; Roads and rail - Manitoba Conservation; Water - NTS.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 23-APR-12	<b>REVISION DATE:</b> 23-APR-12
	<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> APPROVED

**Legend**  
**Caribou Calving Islands Year Surveyed**

- 2003
- 2005
- 2003 and 2005

**Study Areas**  
 Caribou Local Study Area

## Islands Surveyed for Caribou Activity

2003 and 2005



File Location: Z:\Workspaces\Keeyask\_GIS\Support\Mammals\Map 7-5\_3\_Aerial surveys for muskrat\_2011, 2003, and 2006.sxd  
 B:\GIS\ITB\_Landuse\Map 7-5\_3\_Aerial surveys for muskrat\_2011, 2003, and 2006.sxd



<b>DATA SOURCE:</b> Study areas and Nelson River shoreline - ECOSTEM Ltd.; Survey data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 23-APR-12	<b>REVISION DATE:</b> 28-MAY-12
		<b>VERSION NO:</b> 1.0
<b>QA/QC:</b> APPROVED		

- Legend**
- Surveyed Muskrat Lines**
- Spring 2001, 2003, and 2006
- Study Areas**
- Furbearers Local Study Area
  - Furbearers Regional Study Area

## Aerial Surveys for Muskrat

### Spring 2001, 2003, and 2006



File Location: Z:\Workspaces\Keeyask\_GIS\Support\Mammals\GIS\Map - Aerial surveys for beaver Fall 2001 and 2003.mxd  
 B:\GIS\ITB\Journals\Doc 2011



<b>DATA SOURCE:</b> Study areas and Nelson River shoreline - ECOSTEM Ltd.; Survey data - WRCS; Water - NTS; Roads and rail - Manitoba Conservation.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 23-APR-12	<b>REVISION DATE:</b> 28-MAY-12
		<b>VERSION NO:</b> 1.0
		<b>QA/QC:</b> APPROVED

- Legend**
- Surveyed Beaver Lines  
— Fall 2001 and 2003
  - Beaver Local Study Area
  - Beaver Regional Study Area

## Aerial Surveys for Beaver

Fall 2001 and 2003



B:\Site\ITD\_Landuse - Dec 2011  
 File Location: Z:\Workspaces\Keeyask\_GS\Support\Mammal\GIS\Map - Aerial surveys for beaver Fall 2011.mxd



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

**Legend**

**Surveyed Beaver Lines**

— 2011

**Study Areas**

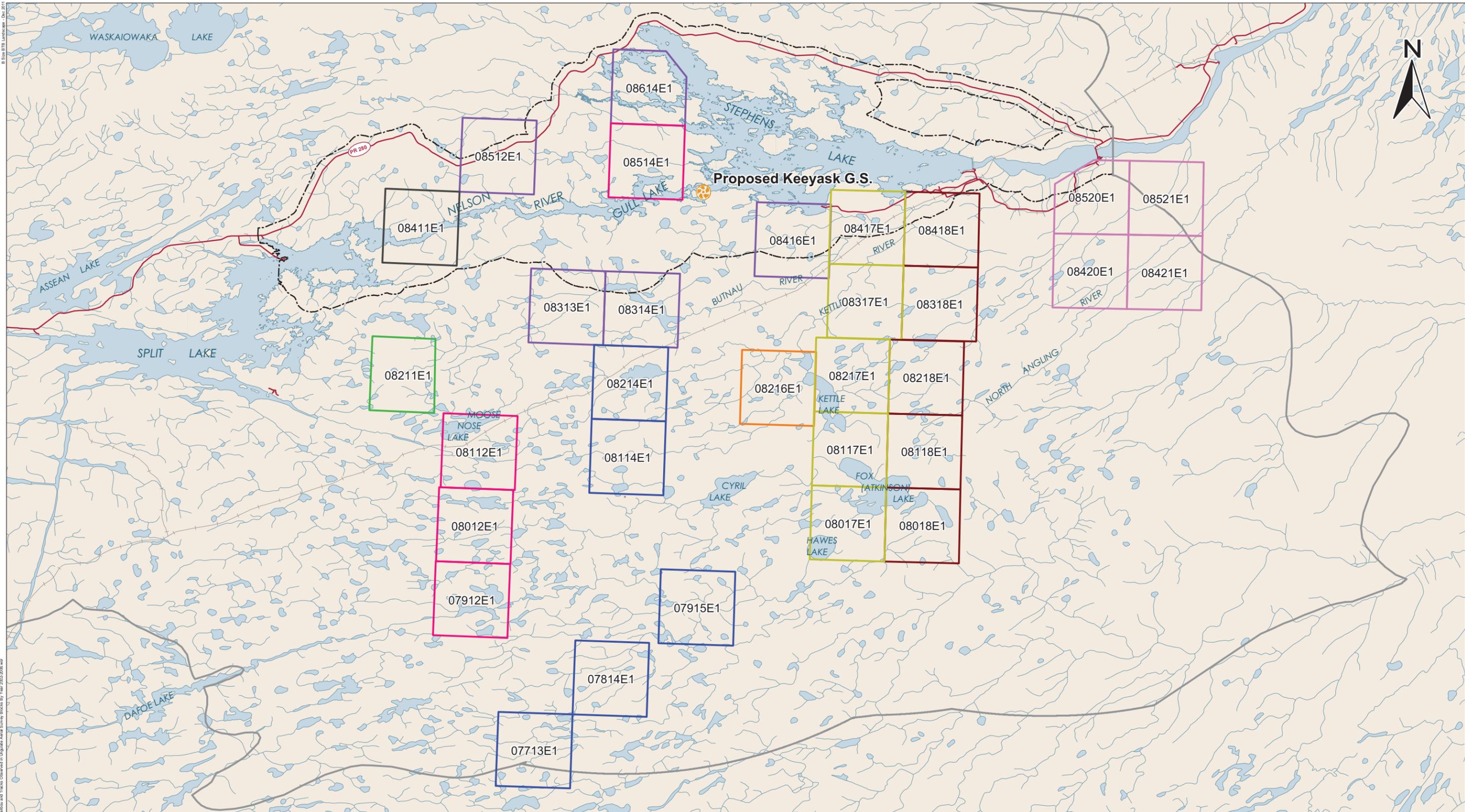
□ Study Zone 1

□ Beaver Regional Study Area

□ Beaver Local Study Area

## Aerial Survey for Beaver

Fall 2011



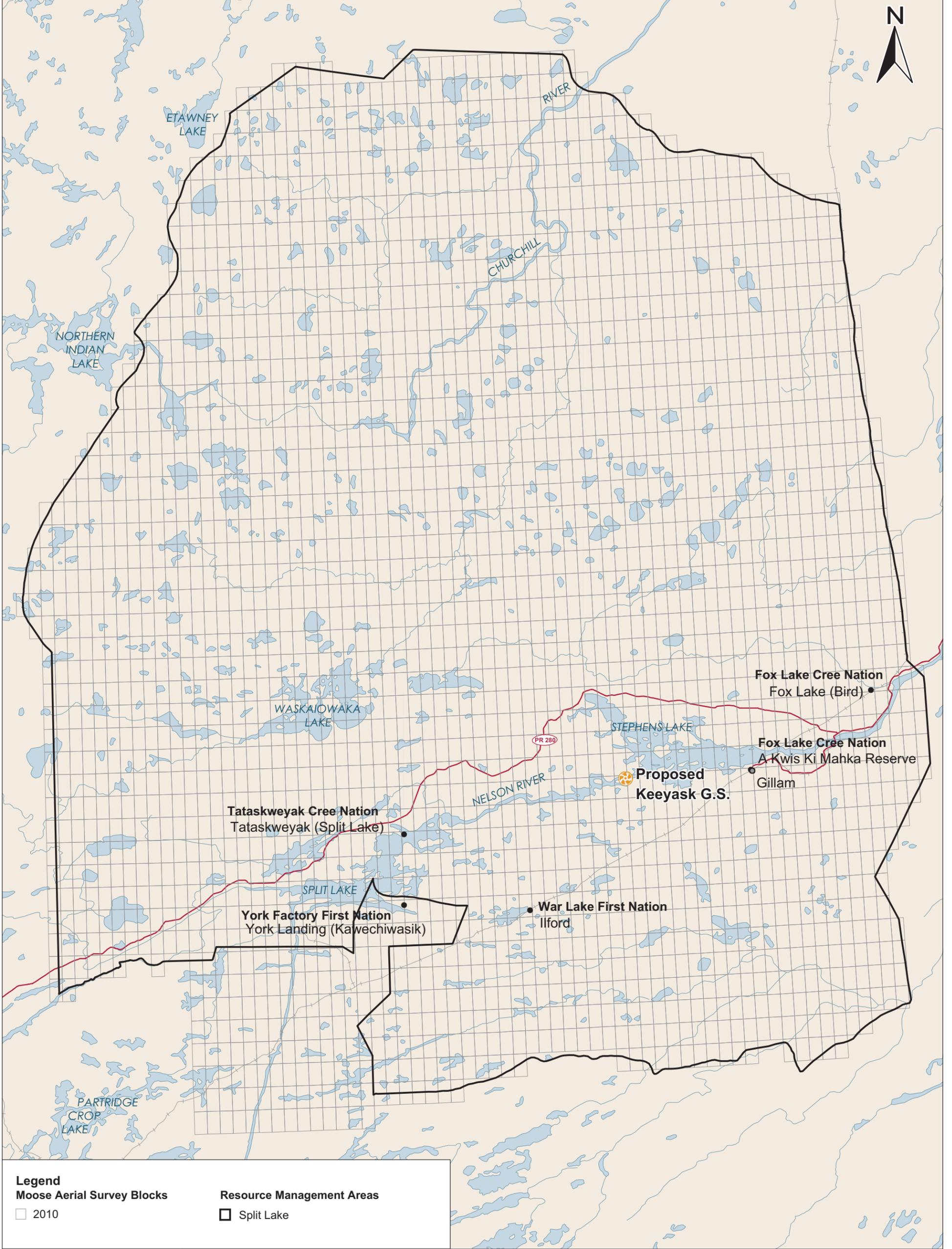
B:\Bios\BTL\MapDocs\Map 7-8\_Caribou and Tracks\_Observed in Ungava\_Aerial Survey Blocks By Year 2002-2006.wor  
 File Location: Z:\Workspaces\Keeyask\_GIS\Support\Mammals\Map 7-8\_Caribou and Tracks\_Observed in Ungava\_Aerial Survey Blocks By Year 2002-2006.wor



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

<b>Legend</b>		<b>Study Areas</b>	
<b>Aerial Survey Blocks Sample Year</b>			
<span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> 2002, 2003, 2004	<span style="border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> 2003, 2004, 2005	<span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> 2003, 2004, 2005, 2006	<span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px;"></span> 2003, 2004, 2005, 2006
<span style="border: 1px solid yellow; display: inline-block; width: 10px; height: 10px;"></span> 2002, 2003, 2004, 2006	<span style="border: 1px solid lightgreen; display: inline-block; width: 10px; height: 10px;"></span> 2003, 2005, 2006	<span style="border: 1px solid pink; display: inline-block; width: 10px; height: 10px;"></span> 2003, 2004, 2005, 2006	<span style="border: 1px solid lightpurple; display: inline-block; width: 10px; height: 10px;"></span> 2006
<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> 2002, 2003, 2005	<span style="border: 1px solid blue; display: inline-block; width: 10px; height: 10px;"></span> 2003, 2004	<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Caribou Local Study Area	<span style="border: 1px solid grey; display: inline-block; width: 10px; height: 10px;"></span> Caribou Regional Study Area

## Aerial Surveys for Moose and Caribou 2002-2006



**Legend**  
**Moose Aerial Survey Blocks**  
 □ 2010

**Resource Management Areas**  
 □ Split Lake



**DATA SOURCE:**  
 Survey sections - WRCS; Resource Management Areas, roads and rail - Manitoba Conservation; Water - NTS.

**CREATED BY:**  
 ECOSTEM Ltd.

**COORDINATE SYSTEM:**  
 UTM NAD 1983 Z15N

**DATE CREATED:**  
 24-APR-12

**REVISION DATE:**  
 24-APR-12

0 14 28 Kilometres  
 0 8 16 Miles

**VERSION NO.:**  
 1.0

**QA/QC:**  
 APPROVED

## Aerial Survey for Moose in the Split Lake Resource Management Area, 2010



B:\Data\ITD\_Landcover - Dec 2011  
 File Location: Z:\Workspaces\Keeyask\_GS\Support\Mammals\GIS\Map - Caribou Regional Aerial Survey 2011-2012.apr



<b>DATA SOURCE:</b> Study areas and Nelson River shoreline - ECOSTEM Ltd.; Flight lines - WRCS; Roads - Manitoba Conservation; Water and rail - NTS.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 27-MAR-12	<b>REVISION DATE:</b> 30-MAR-12
	<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> APPROVED

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

## Aerial Surveys for Moose and Caribou

2011-2012