

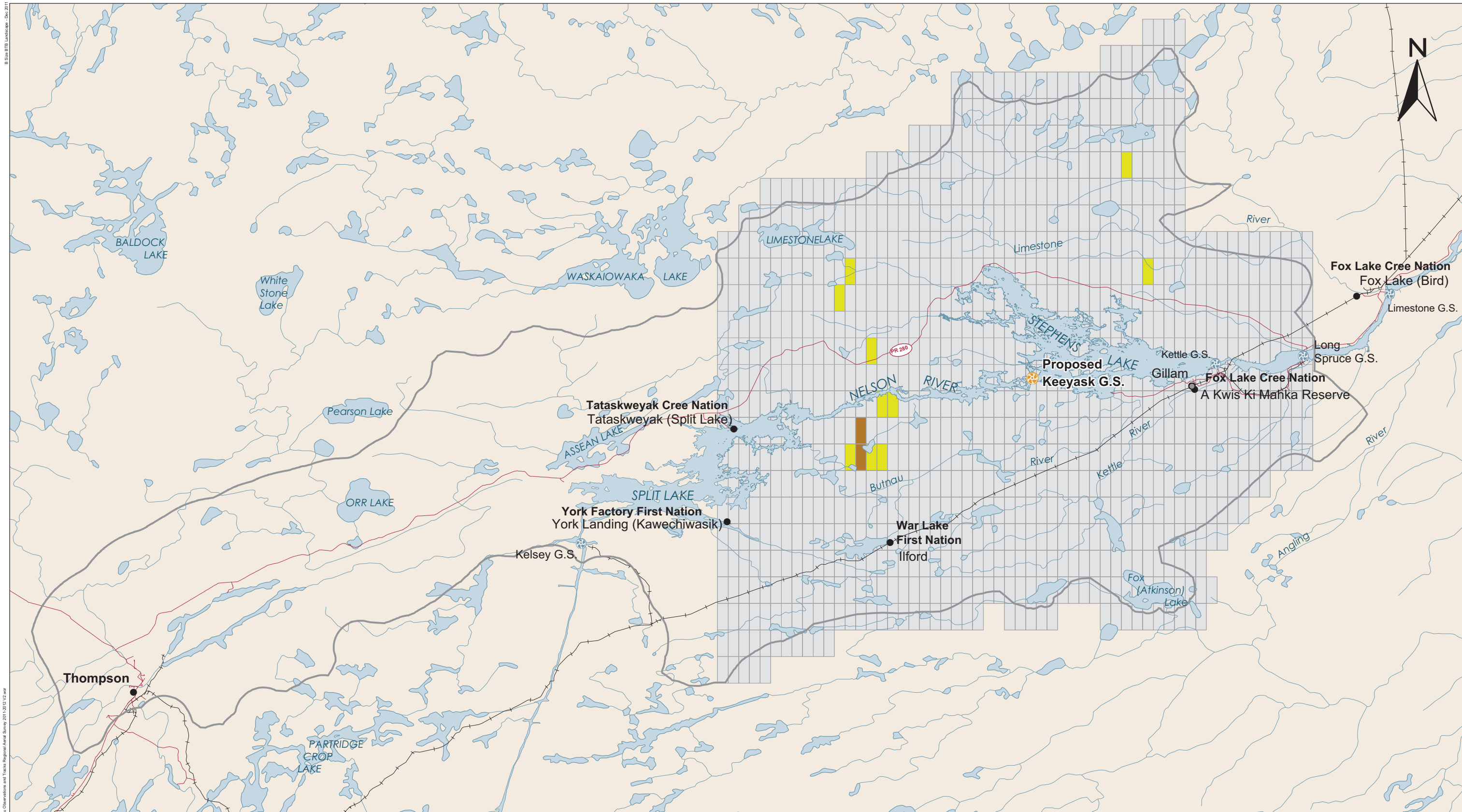


# Keeyask Generation Project Environmental Impact Statement

## Supporting Volume Terrestrial Environment



June 2012



B:\Site\ITD\_Landuse - Dec 2011  
 File Location: Z:\Workspaces\Keyask\_GIS\Support\Mammal\GIS\Map - Caribou Observations and Tracks Regional Aerial Survey 2011-2012\_V2.mxd



<b>DATA SOURCE:</b> Study areas and Nelson River shoreline - ECOSTEM Ltd.; Observed tracks - 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> 13-APR-12	<b>REVISION DATE:</b> 28-MAY-12
	<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> APPROVED

**Legend**

**Frequency of Observed Caribou Tracks**

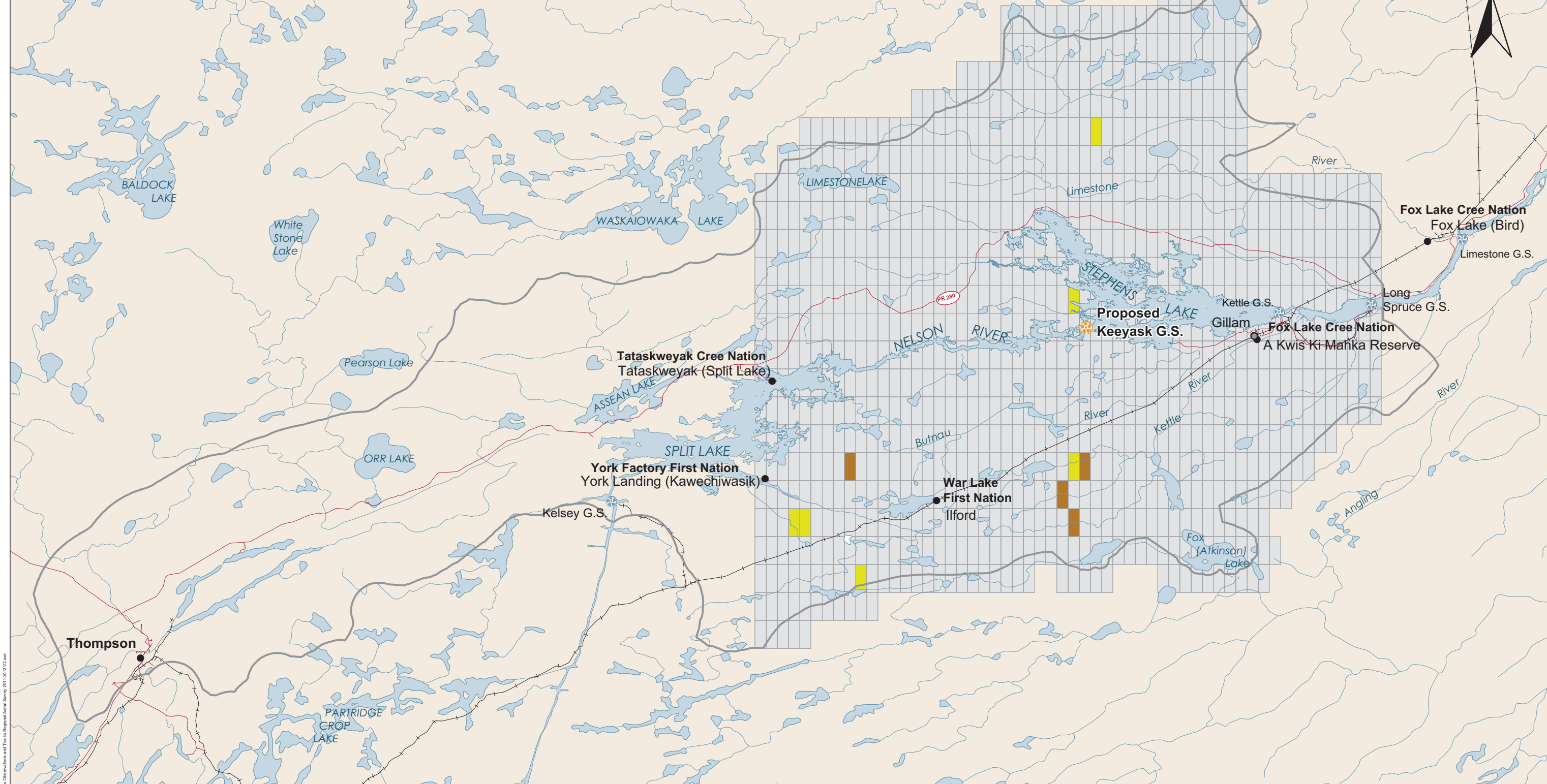
Zero
  Low
  Medium or High

**Study Areas**

Study Zone 5

## Caribou Tracks Observed During Aerial Survey

January 2012

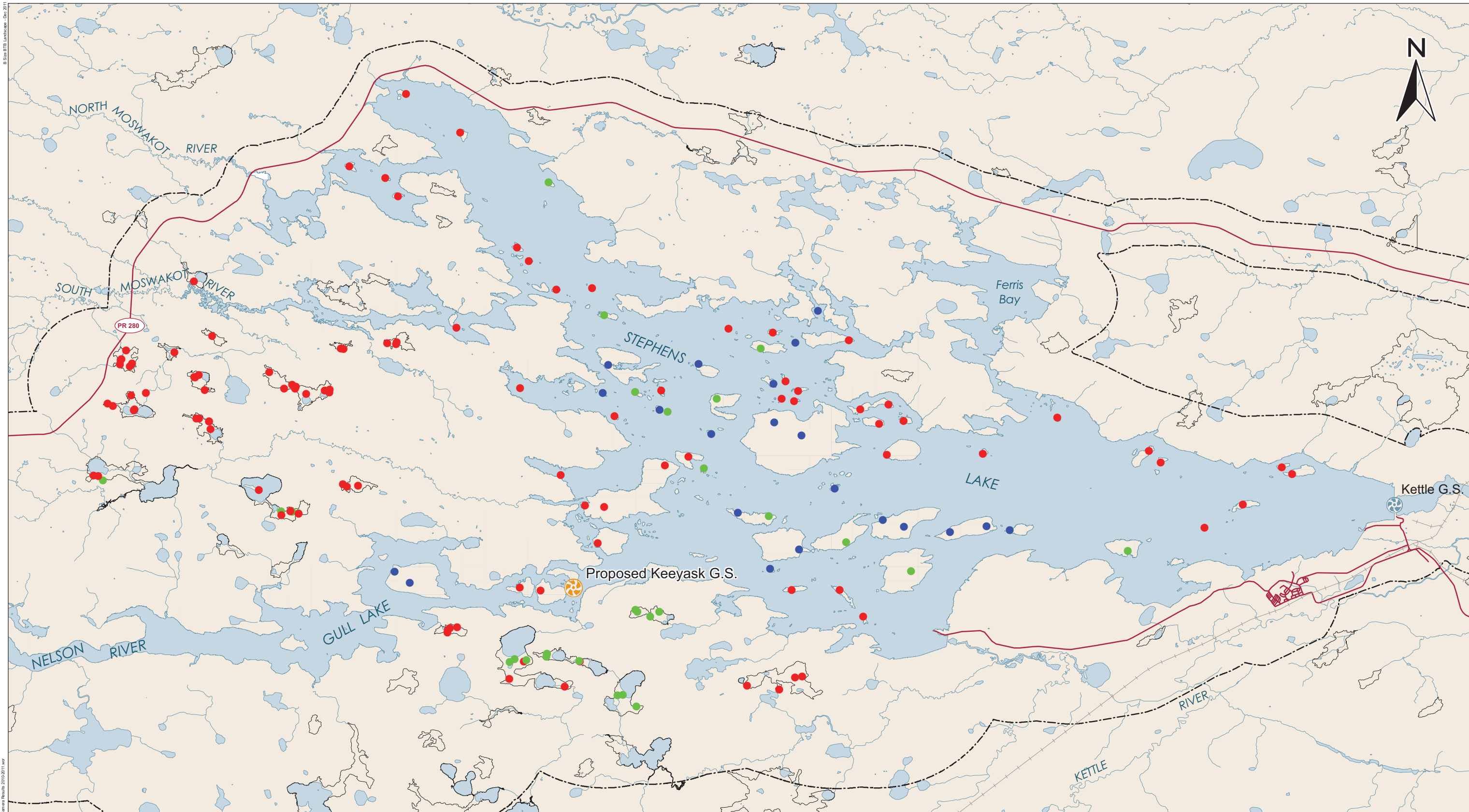


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<b>CREATED BY:</b> ECOSTEM Ltd.		
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	<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> APPROVED

**Legend**  
**Frequency of Observed Caribou Tracks**  
 ■ Zero ■ Low ■ Medium or High

**Study Areas**  
 □ Study Zone 5

## Caribou Tracks Observed During Aerial Survey March 2012



B:\Site\ITD\_Landcover - Dec 2011  
 File Location: Z:\Workspaces\Keeyask\_GIS\Support\Mammals\IEIS\Map - Trail Camera Results\_2010-2011.apr



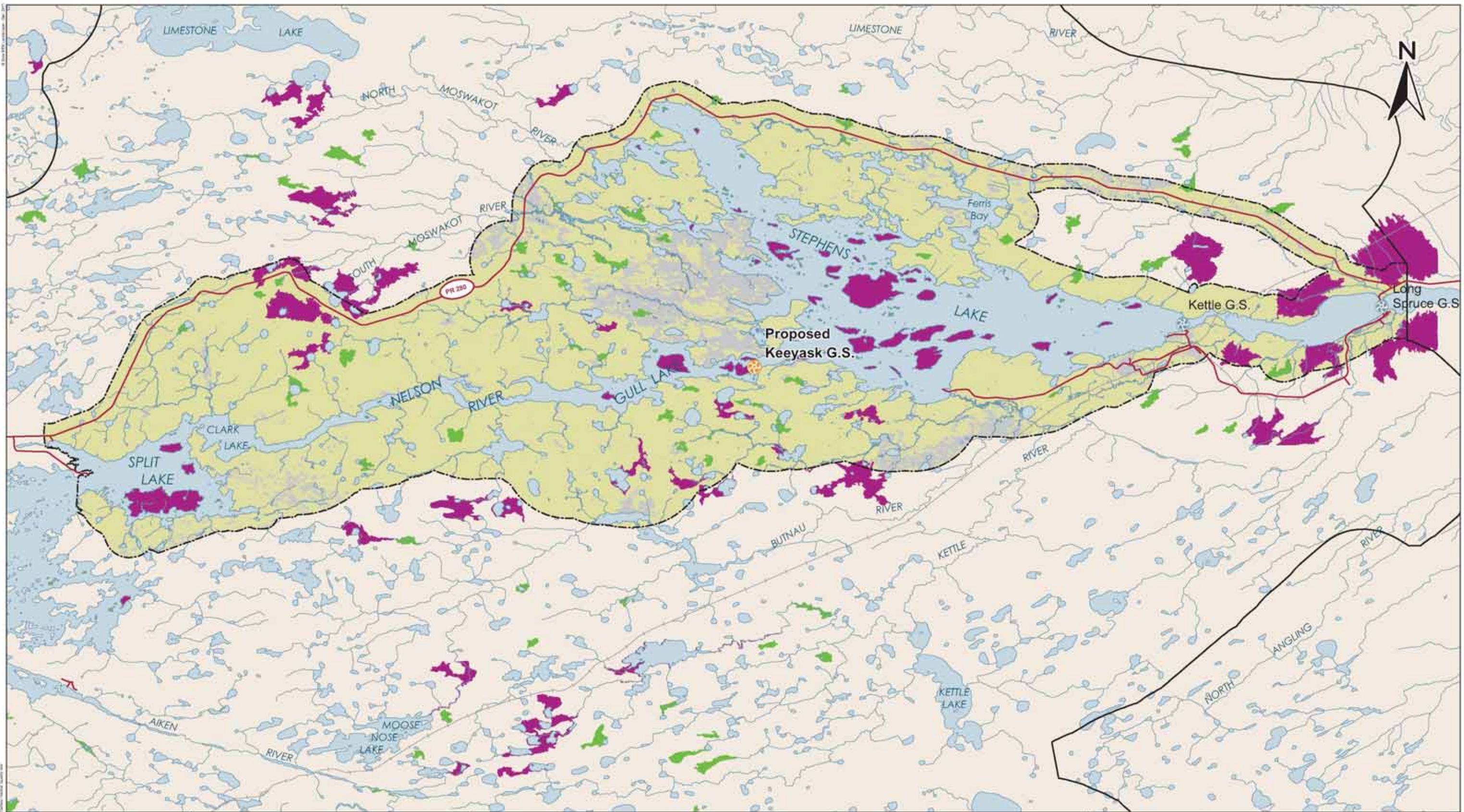
<b>DATA SOURCE:</b> Study areas and Nelson River shoreline - ECOSTEM Ltd.; Trail camera results - WRCS; Roads and rail - Manitoba Conservation; Water - NTS.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 04-MAY-12	<b>REVISION DATE:</b> 04-MAY-12
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

- Legend**
- Trail Camera Results**
- Caribou Absent
  - Adult Present
  - Adult and Calf Present

- Virtual Complex Boundaries**
- Virtual Complex
- Study Areas**
- ▭ Caribou Local Study Area

## Caribou Trail Camera Results

### Calving Island Surveys 2010 and 2011

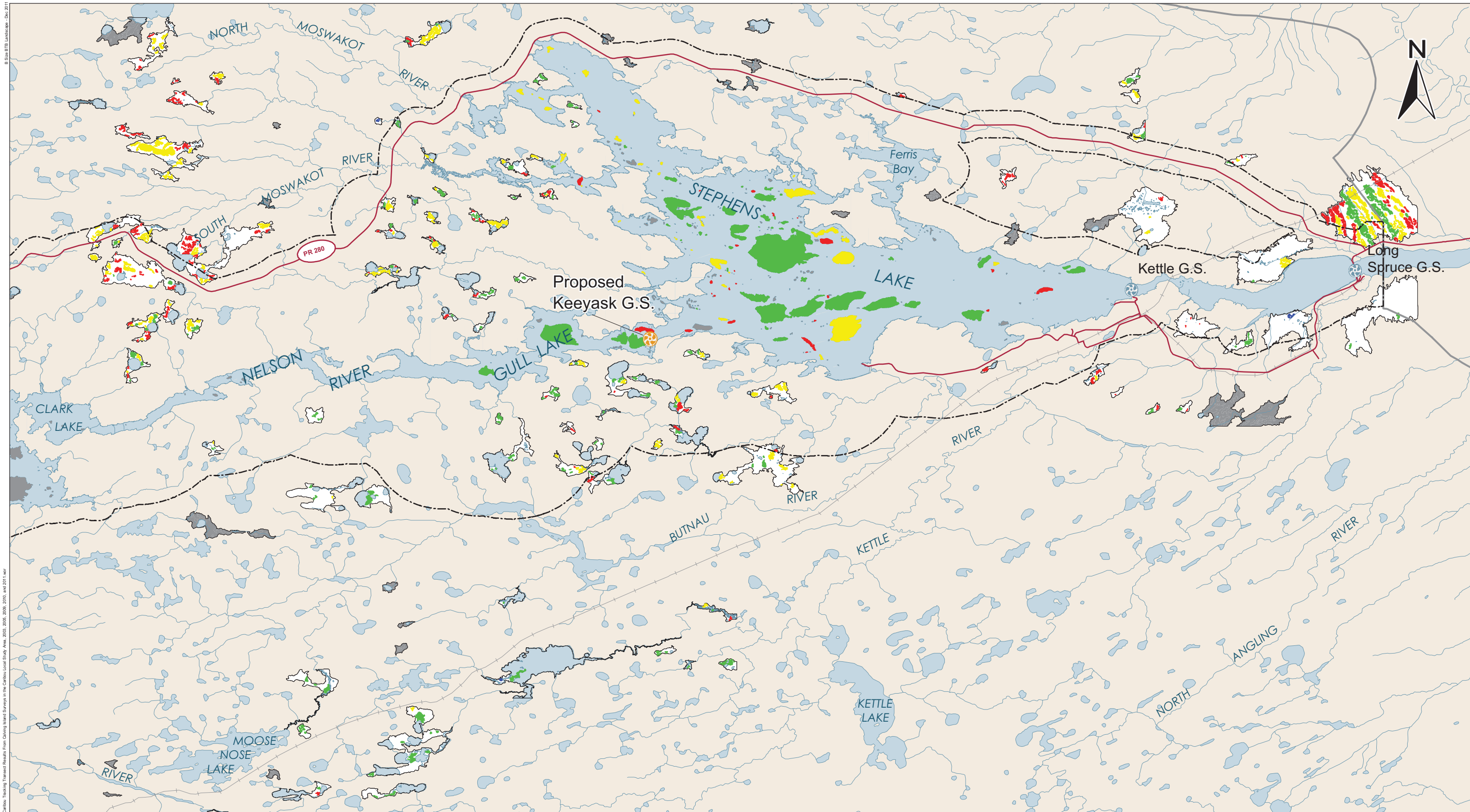


<b>DATA SOURCE:</b> Study areas, habitat data and Nelson River shoreline - ECOSTEM Ltd.; Water - NTS; Roads and rail - Manitoba Conservation.		
<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 14-MAR-12	<b>REVISION DATE:</b> 28-MAY-12
		<b>VERSION NO:</b> 1.0
<b>DAQC:</b> APPROVED		

- Legend**  
**Caribou Habitat Quality**
- Primary Calving Habitat
  - Secondary Calving Habitat
  - Winter Habitat
  - Unsuitable Habitat

- Study Areas**
- Caribou Local Study Area
  - Study Zone 5

## Caribou Habitat



File Location: Z:\Workspaces\Keeyask\_GS\Support\Mammals\GIS\Map 7-3-32\_Caribou Tracking Transect Results From Calving Island Surveys in the Caribou Local Study Area 2003, 2005, 2009, 2010, and 2011.mxd  
 8/16/11 10:15 AM



<b>DATA SOURCE:</b> Study areas, calving islands and Nelson River shoreline - 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> 03-MAY-12	<b>REVISION DATE:</b> 28-MAY-12
	<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> APPROVED

**Legend**

**Surveyed Caribou Calving Islands (Number of Islands)**

<span style="color: red;">■</span> Caribou Absent	(147)
<span style="color: blue;">■</span> Calf Only Present	(3)
<span style="color: yellow;">■</span> Adult Only Present	(168)
<span style="color: green;">■</span> Adult and Calf Present	(170)

■ Unsurveyed Island Complex to 2011

Note: Island size slightly exaggerated to enhance visibility

**Peatland Complex Boundaries**

Peatland Complex

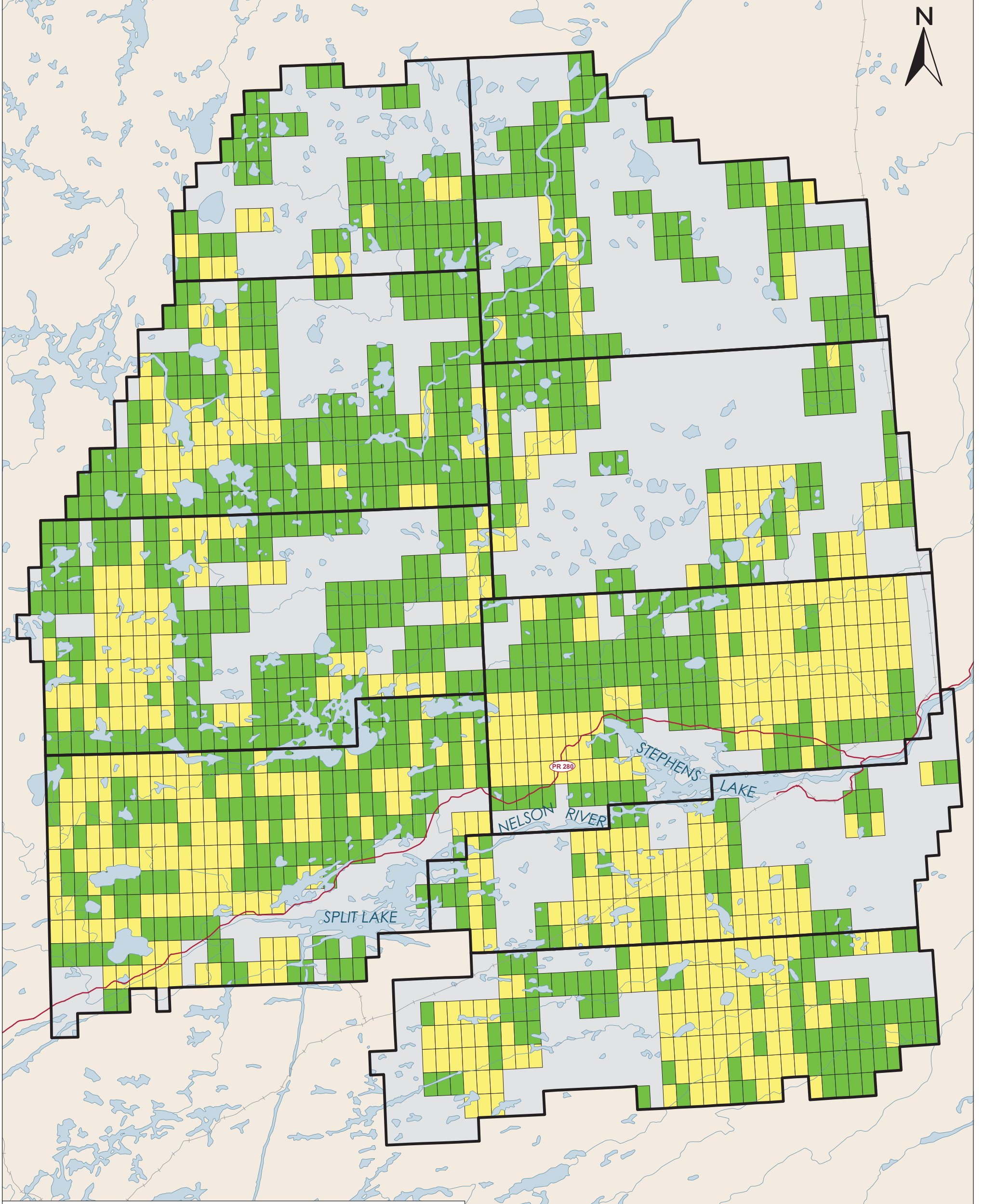
**Study Areas**

Caribou Local Study Area

Caribou Regional Study Area

## Caribou Tracking Transect Results

2003, 2005, 2009, 2010, and 2011



**Legend**  
**Stratified Moose Density by Sample Unit**  
 High or Medium (Yellow)    Extra Low (Grey)  
 Low (Green)

**Moose Aerial Survey Sections**  
 Survey Section (Black outline)

**DATA SOURCE:**  
 Survey sections and moose density - WRCS; Water - NTS;  
 Roads - Manitoba Conservation.

**CREATED BY:**  
 ECOSTEM Ltd.

**COORDINATE SYSTEM:**  
 UTM NAD 1983 Z15N

**DATE CREATED:**  
 13-APR-12

**REVISION DATE:**  
 28-MAY-12

0 14 28 Kilometres  
 0 8 16 Miles

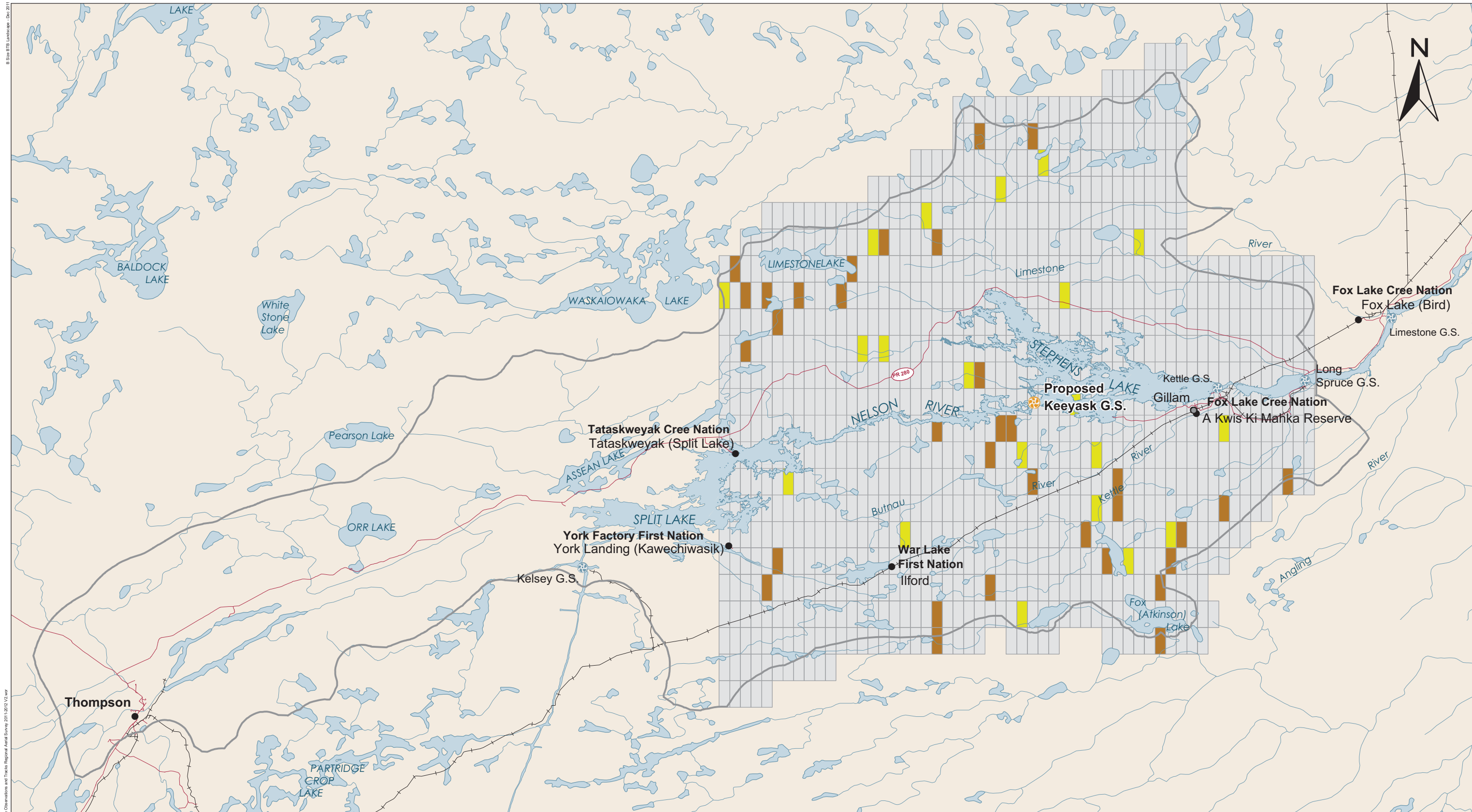
**VERSION NO:**  
 1.0

**QA/QC:**  
 APPROVED



# Moose Density

## in the Split Lake Resource Management Area 2010



B Site 8710 Landcover - Dec 2011  
 File Location: Z:\Workspaces\Keyask\_GIS\Support\Mammal\IEIS\Map - Moose Observations and Tracks Regional Aerial Survey 2011-2012\12.mxd



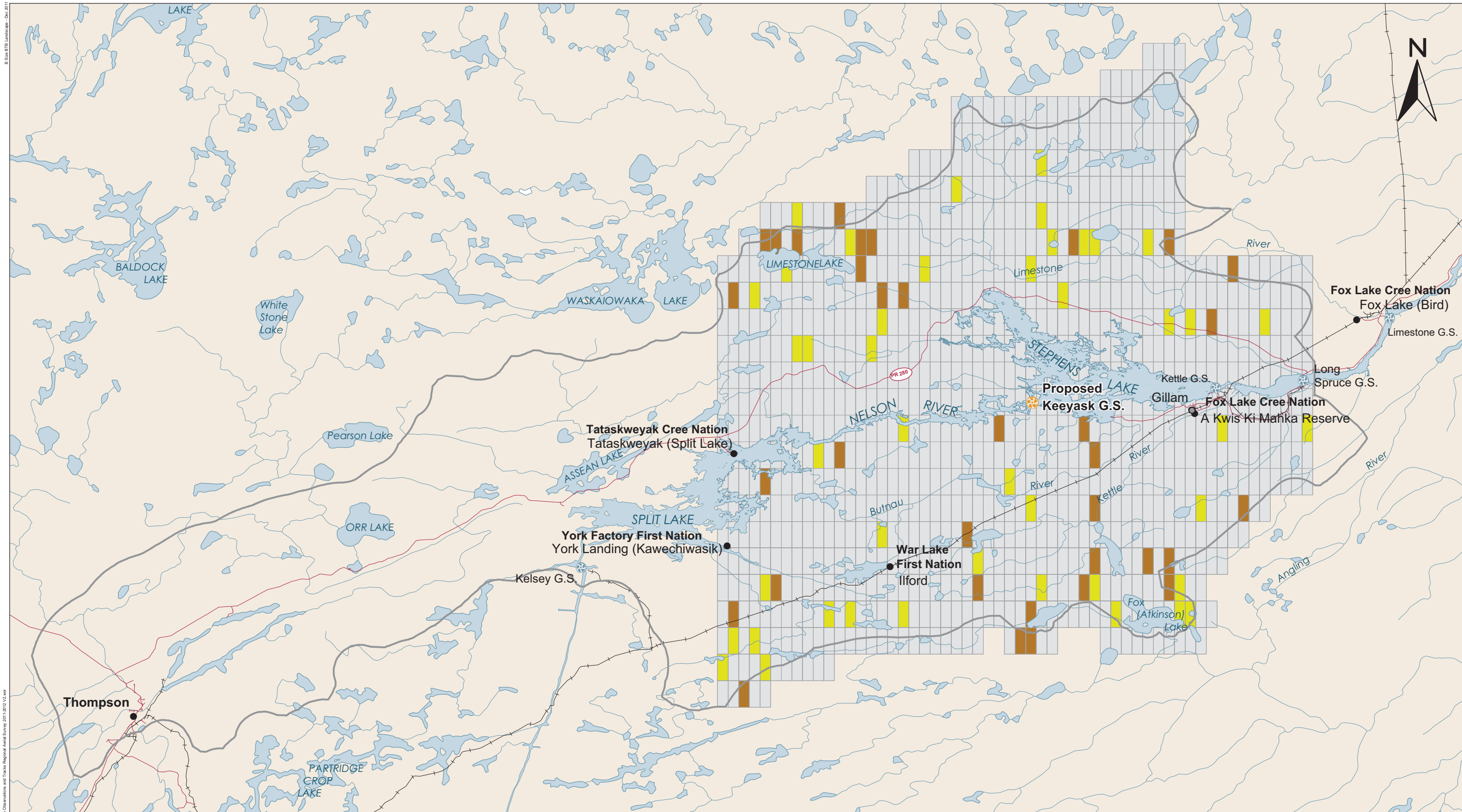
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<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 13-APR-12	<b>REVISION DATE:</b> 16-APR-12
	<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> APPROVED

- Legend**
- Frequency of Observed Moose**
- Zero
  - Low
  - Medium or High
- Study Areas**
- Study Zone 5

## Incidental Moose Observations

During Aerial Survey December 2011





B:\Site\ITD\_Landuse\Map - Moose Observations and Tracks Regional Aerial Survey 2011-2012 V2.mxd  
 File Location: Z:\Workspaces\Keyask\_GIS\Support\Mammal\IEIS\Map - Moose Observations and Tracks Regional Aerial Survey 2011-2012 V2.mxd

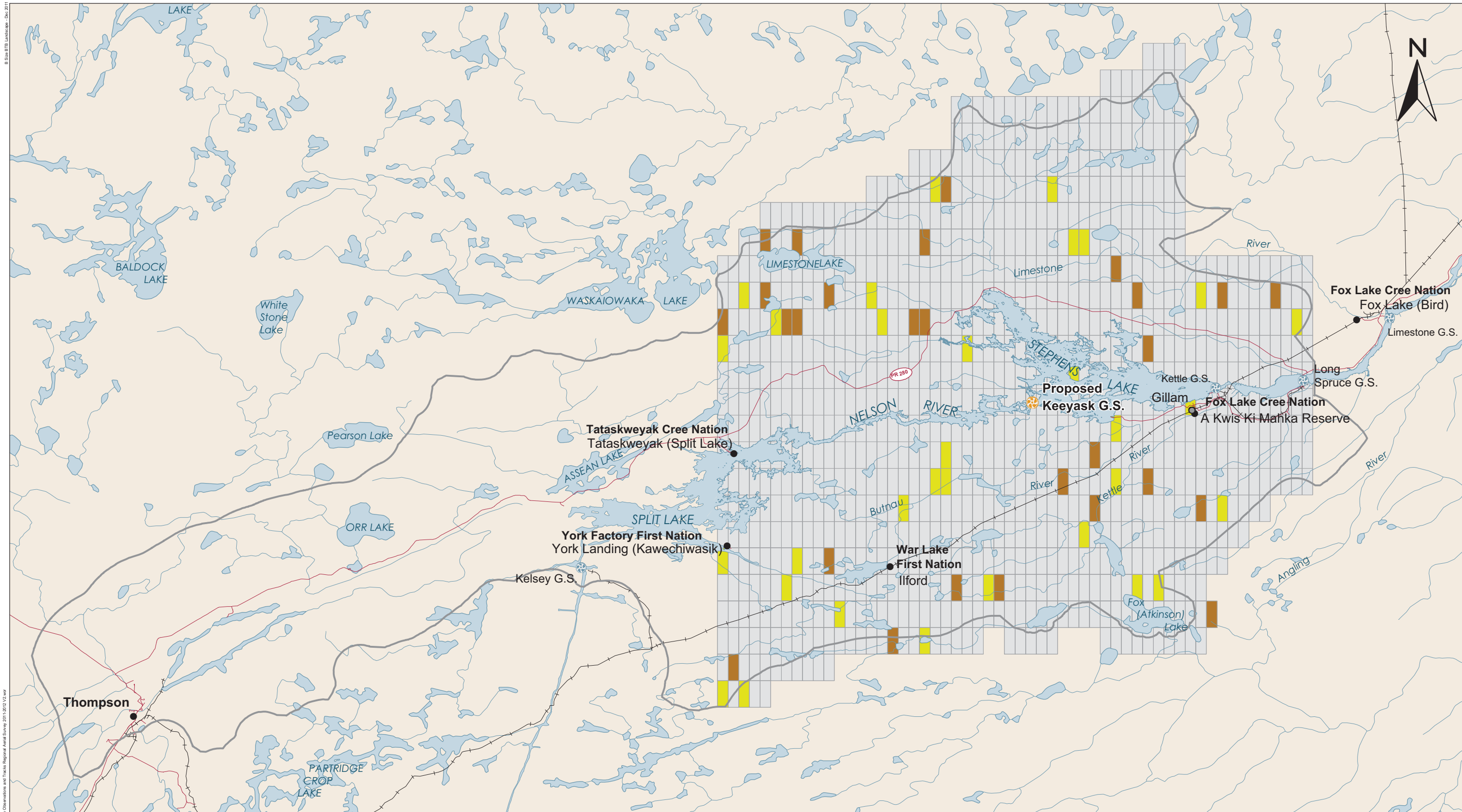


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<b>CREATED BY:</b> ECOSTEM Ltd.		
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- Legend**
- Frequency of Observed Moose**
- Zero
  - Low
  - Medium or High
- Study Areas**
- Study Zone 5

## Incidental Moose Observations

During Aerial Survey January 2012



B Site 8710 Landcover - Dec 2011  
 File Location: Z:\Workspaces\Keyask\_GIS\Support\Mammal\IEIS\Map - Moose Observations and Tracks Regional Aerial Survey 2011-2012\_V2.mxd



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<b>CREATED BY:</b> ECOSTEM Ltd.		
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N	<b>DATE CREATED:</b> 13-APR-12	<b>REVISION DATE:</b> 16-APR-12
	<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> APPROVED

- Legend**
- Frequency of Observed Moose**
- Zero
  - Low
  - Medium or High
- Study Areas**
- Study Zone 5

## Incidental Moose Observations

During Aerial Survey March 2012