

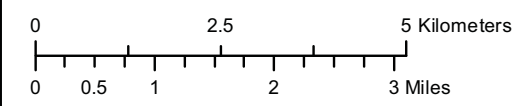
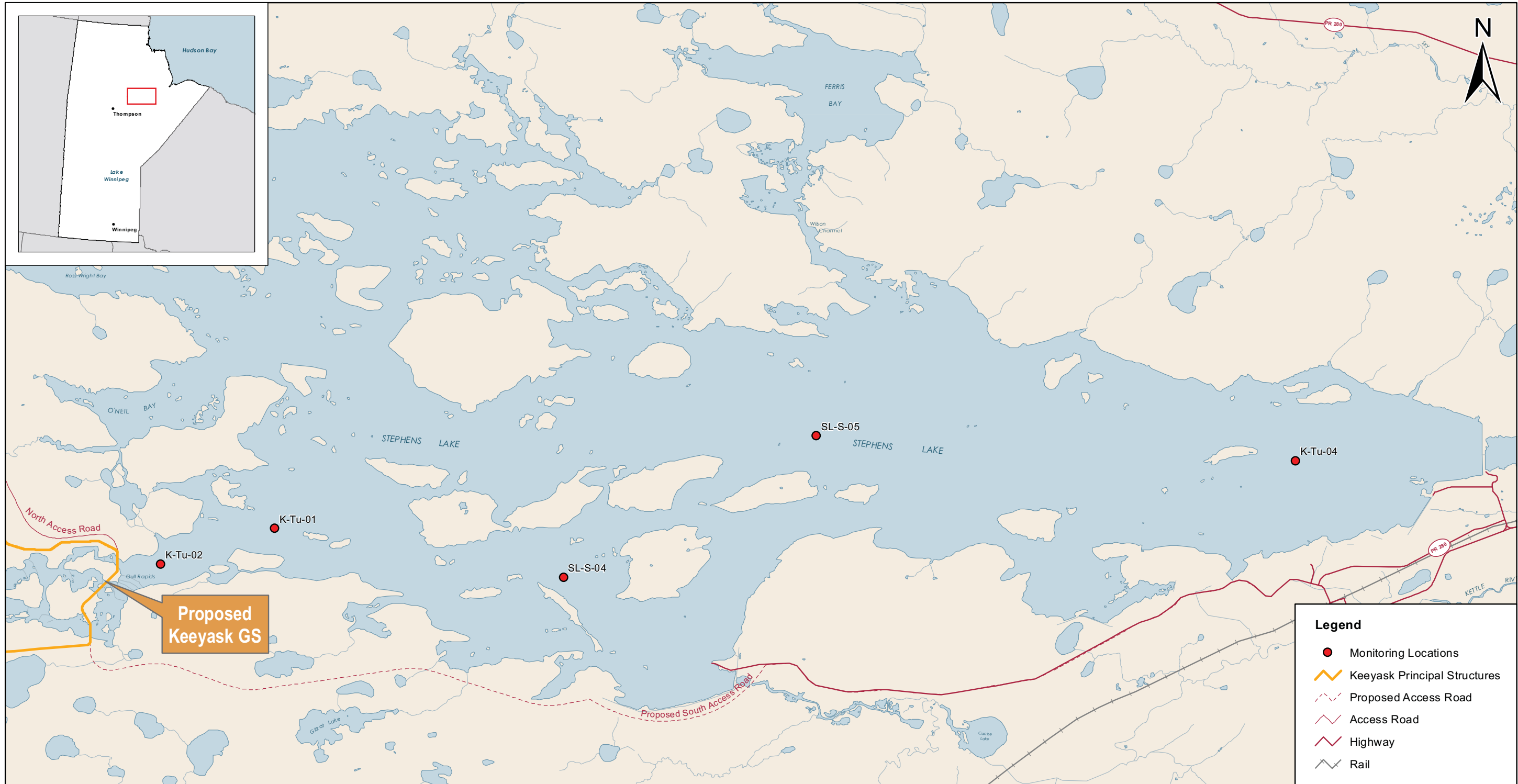


Keeyask Generation Project Environmental Impact Statement

Supporting Volume Physical Environment

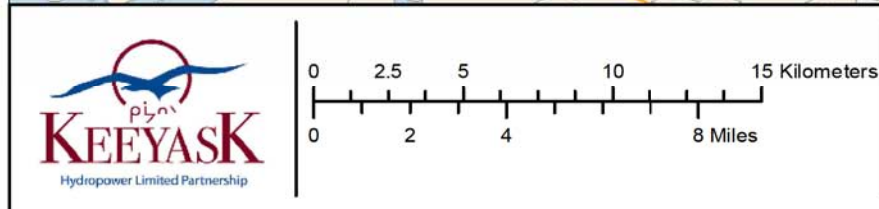
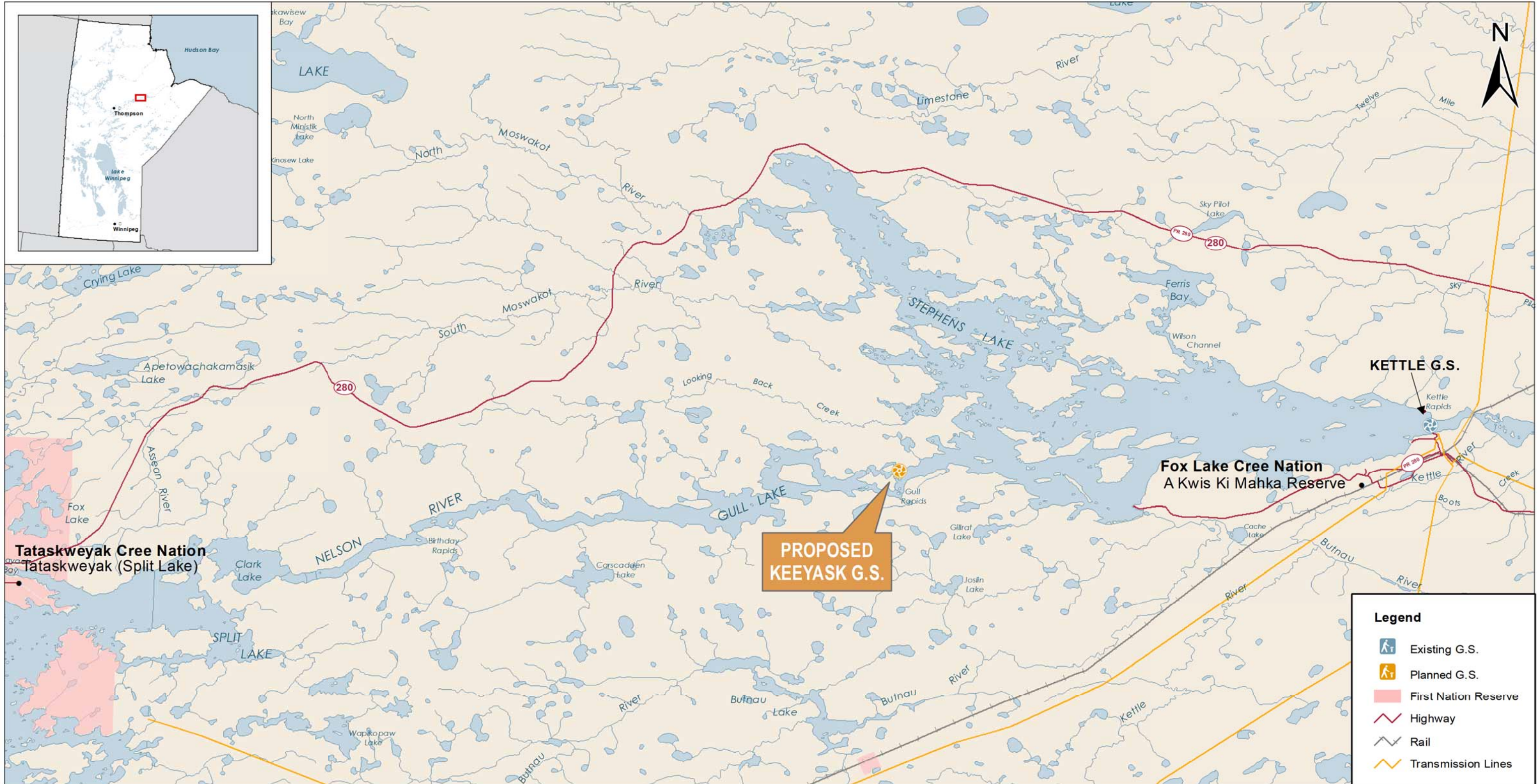


June 2012



Projection: Universal Transverse Mercator Zone 15N, NAD 83
 Data Source:
 1. Lakes and rivers provided by Geogratis, 2004

Monitoring Locations in Stephens Lake

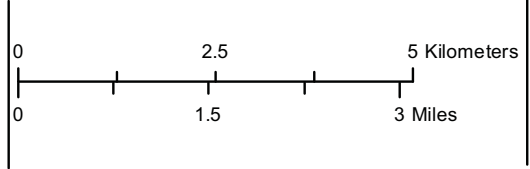
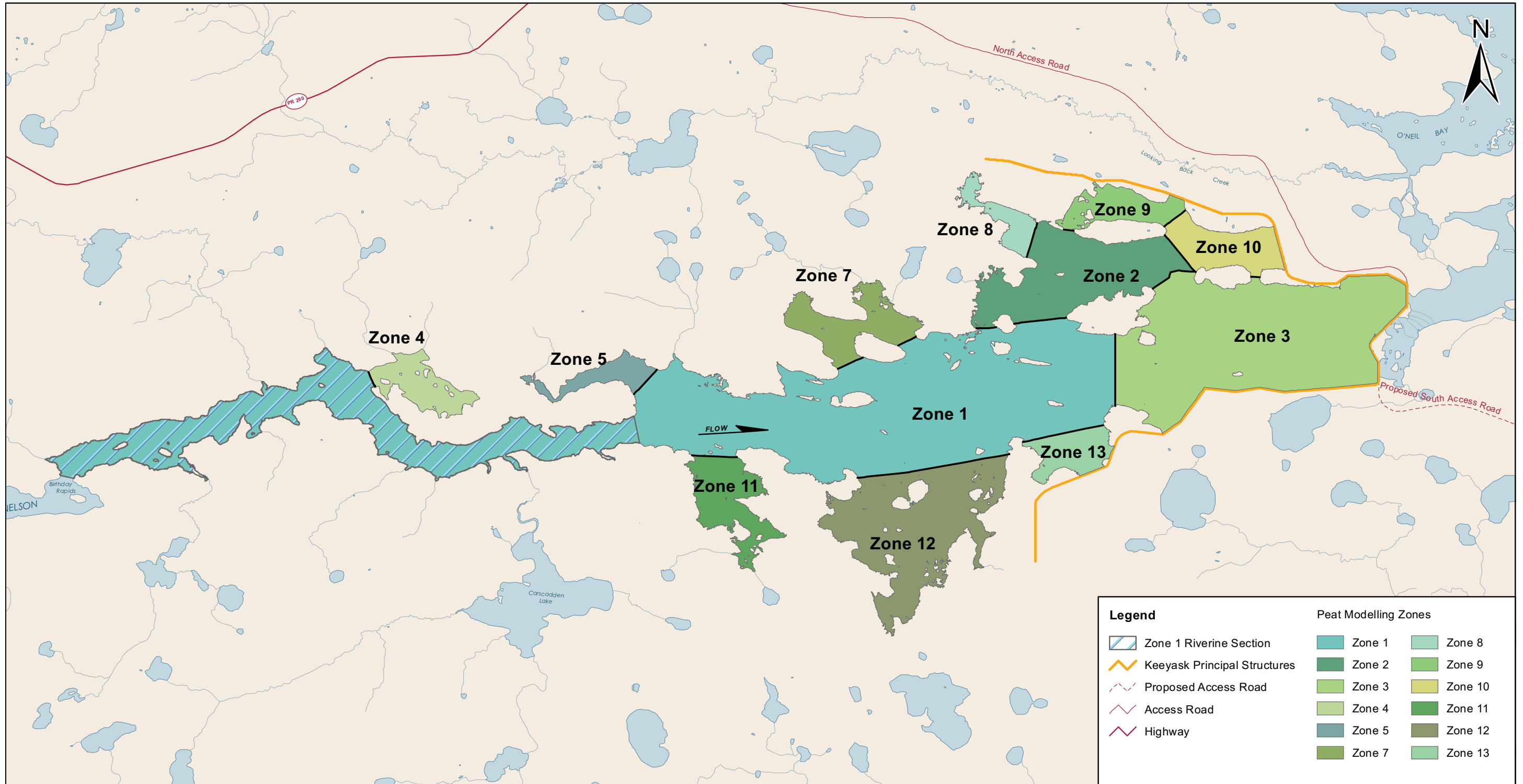


Projection: Universal Transverse Mercator Zone 15N, NAD 83
Data Source:
 1. Lakes and Rivers Provided by Geogritis, 2004

Sedimentation General Study Area

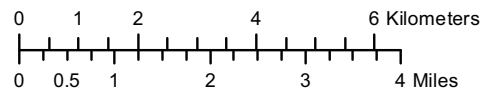
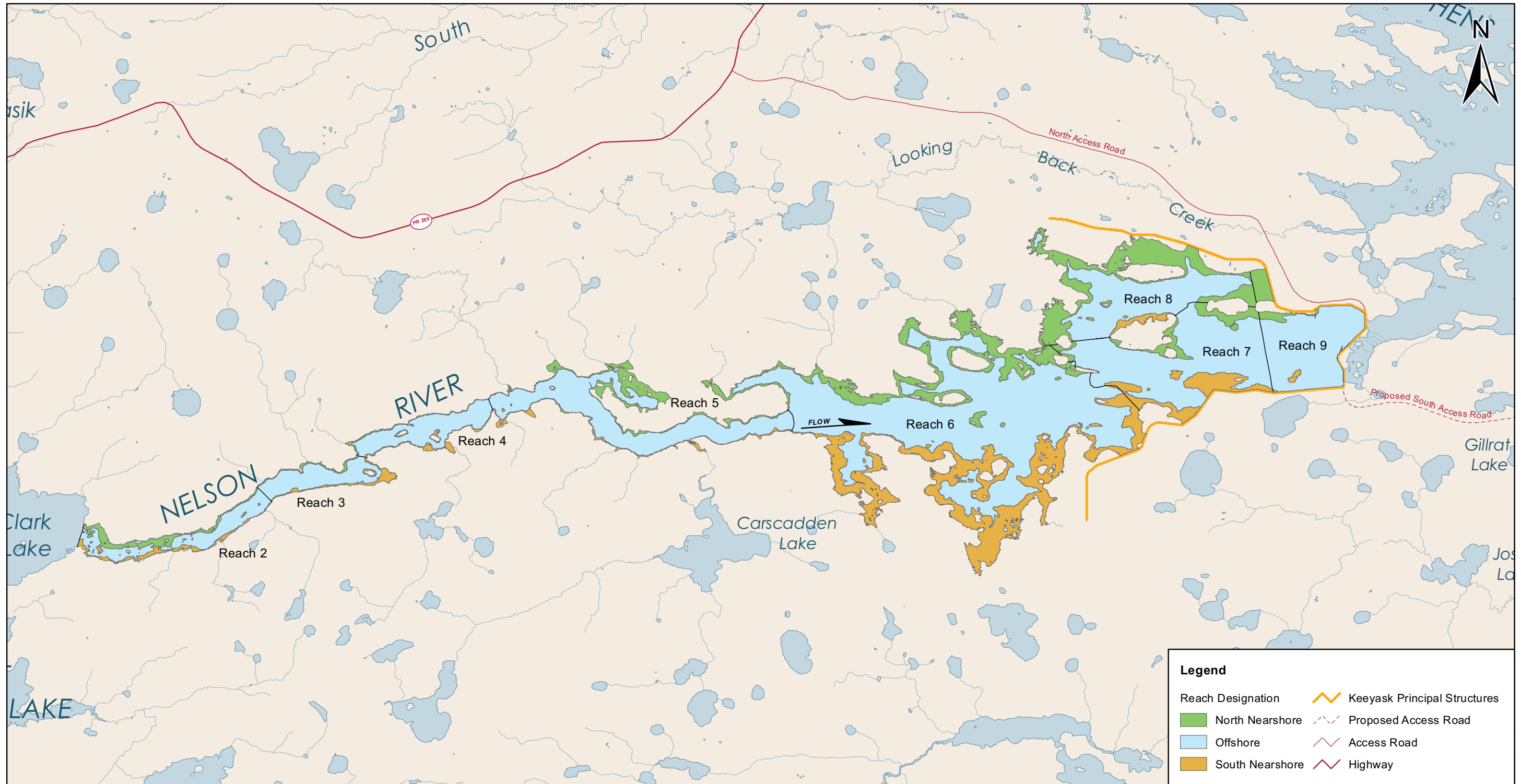
Legend

- Existing G.S.
- Planned G.S.
- First Nation Reserve
- Highway
- Rail
- Transmission Lines



Projection: Universal Transverse Mercator Zone 15N, NAD 83
 Data Source:
 1. Lakes and Rivers Provided by Geogratix, 2004
 2. Peat Zones Provided by ECOSTEM LTD., 2008

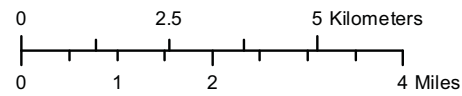
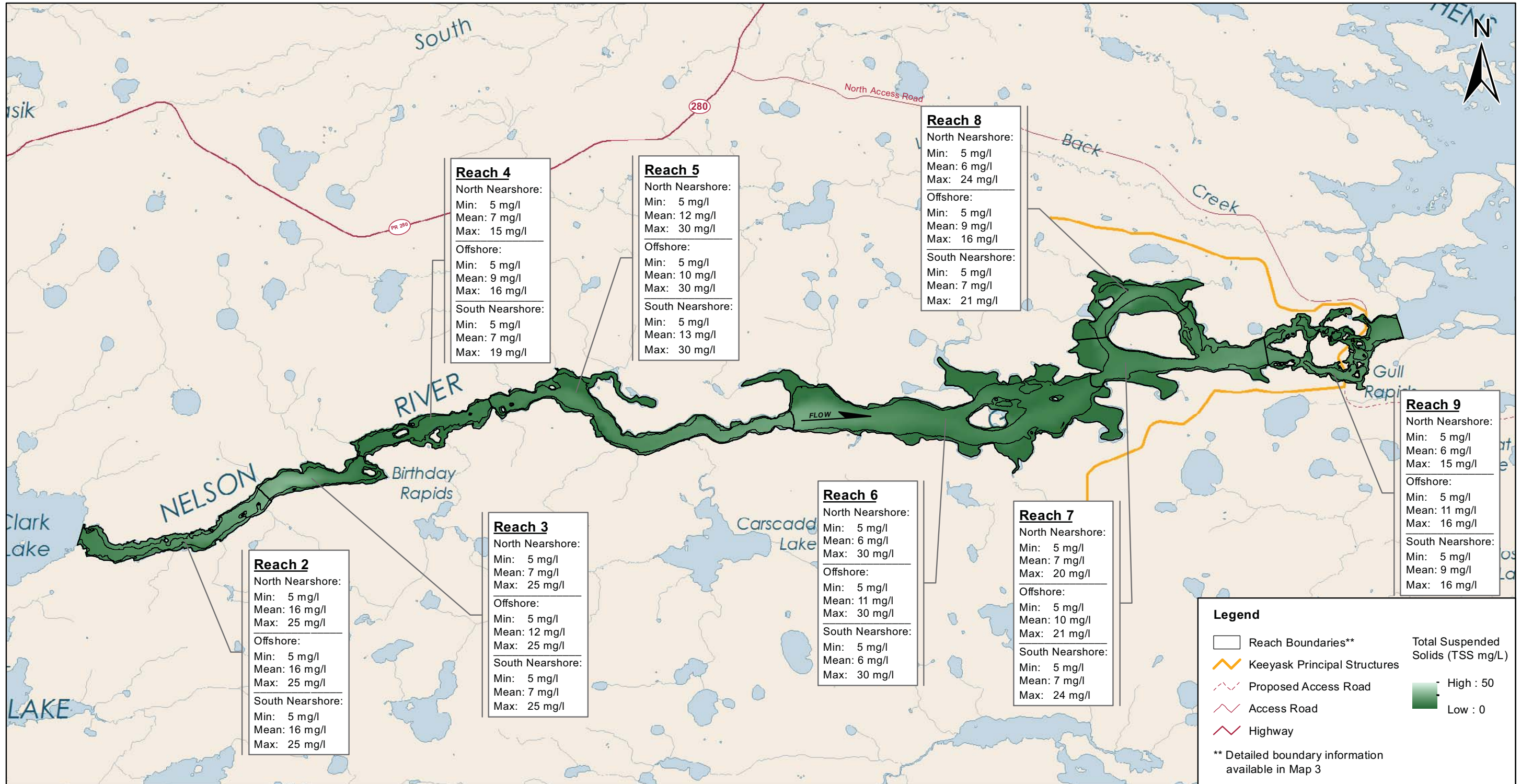
Peat Modeling Zones



Projection: Universal Transverse Mercator Zone 15N, NAD 83

Data Source:
1. Lakes and Rivers Provided by Geogratis, 2004

Modeling Reaches

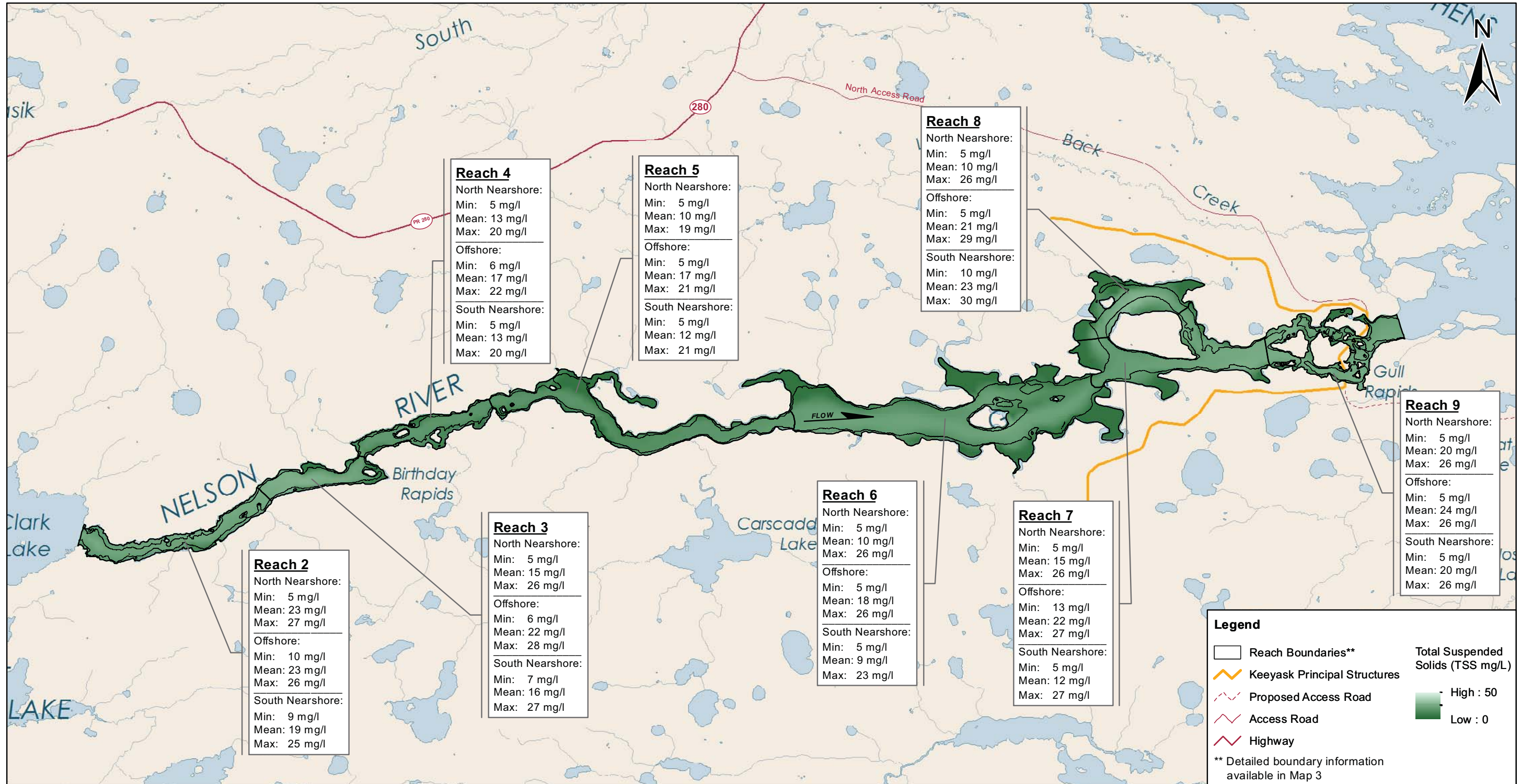


Projection: Universal Transverse Mercator Zone 15N, NAD 83

Data Source:
1. Lakes and Rivers Provided by Geogratix, 2004

Spatial Distribution of Depth Averaged Sediment Concentration

Existing Environment - 50th Percentile Flow



Projection: Universal Transverse Mercator Zone 15N, NAD 83

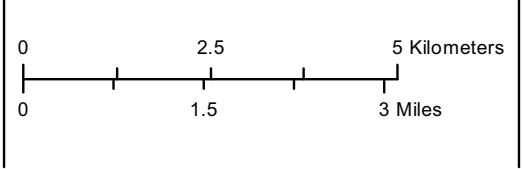
Data Source:
1. Lakes and Rivers Provided by Geogratix, 2004

Spatial Distribution of Depth Averaged Sediment Concentration

Existing Environment - 95th Percentile Flow

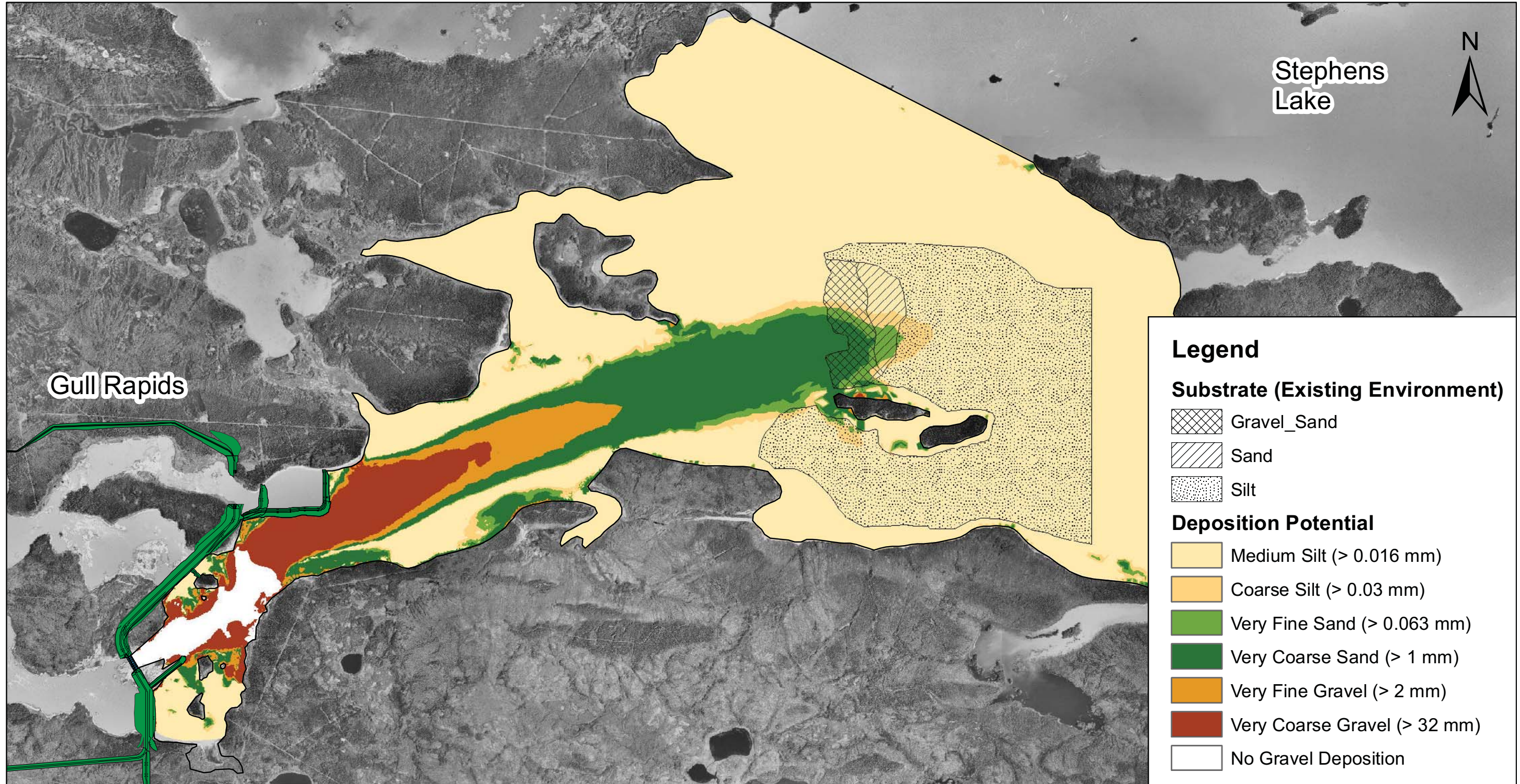


Legend		Deposition (cm)	
●	Monitoring Locations	 	0.0
▬	Keeyask Principal Structures	 	0.0 - 0.1
▬	Proposed Access Road	 	0.1 - 0.3
▬	Access Road	 	0.3 - 0.6
▬	Highway		
▬	Rail		






Projection: Universal Transverse Mercator Zone 15N, NAD 83
 Data Source:
 1. Lakes and Rivers provided by Geogratis, 2004

Deposition in Stephens Lake During Construction










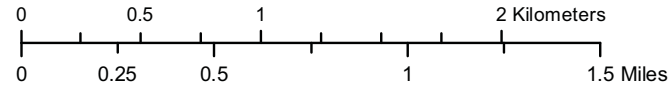
Legend

Substrate (Existing Environment)

-  Gravel_Sand
-  Sand
-  Silt

Deposition Potential

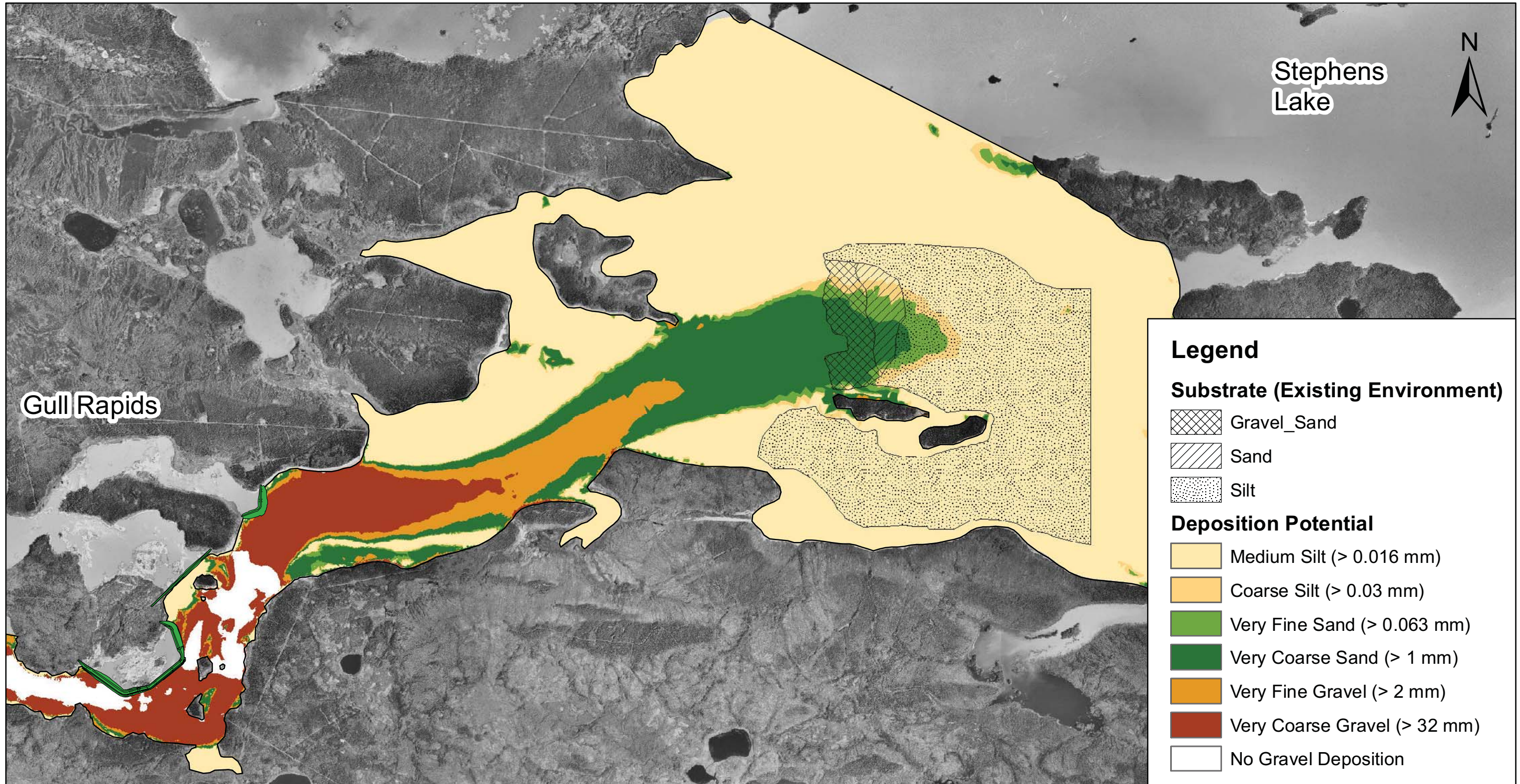
-  Medium Silt (> 0.016 mm)
-  Coarse Silt (> 0.03 mm)
-  Very Fine Sand (> 0.063 mm)
-  Very Coarse Sand (> 1 mm)
-  Very Fine Gravel (> 2 mm)
-  Very Coarse Gravel (> 32 mm)
-  No Gravel Deposition



Projection: Universal Transverse Mercator Zone 15N, NAD83
 Data Sources:
 1. Preliminary Keeyask Existing Environment Substrate provided by North-South Consultants, 2011
 2. Air Photos provided by Manitoba Hydro, 2006
 3. Shoreline created by KGS Acres for reference only




Deposition Potential - Stage II Construction
50th Percentile Flow
Stephens Lake Level = 141.1 m

FOR GENERAL REFERENCE ONLY










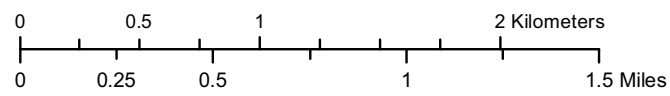
Legend

Substrate (Existing Environment)

-  Gravel_Sand
-  Sand
-  Silt

Deposition Potential

-  Medium Silt (> 0.016 mm)
-  Coarse Silt (> 0.03 mm)
-  Very Fine Sand (> 0.063 mm)
-  Very Coarse Sand (> 1 mm)
-  Very Fine Gravel (> 2 mm)
-  Very Coarse Gravel (> 32 mm)
-  No Gravel Deposition



Projection: Universal Transverse Mercator Zone 15N, NAD83
 Data Sources:
 1. Preliminary Keeyask Existing Environment Substrate provided by North-South Consultants, 2011
 2. Air Photos provided by Manitoba Hydro, 2006
 3. Shoreline created by KGS Acres for reference only

FOR GENERAL REFERENCE ONLY

Deposition Potential - Stage I Construction
50th Percentile Flow
Stephens Lake Level = 141.1 m