

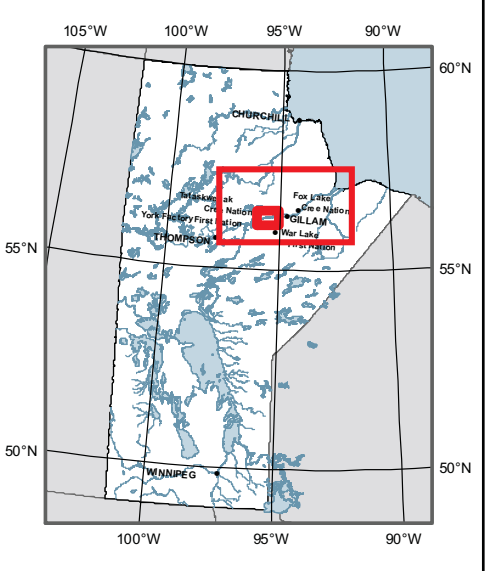


Keeyask Generation Project Environmental Impact Statement

Supporting Volume Physical Environment



June 2012

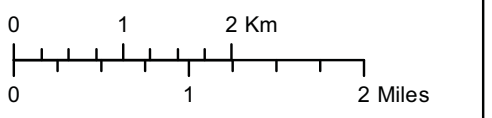


Legend

Depth to Groundwater (m)

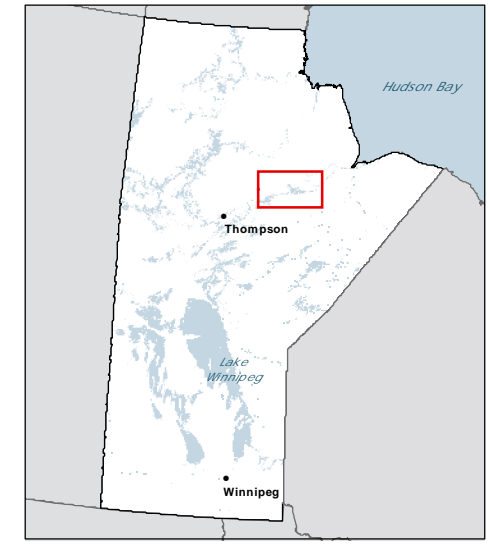
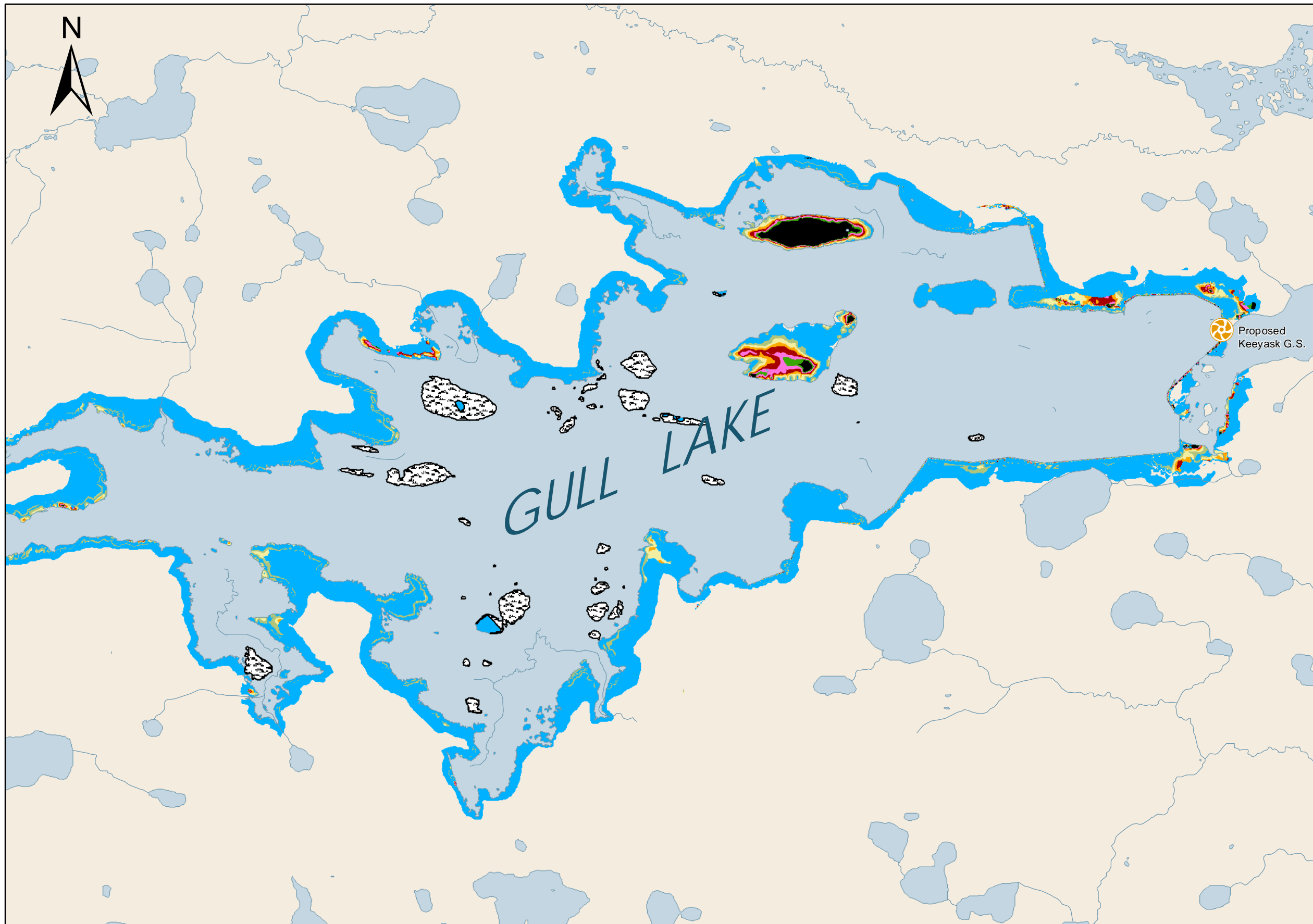
Ground Water at Surface	2 - 2.5
0 - 0.5	2.5 - 3
0.5 - 1	> 3
1 - 1.5	Lakes, Rivers and Streams
1.5 - 2	Affected w/o Depth Info

Projection: NAD 1983 UTM Zone 15
Data Source: Manitoba Hydro, Stantec Consulting Ltd.



Keeyask Groundwater Regime
Simulated Groundwater Depths (With Project) for Affected Area
 Typical Year (50th Percentile)





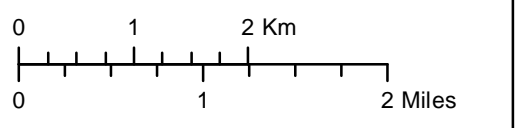
Legend

- Generating Station (Planned)

Depth to Groundwater (m)

Ground Water at Surface	2 - 2.5
0 - 0.5	2.5 - 3
0.5 - 1	> 3
1 - 1.5	Lakes, Rivers and Streams
1.5 - 2	Affected w/o Depth Info

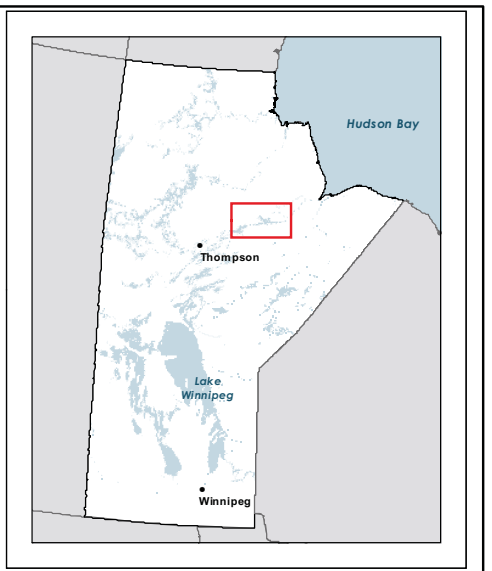
Projection: NAD 1983 UTM Zone 15
Data Source: Manitoba Hydro, Stantec Consulting Ltd.



Keeyask Groundwater Regime
Simulated Groundwater Depths (Post Project) for Affected Area
 Wet Year (50th Percentile)



Map 8.4-3a

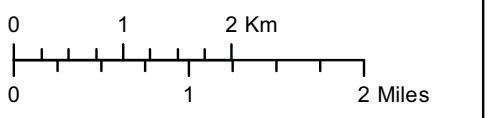


Legend

Depth to Groundwater (m)

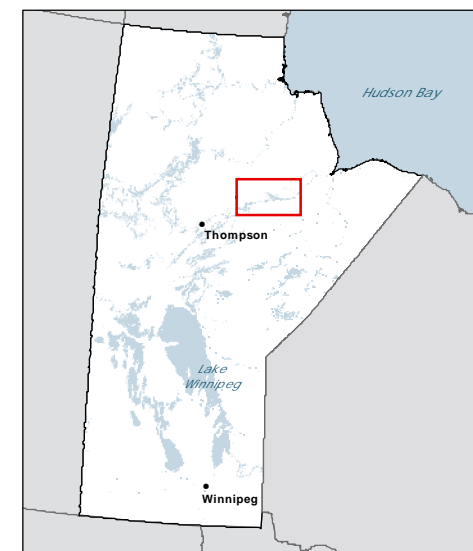
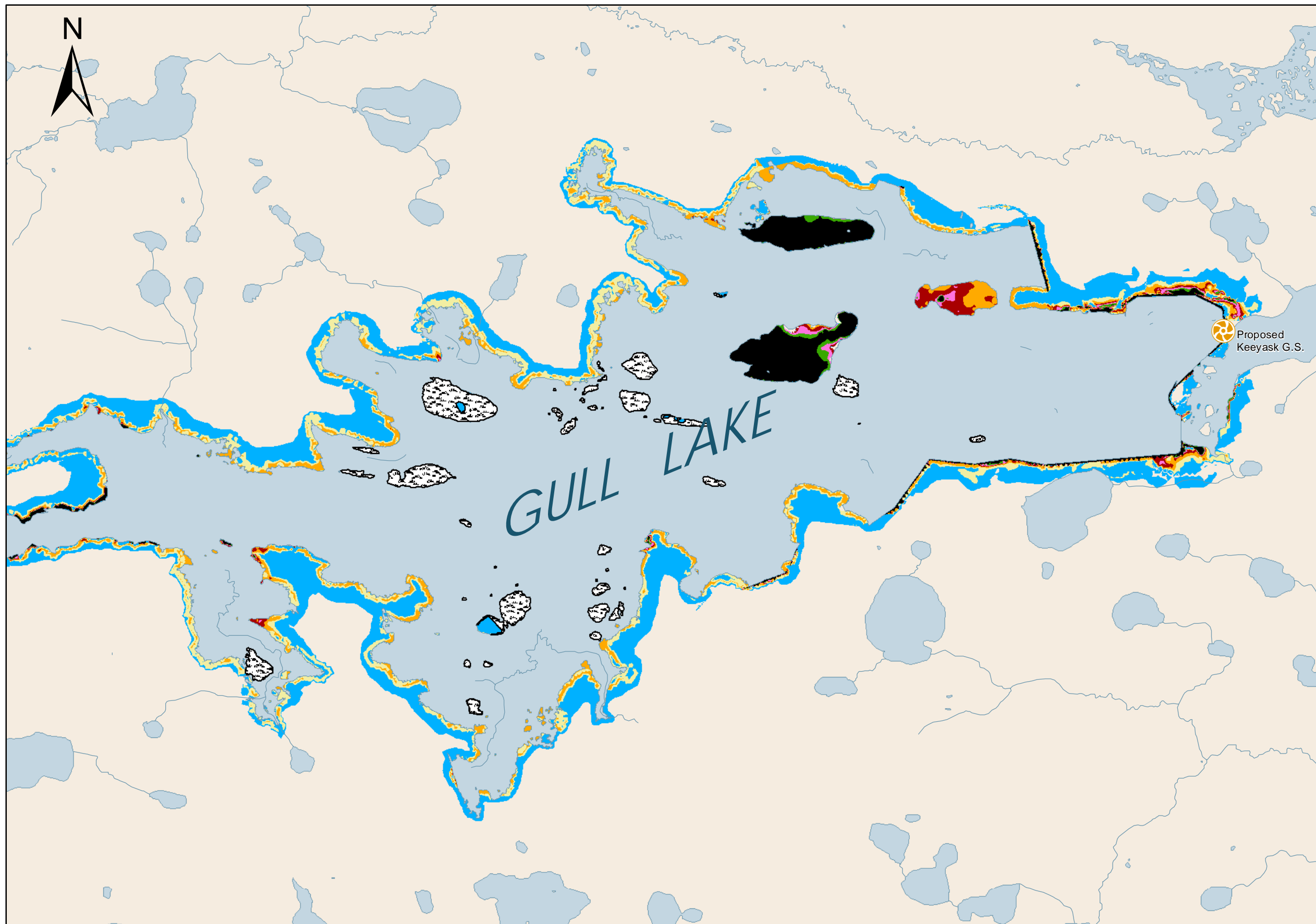
Ground Water at Surface	2 - 2.5
0 - 0.5	2.5 - 3
0.5 - 1	> 3
1 - 1.5	Lakes, Rivers and Streams
1.5 - 2	Affected w/o Depth Info

Projection: NAD 1983 UTM Zone 15
Data Source: Manitoba Hydro, Stantec Consulting Ltd.














Keyask Groundwater Regime
Simulated Groundwater Depths (Post Project) for Affected Area
 Wet Year
 (50th Percentile)

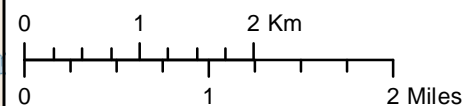




Legend

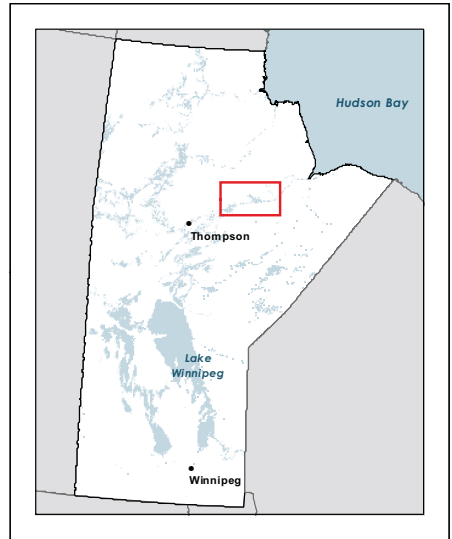
-  Generating Station (Planned)
- Depth to Groundwater (m)**
-  Ground Water at Surface
-  0 - 0.5
-  0.5 - 1
-  1 - 1.5
-  1.5 - 2
-  2 - 2.5
-  2.5 - 3
-  > 3
-  Lakes, Rivers and Streams
-  Affected w/o Depth Info

Projection: NAD 1983 UTM Zone 15
Data Source: Manitoba Hydro, Stantec Consulting Ltd.



Keeyask Groundwater Regime
Simulated Groundwater Depths (Post Project) for Affected Area
 Dry Year (50th Percentile)



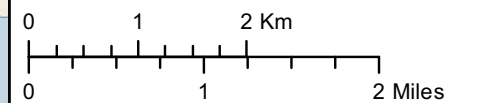


Legend

Depth to Groundwater (m)

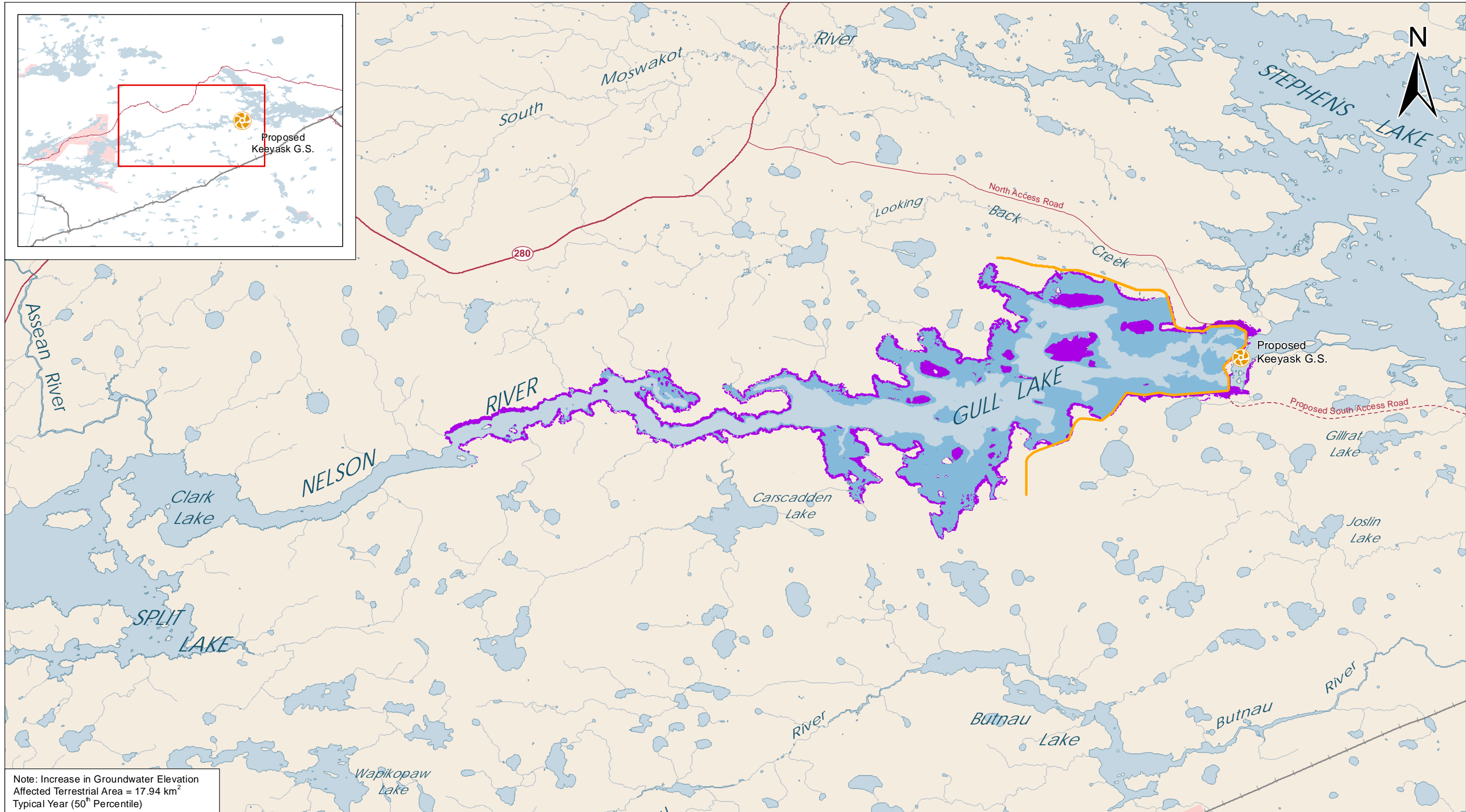
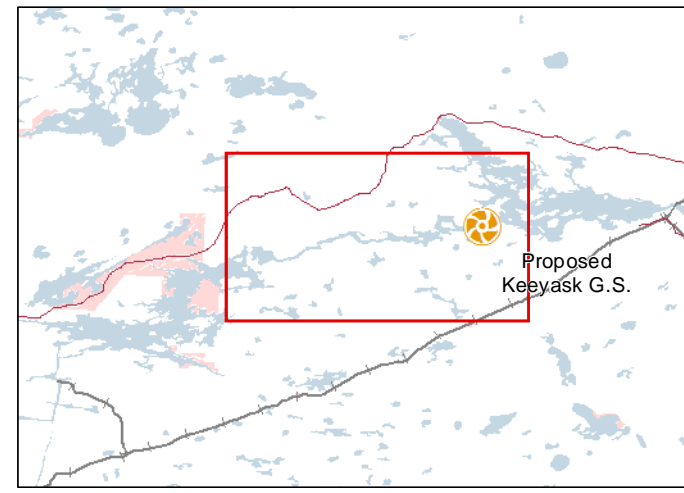
Ground Water at Surface	2 - 2.5
0 - 0.5	2.5 - 3
0.5 - 1	> 3
1 - 1.5	Lakes, Rivers and Streams
1.5 - 2	Affected w/o Depth Info

Projection: NAD 1983 UTM Zone 15
Data Source: Manitoba Hydro, Stantec Consulting Ltd.



Keeyask Groundwater Regime
Simulated Groundwater Depths (Post Project)
for Affected Area
 Dry Year
 (50th Percentile)





Note: Increase in Groundwater Elevation
 Affected Terrestrial Area = 17.94 km²
 Typical Year (50th Percentile)

DATA SOURCE:
 Manitoba Hydro, NTS, Stantec Consulting Ltd.

CREATED BY:
 Stantec Consulting Ltd.

COORDINATE SYSTEM:
 UTM NAD 1983 Z15N

0 1.5 3 Kilometres
 0 1.5 3 Miles

DATE CREATED:
 16-SEP-11

VERSION NO:
 1.0

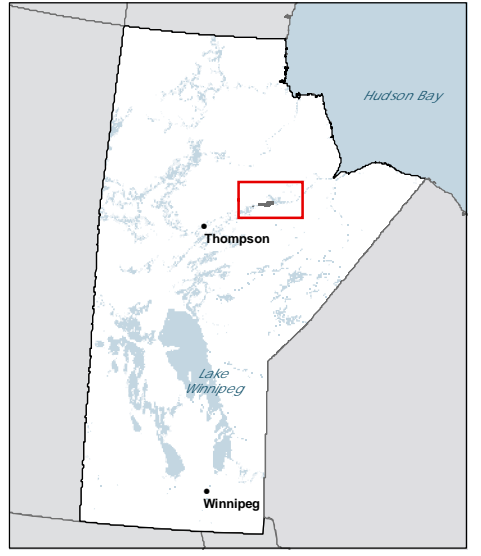
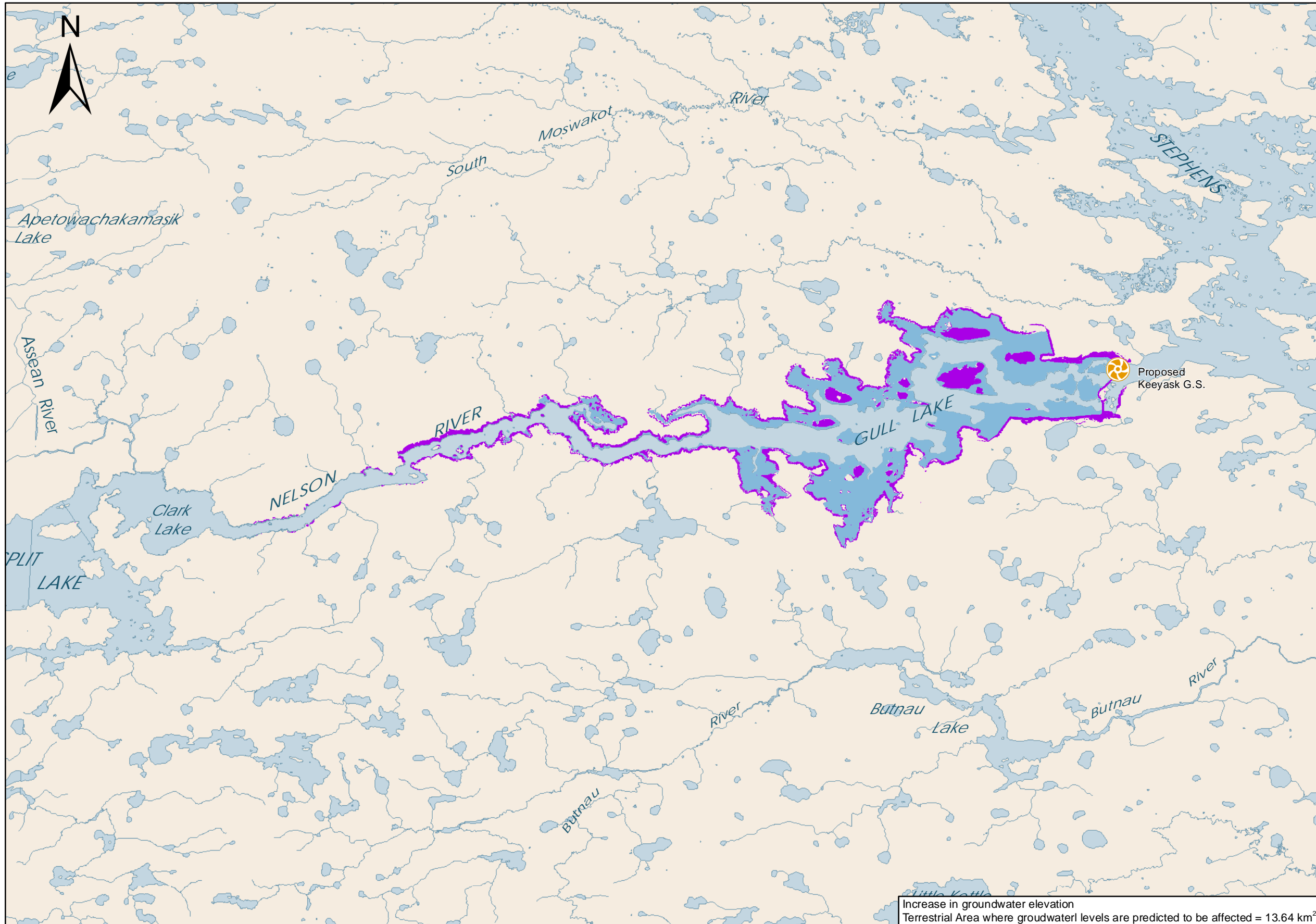
REVISION DATE:
 29-JUN-12





QA/QC:
 APPROVED

Legend

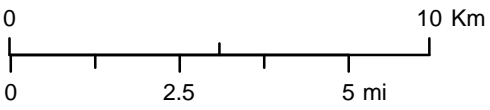
- Existing Waterbody
- Projected Extent of Initial Flooding Area
- Terrestrial Area Where Groundwater Levels Are Predicted To Be Affected
- Generating Station (Planned)
- Keeyask Principal Infrastructure Axis
- Access Road
- Proposed Access Road

Groundwater Regime
 Predicted Future Change
 in Groundwater Regime



- Legend**
-  Generating Station (Planned)
 -  Existing Water Features
 -  Projected Extent of Flooded Area
 -  Terrestrial Area Where Groundwater Levels are Predicted to be Affected

Projection: NAD 1983 UTM Zone 15
Data Source: Manitoba Hydro, Stantec Consulting Ltd.



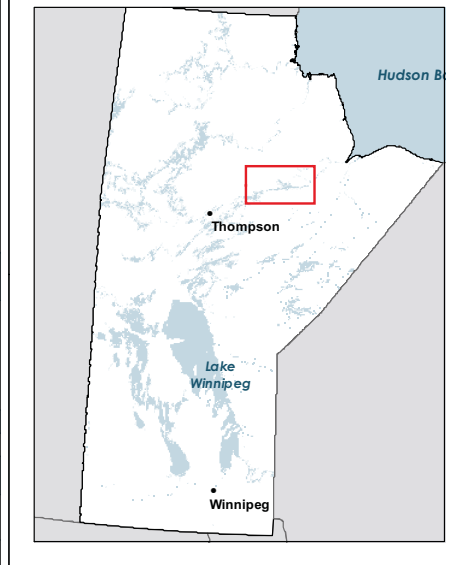
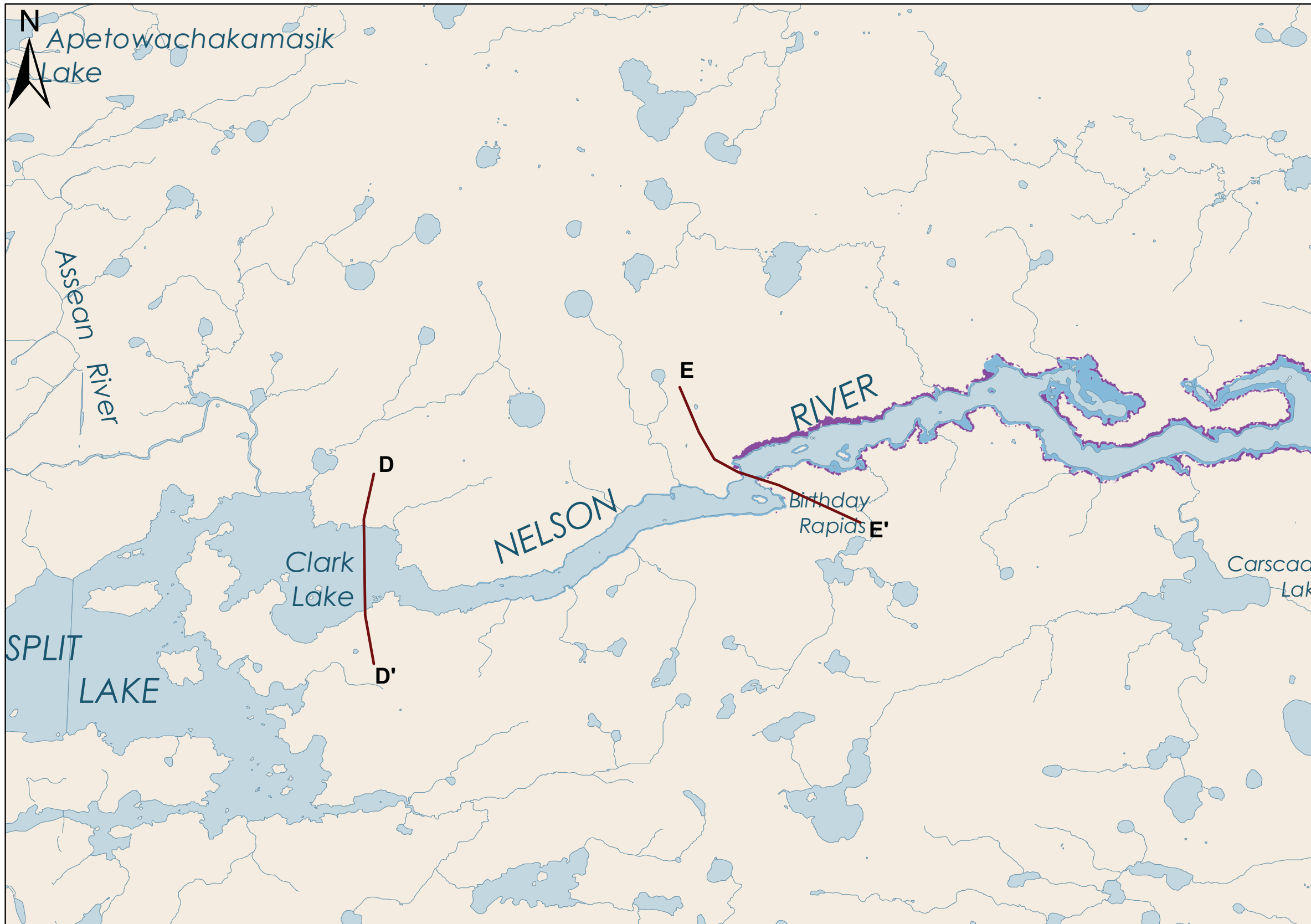
Keeyask Groundwater Regime

Predicted Future Change in Groundwater Regime

Wet Year
 (50th Percentile)



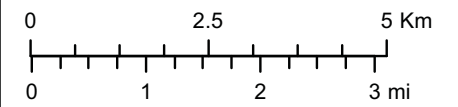
Increase in groundwater elevation
 Terrestrial Area where groundwater levels are predicted to be affected = 13.64 km²



Legend

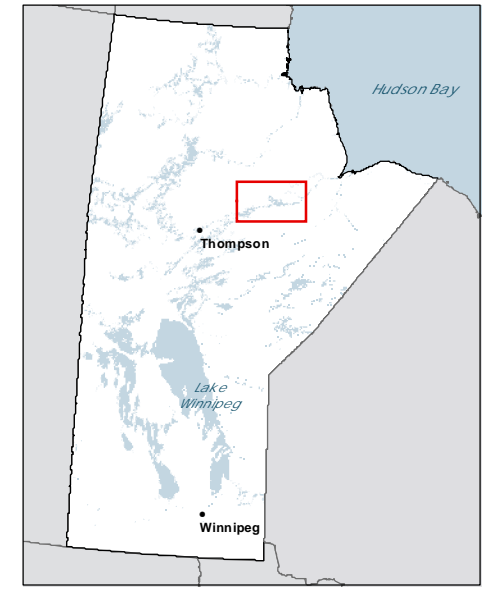
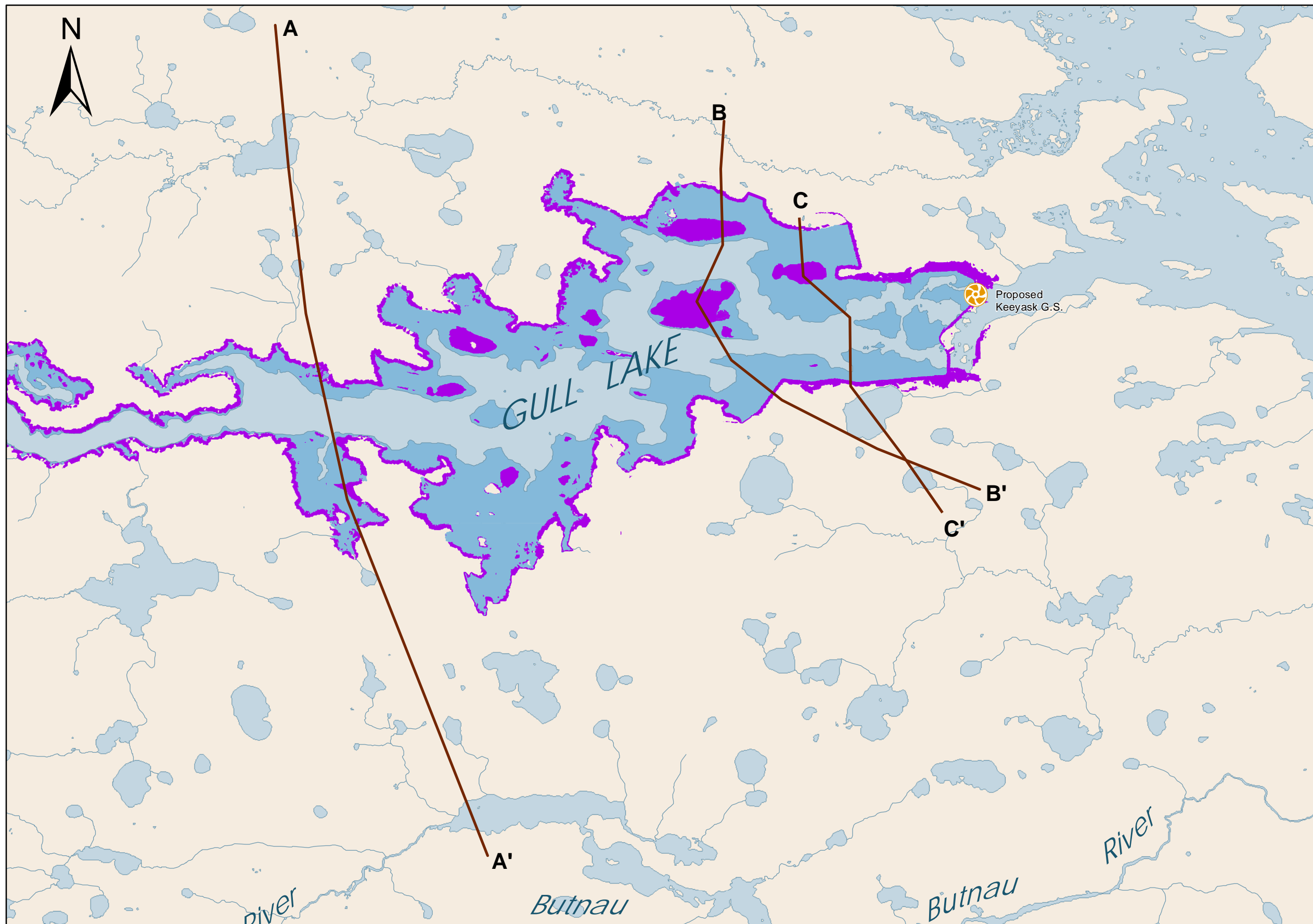
- Existing Water Features
- Projected Extent of Flooded Area
- Terrestrial Area where groundwater levels are predicted to be affected
- Cross section






Projection: NAD 1983 UTM Zone 15
 Data Source: Manitoba Hydro, Stantec Consulting Ltd.



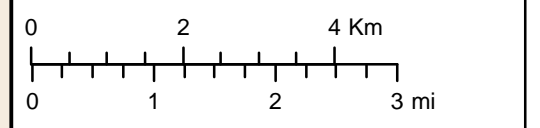
Keyask Groundwater Regime
 Predicted Future Change
 in Groundwater Regime Upstream
 of Gull Lake
 Typical Year
 (50th Percentile)





- Legend**
-  Generating Station (Planned)
 -  Existing Water Features
 -  Projected Extent of Flooded Area
 -  Terrestrial Area Where Groundwater Levels are Predicted to be Affected
 -  Cross Section

Projection: NAD 1983 UTM Zone 15
Data Source: Manitoba Hydro, Stantec Consulting Ltd.



Keeyask Groundwater Regime

Predicted Future Change in Groundwater Regime Gull Lake and Downstream Typical Year (50th Percentile)

