

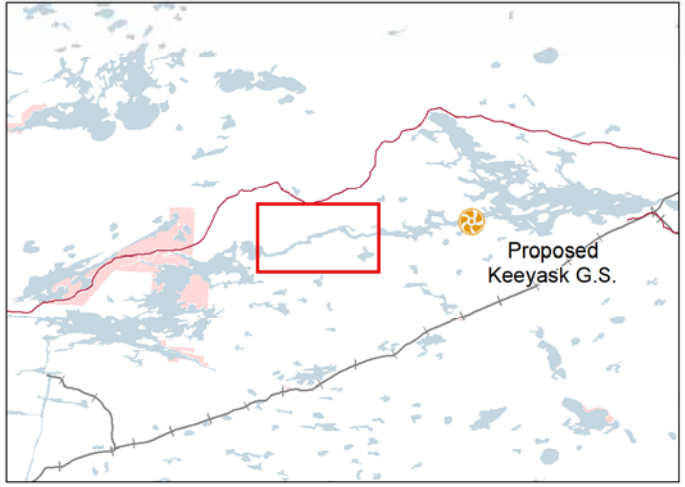
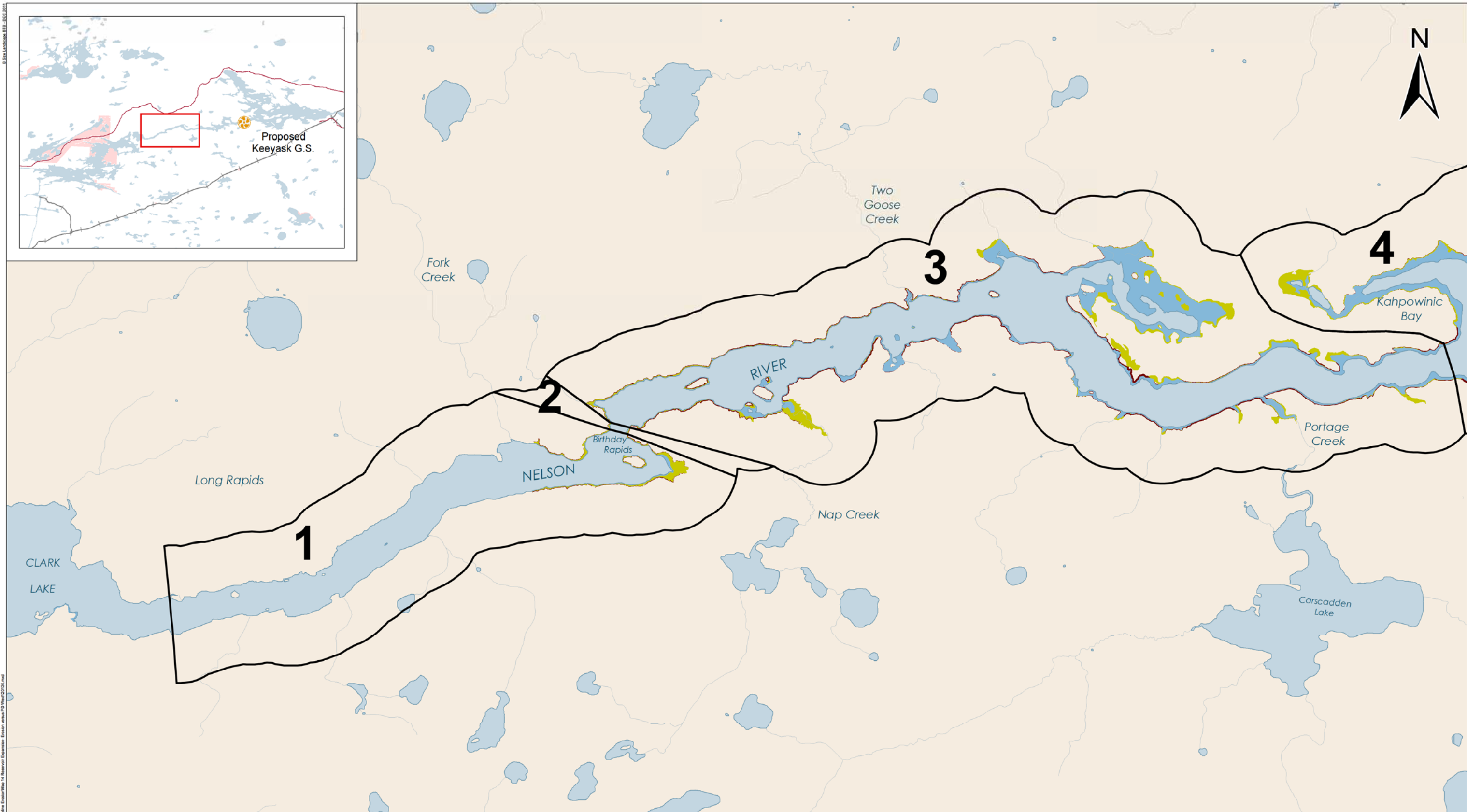


Keeyask Generation Project Environmental Impact Statement

Supporting Volume Physical Environment



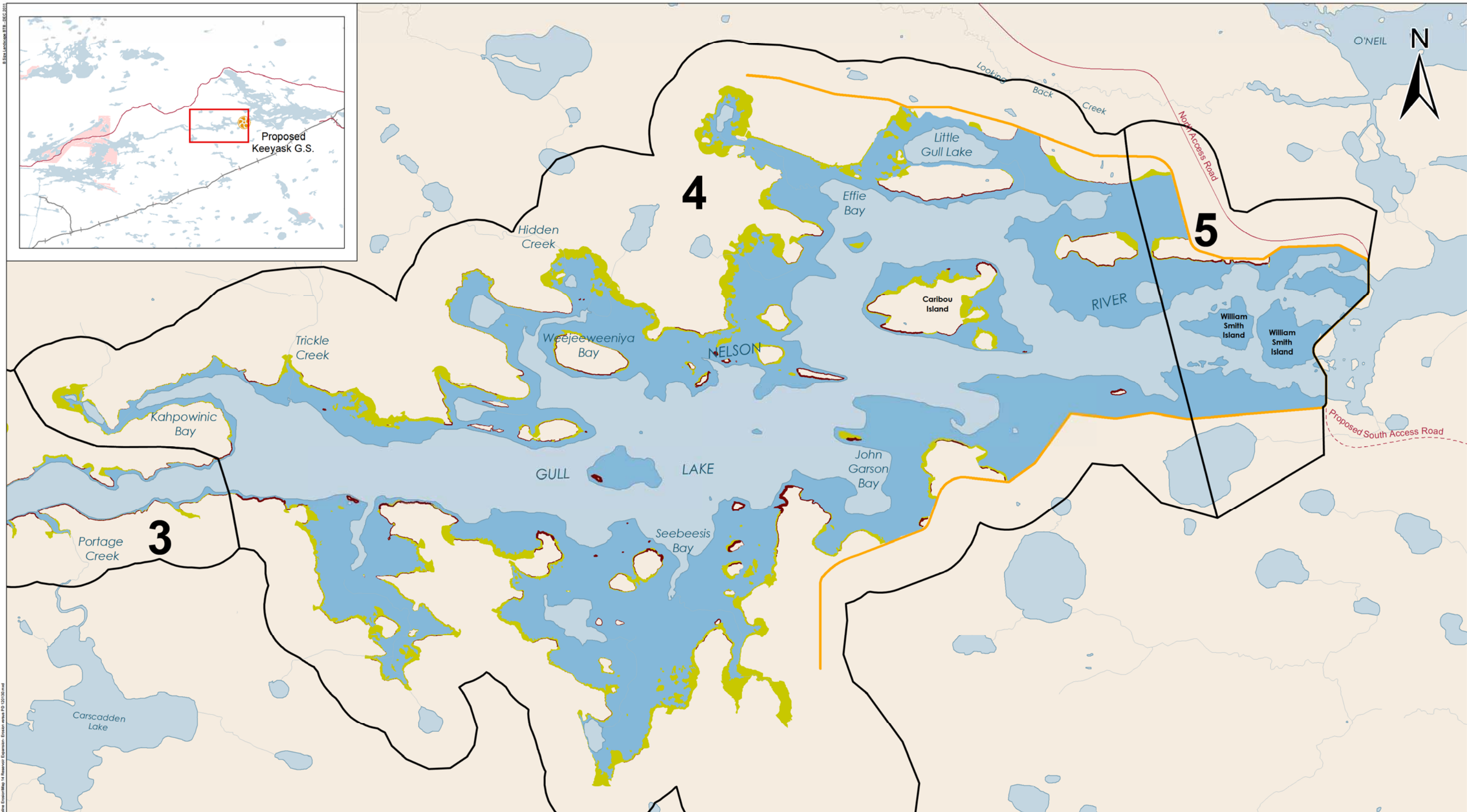
June 2012



DATA SOURCE: Reaches - North/South Consultants Inc.; Peatland disintegration - ECOSTEM Ltd.; Mineral bank erosion - J D Mollard and Associates Ltd.; Existing water (gull-ee-95perc-4327cms-rev3), flooded area (pp-95perc-4327-159-shore-rev5), Infrastructure - Manitoba Hydro; Water - NTS; Roads and rail - Manitoba Conservation; First Nation Reserves - Natural Resources Canada.		
CREATED BY: ECOSTEM Ltd.		
COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 19-JAN-12	REVISION DATE: 14-FEB-12
VERSION NO.: 1.0	QA/QC: APPROVED	

Legend	
Existing Water Surface Area	Initial Flooded Area (159 m)
Peatland Disintegration	Mineral Bank Erosion
Post Project Reach	
1 = Riverine Shore Zones Upstream of Birthday Rapids	4 = Lake Shore Zones in Gull Lake
2 = Riverine Shore Zones at Birthday Rapids	
3 = Riverine Shore Zones Downstream of Birthday Rapids to the Inlet of Gull Lake	

Peatland Disintegration and Erosion in the Western Upstream Reaches During First 30 Years of Operation



DATA SOURCE:
 Reaches - North/South Consultants Inc.; Peatland disintegration - ECOSTEM Ltd.; Mineral bank erosion - J D Mollard and Associates Ltd.; Existing water (gull-ee-95perc-4327cms-rev3), flooded area (pp-95perc-4327-159-shore-rev5), Infrastructure - Manitoba Hydro; Water - NTS; Roads and rail - Manitoba Conservation; First Nation Reserves - Natural Resources Canada.

CREATED BY:
 ECOSTEM Ltd.

COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 19-JAN-12	REVISION DATE: 27-APR-12
VERSION NO.: 1.0	QA/QC: APPROVED	

Legend

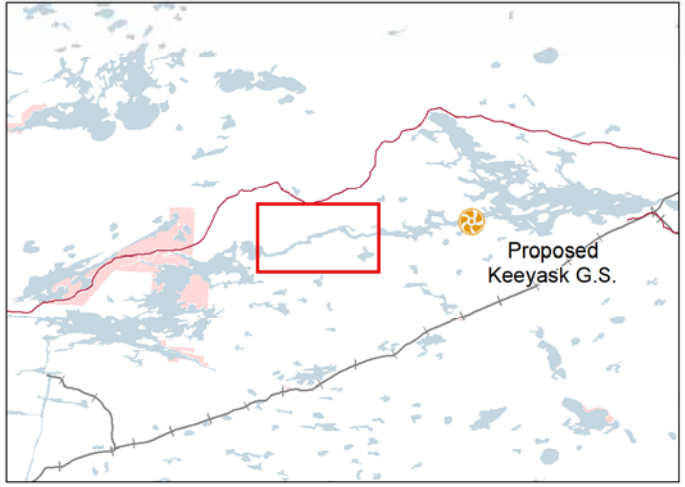
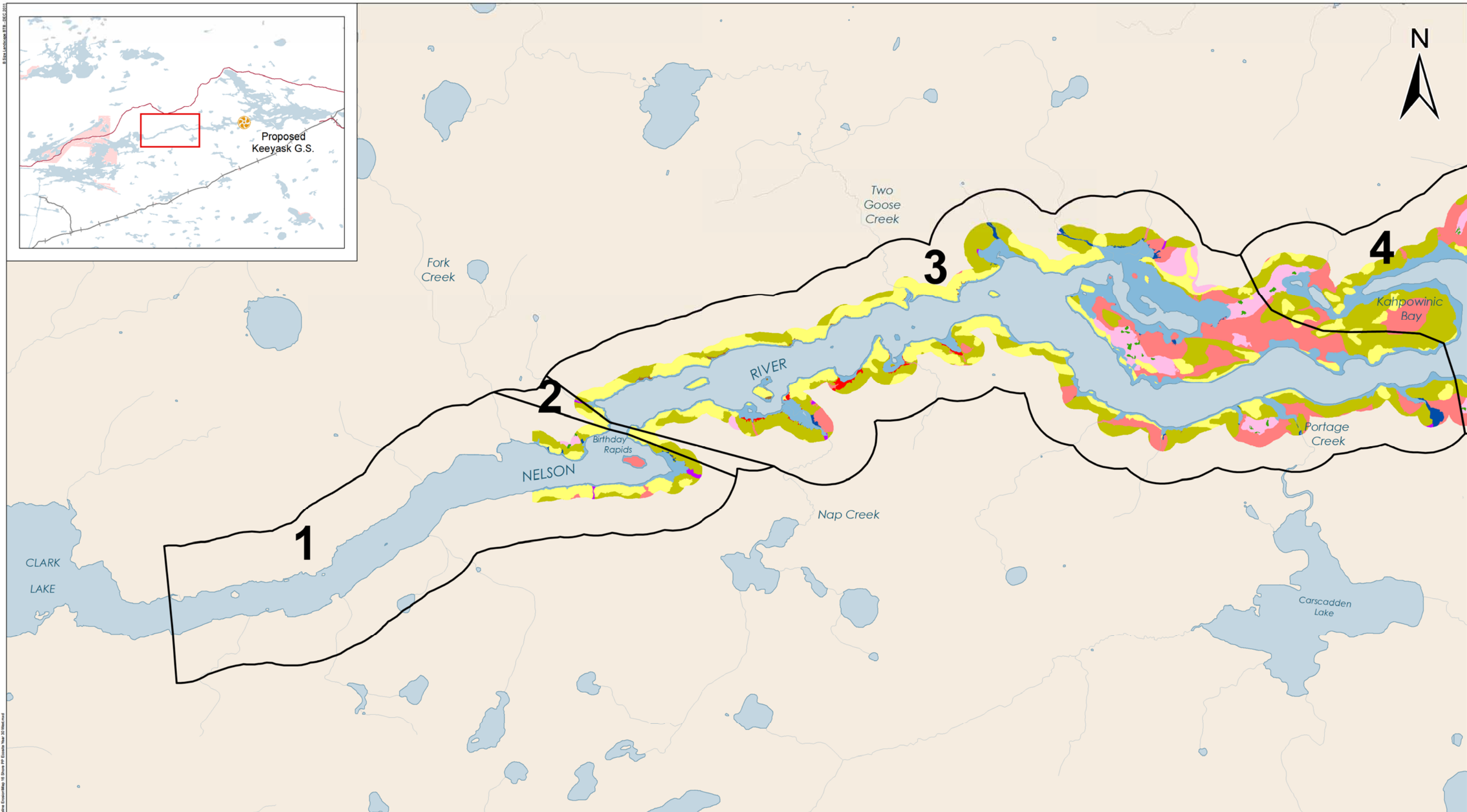
Existing Water Surface Area	Initial Flooded Area (159 m)
Peatland Disintegration	Mineral Bank Erosion

Post Project Reach

3 = Riverine Shore Zones Downstream of Birthday Rapids to the Inlet of Gull Lake	5 = Riverine Shore Zones at Gull Rapids
4 = Lake Shore Zones in Gull Lake	

Keeyask Principal Structures

Peatland Disintegration and Erosion in the Eastern Upstream Reaches During First 30 Years of Operation



DATA SOURCE:
 Reaches - North/South Consultants Inc.; Ecosite - ECOSTEM Ltd.; Reservoir - ECOSTEM Ltd. and J D Mollard and Associates Limited; Nelson River shoreline (gull-ee-95perc-4327cms-rev3) and Infrastructure - Manitoba Hydro; Water - NTS; Roads and rail - Manitoba Conservation; First Nation Reserves - Natural Resources Canada.

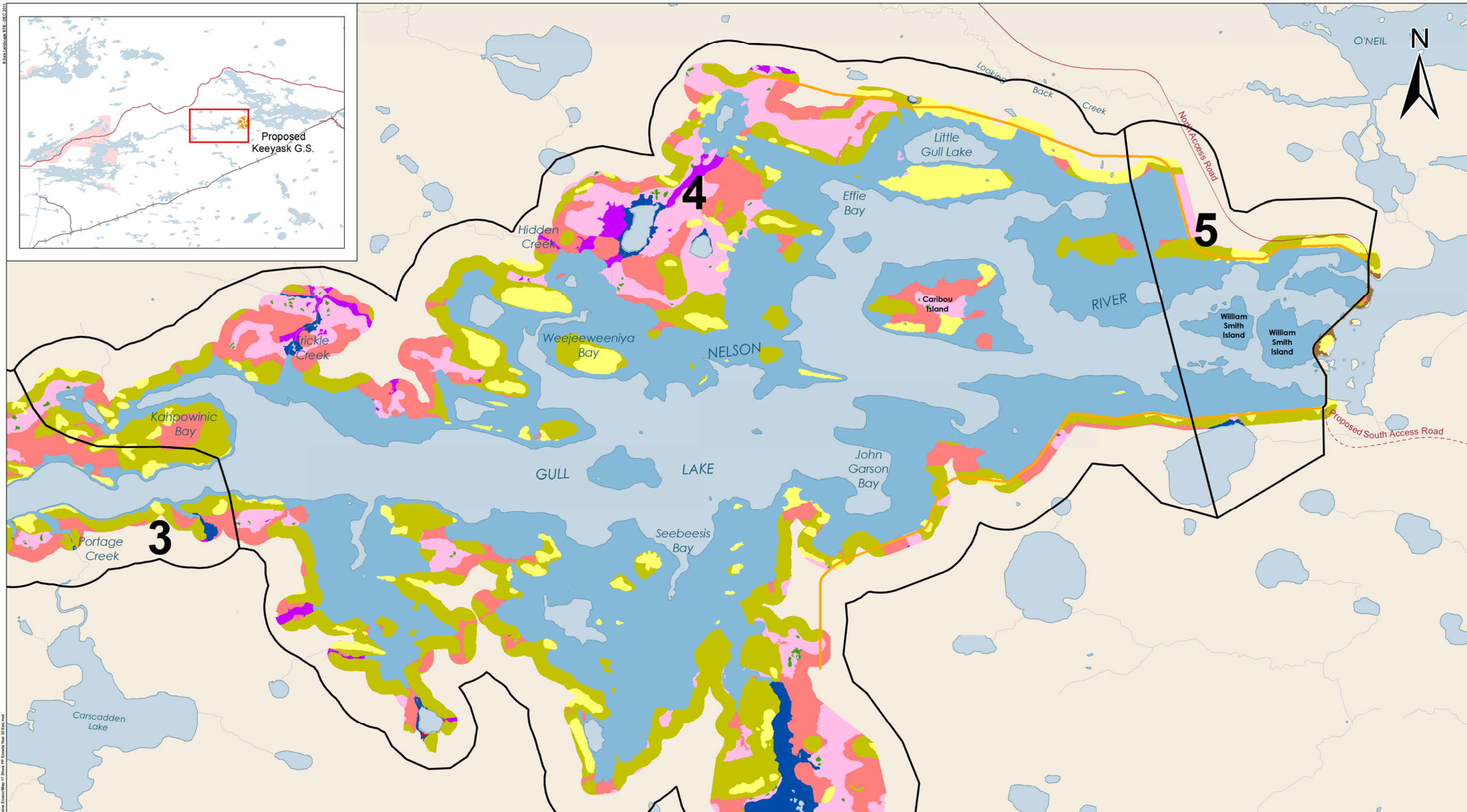
CREATED BY:
 ECOSTEM Ltd.

COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 01-MAY-12	REVISION DATE: 01-MAY-12
VERSION NO.: 1.0	QA/QC: APPROVED	

- Legend**
- Coarse Ecosite**
- Mineral
 - Thin Peatland
 - Shallow Peatland
 - Ground Ice Peatland
 - Permafrost Peatland - Other
 - Deep Peatland
- Wet Deep Peatland
 - Riparian Peatland
 - Ice Scour - Mineral
 - Shoreline Wetland
 - Waterbody
 - Reservoir Year 30 (159 m)

- Post Project Reach**
- 1 = Riverine Shore Zones Upstream of Birthday Rapids
 - 2 = Riverine Shore Zones at Birthday Rapids
 - 3 = Riverine Shore Zones Downstream of Birthday Rapids to the Inlet of Gull Lake
 - 4 = Lake Shore Zones in Gull Lake

Shoreline Ecosite Composition At Year 30 in Western Upstream Reaches



DATA SOURCE:
 Reaches - North/South Consultants Inc.; Ecosite - ECOSTEM Ltd.; Reservoir - ECOSTEM Ltd. and J D Mollard and Associates Limited; Nelson River shoreline (gull-ee-95perc-4327cms-rev3) and Infrastructure - Manitoba Hydro; Water - NTS; Roads and rail - Manitoba Conservation; First Nation Reserves - Natural Resources Canada.

CREATED BY:
 ECOSTEM Ltd.

COORDINATE SYSTEM: UTM NAD 1983 Z15N	DATE CREATED: 01-MAY-12	REVISION DATE: 01-MAY-12
VERSION NO.: 1.0	QA/QC: APPROVED	

Legend
Coarse Ecosite

- Mineral
- Thin Peatland
- Shallow Peatland
- Ground Ice Peatland
- Permafrost Peatland - Other
- Deep Peatland
- Wet Deep Peatland
- Riparian Peatland
- Ice Scour - Mineral
- Shoreline Wetland
- Waterbody
- Reservoir Year 30 (159 m)

Post Project Reach

- 3 = Riverine Shore Zones Downstream of Birthday Rapids to the Inlet of Gull Lake
- 4 = Lake Shore Zones in Gull Lake
- 5 = Riverine Shore Zones Immediately Upstream of Keeyask G.S.
- Keeyask Principal Structures

Shoreline Ecosite Composition At Year 30 in Eastern Upstream Reaches

