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Tracey Braun  
Director  
Environmental Approvals Branch  
Manitoba Conservation and Water Stewardship  
160-123 Main Street  
Winnipeg, MB R3C 1A5

Dear Ms. Braun:

**RE: KEYYASK GENERATION PROJECT – ALTERATION REQUEST, SOUTH ACCESS ROAD  
ENVIRONMENT ACT LICENCE NO. 3107, CLIENT FILE 5550.00**

Manitoba Hydro, in its delegated authority to manage construction of the Keeyask Generation Project on behalf of the Keeyask Hydropower Limited Partnership, is requesting an alteration to Environment Act Licence (EAL) No. 3107 for the development of the Keeyask Generation Project South Access Road.

The alterations are described in the attached materials, which also includes an environmental assessment of the proposed changes and related mitigation measures.

As per Condition 9 and 15 of the EAL, access routes and borrow pit designs will be submitted to the Integrated Resource Management Team for approval prior to construction. As well, if the alteration is approved, the Keeyask Generation Project Construction Environmental Protection Plan - South Access Road will be revised to reflect changes to the footprint and the additional mitigation outlined in the attached description.

The anticipated start date of construction of the South Access Road is January 7, 2015. If there are any questions or concerns with this request, please feel free to contact Jodine MacDuff at 204-360-5539.

Yours truly,



Dave Bowen, P. Eng, M.Sc  
Keeyask Project Manager  
New Generation Construction

c: J. MacDuff

Att.

**Keeyask Generation Project – South Access Road**  
**Description of Proposed Modifications and Potential Environmental Effects**

The Keeyask Generation Project (the Project) South Access Road (SAR) will link the Keeyask Generating Station to the Butnau Dam and to Gillam. The route of the SAR was shown in Map 2-14 of the Keeyask Generation Project – Project Description Supporting Volume. As stated in the Environmental Impact Statement (EIS), the SAR included a 13.5 km section of new road between Gull Rapids and the Butnau Dam and 21.5 km of existing road that would be upgraded to Provincial Road standards. Table 2-3: Preliminary Material Utilization Plan of the Project Description Supporting Volume indicated that material source areas for the SAR would be S-2, Q-1 and Q-9 and that additional material sources were still being evaluated.

An alteration to Environment Act Licence (EAL) No. 3107 is being requested to accommodate changes to the SAR that have been determined during the final design stages.

These include a requested change to the Project footprint to address the following:

- A need for additional material source areas located in the corridor;
- Widening of the right-of-way in the portion of the access road at the proposed security gate location (junction of the new access road with the Butnau Road) to meet Provincial Road Standards for safety at intersections; and
- A re-alignment of the eastern end of the road, close to Gillam, to improve access into the town site for future planning purposes and a slight shift of the road alignment to the north for the eastern half of the road.

In addition to the above, the upgrade of the roadway from the Butnau Dam to Gillam will be undertaken in a different manner than originally anticipated. These modifications represent a change in how the Project will be developed.

**Description**

**Material Source Areas**

The Project EIS identified the need for additional material source areas. It is proposed that the Project footprint be expanded by approximately 4500 hectares to include a corridor along the entire length of the SAR from which borrow material can be sourced (identified as the South Access Road Corridor on the Proposed Alteration map). Within the corridor, there is approximately 1190 hectares identified as material source areas; these areas have the highest potential for viable material sources and avoid most environmentally sensitive sites (refer to the Terrestrial Assessment Section). It is likely that only a portion of the material source areas will be required for construction of the SAR. The entire corridor is being requested to be added to the footprint to reduce the risk of insufficient material being available within the licenced footprint.

A request for quarry leases has been submitted to Manitoba Mineral Resources for the material source areas identified on the Proposed Alteration map. The contractor for the SAR will identify the material source areas for which exploration will occur and the required access route(s) to the sites. This information will be submitted to the Integrated Resource Management Team (IRMT) for approval as per Condition 9 of the EAL. The suitability and availability of materials will be confirmed by test pits. If the source is viable, as per Condition 15 of the EAL, borrow pit designs will be submitted to the IRMT for approval prior to construction.

#### Widening of the Right-of-Way

A small widening of the right-of-way (ROW) is required at the proposed security gate location for the SAR – an area at the junction of the western portion of the SAR and the current Butnau Road (see Proposed Alteration map). This widening is required so that the Partnership can meet Provincial Road design standards for intersections. This widening of the ROW would be within the proposed new road corridor identified above for material source areas.

#### Re-alignment

A re-alignment along the eastern half of the road is proposed to enhance access into Gillam and to accommodate future planning opportunities within the Town. The proposed re-alignments are shown on the Proposed Alteration map. There is a route shift in the vicinity of stream crossing 8 (SC-8) and near the connection to the Town of Gillam, as well as a slight shift generally north of the original alignment for the rest of the eastern half of the road. The final alignment of the road identified additional stream crossings that were not assessed in the Project EIS.

Originally, the existing road from the Butnau Dam to Gillam was to be upgraded to Provincial Road standards including upgrading the existing road bed to meet these standards. This initial approach is no longer considered to be feasible for the following reasons:

- It limits access to the Butnau Dam and dykes along this portion of the Kettle reservoir for maintenance and emergency purposes during the construction period, creating safety risks;
- It would require unacceptable restrictions in public access during the construction period for users travelling to and from the marina and other locations; and
- Subsequent investigation has revealed that the current road bed is not sufficient to accommodate the required road upgrades.

For these reasons, the road will be upgraded by aligning the road slightly northward, and rebuilding the road immediately adjacent to the existing road bed within the existing road right of way (with the exception of the re-alignments noted above). The existing Butnau road will be decommissioned following construction.

#### **Potential Environmental Effects and Mitigation**

An environmental assessment has been undertaken of these proposed changes to the SAR and is outlined below.

### Aquatic Environment

The aquatic assessment of effects is based on the requirement for five stream crossings which were not assessed in the Project EIS. During final design of the SAR, crossings at two small drains were identified (SC-6 and SC-7). Designs were established for an unnamed tributary of the Butnau River (SC-9) and an unnamed tributary of the Kettle River (SC-10) and the re-alignment of the road near Gillam resulted in a new crossing of an unnamed tributary of the Kettle River (SC-11a).

No aquatic species considered at risk by Manitoba's *The Endangered Species Act* (MESA), the *Species at Risk Act* (SARA; Schedule A) or the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) are expected to make use of the streams at any of the proposed crossing sites.

SC-6 is a small stream with a drainage area of approximately 2.73 km<sup>2</sup> entering Stephens Lake approximately 400 m downstream of the crossing. Fish use of this stream is limited by large beaver dams upstream and downstream of the crossing and the site itself is likely too shallow to support overwintering of any resident fish populations. No fish were captured during the assessment, but small species such as Brook Stickleback are likely present.

SC-7 is a headwater tributary to a lake that is on an unnamed tributary of the Butnau River. This small creek (drainage area of approximately 0.49 km<sup>2</sup>) consists of a dredged channel ending at the Butnau Dam. Fish use is likely restricted to spawning, foraging, and rearing by small-bodied species, such as Brook Stickleback, which were captured at the site. Large-bodied fish (i.e., Northern Pike) use would be limited by the small area of deeper water, and the limited ability of larger fish to migrate through the downstream wetland area.

SC-9 is an unnamed tributary of the Butnau River with a drainage area of approximately 6.22 km<sup>2</sup>. The creek joins the Butnau River 430 m downstream of the crossing and is therefore accessible to downstream populations of fish. The diversity of habitat in the creek is suitable for both small and large-bodied species for spawning, rearing and foraging during spring and summer. Low water levels and dissolved oxygen concentrations are expected to limit fall and winter use by fish. Sampling in early June captured Brook Stickleback and White Sucker.

SC-10 is an unnamed tributary to the Kettle River and has been channelized upstream of the crossing. The existing road appears to be acting as a dam, as the culvert at the time of the site visit was perched and water was ponding upstream of the road. Installation of a new crossing and decommissioning the existing crossing will alleviate this current condition. The stream flows into the Kettle River 3.35 km downstream through a series of ponds. The creek provides spawning, rearing and foraging habitat for small and large bodied species and is connected to deeper water downstream, which would provide suitable overwintering habitat.

SC-11a is an unnamed tributary of the Kettle River that has an upstream drainage area of approximately 0.24 km<sup>2</sup> and flows south 1.5 km in an irregular pattern into the Kettle River. Although no fish were captured at the time of the survey, it is expected that this area would be suitable for small-bodied

forage species such as Brook Stickleback. No large-bodied species are expected to be present due to barriers created by beaver dams.

The proposed crossings at all locations will consist of one or more culverts, designed to provide fish passage. The crossings will be permanent.

Potential environmental effects associated with the installation and maintenance of the culverts are minimal, but could include:

- Physical disturbance or damage to in-stream and riparian habitat;
- In-filling of stream channel;
- Impediment to fish movements;
- Introduction of runoff and sediment into the watercourse during construction resulting in water quality degradation and sedimentation of downstream habitat; and
- Introduction of hydrocarbons (e.g., oil, gasoline, lubricants or hydraulic fluids) from construction equipment.

The potential environmental effects at the stream crossings will be mitigated by following the measures outlined in the SAR Environmental Protection Plan (EnvPP) which includes adherence to the Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat (Fisheries and Oceans Canada and Manitoba Natural Resources 1996). The crossings are not expected to result in measurable changes to the fish community given that the areas affected by the culverts and the associated in-fill will be small, the crossings are constructed at habitat common in the region and fish will be able to pass through the culverts.

### Terrestrial Environment

An assessment of potential terrestrial effects of the proposed changes to the SAR has been undertaken. The primary source of change is the addition of new material source areas within the proposed SAR corridor. At this time, only the proposed material source areas have been assessed, rather than the fully proposed corridor, given that these areas are considered the most likely to be disturbed.

Within the SAR corridor, boundaries of potential material source areas were refined based on terrestrial considerations. The following areas were avoided: priority habitat sites; those within 100 m of a waterbody, waterway or marsh wetland; very wet and deep peatlands; those within 50 m of known rare plant locations and sensitive wildlife habitats such as caribou calving and calf-rearing complexes; and locations of known raptor nests or bird and mammal habitat located in the riparian zone. The exceptions to this were very small patches of habitat surrounded by highly disturbed areas or in close proximity to the SAR. The sensitive sites outside of the proposed material source areas have been identified as areas to be avoided - indicated as red zones on the attached revised SAR EnvPP map sheets. This information was available from studies undertaken during the environmental assessment of the Project.

No provincially very rare or provincially rare plant species are known to occur in either the proposed material source areas or along the SAR re-alignment. Based on the types of habitat included in these areas, none are expected to occur.

There is no predicted change or Project-related residual effects for Bird Valued Environmental Components or Priority Birds as a result of the SAR re-alignment or the addition of the proposed material source areas.

There is no predicted change to caribou, moose or beaver Project-related residual effects as a result of the addition of the proposed material source areas and the South Access Road re-alignment. No additional loss of caribou calving and rearing habitat is anticipated. A small increase in access by resource users may result from development of this additional area; however, this will be mitigated for operations since construction areas not required for Project operations will be decommissioned and rehabilitated.

A bear den survey of the SAR route, including the area of the re-alignment, was conducted in October 2014. No bear dens were located during these surveys. Bear den surveys have not occurred in proposed material source areas. If a bear den is located during Project work, the appropriate notification to Manitoba Conservation and Water Stewardship will occur as per the SAR EnvPP.

As noted above, access routes and borrow pit designs will be submitted to the IRMT for approval prior to construction. As well, all work will follow applicable measures described in the Project's SAR EnvPP.

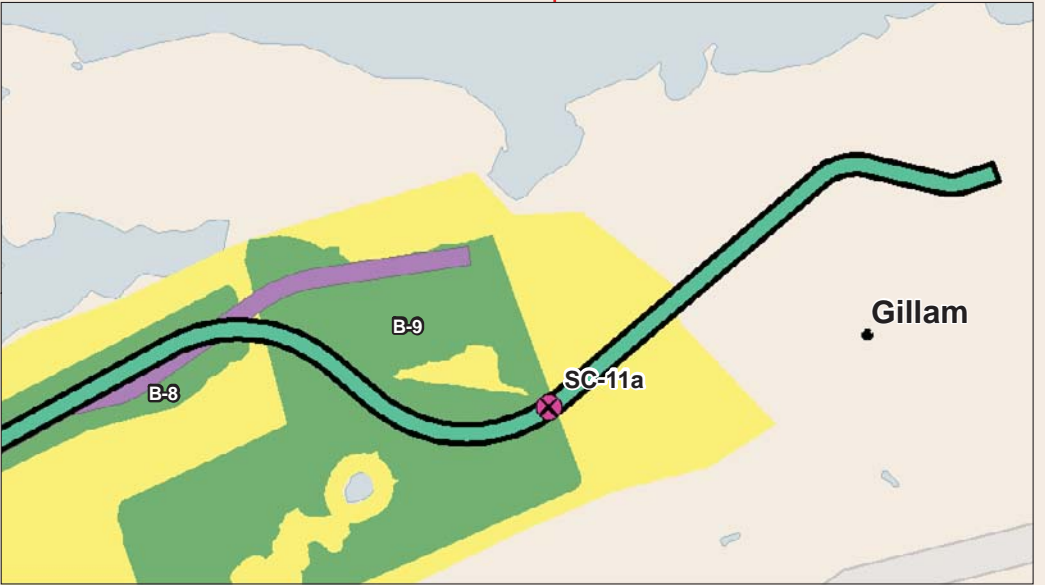
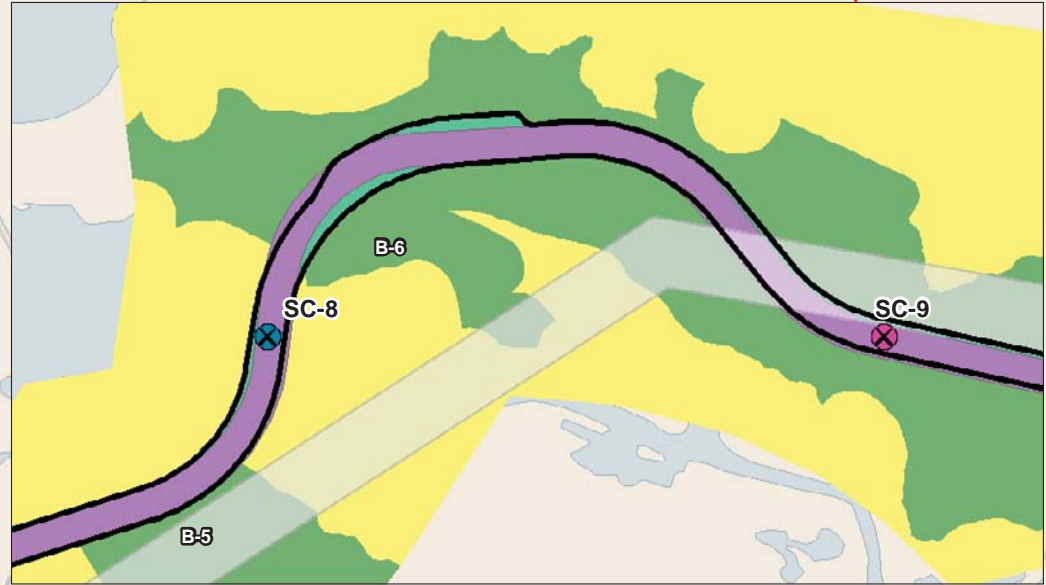
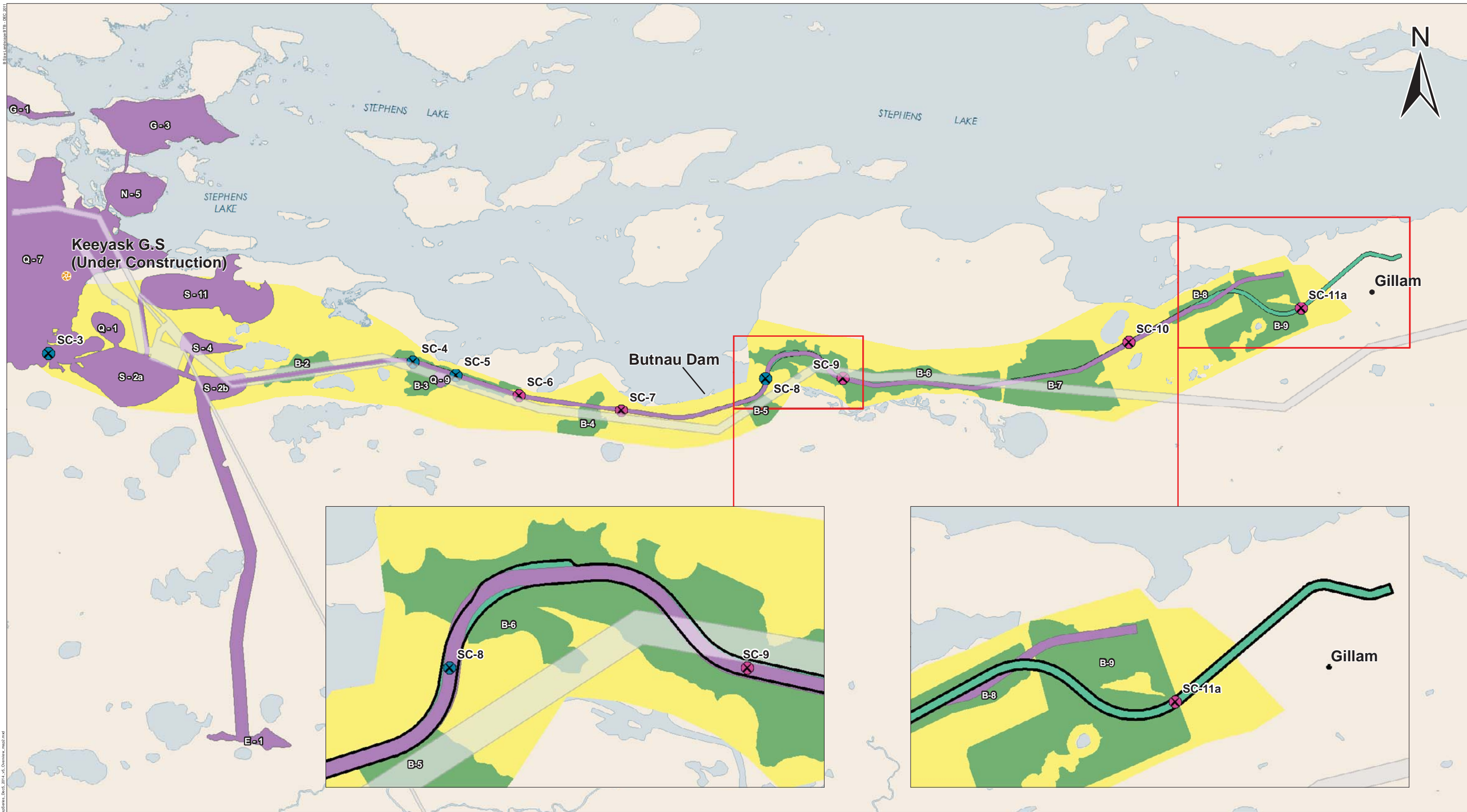
#### Heritage Resources

The heritage assessment of the SAR re-alignment identified crossing SC-11a (see Proposed Alteration map) as an area that has potential for the presence of undiscovered heritage resources. SC-11a is a crossing of an unnamed tributary that flows into the Kettle River. The crossing will be cleared right to the edge of the water with no anticipated ground disturbance. The Keeyask Generation Project Construction Heritage Resources Protection Plan will be adhered to if any heritage resources are discovered during the course of clearing or other construction activities related to the Project. The Project archaeologist will advise and provide field support should any heritage concerns arise during construction.

A memorial cross is currently located on the south side of the existing Gillam to Butnau Road, within the proposed borrow area B-6 and adjacent to the SAR right-of-way. Manitoba Hydro is working with Fox Lake Cree Nation to identify options to protect the cross. If it is determined that the cross should remain in place, it will be cordoned off from construction activities; if temporary removal or relocation is desired then a plan will be developed with the community.

If the alteration is approved, the SAR EnvPP will be revised to reflect the change to the footprint and the additional mitigation described above. All of the current SAR EnvPP sensitive site map sheets will be replaced with the new versions attached (see SAR EnvPP map sheets).





<b>DATA SOURCE:</b> Manitoba Hydro; Government of Manitoba; Government of Canada			
<b>CREATED BY:</b> Department - GIS Studies			
<b>COORDINATE SYSTEM:</b> UTM NAD 1983 Z15N		<b>DATE CREATED:</b> 18-DEC-14	<b>REVISION DATE:</b>
		<b>VERSION NO.:</b> 1.0	<b>QA/QC:</b> XXX/YYY/ZZZ

- Legend**
- Licensed Construction Footprint
  - Keyask Transmission Line Footprint
  - Proposed Additional Construction Footprint**
  - Proposed Material Source Areas
  - South Access Road Corridor
  - Proposed South Access Road Right-of-Way

- X Stream Crossing (Not included in the EIS)
- X Stream Crossing (Included in the EIS)

