

## 7.5.1 AQUATIC ENVIRONMENT

The aquatic environment addresses environmental effects of the Project on the following VECs: water quality; walleye, northern pike, lake whitefish, and lake sturgeon.

### 7.5.1.1 EFFECTS OF PAST AND CURRENT PROJECTS AND ACTIVITIES

The aquatic environment in the lower Nelson River, including the area to be affected by the Project, has been substantially altered by past hydroelectric developments and continues to experience those effects today.

As discussed in Section 6.2 and in greater detail in the AE SV and the KCNs' Environmental Evaluation Reports, changes to the aquatic environment began with the first hydroelectric station, completed in 1961 at the Kelsey Rapids on the Nelson River upstream of Split Lake. The CRD and LWR, completed in the mid 1970s, altered the aquatic environment of the entire Nelson River. The reach of the river between Gull Rapids and Kettle Rapids was converted to a reservoir environment by construction of the Kettle GS, which was completed in 1974.

The most recent additions and alterations to existing hydroelectric developments are the construction of the Wuskwatim GS on the Burntwood River and re-running at the Kelsey GS on the Nelson River, both of which are directly upstream of Split Lake. The Cree world view that all parts of the environment are connected indicates that these would overlap with the effects of the Keeyask Project. The technical assessment of the spatial extent of effects of the Keeyask Project (Section 6.4) indicates that there is no overlap with these recent developments.

The Keeyask Infrastructure Project, which is being constructed adjacent to the Keeyask Generation Project, has minimal potential to affect surface waters, as the only watercourse crossings are a small unnamed stream and Looking Back Creek. Effects to Looking Back Creek are being avoided through the use of a clear span bridge. Other measures to manage sediment inputs from surface runoff and prevent the input of contaminants to surface waters are being employed during construction to avoid effects to water quality and aquatic biota (Keeyask Hydropower Limited Partnership 2009).

The following effects of past and current projects and activities, as they relate to each aquatic VEC affected by the Keeyask Project are summarized in Section 6.2.3.3 and discussed in detail in the AE SV (Sections 2.4 (water quality), 5.3 (walleye, northern pike, and lake whitefish) and 6.3 (lake sturgeon). The KCNs' Environmental Evaluation Reports provide information on the effects of past and current developments on the environment as a whole, including these VECs.