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### **Abstract**

For the river crossing of the Radisson–Nicolet–Des Cantons power line, jetties were constructed in 1988 on the north and south shores of the St. Lawrence River at Grondines. Although temporary, these jetties represented a potential barrier for tomcod migration, so in 1986 Hydro-Québec undertook an impact study covering the physical, biological and socioeconomic aspects of this issue. The physical study consisted in simulating flow conditions in the St. Lawrence River around Grondines without and with the jetties. The main objective of the biological study was to determine the parameters of tomcod migration (migration timeline and corridors, migratory behavior in relation to tides) in the area affected by the construction. The socioeconomic study was to describe sport and commercial tomcod fishing in Sainte-Anne-de-la Pérade and assess the resulting economic spinoffs.

The impact study ended in 1988 when the jetties were built. Environmental follow-up studies were conducted until 1991 to ensure that tomcod migration at Grondines and sport and commercial fishing at Sainte-Anne-de-la-Pérade continued despite the presence of the jetties.

The physical studies showed that the design of the north jetty needed to be modified slightly so as not to cause flow conditions that would interfere with upstream migration. The biological and socioeconomic studies showed that the presence of the jetties had no negative impacts on tomcod migration or on yields in sport and commercial fishing. This document reviews and summarizes the studies of Atlantic tomcod conducted by Hydro-Québec for the Radisson–Nicolet–Des Cantons line river crossing.