

## Nalcor Energy Errata / Addenda for the

### Marine Environment: Fish and Fish Habitat, Water Resources Component Study – Revised

<b>Errata / Addenda</b>	
<b>Report 1: Marine Fish and Fish Habitat in the Strait of Belle Isle: Information Review and Compilation</b>	
<b>Section 3.3.1.4</b>	
The text to be revised on page 61, as follows: “The spawning season of Gulf of St. Lawrence Atlantic halibut takes place between January and May (DFO 2011a).”	
The text to be revised on page 61, as follows: “The female first spawns at between 10 and 14 years of age and can lay several million eggs.”	
The text to be revised on page 61, as follows: “Larvae are pelagic and drift with the water currents but at four centimetres they migrate to the bottom and young, between two and four years, live close to the shore, moving into deeper waters as they grow (Cargnelli et al. 1999).”	
The text to be revised on page 61, as follows: “Atlantic halibut go through several distinct feeding phases: halibut up to 30 cm long feed on worms and small shrimp whereas those measuring 30-80 cm long feed on a combination of invertebrates and small fish.”	
The text to be revised on page 61, as follows: “Various management measures are currently in effect for commercial halibut fishing. As of 2010, any halibut less than 85 cm must be returned to the water.”	
<b>Section 3.3.2.1</b>	
The text to be revised on Page 65, as follows: “Most spawning occurs in coastal areas, although a component of the population remains in offshore areas and spawns in areas such as the Southeast Shoal.”	
<b>Section 3.3.2.2</b>	
Text to be added to Page 67, as follows:  “DFO conducted acoustic surveys of the herring stock in 2009 (NAFO unit 4Ra) and 2010 (NAFO unit 4Sw) (Beaulieu et al., 2009; DFO 2010e and 2011; Gregoire and Beaulieu 2011). The 2009 acoustic herring survey took place between October 18 and November 9 and included the west coast of Newfoundland (a total of 10 strata in NAFO units 4Ra and 4Rb) with strata 10 (St. Johns Bay) in the vicinity of the Strait of Belle Isle Study Area (Beaulieu et al., 2010).  Beaulieu et al. (2010) reported that, unlike the survey conducted in the fall of 2002, no significant signal of herring density ( $\text{kg/m}^2$ ) was measured in 2009 in strata 9 (Hawkes Bay) and 10 (St. John’s Bay). The total biomass index of spring spawning herring dropped sharply between 1991 and 1993, and after some stability, the index continued to fall from 34,550 t in 2002 to 5,801 t in 2009. In 2002, spring herring accounted for 32.1% of the total biomass of the spawning stock compared to 8.1% in 2009 (Figure 12). The total biomass index of fall-spawning herring also dropped between 1991 and 1993, and in 2009, the index was estimated at 66,216 t compared to 72,916 t in 2002.	

The 2010 acoustic herring survey was conducted on the Quebec Lower North Shore (NAFO unit area 4Sw) on October 21 and 22, 2010. All important herring signals were measured near the coast or in the first three nautical miles from the coastline (Gregoire and Beaulieu 2011). The total biomass index of spring spawners was estimated at 3,500 t compared to 80,855 t for fall spawners. The low abundance of spring spawners was explained by the fact that, at the time of the survey, they were likely outside the area.

Data from the DFO acoustic herring surveys in 2009 and 2010 have not been included in Figure 3.25.”

The following references are to be added to the Reference section on page 114:

Beaulieu, J.-L, McQuinn, I, and F. Gregoire. 2010. Atlantic Herring (*Clupea harengus harengus* L.) on the west coast of Newfoundland (NAFO Division 4R) in 2009. DFO Can. Sci. Advis. Sec., Res Doc 2010/049.

Grégoire, F., and J.-L. Beaulieu. 2011. Atlantic herring (*Clupea harengus harengus* L.) on the Quebec North Shore (NAFO Division 4S) in 2010. DFO Can. Sci. Advis. Sec. Res. Doc. 2011/019.

### **Section 3.3.2.3**

Text to be added on Page 69, as follows:

“Atlantic Mackerel do not spawn in the Strait of Belle Isle, however, they do move into the Strait after spawning season.

Grégoire et al. (2009) report that Newfoundland purse seiners have caught mackerel in the southern reaches of Study Area (NAFO unit 4Ra) between 1995 and 2007, mostly in the month of September. Catches have mostly been in the 0 to 10 metric ton range (1996, 1998, 1999, and 2004) although catches from 10 to 50 metric tons were reported in 1996. Most of the commercial mackerel data have been reported by NAFO unit, and by location that the catch was landed, making it difficult to determine the data specifically associated with the Strait of Belle Isle Study Area.

Data from the commercial mackerel fishery (Grégoire et al., 2009) have not been included in Figure 3.26.”