

Key Site 32: Nastapoka Islands and Lac Guillaume-Delisle, Quebec

Location: 56°43'53"N, 76°37'42"W

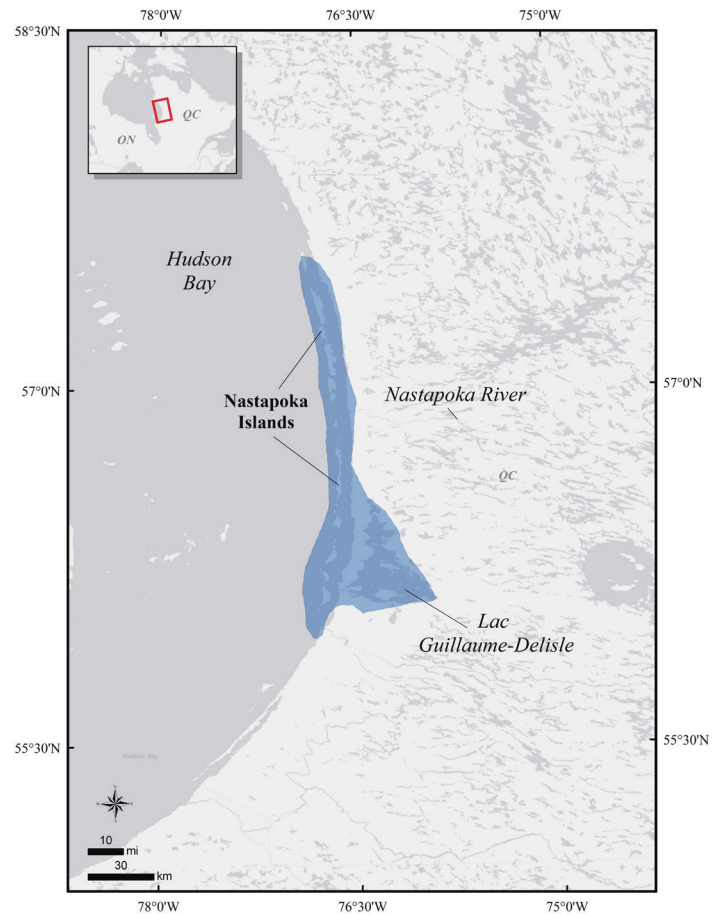
Size: 3887 km²

Description: The Nastapoka Islands and Sound (or channel) and Lac Guillaume-Delisle are situated on the east coast of Hudson Bay. Nastapoka Sound is a narrow 160 km channel between the Nastapoka Islands and the mainland; it extends from the channel (Le Goulet) of Lac Guillaume-Delisle in the south to the mouth of the Boniface River in the north. Lac Guillaume-Delisle is a large brackish lake (61 km long by 22 km wide; area of 712 km²) connected to Hudson Bay by a 5 km long channel.

Precision and Correction of Abundance

Estimates Presented: Abundance estimates presented for this key habitat site have not been adjusted to account for incomplete detection or other biases. Abundance estimates should be treated as minimum estimates.

Biological Value: This key site is particularly important for molting sea ducks, although a few hundred pairs of Common Eiders (*Somateria mollissima sedentaria*) historically breed on the Nastapoka Islands (Consortium Gauthier & Guillemette–GREBE 1990; there are no recent estimates). Both Nastapoka Sound and Lac Guillaume-Delisle host numerous molting scoters (Appendix 1). Male and female Black Scoter (*Melanitta americana*) and Surf Scoter (*Melanitta perspicillata*) use the area (SDJV 2015, Lamb et al. 2020). Black Scoter males arrive in early July and can stay as late as October, whereas females arrive later, peak in August and September, and can stay on site until early November (Lamb et al. 2021, S. Gilliland, Canadian Wildlife Service unpublished data; Appendix 2). Male and female Surf Scoters molt and stage on both waterbodies from late July to late October (SDJV 2015; Appendix 3). Aerial surveys in James and Hudson bays in 2013 reported nearly 10,000 molting Black Scoters within the key site on August 4 (Badzinski et al. 2013); however, this survey was timed optimally for molting male Black Scoters, and it is likely that greater numbers of sea ducks use this site once other cohorts (i.e., females and yearlings) and species (e.g., other scoter species, Common Eiders, mergansers)



arrive there later in August or September. Long-tailed Ducks (*Clangula hyemalis*) also molt along the eastern Hudson Bay coast (Lamb et al. 2020), forming rafts of up to 200 birds (Lamothe 1996). It is not known whether Red-breasted Mergansers (*Mergus serrator*), which nest abundantly in areas adjacent to the key site (Lepage et al. 2015), molt in this key site. Similarly, the importance of this key site to Harlequin Ducks (*Histrionicus histrionicus*) that breed in the watersheds of Lac Guillaume-Delisle and Nastapoka River (Morneau et al. 2008), and may use coastal areas for brood-rearing, is unknown.

The Nastapoka Islands and Sound–Lac Guillaume-Delisle key site is also used during spring (late May–early June) and fall migrations by Black and Surf scoters, Long-tailed Ducks (SDJV 2015, Lamb et al. 2020), and Common Eiders (Consortium Gauthier & Guillemette–GREBE 1990). Bufflehead (*Bucephala albeola*), Common Goldeneye (*Bucephala clangula*), Common Merganser (*Mergus merganser*), and Red-breasted Merganser are also believed to use this key site during migration.

Sensitivities: Availability and quality of food resources could be influenced by changes to water regimes and salinity (e.g., climate change, hydroelectric projects). Human disturbance can displace and alter behavior of birds, particularly while foraging or during the molting period.

Potential Conflicts: Hydroelectric projects on the adjacent mainland could affect the water regime and salinity in portions of Hudson Bay. For instance, about 100 km south of the key site, the Grande Rivière de la Baleine (formerly Great Whale River) and the Petite Rivière de la Baleine (formerly Little Whale River) were the subject of environmental assessments in the late 1980s because they were considered as potential sites for a new hydroelectric complex (Grande-Baleine); this project was abandoned in 1994 due to the Cree Tribal Governments' opposition. Berteaux et al. (2014) predict increasing temperature and precipitation within the next few decades in Quebec's taiga due to climate change; impacts will likely affect sea ducks, possibly favoring some species over others. Increases in precipitation that coincide with peak hatching time for sea ducks (early July) could negatively affect reproductive success.

Status: Wildlife management in this region is mostly under the Nunavik Marine Region Wildlife Board and the Eeyou Marine Region Wildlife Board. Parts of this key site fall within Tursujuq National Park (26,107 km²), which protects Lac Guillaume-Delisle as well as Lac à l'Eau-Claire (KRG 2007, Gouvernement du Québec 2015). Part of the key site also lies within the Rivers of the Lac Guillaume-Delisle Basin Important Bird Area that extends from the coast of Hudson Bay inland to the west side of Lac Eau Claire and mainly covers the rivers of this region. This Important Bird Area was principally identified based on the abundance of breeding Eastern Harlequin Ducks there (IBA Canada website).

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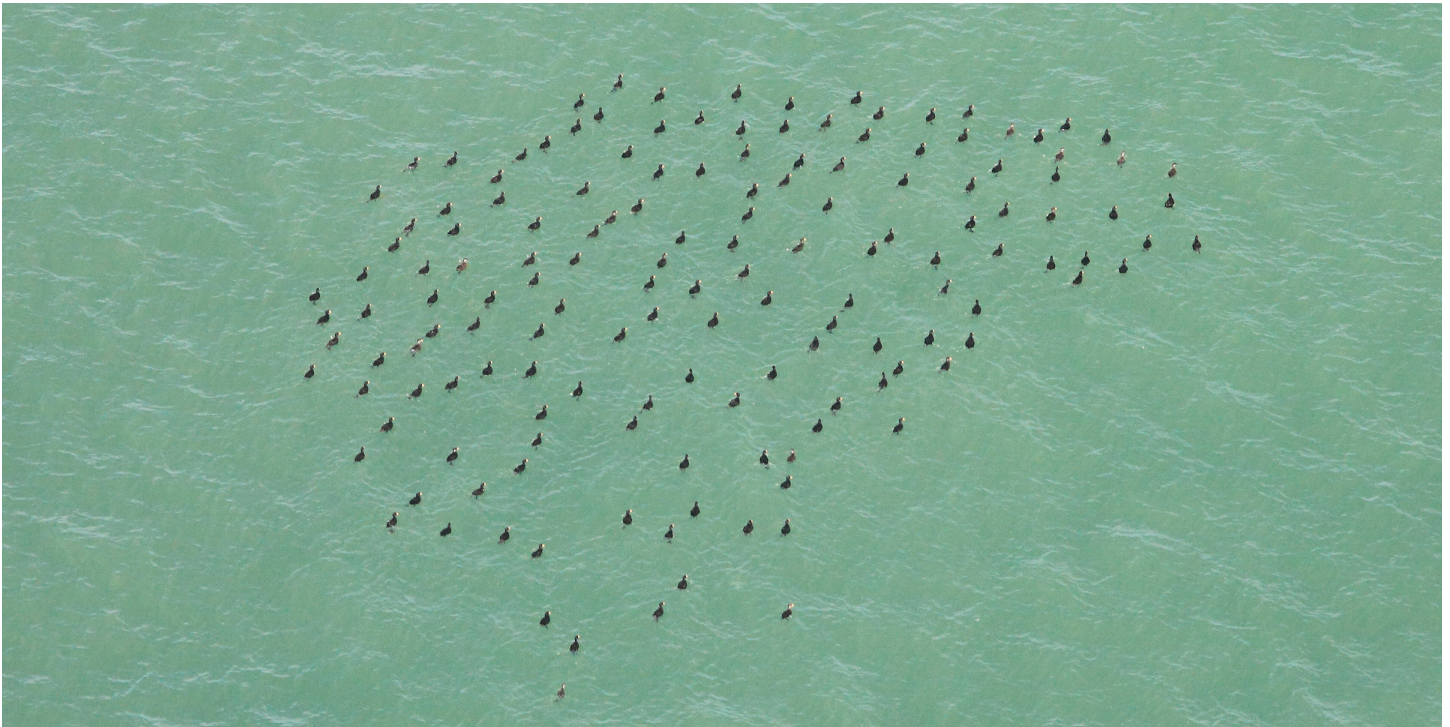
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A flock of molting Black Scoters. Photo: Shannon Badzinski.