

Special Management Practices for Herons

The following management plan is based largely on recommendations from the Management Guidelines for the Protection of Heronries in Ontario (Bowman & Siderius, 1984). The following series of suggested buffer zones provide minimal protection for Great Blue heron and other colonial nesting bird habitat.

Management Guidelines

- i Primary Zone extends a bare minimum of 300 m (990 ft. or 15 chains) from the peripheral nests of the colony. Entry into this buffer zone should be done only during the least sensitive parts of the breeding period (May to August) and only by persons conducting yearly censuses or researches approved by Nova Scotia Department of Natural Resources. Any low-flying aircraft should be prohibited during the breeding season (mid March to mid August). Activities that would necessitate the removal or modification of trees and ground vegetation within this buffer zone and the colony should be prohibited at all times. The use of all terrain vehicles and snowmobiles should be prohibited at all times as these create trails through the vegetation and may also initiate erosion. During the non-nesting season, habitat management activities to enhance the site or those that do not interfere with the nesting habitat (such as erecting duck boxes outside the colony) may be permitted in addition to non-invasive recreational activities such as hiking.
- ii Secondary Zone extends 1 km (two-thirds of a mile or 50 chains) from the peripheral nests of the colony. Activities such as road construction, forestry activities such as harvesting and site-preparation and any major construction should be prohibited in this buffer zone during the nesting season (mid March to

- mid August).
- iii In the case of heronries located on islands, all efforts should be made to leave the islands undisturbed. Even if past heronries have been abandoned for years development on the island should not be permitted. The habitat conditions that made the island suitable for nesting in previous years will quite probably result in it being used again in the future.

Background Information

Heronries or nesting colonies of herons are frequently located in areas isolated from human disturbance such as swamps, marshes, beaver ponds, and woodlots adjacent to water bodies or on islands. In Nova Scotia, 70% of all heronries, including the larger and more viable heronries are on islands where they are isolated from human and mammal contact. The mainland nests tend to be smaller and more transitory. Well-established heronries may be occupied for decades or even centuries due to the habitat conditions which are favorable for reproductive success.

Heronries are especially vulnerable to human disturbance and habitat destruction during the breeding season (March to August) when large numbers of birds are concentrated in a rather confined area. Herons are delicate and tend to desert nests and entire colonies if disturbed during periods of pair forming (late March), nest construction (early April) or early egg laying (mid to late April). Herons continue to be sensitive to disturbance after hatching (June) and up until the young fledge (early August). In some cases colonies have even been deserted after destruction or alteration of their habitat during the non-nesting season. Even if herons relocate after deserting a colony, consequences of disturbance include fragmentation of breeding populations, total reproductive failure in colonies, reduced number of breeding pairs, reduced reproductive output per pair and ultimately this can affect the stability of the entire regional population

(Bowman & Siderius, 1984).

Hérons are unpredictable in their response to disruption of a colony and the severity of the response does not always correspond to the magnitude of the disturbance (seemingly innocuous activities can produce serious results). The most important factors to consider when evaluating these effects are the timing of the disturbance in relation to critical periods of the nesting season and the degree to which the birds are able to adjust to human activities (degree of exposure-induced habituation). Herons seem disproportionately sensitive to humans or mammals moving around under their nesting trees. When conducting surveys or inventories, individuals should take caution to avoid walking into heronries, especially under nesting trees (indicated by the ring of white guano around the base of the tree). Should they find themselves within a heronry, one should quietly and quickly leave by the same route they entered.

Density of vegetation within and surrounding the colony can influence the impact of disturbances. The removal of vegetation near a colony can open paths into the heronry that would not only enable intrusion by humans and predators, but would result in an increased number of exposed nests. Maintaining the vegetation, including trees and shrubs, around a colony provides alternate nest sites and a buffer against disturbance.

Given the varying sensitivity of herons in different colonies, it is difficult to establish the precise distance that will best serve as a buffer zone in all cases. Their response to disturbance varies with factors such as geographic location, size of colony, species present, degree of habituation to disturbance and so on. As a general rule, herons should be considered quite sensitive to disturbance and the most generous buffer possible should be established for the heronries with care to increase the buffer zone if the colony size increases. Furthermore, heronries are not stationary and frequently move across an area as the immediate trees exposed to guano die. This in turn necessitates a dynamic buffer system that can be modified as the heronry moves.

Although the presence of Black-crowned Night Herons is minimal in our province

(found on nesting on Bon Portage Island and Seal Island), it would be prudent to provide this species of heron similar consideration and protection if encountered.

The common Double-crested Cormorants and uncommon Greater Cormorants, another colonial nesting species, occupy similar habitat and nesting areas as herons. They also need the protection of buffer zones while nesting, but they appear to be less sensitive to human disturbance than herons.

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