

5. A Nest of a Great Blue Heron

1) Definition

A *nest of a Great Blue Heron* (*Ardea herodias*) means the nest and its supporting structure that either (1) is currently occupied by a Great Blue Heron to hold its eggs or offspring, or (2) is habitually occupied and still capable of holding eggs or offspring of a Great Blue Heron (Figure 17).



Figure 17. Great Blue Heron nesting colony. (Photo: John Wanderer)

2) Species Description

The Great Blue Heron is a large, long-legged, wading bird with a long, yellow bill. The plumage is mostly gray-blue, with a white crown and face and a black eyebrow stripe (Figure 18). The front of the neck is white, streaked with black. Breeding adults have shaggy plumes on the head, neck, and back. Juvenile herons have a dark crown and lack the breeding plumes.

Two subspecies occur in British Columbia: *Ardea herodias fannini* breeds along the Coast, whereas *A. h. herodias* breeds in the Interior. Both subspecies of Great Blue Heron are *Species at Risk* under the *Forest and Range Practices Act* and are Blue-listed in British Columbia. The coastal subspecies, *A. h. fannini*, is designated as a species of *Special Concern* by COSEWIC.



Figure 18. Great Blue Heron. (Photo: Jared Hobbs)

3) What to Look For

Great Blue Herons nest in relatively contiguous forest, fragmented forest, or solitary trees near foraging areas. The most common tree species used for breeding on the Coast are red alder, black cottonwood, bigleaf maple, lodgepole pine, Sitka spruce, and Douglas-fir. In the southeastern Interior, black cottonwood comprises just over one-half of nest trees, with coniferous species (Douglas-fir, western white pine, hybrid white spruce, ponderosa pine, western redcedar, and western hemlock) accounting for the rest.

In British Columbia, breeding colonies of 2–400 nests occur, although some pairs nest solitarily. Research suggests that colonies probably function as an assembly area for herons to find new mates and nest sites each year. Some colonies are used for many years (> 20), but most colonies, especially those of under 50 nests, are relocated more frequently. Once a colony has been abandoned for more than 1 year, recolonization occurs infrequently.

The surest way to determine which bird species is using a large stick nest is to observe an adult bird at the nest site. The breeding season (March through August) is the best opportunity to do this. If a large stick nest is found during the non-breeding season, and cannot be attributed to a particular bird species, then assess the nest characteristics to determine whether it is a Great Blue Heron nest.

Table 19 summarizes what to look for when identifying a Great Blue Heron nest. Table 20 provides information to consider when conducting primary forest activities near a nest. Consider substituting lower-impact, alternative activities in areas near a Great Blue Heron nest during the breeding season. Table 21 suggests some alternatives to avoid rendering a nest ineffective.

Table 19. Great Blue Heron nests: what to look for.

Great Blue Heron Nest Description
<ul style="list-style-type: none"> • Nests are: <ul style="list-style-type: none"> ○ large, stick platforms, generally 1 m in diameter and approximately 0.5 m in depth; ○ less robust (“flimsy”), smaller, and shallower than raptor nests; and ○ typically made with small-diameter branches that are loosely arranged. • Herons may nest in loose or tight colonies, building nests in several different trees that may or may not be clustered. • Several pairs of herons may build nests in a single tree (see Figure 17); not all of them are necessarily active during a single year. • Herons often regurgitate indigestible food, which is found at the base of the nest tree. Like its whitewash (feces), the regurgitated food is usually dark gray in colour with a slight sheen or greasy appearance and may smell of fish. • Adult birds are often seen flying to and from the nest or perched nearby. • Young birds are often heard begging for food from within the nest.

Table 20. Information to consider when conducting primary forest or range activities near a nest of a Great Blue Heron.

Information to Consider
<ul style="list-style-type: none"> • Great Blue Heron nests are protected under Section 34b of the <i>Wildlife Act</i>. • If you are unsure whether an unoccupied large stick nest is that of a Great Blue Heron, consult a qualified professional biologist to identify the species (see also Table 19). • Unless they occur in more developed locations (e.g., urban/rural interfaces), Great Blue Herons have low to moderate thresholds for new human disturbance, particularly during the breeding season. Unaccustomed levels of noise or human activity near the nest tree can cause some pairs to abandon their nest, particularly during the early part of the nesting season (i.e., before June). Therefore: <ul style="list-style-type: none"> ○ Avoid disturbance near nests and nest colonies during the breeding season (Coastal: February 15–August 31; Interior: March 15–September 31). ○ Minimize access on existing roads and trails during the breeding season (types and levels of use should not exceed customary levels). ○ Establish a forested buffer to provide visual screening around confirmed nest colonies. Ideally, the colony should be centred in the forested patch. If this is not practical, locate the patch so that the nest trees are connected to adjacent forested habitat. ○ Avoid developing new roads, recreation trails, structures, or facilities within retention patches. • Use livestock attractants and range developments to keep livestock away from nest trees and surrounding habitat.

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Table 21. Activity impacts near Great Blue Heron nests and suggested lower-impact alternatives.

Activity	Suggested Lower-impact Alternatives
High Impact	
Blasting	○ Delay until after breeding season (March 1–August 31).
Road construction	○ Delay until after breeding season (March 1–August 31).
Repeated low altitude helicopter flight activity (< 300 m altitude)	○ Plan recurring flight paths to a > 300 m line-of-sight distance from known nest trees during the breeding season (March 1–August 31). ○ Fly at higher altitudes (> 300 m) near nest sites during the breeding season (March 1–August 31).
Falling and yarding (including mechanized falling)	○ Delay until after the breeding season (March 1–August 31).
Medium Impact	
Brushing and thinning	○ Delay until after breeding season (March 1–August 31).
Low Impact	
Block layout, surveys, timber cruising	○ Minimize loud voices or shouting; try to remain at least 50 m away from active nest sites. ○ Minimize time spent in the nest area during the breeding season (March 1–August 31).

4) Regional Information – Kootenay Boundary

In this section, we provide specific timing windows and guidance on disturbance buffers for the Kootenay Boundary Region. This information may vary from provincial guidance and may not be applicable outside of the Kootenay Boundary Region because of regional specificity.

The Great Blue Heron is a migratory species. It is most commonly found in lowlands and valley bottoms of the Kootenay Boundary Region (Figure 19, Table 22). Great Blue Heron sensitivity to disturbance varies with their existing exposure to disturbance and the level of disturbance from the proposed activity. Figure 20 provides suggested minimum buffer sizes. Table 23 supplies additional guidance on protection or alternative measures that may be needed, depending on the nature of the disturbance, existing landscape and cover, or other factors.

Great Blue Herons are most sensitive during the breeding season, which includes territory establishment and courtship stages. Each breeding season stage requires protection because this disturbance-sensitive bird could abandon a site at any time during the entire breeding period. They are most sensitive during the early stages of nest selection and nest building, pair-forming, and egg-laying. Please note that the following dates offer a general guideline of when you might expect to see breeding season activities in the Kootenay Boundary Region; actual breeding season length will depend on the year and area.

- Courtship and nest initiation: February 15–April 30
- Eggs present: April 1–June 30
- Young present: July 1–August 31

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This creates a potential *sensitive period of February 15–August 31*, which encompasses courtship (month before nesting), nesting, and fledging.^{1,2} Based on observations of nest stage observations, the length of this sensitive period can be refined. The period of *least risk is September 15–January 15*.

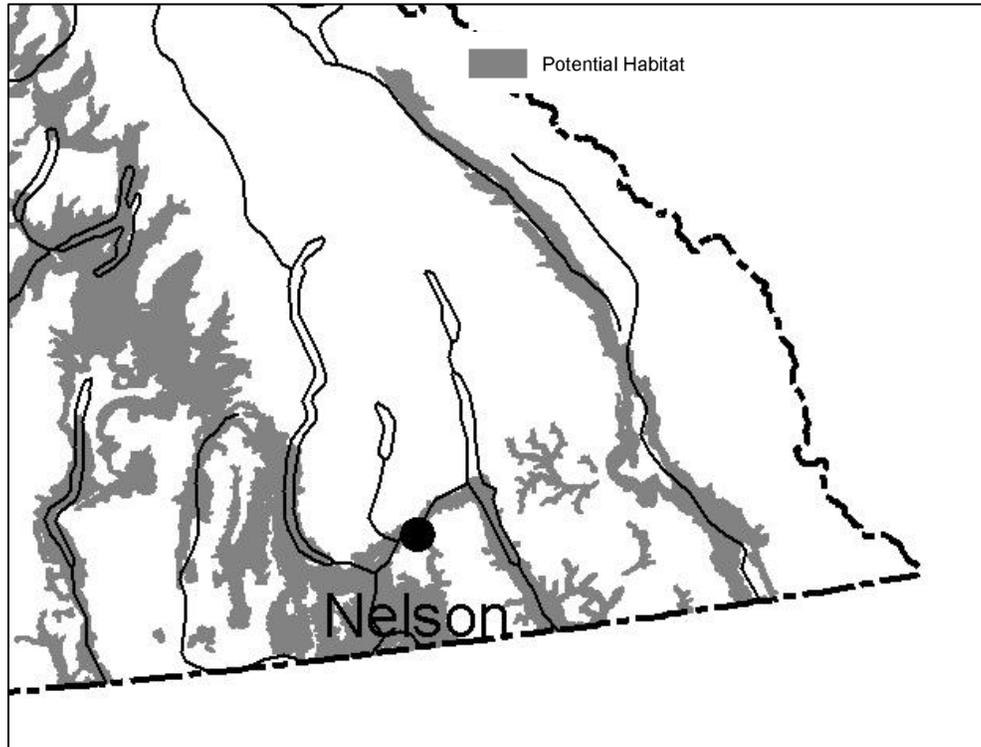


Figure 19. Distribution of Great Blue Heron habitat in the Kootenay Boundary Region.³

Table 22. Habitat and biogeoclimatic associations of Great Blue Heron in the Kootenay Boundary Region.^{3,4}

Habitat	Biogeoclimatic Zone ⁵	Biogeoclimatic Subzone/Variant
Interior Cedar–Hemlock	ICH	dw1, dw2, dm, mk1, mk2, mk3, mk4, mk5, mw2, mw3, mw4, mw5, xw, vk1, wk1
Interior Douglas-fir	IDF	dk3, dk5, dm1, dm2, mw1, mw2, un, xh1, xh2, xh4, xk
Montane Spruce	MS	dk1, dk2
Ponderosa Pine	PP	dh1, dh2, xh1, xh2

¹ Modified from Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia.

² Status of the Great Blue Heron in British Columbia (2001).

³ Adapted from the Identified Wildlife Management Strategy – Species Accounts and Measures (2004).

⁴ M. Machmer, Registered Professional Biologist, Pandion Ecological Research Ltd., pers. comm. (2018).

⁵ A Field Guide for Site Identification and Interpretation for the Nelson Forest Region (1992).

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		Existing Exposure to Disturbance			
		NEST SITE BUFFER	NIL Isolated site, little or no prior access	LOW Undeveloped area with occasional human use	MODERATE Near secondary logging road or minor recreation site
Disturbance Level of Proposed Activity	LOW Activities on foot. Small group, visual screening present. Livestock attractants. Examples: layout, cruising, salt licks.	200 m	60 m	60 m	60 m
	MODERATE Light mechanized activities. Larger group/duration, no visual screening. Examples: spacing, planting, fence construction.	300 m	200 m	200 m	60 m
	HIGH Mechanized activities. Examples: road construction, falling and yarding, landing sites.	300 m	300 m	300 m	200 m
	VERY HIGH Blasting, helicopter logging.	1000 m+	1000 m+	1000 m+	1000 m+

Figure 20. Recommended disturbance buffers around a Great Blue Heron nest, depending on existing disturbance and the disturbance level of the proposed activity.⁶

Table 23. Additional guidance on disturbance buffers for a Great Blue Heron nest.⁶

A Nest of a Great Blue Heron – Guidance on Buffers
<ul style="list-style-type: none"> • The buffer should be measured as a line drawn around the outer perimeter of all nest trees. • Increase buffer or delay activities, if the nest is active and the bird constantly flushes away when using minimum buffers. • During breeding season, consider adding a “quiet” buffer of an extra 200 m to the no disturbance buffer in which no unusual or sudden loud activities will occur (e.g., blasting, tree felling, chain saws, trucking, etc.).

⁶ Modified from Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia.

5) Additional Information

A Field Guide for Site Identification and Interpretation for the Nelson Forest Region, Land Management Handbook No. 20:

<https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh20.htm>

Atlas of the Breeding Birds of British Columbia – Great Blue Heron Species Account:

<http://www.birdatlas.bc.ca/accounts/speciesaccount.jsp?sp=GBHE&lang=en>

BC Species and Ecosystems Explorer – Species Summary for Great Blue Heron, *herodias* subspecies:

<http://a100.gov.bc.ca/pub/eswp/speciesSummary.do?id=17626>

Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia:

<https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resource-standards-and-guidance/best-management-practices/develop-with-care>

Great Blue Heron COSEWIC Status Report:

http://www.registrelep-sararegistry.gc.ca/virtual_sara/files/cosewic/sr_great_blue_heron_0808_e.pdf

Identified Wildlife Management Strategy – Great Blue Heron Species Account:

http://www.env.gov.bc.ca/wld/frpa/iwms/documents/Birds/b_greatblueheron.pdf

Status of the Great Blue Heron in British Columbia:

<http://www.env.gov.bc.ca/wld/documents/statusrpts/wr102.pdf>