

Wildlife Habitat Features Field Guide

(Kootenay Boundary Region)



American Badger at burrow entrance (Photo: Rich Weir)

B.C. Ministry of Environment and Climate Change Strategy
Ecosystems Branch

April 2018

Executive Summary

A “wildlife habitat feature” is defined as a feature used by one or more wildlife species to meet their life history requirements; special management is necessary to ensure that these features are protected and remain functional. These features are established under the authority of the *Forest and Range Practices Act*. Various regulations under the Act require that an authorized person carrying out primary forest or range activities “does not damage or render ineffective a wildlife habitat feature.” Forest agreement holders are also required to report locations of new features encountered during routine forest activities. The Act includes provisions that allow agreement holders to seek exemptions from the requirement to protect a wildlife habitat feature. Before providing an exemption, the delegated decision maker must be satisfied that compliance with the requirement is not feasible.

The current Wildlife Habitat Feature Order (hereafter “the Order) for the Kootenay Boundary Region of British Columbia includes some of the features listed in the Act’s Government Actions Regulation. In addition, the Order includes localized features identified by the Ministry of Environment and Climate Change Strategy in consultation with regional staff from the Ministry of Forests, Lands, Natural Resource Operations and Rural Development and industry stakeholders. These represent high-priority features associated with species of special management concern. The current list for the Kootenay Boundary Region may be expanded from time to time to reflect new information that indicates potential threats from forest or range activities on particular localized features.

Identification of a wildlife habitat feature must be sufficiently specific to enable a person affected by it to identify the feature in the normal course of carrying out forest or range practices. Therefore, clear definitions and descriptions accompany the Order. This Field Guide expands on these definitions and descriptions, and also offers suggested management strategies for consideration when carrying out primary forest or range activities; however, under the Act’s results-based professional reliance regulatory model, forest agreement holders are under no legal requirement to follow these strategies.

List of Wildlife Habitat Features – Kootenay Boundary Region

1. a nest of a Bald Eagle
2. a nest of an Osprey
3. a nest of a Flammulated Owl
4. a nest of a Western Screech-Owl *macfarlanei* subspecies
5. a nest of a Great Blue Heron
6. a nest of a Lewis’s Woodpecker
7. a nest of a Williamson’s Sapsucker
8. an American Badger burrow
9. a Grizzly Bear den
10. a significant mineral lick
11. a significant wallow
12. a bat hibernaculum
13. a bat nursery roost
14. a hot spring or thermal spring

Table of Contents

Executive Summary	i
Acknowledgements.....	vi
PART 1: INTRODUCTION.....	7
Background.....	7
Purpose of the Wildlife Habitat Feature Field Guide	8
Definition and Description of Wildlife Habitat Features.....	8
Reporting and Tracking Wildlife Habitat Features.....	9
Exemptions from Requirements to Protect Wildlife Habitat Features.....	9
Due Diligence and Professional Reliance.....	10
Related <i>Forest and Range Practices Act</i> Provisions, Other Laws, and Legal Obligations	10
Field Guide Contents	12
PART 2: GUIDANCE FOR MANAGING WILDLIFE HABITAT FEATURES.....	Error!
Bookmark not defined.	
1. A Nest of a Bald Eagle	Error! Bookmark not defined.
2. A Nest of an Osprey.....	Error! Bookmark not defined.
3. A Nest of a Flammulated Owl	Error! Bookmark not defined.
4. A Nest of a Western Screech-Owl <i>macfarlanei</i> subspecies....	Error! Bookmark not defined.
5. A Nest of a Great Blue Heron.....	Error! Bookmark not defined.
6. A Nest of a Lewis’s Woodpecker	Error! Bookmark not defined.
7. A Nest of a Williamson’s Sapsucker	Error! Bookmark not defined.
8. An American Badger Burrow	Error! Bookmark not defined.
9. A Grizzly Bear Den	Error! Bookmark not defined.
10. A Significant Mineral Lick	Error! Bookmark not defined.
11. A Significant Wallow	Error! Bookmark not defined.
12. A Bat Hibernaculum	Error! Bookmark not defined.
13. A Bat Nursery Roost.....	Error! Bookmark not defined.
14. A Hot Spring or Thermal Spring	Error! Bookmark not defined.

List of Tables

Table 1. Bald Eagle nests: what to look for.....	Error! Bookmark not defined.
Table 2. Information to consider when conducting primary forest activities near a nest of a Bald Eagle.	Error! Bookmark not defined.
Table 3. Activity impacts near Bald Eagle nests and suggested lower-impact alternatives...	Error! Bookmark not defined.
Table 4. Habitat and biogeoclimatic associations of Bald Eagles in the Kootenay Boundary Region.	Error! Bookmark not defined.
Table 5. Additional guidance on disturbance buffers for a Bald Eagle’s nest. ...	Error! Bookmark not defined.
Table 6. Osprey nests: what to look for.....	Error! Bookmark not defined.
Table 7. Information to consider when conducting primary forest activities near a nest of an Osprey.	Error! Bookmark not defined.
Table 8. Activity impacts near Osprey nests and suggested lower-impact alternatives.	Error! Bookmark not defined.
Table 9. Habitat and biogeoclimatic associations of Osprey in the Kootenay Boundary Region.	Error! Bookmark not defined.
Table 10. Additional guidance on disturbance buffers for an Osprey’s nest.	Error! Bookmark not defined.
Table 11. Flammulated Owl nests: what to look for.	Error! Bookmark not defined.
Table 12. Information to consider when conducting primary forest activities	

Wildlife Habitat Features Field Guide (Kootenay Boundary Region)

near a nest of a Flammulated Owl. **Error! Bookmark not defined.**
Table 13. Habitat and biogeoclimatic associations of Flammulated Owls in the Kootenay Boundary Region. **Error! Bookmark not defined.**
Table 14. Additional guidance on disturbance buffers for a Flammulated Owl’s nest. **Error! Bookmark not defined.**
Table 15. Western Screech-Owl *macfarlanei* subspecies nests: what to look for. **Error! Bookmark not defined.**
Table 16. Information to consider when conducting primary forest or range activities near a nest of a Western Screech-Owl *macfarlanei* subspecies. **Error! Bookmark not defined.**
Table 17. Habitat and biogeoclimatic associations of Western Screech-Owl *macfarlanei* subspecies in the Kootenay Boundary Region. **Error! Bookmark not defined.**
Table 18. Additional guidance on disturbance buffers for a Western Screech-Owl *macfarlanei* subspecies nest. **Error! Bookmark not defined.**
Table 19. Great Blue Heron nests: what to look for. **Error! Bookmark not defined.**
Table 20. Information to consider when conducting primary forest or range activities near a nest of a Great Blue Heron. **Error! Bookmark not defined.**
Table 21. Activity impacts near Great Blue Heron nests and suggested lower-impact alternatives. **Error! Bookmark not defined.**
Table 22. Habitat and biogeoclimatic associations of Great Blue Heron in the Kootenay Boundary Region. **Error! Bookmark not defined.**
Table 23. Additional guidance on disturbance buffers for a Great Blue Heron nest. **Error! Bookmark not defined.**
Table 24. Lewis’s Woodpecker nest description: what to look for. **Error! Bookmark not defined.**
Table 25. Information to consider when conducting primary forest and range activities near Lewis’s Woodpecker nests. **Error! Bookmark not defined.**
Table 26. Habitat and biogeoclimatic associations of Lewis’s Woodpecker in the Kootenay Boundary Region. **Error! Bookmark not defined.**
Table 27. Guidance on disturbance buffers for a Lewis’s Woodpecker nest. **Error! Bookmark not defined.**
Table 28. Williamson’s Sapsucker nest description: what to look for. **Error! Bookmark not defined.**
Table 29. Information to consider when conducting primary forest and range activities near Williamson’s Sapsucker nests. **Error! Bookmark not defined.**
Table 30. Habitat and biogeoclimatic associations of Williamson’s Sapsuckers in the Kootenay Boundary Region. **Error! Bookmark not defined.**
Table 31. Guidance on disturbance buffers for a Williamson’s Sapsucker nest. **Error! Bookmark not defined.**
Table 32. American Badger burrows: what to look for. **Error! Bookmark not defined.**
Table 33. Information to consider when conducting primary forest or range activities near badger burrows. **Error! Bookmark not defined.**
Table 34. Habitat and biogeoclimatic associations of American Badgers in the Kootenay Boundary Region. **Error! Bookmark not defined.**
Table 35. Grizzly Bear ground dens: what to look for. **Error! Bookmark not defined.**
Table 36. Information to consider when conducting primary forest activities near Grizzly Bear ground dens. **Error! Bookmark not defined.**
Table 37. Guidance on disturbance buffers for a Grizzly Bear den. **Error! Bookmark not defined.**
Table 38. A significant mineral lick: what to look for. **Error! Bookmark not defined.**
Table 39. Information to consider when conducting primary forest or range activities or near a significant mineral lick. **Error! Bookmark not defined.**
Table 40. Guidance on disturbance buffers for significant mineral licks. **Error! Bookmark not defined.**
Table 41. A significant wallow: what to look for. **Error! Bookmark not defined.**

Wildlife Habitat Features Field Guide (Kootenay Boundary Region)

- Table 42. Information to consider when conducting primary forest or range activities near a significant wallow. **Error! Bookmark not defined.**
- Table 43. Guidance on disturbance buffers for significant wallows. **Error! Bookmark not defined.**
- Table 44. Bat conservation status and distribution by region in British Columbia. **Error! Bookmark not defined.**
- Table 45. Bat hibernacula: what to look for. **Error! Bookmark not defined.**
- Table 46. Information to consider when conducting primary forest activities near a bat hibernaculum..... **Error! Bookmark not defined.**
- Table 47. Elevation, biogeoclimatic zones, and characteristics of hibernacula structures within species’ distributions in the Kootenay Boundary Region. **Error! Bookmark not defined.**
- Table 48. Guidance on disturbance buffers for a bat hibernaculum. **Error! Bookmark not defined.**
- Table 49. Bat nursery roosts: what to look for. **Error! Bookmark not defined.**
- Table 50. Information to consider when conducting primary forest activities near a bat nursery roost..... **Error! Bookmark not defined.**
- Table 51. Characteristics of natural bat nursery roosts in the Kootenay Boundary Region. .. **Error! Bookmark not defined.**
- Table 52. Guidance on disturbance buffers for a bat nursery roost..... **Error! Bookmark not defined.**
- Table 53. Hot or thermal springs: what to look for. **Error! Bookmark not defined.**
- Table 54. Information to consider when conducting primary forest or range activities near hot springs and thermal springs. **Error! Bookmark not defined.**
- Table 55. Guidance on disturbance buffers for a hot or thermal spring. **Error! Bookmark not defined.**

List of Figures

- Figure 1. Immature Bald Eagle at nest. **Error! Bookmark not defined.**
- Figure 2. Adult Bald Eagle. **Error! Bookmark not defined.**
- Figure 3. Distribution of Bald Eagles in the Kootenay Boundary Region. .. **Error! Bookmark not defined.**
- Figure 4. Recommended disturbance buffers around a Bald Eagle’s nest, depending on existing disturbance and disturbance level of the proposed activity. **Error! Bookmark not defined.**
- Figure 5. Osprey nest..... **Error! Bookmark not defined.**
- Figure 6. Adult Osprey..... **Error! Bookmark not defined.**
- Figure 7. Distribution of Ospreys in the Kootenay Boundary Region. **Error! Bookmark not defined.**
- Figure 8. Recommended disturbance buffers around an Osprey’s nest, depending on existing disturbance and the disturbance level of the proposed activity. **Error! Bookmark not defined.**
- Figure 9. Flammulated Owl in nest cavity. **Error! Bookmark not defined.**
- Figure 10. Flammulated Owl..... **Error! Bookmark not defined.**
- Figure 11. Distribution of Flammulated Owl habitat in the Kootenay Boundary Region..... **Error! Bookmark not defined.**
- Figure 12. Recommended disturbance buffers around a Flammulated Owl’s nest, depending on existing disturbance and the disturbance level of the proposed activity. **Error! Bookmark not defined.**
- Figure 13. Western Screech-Owl at nest cavity. **Error! Bookmark not defined.**
- Figure 14. Western Screech-Owl *macfarlanei* subspecies. **Error! Bookmark not defined.**
- Figure 15. Distribution of the Western Screech-Owl *macfarlanei* subspecies habitat in the Kootenay Boundary Region. **Error! Bookmark not defined.**

Wildlife Habitat Features Field Guide (Kootenay Boundary Region)

- Figure 16. Recommended disturbance buffers around a Western Screech-Owl *macfarlanei* subspecies' nest, depending on existing disturbance and the disturbance level of the proposed activity. **Error! Bookmark not defined.**
- Figure 17. Great Blue Heron nesting colony. **Error! Bookmark not defined.**
- Figure 18. Great Blue Heron. **Error! Bookmark not defined.**
- Figure 19. Distribution of Great Blue Heron habitat in the Kootenay Boundary Region. **Error! Bookmark not defined.**
- Figure 20. Recommended disturbance buffers around a Great Blue Heron nest, depending on existing disturbance and the disturbance level of the proposed activity. **Error! Bookmark not defined.**
- Figure 21. Lewis's Woodpecker nest trees. **Error! Bookmark not defined.**
- Figure 22. Lewis's Woodpecker at nest cavity. **Error! Bookmark not defined.**
- Figure 23. Distribution of Lewis's Woodpecker in the Boundary area based on habitat suitability mapping. **Error! Bookmark not defined.**
- Figure 24. Distribution of Lewis's Woodpecker in the Pend D'Oreille area based on habitat suitability mapping. **Error! Bookmark not defined.**
- Figure 25. Distribution of Lewis's Woodpecker in the East Kootenay area based on habitat suitability mapping. **Error! Bookmark not defined.**
- Figure 26. Williamson's Sapsucker nest trees. **Error! Bookmark not defined.**
- Figure 27. Williamson's Sapsucker. **Error! Bookmark not defined.**
- Figure 28. Suitable habitat for Williamson's Sapsucker within the Boundary portion of the Okanagan-Boundary area of occupancy. **Error! Bookmark not defined.**
- Figure 29. Suitable habitat for Williamson's Sapsucker within the East Kootenay area of occupancy. **Error! Bookmark not defined.**
- Figure 30. American Badger at its burrow. **Error! Bookmark not defined.**
- Figure 31. A freshly dug badger burrow. **Error! Bookmark not defined.**
- Figure 32. A no machine zone established around an American Badger burrow **Error! Bookmark not defined.**
- Figure 33. Distribution of potential American Badger habitat in the Kootenay Boundary Region. **Error! Bookmark not defined.**
- Figure 34. Grizzly Bear ground den in alpine. **Error! Bookmark not defined.**
- Figure 35. Grizzly Bear. **Error! Bookmark not defined.**
- Figure 36. Interior of Grizzly Bear ground den. **Error! Bookmark not defined.**
- Figure 37. Potential Grizzly Bear denning habitats in the Kootenay Boundary Region. **Error! Bookmark not defined.**
- Figure 38. Mountain Goats at a wet mineral lick. **Error! Bookmark not defined.**
- Figure 39. Bighorn Sheep at dry mineral lick. **Error! Bookmark not defined.**
- Figure 40. Moose wallow in high-elevation fen. **Error! Bookmark not defined.**
- Figure 41. Moose in wallow. **Error! Bookmark not defined.**
- Figure 42. Grizzly Bear in wallow. **Error! Bookmark not defined.**
- Figure 43. Townsend's Big-Eared Bat hibernaculum located in a cave. **Error! Bookmark not defined.**
- Figure 44. Bat hibernaculum in cliff crevices. **Error! Bookmark not defined.**
- Figure 45. Western redcedar bat nursery roost. **Error! Bookmark not defined.**
- Figure 46. Inside a western redcedar bat nursery roost. **Error! Bookmark not defined.**
- Figure 47. Sloughing bark provides potential nursery roost sites. **Error! Bookmark not defined.**
- Figure 48. Hot spring. **Error! Bookmark not defined.**
- Figure 49. Hot spring. **Error! Bookmark not defined.**
- Figure 50. Locations of thermal springs in the Kootenay Boundary Region. **Error! Bookmark not defined.**

Acknowledgements

Several people contributed to the review and publication of this Field Guide. These current and former provincial government staff provided content and review comments:

Ted Antifeau, Louise Blight, Michael Burwash, Emily Chow, Laura Darling, Tim Davis, Peter Fielder, Greg George, Purnima Govindarajulu, Stewart Guy, Jared Hobbs, Jeff Hoyt, Francis Iredale, Geoffrey Klassen, Todd Manning, Rob Martin, Erica McClaren, Leslie McKinley, Roger Packham, Erin Prescott, Heather Pritchard, Jennifer Psyllakis, Rodger Stewart, Lisa Tedesco, Richard Thompson, Peter Tschaplinski, Joanne Vinnedge, Rich Weir, and Andy Witt.

These forest industry and woodlot owner representatives provided review comments:

John Deal, George Delisle, Shawn Flynn, Stephanie Keightley, Les Kiss, Dave Lindsay, Archie Macdonald, Fred Marshall, Dave Marquis, Sue McDonald, Mark Phinney, and Kari Stuart-Smith.

These consulting biologists provided review comments:

Paul Chytyk, Les Gyug, Susan Holroyd, Leigh Ann Isaac, Cori Lausen, and David Nagorsen.

Susan Bannerman (Kaatza Publishing Services) undertook the English edit. Paul Nystedt (Ministry of Environment and Climate Change Strategy) completed the layout and formatting.

PART 1: INTRODUCTION

Background

A “wildlife habitat feature” is defined as a feature used by one or more wildlife species to meet their life history requirements; special management is necessary to ensure that these features are protected and remain functional. Wildlife habitat features are established under the authority of the *Forest and Range Practices Act* Government Actions Regulation.¹ The Forest Planning and Practices Regulation,² Woodlot Planning and Practices Regulation,³ and Range Planning and Practices Regulation⁴ all require that an authorized person carrying out primary forest or range activities “does not damage or render ineffective a wildlife habitat feature.” In addition, *Forest Act* agreement holders are required to report annually to the district manager the location of new wildlife habitat features.⁵

The current Wildlife Habitat Feature Order (hereafter “the Order”) for the Kootenay Boundary Region of British Columbia includes some of the features listed in the regulation (i.e., mineral lick, wallow, and the nests of bird species such as Bald Eagle and Osprey). In addition, the Order includes localized features identified by the Ministry of Environment and Climate Change Strategy in consultation with regional staff from the Ministry of Forests, Lands, Natural Resource Operations and Rural Development and industry stakeholders. These represent high-priority features associated with species of special management concern that are potentially affected by forest or range practices, and for which no other means exists to provide special management (e.g., bat hibernacula and hot springs or thermal springs that provide unique habitat for certain plant and invertebrate species). The current wildlife habitat feature list for the Kootenay Boundary Region may be expanded from time to time to reflect new information that indicates potential threats from forest or range activities on a particular localized feature.

****Important Note****

- ***The information contained in this Field Guide does not constitute a legal or professional practice requirement.***
- This information does not create any mandatory obligations on a person undertaking forest or range practices and cannot establish the site-specific prescription for compliance with the requirements of regulation.
- It is up to the prescribing professional, and forest or range manager, to determine the most appropriate practices given site-specific situations and circumstances, and with due consideration of the best current technical information available to that person.
- This approach is consistent with the results-based professional reliance regulatory model required for forest and range management under the *Forest and Range Practices Act*.

¹ See the Government Actions Regulation, Section 11(1):

http://www.bclaws.ca/Recon/document/ID/freeside/582_2004#section11.

² See the Forest Planning and Practices Regulation, Section 70(2):

http://www.bclaws.ca/Recon/document/ID/freeside/14_2004#section70.

³ See the Woodlot Planning and Practices Regulation, Section 56(1):

http://www.bclaws.ca/civix/document/id/complete/statreg/21_2004#section56.

⁴ See the Range Planning and Practices Regulation, Section 37(1):

http://www.bclaws.ca/civix/document/id/complete/statreg/19_2004#section37.

⁵ See the Forest Planning and Practices Regulation, Section 86(3)(b):

http://www.bclaws.ca/civix/document/id/complete/statreg/14_2004#section86; and the Woodlot Planning and Practices Regulation, Section 76(2): http://www.bclaws.ca/civix/document/id/complete/statreg/21_2004#section76.

Purpose of the Wildlife Habitat Feature Field Guide

Intended specifically for Kootenay Boundary Region forest and range practitioners, this Field Guide will assist in:

- identifying wildlife habitat features;
- understanding how forest and range activities may damage or render ineffective a wildlife habitat feature;
- understanding reporting requirements (*Forest Act* agreement holders only) when a wildlife habitat feature is encountered; and
- preparing an exemption request when compliance with the Order may not be practical or realistic.

The Field Guide also provides information regarding the choice of practices to consider when undertaking primary forest or range activities around a given feature so as not to damage it or render it ineffective.

Additional supporting information is available on the Wildlife Habitat Features website:

gov.bc.ca/Kootenay-Boundary-Wildlife-Habitat-Features-Order

Definition and Description of Wildlife Habitat Features

The following 14 features are identified in the Wildlife Habitat Feature Order for the Kootenay Boundary Region:

1. a nest of a Bald Eagle (*Haliaeetus leucocephalus*)
2. a nest of an Osprey (*Pandion haliaetus*)
3. a nest of a Flammulated Owl (*Psiloscoops flammeolus*)
4. a nest of a Western Screech-Owl *macfarlanei* subspecies (*Megascops kennicottii macfarlanei*)
5. a nest of a Great Blue Heron (*Ardea herodias*)
6. a nest of a Lewis's Woodpecker (*Melanerpes lewis*)
7. a nest of a Williamson's Sapsucker (*Sphyrapicus thyroideus*)
8. an American Badger burrow (*Taxidea taxus*)
9. a Grizzly Bear den (*Ursus arctos*)
10. a significant mineral lick
11. a significant wallow
12. a bat hibernaculum
13. a bat nursery roost
14. a hot spring or thermal spring

In addition to these definitions, to become recognized as a wildlife habitat feature, **all** of the following attributes must be present.

- The feature is newly or previously known to exist at a specified location.
- The feature is in functioning condition; that is, the feature is capable of providing the habitat and ecological functions associated with it.

Wildlife Habitat Features Field Guide (Kootenay Boundary Region)

- The feature has visible evidence of past use⁶ by the associated wildlife species (except for the “hot spring or thermal spring” feature).
- The feature is naturally occurring; it is not created by human activities.

Occasionally, it may be difficult to determine whether suspected features meet the definition. For example, a potential bat hibernaculum is observed in summer, or an unoccupied cavity nest is spotted outside the usual breeding time. If any doubt exists, the precautionary principle is applied by considering the above criteria. When all attributes are present, it is reasonable to assume the feature meets its definition. If greater certainty is required, revisit the site during the appropriate season or ask a qualified professional to assess the feature.

Reporting and Tracking Wildlife Habitat Features

Tracking the locations of wildlife habitat features is important to ensure effective management, as well as data access and availability. Doing so serves two purposes: (1) it provides those who carry out primary forest activities with the ability to determine the locations of known features and to plan their operations accordingly; and (2) it allows the location of these features to be known for compliance and effectiveness evaluations.

Each year, *Forest Act* agreement holders must report any newly encountered features within, or contiguous to, cutblocks or roads. This information is forwarded to district managers. Woodlot licence holders must report new wildlife habitat features by May 31.⁷ All other forest licence and agreement holders must report new features by June 1.⁸ At this time, *Range Act* agreement holders have no reporting requirements.

The location of new features is reported online. Paper forms are also available from the regional biologist. For more information on how to report new wildlife habitat features, see: gov.bc.ca/Kootenay-Boundary-Wildlife-Habitat-Features-Order.

Exemptions from Requirements to Protect Wildlife Habitat Features

In certain circumstances, it may not be practical or realistic to comply with the regulatory requirements to protect wildlife habitat features. Various *Forest and Range Practices Act* provisions allow agreement holders to seek exemptions from the requirement to protect (“not damage or render ineffective”) a feature.⁹

Requests for an exemption are made to the delegated decision maker (currently the Director of Resource Management, Ministry of Forests, Lands, Natural Resource Operations and Rural Development). Before providing an exemption, the delegated decision maker must be satisfied that compliance with the Order is

⁶ “Visible evidence of past use” means the presence of the associated wildlife species, or observable sign of the species (e.g., tracks, hair, feathers, fecal droppings, feeding sign or prey remains, excavations, nesting or bedding material, etc.), is seen at the feature location.

⁷ See the Woodlot Licence Planning and Practices Regulation, Sections 76(2) and Section 76(3)(d): http://www.bclaws.ca/civix/document/id/complete/statreg/21_2004#section76.

⁸ See the Forest Planning and Practices Regulation, Section 86(3)(b): http://www.bclaws.ca/civix/document/id/complete/statreg/14_2004#section86.

⁹ See the Forest Planning and Practices Regulation, Section 92(2) (http://www.bclaws.ca/civix/document/id/complete/statreg/14_2004#section92); Woodlot Licence Planning and Practices Regulation Section 79(2) (http://www.bclaws.ca/civix/document/id/complete/statreg/21_2004#section79); and the Range Planning and Practices Regulation, Section 37(2) (http://www.bclaws.ca/civix/document/id/complete/statreg/19_2004#section37).

Wildlife Habitat Features Field Guide (Kootenay Boundary Region)

not realistic. This will depend on the circumstances or conditions related to the area in which the feature occurs.

Exemption requests should be discussed with the Regional Biologist. A request must include a rationale that describes the nature of the problem and any options that may minimize impacts to the feature. Information provided in a formal request will inform any conditions that the decision maker may attach to an exemption.

Consideration of exemption requests begins when a completed formal request is received; incomplete requests are returned to the proponent. Exemption requests are administered as soon as possible after receiving a complete request (e.g., 5–10 business days). During the review process, the delegated decision maker may ask for additional information from the proponent.

Due Diligence and Professional Reliance

Section 72(a) of the *Forest and Range Practices Act* provides for the defence of due diligence to any alleged contravention of the Act, its regulations, and standards.¹⁰ A person is expected to exercise due diligence to meet the requirement to protect wildlife habitat features.

Due diligence refers to the amount of care that a person must exercise in any given situation.¹¹ A professional must have taken all reasonable care to avoid a contravention (in this case, “not damage or render ineffective a wildlife habitat feature”). This involves a consideration of what a reasonable person would have done in the particular circumstances. Each situation must be evaluated in light of its own particular facts.

There are two basic elements of due diligence—“reasonable foreseeability” and “reasonable care.” The first is based on what a person engaged in the same activity, exercising all reasonable care, would likely have foreseen in those same circumstances; the second is based on the standard of what a person engaged in the activity exercising all reasonable care would have foreseen. The following two principles apply: (1) The greater the likelihood of a harmful event occurring, generally the higher the standard of care; and (2) The greater the potential damage, the greater the degree of care required.

Forest and range practitioners (or qualified professionals, if required) will thus determine the most appropriate actions and practices to adequately protect a wildlife habitat feature. Identifying features in the field, seeking additional specialized advice, and determining how best to protect them are all areas of professional reliance and due diligence.

Related *Forest and Range Practices Act* Provisions, Other Laws, and Legal Obligations

Legal provisions in the *Forest and Range Practices Act* exist to protect and conserve wildlife values across the Crown forest land base (i.e., riparian reserves, wildlife tree retention areas, wildlife habitat areas, and ungulate winter ranges). A wildlife habitat feature is a specific habitat element that has no legally defined measures for protection under the Act. Instead, the protection of these features depends on the professional reliance approach that ensures the feature will not be “damaged or rendered ineffective”

¹⁰ See the *Forest and Range Practices Act*, Section 72(a):
http://www.bclaws.ca/Recon/document/ID/freeside/00_02069_01#section72.

¹¹ For more guidance about due diligence, see “Assessing Due Diligence as a Defence”:
https://www.for.gov.bc.ca/ftp/hen/external/!publish/web/bulletins/C_and_E_Advice_Bulletin_14.pdf.

Wildlife Habitat Features Field Guide (Kootenay Boundary Region)

by primary forest and range activities. *Forest Act* and *Range Act* agreement holders are expected to protect these habitat features through tools such as wildlife tree retention requirements, the purpose of which is to manage stand-level biodiversity, and through their range use plans.

Forest and range practitioners are responsible to understand their obligations to protect and (or) manage special habitats or attributes under other provincial and federal laws. The table below describes the habitat protection provisions supplied by these statutes and how the Order provides additional special management for wildlife habitat features. This is not an exhaustive list; practitioners may wish to consult the appropriate authorities for further information.

Habitat Protection in Related Statutes	Additional Protection Provided by the Order¹²
<p><i>Species at Risk Act (SARA):</i>¹³ Under general prohibitions of this Act, it is an offence to damage or destroy the residence (e.g., nest or den) of species listed under the Act. This Act also includes a prohibition against destroying any part of “critical habitat”¹⁴ that is identified in a recovery strategy for a listed species. More specifically, prohibitions against killing an individual or damaging its habitat apply to all listed species that occur on federal lands; however, on private or provincial land, these prohibitions apply <i>only</i> to SARA-listed aquatic species and migratory birds.</p>	<p>Wildlife habitat features will be protected where <i>Forest Act</i> or <i>Range Act</i> agreements occur on provincial Crown land.</p> <p>Some features are not related to federally designated species at risk (e.g., a mineral lick, a wallow, an Osprey nest).</p> <p>The Government Actions Regulation requires that primary forest and range activities “not damage or render ineffective” a wildlife habitat feature; however, ensuring the effectiveness of a nest is not addressed under the federal <i>Species at Risk Act</i>.</p>
<p><i>Migratory Birds Convention Act:</i>¹⁵ Activities affecting migratory birds and (or) their nests and eggs (including “incidental take” or damage), regardless of their scale, the level of potential detrimental effects on bird populations, or the nature of mitigation measures taken, can result in violations of the Act. Possibility of prosecution is elevated if no reasonable attempt was made to avoid or reduce the risk of impact if the person had reasonable knowledge of the presence of migratory birds, nests, and eggs in the area and (or) the potential harm.</p>	<p>The list of wildlife habitat features includes features other than the nests of migratory birds.</p> <p>The Government Actions Regulation requires that primary forest and range activities “not damage or render ineffective” a wildlife habitat feature; however, ensuring the effectiveness of a nest is not addressed under the <i>Migratory Birds Convention Act</i>.</p>

¹² That is, the ways in which including each wildlife habitat feature in the Order satisfies the Minister that the feature requires special management not otherwise provided under the *Forest and Range Practices Act*, Government Actions Regulation, or other enactment.

¹³ Canada *Species at Risk Act*: <http://laws-lois.justice.gc.ca/eng/acts/s-15.3/>. See, also, the Species at Risk Public Registry website for a wide range of information related to species at risk in Canada: <https://www.registrelep-sararegistry.gc.ca/default.asp?lang=en&n=24F7211B-1>

¹⁴ “Critical habitat” is habitat necessary for the survival or recovery of a listed endangered, threatened, or extirpated species.

¹⁵ *Migratory Birds Convention Act*: <http://laws.justice.gc.ca/eng/acts/M-7.01/>; see also: <https://www.canada.ca/en/environment-climate-change/services/migratory-birds-legal-protection/convention-act.html>

Wildlife Habitat Features Field Guide (Kootenay Boundary Region)

<p>Wildlife Act:¹⁶ Under this Act, a person commits an offence if they: possess, take, injure, molest, or destroy certain bird nests (Eagle, Peregrine Falcon, Gyrfalcon, Osprey, Heron, or Burrowing Owl) and (or) bird nests occupied by a bird or its egg (Section 34). In addition, the Minister may, by regulation, designate land in a wildlife management area as a critical wildlife area for species of wildlife designated under this Act as an endangered species or threatened species (Section 5).</p>	<p>The list of wildlife habitat features includes features other than bird nests and for other species than the four endangered and threatened species that could be protected in a critical wildlife habitat area under the <i>Wildlife Act</i>.</p> <p>The Government Actions Regulation requires that primary forest and range activities “not damage or render ineffective” a wildlife habitat feature; however, ensuring the effectiveness of a nest is not addressed under the <i>Wildlife Act</i>.</p>
---	---

Field Guide Contents

Part 2 of this Field Guide contains a chapter for each wildlife habitat feature currently identified by the Order for the Kootenay Boundary Region. Each chapter contains a definition and description of the feature and some suggested management strategies to consider when carrying out primary forest or range activities in the vicinity of these features.

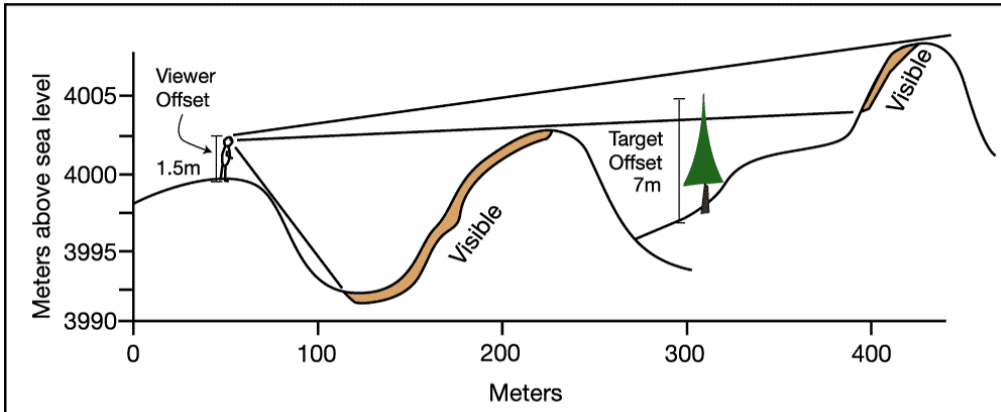
Section 1 supplies a specific definition of each wildlife habitat feature along with photographs showing typical examples. For features associated with bird nests or animal burrows or dens, Section 2 provides clear descriptions of the related bird and animal species. Where applicable, the conservation status of these species is provided using both British Columbia and Committee on the Status of Endangered Wildlife in Canada (COSEWIC) designations. For localized features, such as mineral licks, wallows, or bat hibernacula, this section describes the importance of these features. Section 3 offers a more extensive summary of the feature’s characteristics, including tips on identification, information to consider when conducting primary forest and range activities near the feature and, for some features, suggested alternatives to avoid rendering the features ineffective. Section 4 outlines specific timing windows (i.e., sensitive periods and periods of least risk) and guidance on disturbance buffers for the features in the Kootenay Boundary Region. This section includes maps of feature distribution or species’ areas of occupancy, any relevant biogeoclimatic associations, and detailed recommendations regarding disturbance buffers. The concluding Section 5 provides links to chapter source material and additional relevant information.

Some chapters include information about the types of disturbance that may affect specific nesting birds along with suggestions of lower-impact alternatives. Implementation of these alternatives relies on knowledge of the two distance concepts illustrated on the next page.

Additional supporting information is available on the Wildlife Habitat Features website:
gov.bc.ca/Kootenay-Boundary-Wildlife-Habitat-Features-Order.

¹⁶ *Wildlife Act*: http://www.bclaws.ca/Recon/document/ID/freeside/00_96488_01.

Line-of-Sight – Defined as a straight line along which an observer has unobstructed vision.



A single Line of Sight (LOS) in a particular direction, with examples of viewer and target offsets. Collectively, all of the LOS from a given location make up its viewshed.

http://mapaspects.org/colca/research/viewshed/what_is.html

Horizontal Distance – Defined as a straight line distance measured on a flat plain between two objects.

