BRITISH COLUMBIA

December 30, 2004

NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN THE CASCADES FOREST DISTRICT

This Notice is given under the authority of section 7(2) of the *Forest Planning and Practices Regulation* (B.C. Reg. 14/04*)* and 9(3) of the *Woodlot Licence Planning and Practices Regulation* (B.C. Reg. 21/04).

The following Notice includes indicators of the amount, distribution and attributes of wildlife habitat required for the survival of the species at risk outlined in Schedule 1.

Approved Wildlife Habitat Areas are not included in the indicators of amount, distribution and attributes for each of the species outlined in Schedule 1. As per section 7(3) of the *Forest Planning and Practices Regulation*, forest tenure holders are exempt from the obligation to specify a result or strategy in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation*, for approved Wildlife Habitat Areas.

This Notice applies to the Cascades Forest District**.**

Schedule 1

1) Coastal Tailed Frog (*Ascaphus truei*)

Amount:

1. 2793 ha not exceeding an impact to the mature timber harvesting landbase of 1187 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Coastal Tailed Frog in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Coastal Tailed Frog in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

Species: Coastal Tailed Frog	
Attribute	**Characteristics**
Size	Approximately 20 ha (depending on number and length of suitable stream reaches). Larger areas may be appropriate in watersheds with unstable terrain (class 4-5). Areas should include at least two streams or stream reaches (i.e., S4 to S6) with previous detections of tailed frogs. The area should include a 30 m core area buffered by a 20m management zone on both sides of occupied stream reaches.
Habitat Attributes	Tailed frog aquatic habitats are generally characterised by year round flow, non fish bearing (S4-S6), intermediate gradient (>2.5%), coarse substrates (>6.4 cm), stable channel beds and forest cover (generally associated with structural stage S6 or S7). Retain 100% of forest cover within the core area. Within the management zone maintain 70% basal area with appropriate structure to maintain riparian forest, important structural elements (e.g., coarse wood debris,) water quality and temperature (5 to 18 degrees), and naturally dispersed water flows.
Elevation	From sea level to 2140 m.

2) "Great Basin" Gopher Snake (*Pituophis catenifer deserticola*)

Amount:

1. 4000 ha not exceeding an impact to the mature timber harvesting landbase of 0 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for "Great Basin" Gopher Snake in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for "Great Basin" Gopher Snake in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

Species: Great Basin Gopher Snake	
Attribute	**Characteristics**
Size	Approximately 200–300 ha but will depend on site specific factors such as area of suitable habitat and nearness to foraging areas.

Foraging Habitat Characteristics	Sites with low disturbance and absence of roads (populations are negatively impacted by mortality, particularly road mortality). Presence of retreat sites including structural elements such as rock outcrops, talus slopes, friable soils, coarse woody debris, burrows in areas with friable soils, concentrations of boulders, or other unconsolidated materials and vegetative cover. Areas with moderate to dense cover provided concealment cover to snakes and maintain foraging opportunities. Properly functioning riparian areas also may provide enhanced foraging opportunities. Grassland, parkland forest, wetland, and riparian areas provide foraging habitat for snakes. Foraging habitats must also provide suitable cover, in the form of vegetation and coarse woody debris, to provide protection from predation. Rock outcroppings and wildlife trees (class 8 and 9[dead fallen]) were observed to be important sources of cover for the snakes.
Denning	Rock outcrops or talus habitat. Located on south facing slopes in Ponderosa Pine or Bunchgrass BEC zones.
Egg-laying Site Characteristics	South to southeast facing slopes, but are more likely to be found in abandoned rodent burrows than in talus or rock outcrops. Well drained sites.
Structural stage	1, 2 and 3.
Elevation	250-1100 m.

3) Flammulated Owl (*Otus flammeolus*)

Amount:

1. 4050 ha not exceeding an impact to the mature timber harvesting landbase of 3150 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
    - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Flammulated Owl in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Flammulated Owl in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

Species: Flammulated Owl

Attribute	Characteristics
Size	Between 10 and 30 ha, based on estimated home range size using habitat suitability information. Should include a core area of 7-12 ha that includes key foraging, the nest site and security habitats and ~100 m management zone. Consider a WTP ≥4 ha where salvage does not occur and where as many suitable wildlife trees as possible are maintained or recruited over the long term (>80 yrs).

Tree Features	Visible woodpecker or natural cavities; understory brush or thickets, snags with cavities.
Tree Species	Most commonly, Ponderosa pine; less commonly, Douglas-fir, trembling aspen or western larch.
Nesting Habitat Features	Includes multi-age class stands with multiple canopy layers, including a veteran tree component for nesting or roosting. Large diameter ponderosa pine for nest trees may be critical to sustain local populations. Nest in Pileated Woodpecker and Northern Flicker cavities and it is therefore important to consider nesting requirement of these species as well. Nests are often located within and/or near foraging habitat.
Foraging Habitat Features	Often forages within 300 m of nest during breeding season. Habitat is characterized by small forest openings (<1 ha) adjacent to Douglas-fir thickets and/or large veteran Douglas-firs or ponderosa pines with heavy branching for security. Understorey structure may be important in forest openings for foraging habitat.
Tree Size	64-77 cm. In the absence of trees with the preferred dbh, trees >35 cm or largest available should be retained for recruitment.
Wildlife Tree Class	1, 3-7
Structural Stage	6 (mature forest), 7 (old forest).
Elevation	400-1375 m.

4) "Interior" Western Screech-Owl (*Otus kennicottii macfarlanei*)

Amount:

1. 44 ha not exceeding an impact to the mature timber harvesting landbase of 22 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for "Interior" Western Screech-Owl in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for "Interior" Western Screech-Owl in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

Species:
Interior Western
Screech-Owl

Attribute	Characteristics
Size	Typically between 5 and 30 ha. The area should include a 5–12 ha core area for the nest area and may include a ~100 m management zone. The management zone should include suitable foraging habitat. Other features to include are large diameter snags (particularly black cottonwood, trembling aspen, water birch, and broadleaf maple) with suitable nest cavities.
Tree Features	Visible woodpecker cavities or natural cavities, conks, fire scars, heartwood decay and broken tops.
Tree Species	Trembling aspen, black cottonwood, water birch, Douglas-fir, possibly ponderosa pine, and western larch.
Nesting and Roosting Habitat Features	Home ranges can be small in optimal habitat; a reasonable size is ~ 2.5-10 ha. Occupancy is closely associated with riparian habitats. A minimum of 2 suitable nesting cavities must be present to accommodate one breeding pair. Nesting and roosting occurs in tree cavities often made by Northern Flickers and Pileated Woodpeckers; dense vegetation thickets are also used for roosting.
Tree Size	34–44 cm dbh or larger for deciduous tree species. 74–85 cm dbh or larger for coniferous tree species. In the absence of trees with the preferred dbh, trees with ≥30 cm dbh should be retained for recruitment.
Wildlife Tree Class	2–6
Structural Stage	6 (mature forest), 7 (old forest).
Elevation	0–700 m.

5) Spotted Owl (*Strix occidentalis*)

Amount:
Within the Lillooet TSA, 5000 ha not exceeding an impact to the mature timber harvesting landbase of 5000 ha.

Distribution:
The amount referenced above must be distributed around Spotted Owl territories where owl activity has been identified between 1997 and 2004, consistent with the attributes identified below.

Attributes:
Attributes consistent with those identified in the 1997 *Spotted Owl Management Plan*.

6) Spotted Bat (*Euderma maculatum*)

Amount:

1. 16 ha not exceeding an impact to the mature timber harvesting landbase of 4 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Spotted Bat in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Spotted Bat in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

Attributes:

Species:
Spotted Bat

Attribute	Characteristics
Size	5-10 ha; the area should related to the size of the roost feature (i.e., cliff face) and may in some cases be larger than 10 ha. The core of the area will consist of the roost cliff and talus base; the management zone should be 100 m around the roost cliff.
Roosting Habitat Features	Steep, high cliffs within a few kilometres of suitable feeding areas (riparian areas, marshes, fields, grasslands, and open forest) and close to a source of water are important as day roosts. These sites are typically located in crevices in steep, tall cliffs.
Foraging Habitat Features	Grassland, parkland, forest, wetland, and riparian areas. Foraging corridors, such as lake edges, may also be used.
Structural Stage	There are no structural stage preferences known for this species, as they roost in large cliffs and often forage well above the canopy.
Elevation	Variable. Typically between 300 to 900 m, although most occurrences are below 500 m. In other parts of its range, it has been found from sea level to 3300 m.

7) Grizzly Bear (*Ursus arctos*)

Amount:

1. Within the Merritt timber supply area, 5211 ha not exceeding an impact to the mature timber harvesting landbase of 521 ha; and
2. Within the Lillooet timber supply area an amount of area equal to a mature THLB impact of 8000 ha.

Distribution:

1. The amount of habitat referenced above must be distributed to provide:
   - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for Grizzly Bear in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
2. The areas described above are located within biogeoclimatic units and preferred elevations identified in the species account for Grizzly Bear in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004 and also considering the distribution of riparian and berry producing sites:

Distribution of Riparian Habitats in the North Cascades Grizzly Bear Population Unit.

Biogeoclimatic Subzone Variants	Site Series
CWHdm	07, 12, 14, 15
CWHds1	07, 12
CWHms1	06, 11
CWHvm2	07, 08, 11
CWHxm1	07, 12, 14, 15
ESSFdc2	08
ESSFmw	08
ESSFxc	08
IDFdk1	06
IDFdk2	06, 07
IDFww	06, 07
IDFxh2	08
MHmm2	06, 07, 09
MSdm2	07
MSxk	09
PPxh2	07

Distribution of High and Moderate Berry (principally *Vaccinium*) Producing Site Series in the North Cascades Grizzly Bear Population Unit.

Biogeoclimatic Subzone Variants	High Berry Productivity Site Series	Moderate Berry Productivity Site Series
CWHdm	12	
CWHms1	02, 01, 05, 06, 11	03
CWHvm2	03, 01, 05, 06, 07, 09, 10, 11	02, 04
ESSFdc2		05
ESSFmw	04, 05	01, 02, 06, 07, 08
MHmm2	02, 01, 04, 05, 06, 07, 08	03, 09

Attributes:

Important Grizzly Bear Habitat Types and their Season of Use in the North Cascades Grizzly Bear Population Unit.

Habitat Types	Season of Use

	Spring *	Summer	Fall **
Riparian areas, including wetlands	X	X	X
Avalanche tracks and run out zones	X	X	X
Hedysarum and glacier lily complexes	X	X	
Sub-alpine parkland meadows		X	X
Berry producing sites		X	X

***Spring** refers to the period after bears emerge from their dens - late March through April until spring habitats are no longer used – usually the end of June.

****Fall** refers to the period when berries become abundant - often late July/early August through to November.