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**Ministry of Environment, Lands and Parks
and
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FINAL REPORT

**Terrestrial Ecosystem Mapping
for Princess Royal Island**

Wildlife Interpretations

Job No. 31417-001-310
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4.0 WILDLIFE CAPABILITY AND SUITABILITY RATINGS

4.1 INTRODUCTION

The following provides comments on wildlife habitat value and potential, and a discussion of the general concepts used to generate suitability and capability ratings.

Suitability and capability ratings were generated for eleven wildlife species (Table 4-1). Preliminary ratings were noted on full and visual plots in the field. Generally, ecosystem units with the same site series and seral stage were rated similarly across a variety of site modifiers. The exceptions were the warm (i.e., w) and cool (i.e., k) aspects. Ecosystem units with warm modifiers were generally rated one level higher than cool aspects. Concepts used for developing species-specific suitability and capability ratings are described below.

An annotated list of wildlife observed during field surveys is provided in Appendix C.

4.2 BLACK BEAR (URAM)

Ratings were not generated separately for each season. Only the season with the highest rating was provided in the look-up tables. Four seasons were considered; spring (P), summer (S), fall (F) and winter (W). Production of herbs and berries was the primary factor considered in generating the ratings.

Herbs were considered to be particularly important in spring, whereas berries were considered important in summer and fall. Younger seral stage habitats, particularly rich and productive sites, were rated relatively high compared to forested habitats.

Only avalanche chutes and rich alluvial sites were given a >1= rating. These sites provided an abundance of herbs and berries. Site series with >1= ratings included >SA= (Sitka alder - Avalanche) in all biogeoclimatic zones/subzones, and >SC= (Ss - Pacific crabapple). The values of these habitats are comparable to the best in the province. A >2= rating was given for early seral stage habitats on rich and productive sites. High herb and berry production on these early seral stage sites are of high value to bears. Other site series which received >2= ratings included: a) CWHvm1, >RC= (CwSs-Skunk cabbage) and >SS= (Ss-Salmonberry); b) CWHvm2, >RC= (CwYc-Skunk cabbage); and c) CWHvh2, >AL= (Dr-Lily-of-the-valley) and >TM= (Tufted hairgrass meadow). The only >2= rating given for the winter (i.e., denning) season was >AD= (BaSs-Devil=s Club; warm aspect) in the CWHvm2. This habitat contained large balsam, spruce and hemlock with good den site potential. Generally, denning habitats on Princess Royal Island were not comparable to the best in the province.

4.3 BLACK-TAILED DEER (ODHC)

Herb production was the primary habitat component considered for generating suitability and capability ratings for deer habitats. Deer

appeared to be abundant on the island and occurred in most habitats from lowland pine forests and blanket bogs to alpine areas. The highest ratings given were >2=. Generally ratings were similar or moderately lower than those for black bear. Early seral stage habitats, avalanche chutes, wet meadows and alluvial floodplain received the highest rating. However, these habitats were considered to be of lower value than the best habitats recognized in the province.

Only summer and winter seasons were considered in generating the ratings. Winter ratings only appeared on the look-up tables for mature or old-growth forests which potentially provide cover and shelter.

4.4 MOUNTAIN GOAT (ORAM)

Viable mountain goat populations do not occur on Princess Royal Island. However, one unconfirmed sighting of a mountain goat was reported by Shaun Sharpe (MOE, Victoria) in 1995.

Only the summer and winter seasons were considered in the rating process. Habitat potential in lowland habitats (i.e., CWHvm1 and CWHvh2) was considered to be nil. Subalpine areas (>MK=, Mountain hemlock krummholz; >MM=, HmYc-Mountain-heather or HmBa-Mountain-heather) in the CWHvm2, MHmm1, MHwh1 potentially provide foraging opportunities year round and thus received moderate ratings. Avalanche chutes (i.e., site series >SA=) again received the highest ratings because of the potentially excellent foraging opportunities in spring and summer. Moderately high capability ratings were also given to early seral stage habitats adjacent to subalpine areas (i.e., age class 2 and 3a provide an abundance of herbaceous vegetation). Forested habitats adjacent to subalpine forests and avalanche chutes were rated depending on their potential to provide escape and winter cover for goats. None of the habitats on Princess Royal Island are comparable to the best habitats known in the province.

4.5 MARTEN (MAAM)

Only presence (U) or absence (X) ratings were determined for marten. Some of the mature, old-growth forested habitats appear to be comparable to the best marten habitats known in the province. Prey availability in these habitats (i.e., birds and squirrel) was high.

All moist, mature forests (generally age class 6 and 7) were considered capable of supporting marten populations. Forest with particularly high coarse woody debris volumes are known to be of higher value to marten, however, because of the low resolution of the rating scale, the relative value of these habitats was not distinguished. Because our knowledge of marten habitat requirements is quite well known, this species should be rated on a four class system in the future.

4.6 KEEN' S LONG-EARED MYOTIS (MYKE)

Only presence (U) or absence (X) ratings were determined for Keen=s long-eared myotis. Productive, age class 6 and 7 forests were rated as suitable for this bat species because of the potential for roost Job No. 31417-001-310 11 Norecol, Dames & Moore sites. These forested habitats are increasingly important the closer they are to important foraging areas such as wetlands, clearcuts and other open areas. Wetland sites, or early seral stage moist sites were rated as suitable foraging areas for Keen=s long-eared myotis. Because of our limited knowledge of habitat requirements of this species, a two class rating system is appropriate.

4.7 BALD EAGLE (BAEA)

Habitats in coastal areas of Princess Royal Island are some of the best in the province. Only CWHvm1 and CWHvh2 biogeoclimatic zones were rated. The value of each ecosystem unit to bald eagle depended on the productivity of the habitat and the seral stage. Those habitats with a large abundance of veteran trees, which are important as perch, roost and nest sites, were rated as high. As productivity and size of trees decreased, ratings were also lowered. Early seral stages (i.e., 1-5) were not considered suitable for bald eagles.

4.8 GREAT BLUE HERON (GBHE)

Habitats on Princess Royal Island are generally unsuitable for great blue herons. Preferred feeding areas such as extensive intertidal flats or shallow lakes are rare on the island. The highest ratings (i.e., moderate suitability) were given to age class >5= habitats which were expected to have a dense, red alder or other deciduous tree cover. These habitats are used as nests sites in other regions. Mature forest in coastal areas were given >Low= ratings because of their potential to provide roost and perch sites for herons feeding in intertidal areas. Alluvial floodplain (i.e., Ss-Pacific crabapple) was also rated as having some suitability for herons.

4.9 SANDHILL CRANE (SACR)

Large bogs and wetlands in the Hecate Lowlands (i.e., CWHvh2) are known breeding areas for sandhill cranes. Wetlands with open water were considered to be important for nesting, whereas vegetated wetlands were considered to be particularly important for foraging. Site series expected to be utilized by sandhill cranes include: a) CWHvm1 - >BS=, >HF=, >SC>and >TS=; b) CWHvm2 - >TS=; and c) CWHvh2 - >LS=, >SC=, >SL=, >ST=, >TM=, >TS= and >YG=. The >TS= (Tufted clubrush - sphagnum) and >TM= (Tufted hairgrass meadows) site series were rated the highest because of their high potential as foraging areas. Open, wetland areas, typically used for nesting were not assessed. Generally, habitats of value to sandhill cranes were located in low relief and low elevation areas.

4.10 NORTHERN GOSHAWK (NOGO)

Productive and moist, mature and old growth forest were considered to be of highest value to northern goshawk. Open stand structure with large mature trees and well developed understorey were considered to have the greatest value. Occurrence was not considered to be dependent on elevation or species composition of forests. Forests of large, old growth trees and a diverse understorey provide nesting opportunities and numerous foraging opportunities.

4.11 MARBLED MURRELET (MAMU)

Productive and most, mature or old growth forests were considered to be of value to marbled murrelets. Only a two class system was utilized, although enough information is now known to use a four class system. Forests with large trees, large limbs and extensive moss cover on the limbs were of highest value to murrelets. Age class 1 to 5 habitats were not considered to be of any value.

4.12 TAILED FROG (ASTR)

Stream characteristics are probably more important habitat components than composition of existing forests. Age class 5 to 7 forested habitats in close proximity to creeks or streams were rated as being suitable for tailed frogs.

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