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May 21, 2024

Bailey Williams
Planning Forester
BC Timber Sales – Strait of Georgia Business Area
370 S. Dogwood Street
Campbell River BC

Dear Ms. Williams,

**Re: Review of Focus Species at Risk for BC Timber Sales,
Strait of Georgia Business Area – 2024 Update**

BC Timber Sales is registered under the Sustainable Forestry Initiative (SFI) Forest Management Standard. SFI provides parameters for sustainable forest management, and certification under the SFI Forest Management Standard requires organizations to develop a program to address conservation of significant species of concern¹. In the Provincial SFI Sustainable Forest Management Plan, BCTS commits to meeting Objective 4² which is:

“To manage the quality and distribution of wildlife habitats and contribute to the conservation of biological diversity by developing and implementing stand- and landscape-level measures that promote a diversity of types of habitat and successional stages, and the conservation of forest plants and animals, including aquatic species, as well as threatened and endangered species, Forests with Exceptional Conservation Value, old-growth forests and ecologically important sites”.

Under this Objective, BCTS developed the *Species and Ecosystems of Management Concern Management Guide* to “identify species and ecosystems that could be adversely affected by forestry related activities and require special management”³.

The Strait of Georgia Business Area (TSG) of BCTS has been working to identify species at risk that may occur in their Operating Areas. Species are identified for inclusion on a Focus List or Awareness List. These are defined as follows:

1 <https://forests.org/wp-content/uploads/OnePagerFeb4.pdf>

2 <https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/forestry/bc-timber-sales/ems-sfm-certification/corporate/provincial-sustainable-forest-management-plan.pdf>

3 <https://www.for.gov.bc.ca/ftp/tpg/external/!publish/Species%20at%20Risk/May%202013%20Management%20Guide.pdf>

Focus List: species that are provincially red- or blue-listed and Threatened or Endangered under Schedule 1 of the Species At Risk Act (SARA). Also includes species designated under the Forests and Range Protection Act (FRPA), species that have special protection under the BC Wildlife Act, or species that have regional significance⁴ and have moderate to high habitat overlap within BCTS Operating Areas.

Awareness List: species that are typically listed under SARA Schedule 1 as Special Concern and/or designated under FRPA, species that have special protection under the Wildlife Act, or are regionally significant and have low habitat overlap.

TSG Species at Risk Focus List Update Procedures

Madrone's involvement in the BCTS TSG Species at risk Focus List began in 2021 where we updated the assessment created by Graham/Wall Consulting in February 2019. Madrone created a Master List⁵ to summarize all plant and animal species that may occur in the TSG according to a query of the BC Conservation Data Centre's Species and Ecosystem Explorer⁶. Species of significance that had been identified in previous assessments were also included on this Master List.

Methods used to update the Master List and ultimately select species for the Focus List are included in the Appendix of this letter, along with a summary graphical flow chart. The process developed by Madrone and BCTS was used to update the Focus List in 2021, 2022, and will now be used again in 2024.

Summary of 2024 Changes

Based on flow chart methodology and input from BCTS Planners, the following changes have been made to the 2024 Focal and Awareness Lists.

Plants and Lichen

- Based on field observations made by BCTS in recent years, Oldgrowth Specklebelly lichen was determined to have moderate habitat overlap with their Operating Areas. Therefore, it has been upgraded from the Awareness List to the Focal List.
- BCTS confirmed that the geographic range of whitebark pine does not overlap with their Operating Areas, therefore, it was removed from the Focal List.

⁴ Species with regional significance include Schedule 1 Ungulate species (https://www.env.gov.bc.ca/wld/documents/uwr/UWR_order.pdf) or species requiring special management

⁵ "BCTS SOG 2019 SAR Focus List Letter of Transmittal and Summary of Search Criteria.pdf" and "BCTS SOG SAR Focus list 2019_02_20.xlsx" provided by H. Soo to Madrone on September 29, 2021 via Microsoft Teams

⁶ B.C. Conservation Data Centre. 2022. BC Species and Ecosystems Explorer. B.C. Ministry. of Environment. Victoria, B.C. Available: <http://a100.gov.bc.ca/pub/eswp/>.

Animals

- Steller's Sea Lion has been added to the Focal List in recognition of potential impacts to marine species from BCTS log dumps. This is consistent with the inclusion of Northern Abalone and Killer Whale on the Focal List.

The conservation status of two species listed on the Awareness List has changed since the last assessment in 2022. These changes are shown below.

Animals

- Olive-sided Flycatcher was downgraded to the Awareness List in 2022 due to classification as provincially yellow-listed (blue-listed in 2021; down-listed in 2022), and not being listed under FRPA. This species was also downgraded in 2023 under SARA Schedule 1 from Threatened to Special Concern. This species will remain on the Awareness List.
- Common Nighthawk was downgraded under SARA Schedule 1 from Threatened to Special Concern. This species will remain on the Awareness List.

Additionally, the following species were removed from the Master List based on status downgrades and associated exclusion from BC CDC search outputs:

Insects

- Blue Dasher was downgraded from a provincial status of S3S4 (blue) to S4S5 (yellow).
- Western Pondhawk was downgraded from a provincial status of S3S4 (blue) to S4 (yellow).

Vascular Plants

- Ozette Coralroot is no longer recognized as a distinct species variant.
- Oregon Ash was downgraded from a provincial status of S1S2 (red) to SU (unknown).
- Northern Jacob's Ladder was downgraded from a provincial status of S3 (blue) to SU (unknown).

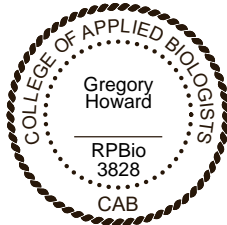
The 2024 Focus List and Awareness List for the BCTS Strait of Georgia Business Area are shown in Tables 1 and 2 respectively. Please refer to Table 3 for BC CDC's ranking criteria definitions.

If you have any questions or comments, please do not hesitate in contacting the undersigned.

Sincerely,



Greg Howard, B.Sc., R.P.Bio.



MADRONE ENVIRONMENTAL SERVICES LTD.

TABLE 1: BCTS STRAIT OF GEORGIA BUSINESS AREA 2024 FOCUS LIST

Species	Forest District		FRPA or Wildlife Act	SARA	CDC List
	Campbell River	South Island			
Gastropods					
Northern Abalone	X	X	-	1-E	Red
Insects					
Johnson's Hairstreak	-	X	X	-	Red
Dun Skipper	X	X	-	1-T	Blue
Amphibians					
Northern Red-legged Frog	X	X	X	1-SC	Blue
Reptiles					
Painted Turtle - Pacific Coast Population	X	X	-	1-E	Red
Birds					
Northern Goshawk, <i>laingi</i> subspecies	X	X	X	1-T	Red
Great Blue Heron, <i>fannini</i> subspecies	X	X	X	1-SC	Blue
Marbled Murrelet	-	-	X	1-T	Blue
Peregrine Falcon, <i>anatum</i> subspecies	-	X	X	1-SC	Red
Peregrine Falcon, <i>pealei</i> subspecies	X	-	X	1-SC	Blue
Northern Pygmy Owl, <i>swarhi</i> subspecies	X	X	X	-	Blue
Western Screech Owl, <i>kennicotti</i> subspecies	X	X	-	1-SC	Blue
Mammals					
Roosevelt Elk	X	X	-	-	Blue
Vancouver Island Marmot	X	X	X	1-E	Red
Black-tailed (Mule) Deer	X	X	-	-	Yellow
Killer Whale - Northeast Pacific northern resident population	X	X	-	1-E	Red
Killer Whale - Northeast Pacific southern resident population	X	X	-	1-T	Red
Steller Sea Lion	X	X	-	1-SC	Blue
American Water Shrew, <i>brooksi</i> subspecies	X	X	X	-	Blue
Black Bear	X	X	-	-	Yellow
Grizzly Bear	X (ML)	-	X	1-SC	Blue
Plants					
Oldgrowth Specklebelly	X	X	-	1-SC	Blue
Poor Pocket Moss	X	X	-	1-E	Red
Western Yew	X (GBR)	-	-	-	Yellow

TABLE 2: BCTS STRAIT OF GEORGIA BUSINESS AREA 2024 AWARENESS LIST

Species	Forest District		FRPA or Wildlife Act	SARA	CDC List
	Campbell River	South Island			
<i>Gastropods</i>					
Dromedary Jumping-slug*	X	X	-	1-T	Red
Warty Jumping-slug	X	X	-	1-SC	Red
Threaded Vertigo	X	X	-	1-SC	Blue
Blue-grey Taildropper*	-	X	-	1-T	Blue
<i>Bivalves</i>					
Olympia Oyster	X	X	-	1-SC	Blue
<i>Amphibians</i>					
Western Toad	X	X	-	1-SC	Yellow
Wandering Salamander	X	X	-	1-SC	Blue
Coastal Tailed Frog	X	X	X	1-SC	Yellow
<i>Birds</i>					
Short-eared Owl	-	X	X	1-SC	Blue
Common Nighthawk	X	X	-	1-SC	Blue
Evening Grosbeak	X	X	-	1-SC	Yellow
Olive-sided Flycatcher	X	X	-	1-SC	Yellow
Barn Swallow	X	X	-	1-T	Yellow
White-tailed Ptarmigan, saxatilis subspecies	X	X	X	-	Blue
Band-tailed Pigeon	X	X	-	1-SC	Blue
Osprey	X	X	X	-	Yellow
Cassin's Auklet	-	X	X	1-SC	Blue
<i>Mammals</i>					
Little Brown Myotis	X	X	-	1-E	Yellow
Mountain Goat	X (ML)	-	-	-	Blue
<i>Fish</i>					
Green Sturgeon	X	X	-	1-SC	Blue
Bull Trout – South Coast Population	X	X	-	1-SC	Blue
<i>Plants and Lichen</i>					
Cryptic Paw	X	X	-	1-SC	Blue
Peacock Vinyl	X	X	-	1-SC	Yellow

* Red-listed in BC and Threatened under SARA Schedule 1 but not included on the Focus List due to difficult ID.

TABLE 3. B.C. CONSERVATION DATA CENTRE RANKING DEFINITIONS.

Type of Rank		Description
S		Subnational ranks assigned and maintained by the B.C. Conservation Data Centre.
N		National ranks assigned by national and international conservation authorities.
G		Global ranks assigned by national and international conservation authorities.
Rank	Meaning	Description
X	Presumed extirpated or extinct	Not located despite intensive searches and no expectation that it will be rediscovered.
H	Historical	Not located in the last 50 years, but some expectation that it may be rediscovered.
1	Critically imperiled	Especially susceptible to extirpation or extinction. Occurrences: 5 or less.
2	Imperiled	Very susceptible to extirpation or extinction. Occurrences: 6 to 20.
3	Vulnerable	Found only in a restricted range (even if abundant at some locations), or susceptible to extirpation or extinction. Occurrences: 21 to 100.
4	Apparently secure	Uncommon but not rare, and usually widespread in the province. Occurrences: more than 100 existing.
5	Secure	Common to very common, typically widespread, abundant, and not susceptible to extirpation or extinction under present conditions.
?	Unranked	Rank not yet assessed.
U	Unrankable	Due to current lack of available information.
Modifier		Description
E		Exotic – a species introduced to the province.
?		Inexact or uncertain rank due to limited information; qualifies the immediately preceding character.
Q		Taxonomic status is not clear or is in question.
T		A rank for a subspecies or variety.
B		A rank for breeding occurrence of mobile animals.
N		A rank for non-breeding occurrences of mobile animals.
Z		Reported in province as a diffuse, usually moving population.
R		Reported from province, but without persuasive documentation for either accepting or rejecting the report.
RF		Reported in error, but this error has persisted in the literature.

Appendix

For the 2024 update, the process of selecting species was as follows:

1. Search the BC CDC Species and Ecosystem Explorer⁷ using the following criteria:

For Plants:

Plants OR Lichens OR Macrofungi
AND BC Conservation Status: Red (Extirpated, Endangered, or Threatened) OR Blue (Special Concern)
AND COSEWIC Status: Endangered OR Threatened OR Special Concern
AND Federal Species at Risk Act (SARA)
AND Provincial Forest and Range Practices Act (FRPA) – Previously Identified Wildlife
AND Provincial Wildlife Act
AND 'Natural Resource (NR) Districts': Campbell River Natural Resource District, South Island Natural Resource District

For Animals:

Animals
AND BC Conservation Status: Red (Extirpated, Endangered, or Threatened) OR Blue (Special Concern)
AND COSEWIC Status: Extinct OR Extirpated OR Endangered OR Threatened OR Special Concern OR Not at Risk OR Data Deficient
AND Federal Species at Risk Act (SARA)
AND Provincial Forest and Range Practices Act (FRPA) – Previously Identified Wildlife
AND Provincial Wildlife Act
AND 'Natural Resource (NR) Districts': Campbell River Natural Resource District, South Island Natural Resource District

**Note: The output of searches using the Species and Ecosystem Explorer always results in the inclusion of species that do not occur despite selecting the NR Districts in the query. It is a known limitation of this tool.*

2. Save the Master List (Excel document) with a new file date and use as the working copy. The Master List contains a tab for each plant and animal species and within these tabs, individual species are separated into groups (e.g., birds, mammals, ferns, mosses, etc.). Add a new tab for “Metadata” with the BC CDC rankings and definitions.

⁷ <https://a100.gov.bc.ca/pub/eswp/>

3. Compare the 2024 BC CDC output list to the 2022 Master List. All species in 2024 output should be included in the Master List.
 - Species not already in the Master List are added based on type of species and in alphabetical order (by Latin name).
 - For plants, populate all the columns from A-I with information from the 2022 search output.
 - For animals, insert a new column (H) for “Species 2024” and update all fields from columns H-P with information from the 2024 search output.
 - Species already in the Master List are cross-referenced with the 2024 output. Where appropriate, update status fields to reflect any changes.
 - Species in the Master List from previous years but not on the 2024 output list are individually searched in the BC CDC Ecosystem Explorer to determine why they may not have been captured by the search. Where appropriate, species should be removed with justification added to the “Comments” field. In 2022, some examples for removing species included taxonomic name, status changes to yellow-listed, status changes to “distribution unknown”, etc. Species removed are moved to a new tab “Removals”; however, no species were removed in 2024.
4. Once the Master List reflects the 2024 search output, new species are individually assessed following the “Steps” in the Master List. For example, Step 1 is determining “Geographic Overlap” of the species with BCTS Operating Areas, and Step 2 is determining if there is “Habitat Overlap”. Information for each species is gathered online from the BC Species and Ecosystem Explorer, including reviewing the Mapped Occurrences, or other online sources (e.g., E-flora/E-fauna BC). Based on information gathered, the probability of the species occurring in the BCTS operating areas is assessed (e.g., None, Low, Unknown, Moderate, or High). Any useful or relevant information is added to the Master List (Column AF for Animals, Columns V and/or W for Plants).
5. Reassess species previously included on the Focus List (in red) by working through the Flow Chart. Species on the Focus List are typically provincially red- or blue-listed AND Threatened or Endangered under COSEWIC and/or SARA Schedule 1. It also includes species that are included under FRPA, species that receive special protection under the Wildlife Act or are Regionally Significant with moderate to high habitat overlap, such as Roosevelt Elk or Black Bear. During the assessment, determine if any of these species have had a status change that may result in down-listing to the Awareness List or removal from the lists (e.g., from blue-listed to yellow-listed).

6. Reassess each species previously included on the Awareness List (in yellow) using the Flow Chart. Species on the Awareness List are typically under SARA Schedule 1 as Special Concern and/or included under FRPA, species that receive special protection under the Wildlife Act or are Regionally Significant with low habitat overlap. During the assessment, determine if any of these species had a status change that requires moving onto the Focus List or removal from the Awareness List.
7. Species previously not included on either the Focus List or Awareness List are coloured green in the Master List. These are typically species with overall low to no geographic or habitat overlap and species that are not listed under SARA Schedule 1 or any other sources (Wildlife Act, FRPA, etc.). During the assessment, use the Flow Chart to determine if any of the species previously in green should be added to the Awareness List or Focus List.
8. Assess any species added to the Master List in 2024 using the Flow Chart to determine if they should be included on either the Focus List or Awareness List. If species do not meet requirements for inclusion on the Awareness or Focus Lists, they should be coloured green.

