



1081 Canada Ave  
Duncan, BC V9L 1V2  
p. 250.746.5545  
f. 250.746.5850

#1 – 30435 Progressive Way  
Abbotsford, BC V2T 6Z1  
p. 604.504.1972  
f. 604.504.1912

info@madrone.ca  
www.madrone.ca

October 26, 2022

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

Dear Ms. Soo,

**Re: Review of Focus Species at Risk for BC Timber Sales, Strait of Georgia Business Area – 2022 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 concern<sup>1</sup>. In the Provincial SFI Sustainable Forest Management Plan, BCTS commits to meeting Objective 4<sup>2</sup> 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”<sup>3</sup>.

---

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

<sup>2</sup> <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>

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

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 can be defined as follows:

**Focus List:** Species that are provincially red- or blue-listed and Threatened or Endangered under SARA Schedule 1. Also includes species under the Forests and Range Protection Act (FRPA), the BC Wildlife Act or species that have regional significance<sup>4</sup> and have moderate to high habitat overlap within BCTS' operating areas.

**Awareness List:** Species are typically under SARA Schedule 1 as Special Concern and/or under FRPA, the Wildlife Act or are regionally significant and have low habitat overlap.

### **TSG Species at Risk Focus List Update Procedures**

In 2021, Madrone was contracted to update the TSG Species at Risk Focus List created by Graham/Wall Consulting in February 2019. The data provided from BCTS included a PDF letter and a "Master List" in Excel<sup>5</sup>. The Master List contains a complete list of plant and animal species identified from a focused search of the BC Conservation Data Centre's Species and Ecosystem Explorer<sup>6</sup> and includes species from the 2019 search as well as previous years (animals only).

The process for updating the Master List and selecting species for the Focus List is included in the Appendix. To ensure consistency amongst species selected, a Flow Chart was created for the 2021 update. The same process was followed for updating the Focus List for 2022 (see Appendix).

### **Summary of 2022 Changes**

Using the 2021 flow chart methodology, only two changes for animals were noted for 2022. The following is a summary of changes to the Focus and Awareness Lists.

---

<sup>4</sup> Species with regional significance include Schedule 1 Ungulate species ([https://www.env.gov.bc.ca/wld/documents/uwr/UWR\\_order.pdf](https://www.env.gov.bc.ca/wld/documents/uwr/UWR_order.pdf)) or species requiring special management

<sup>5</sup> "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

<sup>6</sup> 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

- Olive-sided Flycatcher is down-listed to Awareness List due to classification as provincially yellow-listed (blue-listed in 2021; down-listed in 2022), and not being listed under *Provincial Forest and Range Practices Act*. Note that this species is still federally Threatened under SARA Schedule 1 (2010); COSEWIC notes it as Special Concern.
- Barn swallow is down-listed to Awareness List due to classification as provincially yellow-listed (blue-listed in 2021; down-listed in 2022) and not listed under *Provincial Forest and Range Practices Act*. Note that this species is still federally Threatened under SARA Schedule 1 (2017); COSEWIC notes it as Special Concern.

The 2022 Focus List and Awareness List for the BCTS Strait of Georgia Business Area for 2022 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,



Tania Tripp, M.Sc., R.P.Bio. (review of update process documented by Emily Dawydiak).

**MADRONE ENVIRONMENTAL SERVICES LTD.**

TABLE 1: BCTS STRAIT OF GEORGIA BUSINESS AREA 2022 FOCUS LIST

| Species   | Forest District |              | FRPA or Wildlife Act | SARA | CDC List |
|---|-----------------|--------------|----------------------|------|----------|
|   | Campbell River  | South Island |                      |      |          |
| <b>Gastropods</b>   |                 |              |                      |      |          |
| Northern Abalone  | X               | X            | -                    | 1-E  | Red      |
| <b>Insects</b>  |                 |              |                      |      |          |
| Johnson’s Hairstreak  | -               | X            | X                    | -    | Red      |
| Dun Skipper   | X               | X            | -                    | 1-T  | Blue     |
| <b>Amphibians</b>   |                 |              |                      |      |          |
| Northern Red-legged Frog                                      | X               | X            | X                    | 1-SC | Blue     |
| <b>Reptiles</b>   |                 |              |                      |      |          |
| Painted Turtle – Pacific Coast Population                     | X               | X            | -                    | 1-E  | Red      |
| <b>Birds</b>  |                 |              |                      |      |          |
| 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>swarthi</i> subspecies                 | X               | X            | X                    | -    | Blue     |
| Western Screech Owl, <i>kennicotti</i> subspecies             | X               | X            | -                    | 1-SC | Blue     |
| <b>Mammals</b>  |                 |              |                      |      |          |
| 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      |
| American Water Shrew, <i>brooksi</i> subspecies               | X               | X            | X                    | -    | Blue     |
| Black Bear  | X               | X            | -                    | -    | Yellow   |
| Grizzly Bear  | X (ML)          | -            | X                    | 1-SC | Blue     |
| <b>Plants</b>   |                 |              |                      |      |          |
| Poor Pocket Moss  | X               | X            | -                    | 1-E  | Red      |
| Whitebark Pine  | X               | -            | -                    | 1-E  | Red      |
| Western Yew   | X (GBR)         | -            | -                    | -    | Yellow   |

TABLE 2: BCTS STRAIT OF GEORGIA BUSINESS AREA 2022 AWARENESS LIST

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

\* Red-listed 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 by man 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 2022 update, the process of selecting species was as follows:

1. Search the BC CDC Species and Ecosystem Explorer<sup>7</sup> 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,

---

<sup>7</sup> <https://a100.gov.bc.ca/pub/eswp/>

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.

3. Compare the 2022 BC CDC output list to the 2021 Master List. All species in 2022 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 (G) for “Species 2022” and update all fields from columns H-P with information from the 2022 search output.
  - Species already in the Master List are cross-referenced the 2022 output. Where appropriate, update status fields to reflect any changes.
  - Species in the Master List from previous years but not on the 2022 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 2022.
4. Once the Master List reflects the 2022 search output, new species are individually assessed following the “Steps” in the Master List. For example, Step 1 is determining the “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 the information gathered, the probability of the species occurring in the BCTS operating areas is assessed (e.g., None, Low, Unknown, Moderate, 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, the Wildlife Act or are Regionally Significant with moderate to high habitat overlap, such as elk or bear. During the assessment, determine if any of these species have had a status change that may result in down-listing (e.g., from blue-listed to yellow-listed) to the Awareness List or removal from the lists.

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, 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 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. Species added in 2022 are assessed using the Flow Chart to determine if they should be included on either the Focus List or Awareness List. If species do not meet the requirements for inclusion on the Awareness or Focus Lists, they should be coloured green.

