British Columbia Guide to Recovery Planning for Species at Risk

Appendix 4. Guidance for Drafting Recovery Documents (Management Plans and Recovery Plans)

June 2026

Version 4.0

BRITISH COLUMBIA
Ministry of Water, Land and Resource Stewardship

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GUIDANCE TO GETTING STARTED

This document provides guidance for authors and drafters to complete all required sections of a B.C. recovery plan or management plan. This document must be used in conjunction with Appendix 6 (Recovery Plan Template) or Appendix 7 (Management Plan Template). This guidance applies to the development of recovery documents for both terrestrial and aquatic species at risk.

Although this guidance primarily focuses on producing a single-species recovery plan or management plan, it may be modified to accommodate a multi-species approach. Contact the Recovery Planning Coordinator for additional guidance if an approach other than single-species is being used.

Before drafting a recovery plan or management plan:

1. Check in with the Recovery Planning Coordinator[1] (RPC), Ministry of Water, Land and Resource Stewardship (WLRS).
2. Obtain the most recent version of the guidance documents from the BC Recovery Planning website (see list below).
3. Ensure that any recovery/management team involved has a current Terms of Reference signed by all members of the team and the Executive Director who serves as the B.C. co-chair of the Species at Risk Coordinating Committee (SARCC)[2] (see Chapter 2 of B.C. Guide to Recovery Planning for Species at Risk).
4. If the species has a recent (<3 years) COSEWIC status and assessment report, there are options for streamlining the document to reduce repetition. Guidance for this is noted in the templates.

Other documents you will need to reference:

- B.C. Guide to Recovery Planning for Species at Risk: this document provides general guidance and information for all aspects of recovery planning in B.C.
- Appendix 3: Formatting Specifications for Recovery Documents
- Appendix 5: Guidance for Threat Assessments
- For examples of recent recovery plans, visit the BC Recovery Planning website. The RPC can help identify key documents to review. Note that templates were substantially updated in May 2026, so older plans may differ from the current format.

Using the associated templates:

- Text highlighted in grey indicates where to insert text.
- Text highlighted in yellow is a place-holder for species-specific text or to choose an appropriate value for that field.
- Do not modify the template formatting or standard text unless approved by the RPC.
- Ensure that all common and scientific names in provincial documents match exactly (including spelling and capitalization) with those shown in the B.C. Species and Ecosystem Explorer.

[1] The current Recovery Planner (RPC)is Alana Phillips (alana.phillips@gov.bc.ca) (eff. Sept 2021), Conservation Policy & Planning Unit, Wildlife and Ecosystems Branch, Resource Stewardship Division, WLRS

[2] The current Executive Director/Co-Chair of SARCC is Heather Wiebe (eff. Jan 2026), North Area, Resource Stewardship Division, WLRS

ACKNOWLEDGEMENTS

| **Recommended length:** ½ page

Include an appropriate land acknowledgement as the first paragraph. Then, acknowledge significant contributors to the document (e.g., drafters, recovery teams, advisors or advisory groups, reviewers). Note only funding sources that are external to the BC government/ministry. Example text is provided. Use only that which is applicable, and modify text as needed.

EXECUTIVE SUMMARY

| **Recommended length:** 1 page

Provide a brief summary of the recovery plan/management plan that includes:

- legal status of the species and conservation objective
- description of the species and its populations and distribution
- the major threats to the species
- recovery or management objective(s)
- summary of recovery/conservation approaches.

RECOVERY FEASIBLITY SUMMARY (RECOVERY PLANS ONLY)

| **Recommended length:** 1-2 pages

Draft this section after completing Section 5 (Population and Distribution Objectives).

The Recovery Feasibility Summary has been updated to align with the federal SARA Policy on Recovery and Survival (2020). This policy provides guidance on determining feasibility of recovery, developing population and distribution objectives, and ensuring population and distribution objectives are consistent with the purposes of SARA. Please contact the Recovery Planning Coordinator for guidance on this section, as well as the related content in Section 5.

1 COSEWIC SPECIES ASSESSMENT INFORMATION

| **Recommended length:** Box only

This section begins on a new page. Fill in the "COSEWIC species assessment information" summary box using the exact wording from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) status report. Assessment summaries and links to full status reports are available on the Species at Risk Public Registry.

If the species has not been assessed by COSEWIC, this section can be removed from the document. Instead, under the "Conservation Status" heading in the "Species Status Information" box, include the note: "COSEWIC: Not assessed."

2 SPECIES STATUS INFORMATION

| **Recommended length:** Box only

Fill in the "Species status assessment" summary box using information from the B.C. Species and Ecosystems Explorer. No additional text is required for this section. Include further explanation or clarification only if it is essential to support the information provided.

3 SPECIES INFORMATION

This section provides context to help readers understand the general status of the species and the reasons it is at risk. In most cases, a detailed status report—such as a COSEWIC assessment—will have been completed prior to the development of the recovery or management plan. Use information and maps from existing status reports to complete this section and minimize duplication of effort, but ensure the content is updated as needed. Write in a clear, concise manner that is accessible to a general audience while maintaining biological accuracy.

This section supports the rationale for the recovery/management approach by providing essential background information. Include only the details necessary to inform and contextualize the subsequent sections of the recovery document. This section is not intended to be as detailed or comprehensive as a status report.

Note: For species that are currently managed by the Province, especially harvested species, it may be beneficial to provide an outline and evaluation of the current management framework to give context for the management section. Include this information as an Appendix (see Appendix A of this document for example). Details on the current management framework should include a summary of protection (legal, policy, or stewardship) and management provisions already in place. This section should also be used to provide concise information on how to manage for the species and/or its habitat (i.e., a brief overview of known best management practices) where this information is known.

3.1 Species Description

| **Recommended length:** 1–2 paragraphs

Provide a brief physical description of the species in plain language to help the public recognize it. Where relevant, describe the appearance of different life stages. A photo may be included to complement the description (referring to cover photo is acceptable). For a full taxonomic description, refer readers to another body of work.

For species with recent COSEWIC assessment (<3 years), limit this section to one paragraph. Refer readers back to the COSEWIC report for more detailed informaiton; refer to cover photo instead of including an illustration here.

3.2 Species Population and Distribution

| **Recommended length:** 0.5–2 pages excluding tables and figures

Summarize the best available knowledge on the species' global and provincial distribution and abundance, and indicate the level of confidence in this information.

For species with recent COSEWIC assessment (<3 years), limit this section to a summary of B.C. distribution. Briefly summarize COSEWIC report and highlight any updates since its publication, such as newly discovered element occurrences or known population losses.

The following should be covered in this section:

Global distribution and abundance (include only if there is no recent COSEWIC report)

- Description of the species' global distribution and abundance.
- Estimate of the percentage of the species' global distribution and abundance that occurs in B.C.
- Map showing the species' current global distribution, and historical distribution if available.

B.C. distribution and abundance

- Description of the known extant and historical[3] distribution and abundance of the species in B.C. Include a list of the B.C. Natural Resource Regions where the species occurs.
- Include a table where appropriate (e.g., for geographically restricted or sessile species), showing the status of all known populations (e.g., extant, extirpated, historical, unknown). Use consistent naming/numbering (e.g., CDC EO#s, COSEWIC reports), and cross-reference sources if helpful. Status may also be noted in parentheses beside population names.
- List all land tenures across the species' distribution in as much detail as possible. Indicate provincial or federal public ("Crown") land where applicable. For plants and/or geographically restricted species, link tenure to specific populations in the table. For wide-ranging species, summarize tenure distribution in text or a table.
- Comment on confidence in the known distribution and abundance, based on search effort or habitat models. Include negative search results where relevant.
- Estimate trends in geographic distribution and population abundance over a biologically relevant timeframe (e.g., percent range loss in 50 years, population decline over 10 years or three generations, proportion of extirpated populations).
- Provide a map of current and historical B.C. distribution at an appropriate resolution. Label population names or numbers (as in Table 1) where feasible and appropriate, while respecting data sensitivity. See Appendix 3 Formatting Specifications for Recovery Documents for map standards and requirements.

Note: Table 1 may not be suitable for wide-ranging species (e.g., monarch butterflies, migratory birds). In such cases, modify Table 1 as needed, or provide a text description of the species' distribution across B.C., including relevant Biogeoclimatic (BEC) zones where appropriate, and include a distribution map.

The following terms are often used in this section and so are defined here[4]. Include definitions as footnotes when the term is first introduced.

[3] Historical: used when there is a lack of recent field information verifying the continued existence of the occurrence (e.g., when it is based only on historical collection data; or when there hasn`t been any field survey work and the occurrence is possibly extirpated due to general habitat loss or degradation of the environment). In general, if there is no known survey for an animal occurrence for 20 years or 20 to 40 years for a plant occurrence, it should be considered historical. These timeframes represent suggested maximum limits; see NatureServe (2002) for details.

[4] These definitions are not the same as those used by COSEWIC. (COSEWIC terms are specifically defined for use in their assessment process.)

- Populations/locations: follows element occurrence specifications used by NatureServe (2002)[5], which defines populations as being separated by a specified distance from one another depending on the taxa.
- Subpopulations: represent records of individuals or patches of individuals within a population that are within a specified distance of each other.
- Element Occurrence[6]: An area of land and/or water in which a species or ecological community is, or was, present (NatureServe 2002).

3.3 Habitat and Biological Needs of the Species

| **Recommended length:** 0.5–2 pages plus table

The length of this section will vary with the complexity of the situation. Include references to peer-reviewed literature whenever possible.

This section describes the habitat that the species depends on directly or indirectly to carry out its life-cycle processes (i.e., a biological need or requirement of the species necessary for its survival). These life-cycle processes of the species or **functions** (e.g., spawning, breeding, denning, nursery, rearing, feeding/foraging, migration; flowering, fruiting, seed dispersing, germinating, seedling development) describe how a species uses the habitat.

This section often begins with a general description of the environmental setting where the species occurs. Include relevant details such as:

- Biogeoclimatic zone or ecoregion classifications
- General climate conditions suitable for the species
- Common species associations
- Geological formations and soils types characteristic of the habitat

For the various life stages of the species (e.g., adult, juvenile, seedlings, eggs, seeds) describe the habitat required to support each function of its life cycle. Some habitat may only be used at certain times for specific functions. For example, habitat use can be temporal (e.g., only used during breeding) and/or are only available at certain periods of time (e.g., ephemeral ponds, pools, or seeps occurring only in spring). Describe the biophysical features and attributes (biotic and abiotic) of the habitat necessary for the species to perform these essential functions (Figure 1).

Along with the narrative, use the table[7] provided to summarize the essential functions, features, and attributes of the species' habitat in British Columbia

[5] NatureServe. 2002. Element occurrence data standard. NatureServe, Arlington, VA. http://downloads.natureserve.org/conservation_tools/element_occurence_data_standard.pdf

[6] References for animal and habitat-based plant element occurrence delimitation/specifications are provided in the recovery plan template.

[7] There are possibly a few instances where including the table may not add value to the reader (e.g., plant that uses the same habitat for all life stages/functions; habitat generalist). Contact the Recovery Planning Coordinator if this is the case for your species.

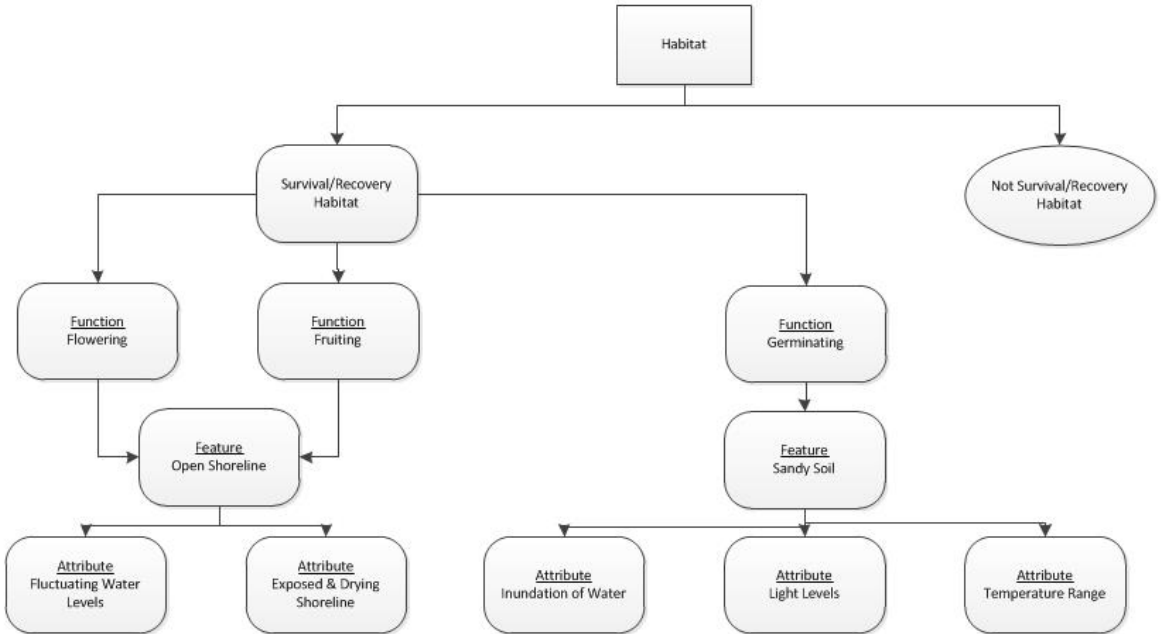

Figure 1. Example showing how to determine functions, features, and attributes (lakeshore summer-flowering annual plants)

Features

Features are the essential structural components of the habitat required by the species (e.g., eelgrass beds, macrophytes, riffles, pools, shorelines, rocky outcrops or benches, marshes, grasslands, mixed-conifer forests). Features are the aspects of the habitat that have the functional capacity to support a life process. Thus functions are associated with and supported by one or more feature(s). Features describe how the habitat is important.

A feature may support more than one function (e.g., a riffle may be used as a spawning and rearing habitat; rocky slopes provide both denning and sunning sites for reptiles). In addition to supporting a particular function, some features may also support or reinforce other features. Riparian zones, for example, are features of the aquatic ecosystem that support the establishment and maintenance of deep and shallow pool features, supply food for migrating and juvenile fish of many species, and influence water temperature (e.g., tree shade). Other features may in fact be another species within the ecosystem (e.g., a food or host fish; host plants for larval or adult insect feeding) or a component of the ecosystem (e.g., ambient acoustic environment).

A feature should be described at least qualitatively but preferably in terms of size, length, decibels, percent coverage, and so on. Features may change over time and are usually comprised of more than one part, or attribute. A change or disruption to the feature or any of its attributes may affect the function and its ability to meet the biological needs of the species.

Attributes

Attributes are the building blocks or parts of a feature; they are the measurable characteristics of a feature and provide an indication of why one feature is essential whereas another similar feature is not. Every feature is comprised of many attributes, such as temperature, water depth, velocity, gravel size,

oxygen level, light level and percent humidity, which the species require within optimal ranges to function. Together, the attributes allow the feature to support the function. In essence, attributes provide the greatest level of information about a feature, the quality of the feature and the way the feature is able to support the life-cycle requirements of the species (i.e., the identified functions necessary for the species' life processes).

Only those attributes deemed essential to a feature and the function it supports should be described. Some attributes, such as a certain temperature range, may support more than one feature. This level of biophysical description will often be the most difficult to understand and may not be applicable for every species.

Describing features and attributes

Most biophysical features and their attributes can be quantified or qualified in terms of their typical form and/or optimal functional range. For example, riffles with cool, well-oxygenated water are required for successful spawning and egg incubation of a salmonid species. In this case, the riffle is the feature and can be qualitatively described as being at general location X in watercourse A, Y in length and Z in width, and characterized by cobble/gravel. The temperature attribute could be expressed as a range (e.g., for adult salmon spawning activity) with a target or optimal condition (e.g., 5 to 8°C), a threshold (e.g., 9°C, which can also be expressed as a lower threshold of 4°C) and the limit or unacceptable condition (e.g., 10 to 12°C, which can also be expressed as a lower threshold).

Another example is an ephemeral pool (the feature) that is inundated with water for a specific length of time. For some annual plant species, this feature is required for successful germination (function) and to ensure that the plants mature and reproduce (function) before the drought season sets in. The water attribute could be expressed as a threshold for water depth, and a range for timing and length of inundation. The soil attribute could be expressed as soil depth and parent material.

Note: If there are substantial knowledge gaps in this habitat information, ensure that the recovery/management actions include studies to obtain or improve this data. Proposed actions should offer a clear and practical path to obtaining the necessary habitat information.

3.4 Limiting Factors

| **Recommended length:** 1–2 paragraphs

List and describe biologically limiting factors, which are intrinsic or evolved traits in the species' life history or ecology, that may affect recovery or conservation potential. Provide a rationale explaining how each factor may limit recovery/conservation potential.

Note: Limiting factors differ from threats. Limiting factors are generally not human induced and as such cannot be mitigated through conventional recovery or management action, making species less responsive to such efforts. Examples include late maturity, low reproductive rate, pollinator dependency, intermittent recruitment, natural rarity, rigid behaviour patterns, reliance on specific disturbance regimes, limited dispersal, cannibalism, narrow habitat requirements, strong fidelity to traditional gestation, birthing, or overwintering sites, extremely isolated small population(s), and dormancy needs.

4 THREATS

The contents of this section are drawn from the COSEWIC status and assessment report. If there isn't a recent COSEWIC threat assessment, contact the Recovery Planning Coordinator to check if a previous threat assessment exists (e.g., via the B.C. Conservation Data Centre). If available, use it as the basis for the Threats section and update as needed. Appendix 5 (Guidance for Threat Assessments) provides instructions for using the Threats Calculator to complete the threat classification table and write the narrative on species threats. Use the International Union for Conservation of Nature-Conservation Measures Partnership (IUCN-CMP) Direct Threats Classification (Version 2.0)[8]. See Appendix B, Table 1 for details.

4.1 Threat Assessment

| **Recommended length:** 1–2 paragraphs plus table

Standard introductory text has been provided. Populate the table from the Threat Assessment. Within the table, remove all headings/rows for threats that do not apply to the species.

4.2 Description of Threats

| **Recommended length:** 1 paragraph

Report the overall province-wide Threat Impact provided by the Threats Calculator. "Identified threats" refers to those threats with the demonstrated impact; threats assessed as Unknown or Negligible are listed separately in the following subsections.

If the 3-generation timeframe used to determine severity scores differs from that in the COSEWIC status report, include a second introductory paragraph explaining the rationale.

4.2.1 Identified Threats

| **Recommended length:** 3-5 pages

Use this section to provide additional details on threats assessed as Very High, High, Medium, or Low. Arrange the threats in order of the IUCN-CMP categories, as listed in the template, and remove any categories that don't apply (threats that are Unknown or Negligible will be listed in the next subsections).

Briefly summarize each threat in 1-2 sentences. Then, add any relevant updates since the COSEWIC report, such as changes to specific locations (e.g. a bridge is now under construction at location X), changes in threat effects since the report (e.g. introduction of an invasive species), or recent research that directly improves our understanding of the threat. Include references to inventory reports, local studies, and peer-reviewed literature as relevant. **Do not copy/paste text directly from the COSEWIC report.**

[8] A newer version of the IUCN-CMP Threats Classification v. 4.0 is available but has not yet been adopted in B.C.; this guidance will be updated if adoption occurs.

4.2.2 Unknown Threats

| **Recommended length:** up to 1 page; 1-2 sentences per category

NEW: This section is optional and should only be used to explain why a threat rated as Unknown cannot currently be assessed, particularly when this information may guide monitoring or research priorities and aligns with knowledge-gap actions identified in the Action Table. Avoid speculation and do not copy text from the COSEWIC report. Limit text to one to two sentences for each Unknown-rated threat using the threat headings from Section 4.2.1.

4.2.3 Actions Considered Negligible

| **Recommended length:** up to 1 page; 1-2 sentences per category

NEW: This section is optional. Actions rated Negligible are not threats under current or reasonably foreseeable conditions; for example, dam construction is not a threat if no dams are planned within three generations where the species occurs. Provide 1–2 sentences to flag conditions that might increase the frequency or intensity of an activity in the future. Do not restate COSEWIC's rationale or describe effects on the species. Use the threat headings from Section 4.2.1.

5 POPULATION AND DISTRIBUTION OBJECTIVE / MANAGEMENT OBJECTIVE

| **Recommended length:** 1 sentence (can use bullets to split objective into population vs distribution)

Developing the Population and Distribution Objective (PDO) or Management Objective is the most important step in preparing a recovery or management plan.

Follow the guidance below to develop the Objective. No preamble is needed; simply state the Objective.

NEW - Note on Terminology: The move to a Population and Distribution Objective or Management Objective is part of aligning provincial recovery documents with federal policy, including the SARA Policy on Recovery and Survival (2020). In the current approach, each plan includes one clear, outcome-focused statement that describes the long-term population and distribution conditions needed for recovery or conservation. Under the updated system, the broad, long-term statement that previously functioned as the goal is now presented as the objective itself, and the content that used to be divided into individual objectives is consolidated into this single overarching statement. This streamlined structure improves consistency with federal terminology and COSEWIC assessment criteria and provides a more coherent foundation for describing the long-term conditions required for recovery or conservation. This differs from earlier versions of provincial plans, which used a goal and multiple separate objectives that may have included items (e.g., securing financing) that do not directly result in achieving the PDO or MO.

Guide to Developing the Population and Distribution Objective (PDO) or Management Objective (MO)

This section is key to outlining the long-term outcomes for the recovery or conservation of the species. The objective must provide a clear understanding of what recovery or conservation success looks like, based on the best available science and aligned with the federal SARA Policy on Recovery and Survival (2020). Please consult the Recovery Planning Coordinator for additional support with this section and the Recovery Feasibility Summary.

Use the following guidance to shape a strong, outcome-focused objective[9]:

- Clearly define what recovery or management means for the species by addressing both population and distribution outcomes.
- Frame the objective as a statement of intent that describes a desired future condition or achievement to be reached over time.
- Focus the objective on the ultimate outcome, without including mechanisms or methods for achieving it (e.g., avoid references to securing financing or developing partnerships).
- Recognize that achieving recovery or conservation typically requires multiple actions and sustained effort over time towards the objective.
- Ensure the objective is scientifically sound, biologically and technically realistic, and provides clear direction for the development of appropriate recovery or management actions.
- Incorporate quantifiable metrics where possible, supported by credible evidence and explanations of any uncertainty.
- Where feasible, specify the number of individuals, populations, and/or geographic distribution required to achieve recovery or conservation.
- If baseline information is lacking, outline approaches in the recovery or management table to obtain the necessary data for developing realistic, quantifiable objectives.

Specifics for Population and Distribution Objective (Recovery Plans):
The ultimate purpose of a recovery plan is to secure the status of the species by reducing its risk of extinction or extirpation. When developing the objective, consider the COSEWIC assessment criteria that led to the species' designation, along with any new information presented in the recovery plan. Aligning objectives with these criteria clarifies how "recovery" is interpreted for the species and helps ensure that objectives support the potential for future down-listing.

Objectives should clearly reflect the species' recovery feasibility, as this determines the type of future condition that is realistically achievable and appropriate to articulate in the plan.
For species that are naturally rare or have long lifespans, recovery may not realistically result in delisting or down-listing. In these cases, objectives should acknowledge biological constraints and set achievable expectations. Short-term (interim) statements may also be included for species with long recovery timelines to provide measurable indicators of progress toward the long-term objective.

Table 1. Sample wording for objectives based on recovery feasibility:

Recovery feasibility	Species' current condition	Sample wording for objective
Feasible	Meets or exceeds the recovery threshold	… to maintain the current condition of [Species Common Name] in Canada by [YEAR].
Feasible	Can meet or exceed the recovery threshold with actions	… to recover [Species Common Name] in Canada by [YEAR].
Not feasible	Cannot meet the recovery threshold but species is extant.	… to increase the likelihood of survival of [Species Common Name] in Canada by [YEAR].

[9] Use the SMART method to ensure that the objective is Specific, Measurable, Achievable, Realistic, and Time-bound.

Table 2. Sample wording for objectives based on key survival characteristics and associated COSEWIC Status Assessment Indicators (SAI):

Survival characteristic	COSEWIC SAI	Sample wording for objective
Stability	A, E, and/or recent COSEWIC reassessment	… to improve/maintain the stability of extant [population units] … to improve/maintain the amount, condition and connectivity of habitat supporting the populations and to reduce local threats … to stabilize the trend of population decline across the species' known distribution range in Canada.
Resiliency	C, D1	… to maintain sufficient population resilience … … to improve the resiliency of the extant [population units], as well as any additional locations that are found
Redundancy	B1b, B1c, B2b, B2c, D2	… to improve/maintain the redundancy of Species Common Name within all extant [population units].
Connectivity	B1a, B2a	… to improve/maintain the connectivity of habitat supporting the [population unit]
Vulnerability to human-caused threats	A2, A3, D2	… by reducing/mitigating/ceasing human-caused threats causing decline…

Specifics for Management Objective (Management Plans):

- The purpose of a management plan is to prevent further decline, range loss, or worsening of status. The management objective should reflect this focus.
- The objective should support efforts to maintain the species' current status or facilitate down-listing to Not at Risk.
- When developing the objective, consider the reasons COSEWIC designated the species as Special Concern (if applicable), and incorporate any new information presented in the management plan.
- Do not include short-term or interim statements, as management plans are expected to be monitored and updated regularly (i.e., every five years) to adjust for changing conditions.
- A second objective may be included to address sustainable harvesting or recreational use, but only if it is explicitly dependent on first achieving the primary conservation objective. This objective should align with the description of current management frameworks included as an appendix (see Appendix A).

5.1 Rationale for the Objective

| **Recommended length:** 1-3 pages

Clearly outline the rationale used to determine the Objective so that readers can understand why it has been set. Explain the key facts and assumptions that informed the objective. Explain why the specified level of persistence[10] is appropriate for the target species' recovery or conservation. Base the rationale on information provided earlier in the recovery document (e.g., confidence in population and distribution parameters, specific limiting factors or habitat and biological needs, and key knowledge gaps).

Include a rationale of how specific quantitative targets were determined (e.g., to meet COSEWIC criteria

[10] Persistence is equivalent to the desired outcome, and may range from precarious with limited occurrence to highly viable and self-sustaining.

for down-listing, or the level of persistence that is thought to be possible with all remaining habitat). If measurable targets cannot be set, define the qualitative indicators that will be used. For example, if the objective is to maintain a "viable population," clearly describe what "viable" means, as precisely as possible.

6 RECOVERY ACTIONS (RP) / CONSERVATION ACTIONS (MP)

For this section, use the IUCN-CMP Conservation Actions Classification (Version 2.0)[11]. See Appendix B, Table 2 for details.

6.1 Actions Already Completed or Underway

| **Recommended length:** 1–2 pages

Summarize the recovery and conservation actions taken or initiated to date, providing context for the current status of the species or population and the actions outlined in the recovery/management plan.

- Use Level 1 Action categories only, and delete any action categories that aren't used. Additional guidance on action categories is provided in Section 6.2 of this document.
- Use bullets and brief statements to summarize completed/ongoing activities.
- See template for examples and prompts.

Note that for some species it may be valuable to include indirect measures that benefit the species (e.g., a Wildlife Habitat Area that has been established for another species, which may overlap and provide protection for the subject species, or invasive species removal that benefits many species).

Specific Guidance for Action 6. Conservation Designation and Planning

Starting with information from the COSEWIC status report, and updating it as necessary, identify which portions of the species habitat are directly or indirectly protected under existing legal, stewardship, and/or policy frameworks (e.g., Wildlife Habitat Areas or Features, provincial and federal parks, stewardship agreements) in as much detail as possible. Specify the land designation or protection tool in place and whenever possible list the threats (from the threats section) addressed by the protection measure. The template table can be modified if appropriate, or use additional narrative if needed. Example phrasing[12]:

- "The species is found in XX Provincial Park, which is afforded some protection through the legal provisions of the B.C. Parks Act."
- "These areas are protected from industrial resource extraction through provisions such as the Parks Act and the Ecological Reserve Act."

6.2 Recovery Actions Table (RP) / Conservation Actions Table (MP)

| **Recommended length:** 3-6 pages (intro paragraph plus table).

The Recovery/Conservation Actions Table is a core communication tool for outlining recovery or

[11] While ECCC is currently piloting an updated version of the IUCN-CMP Actions Classification with new Level 3 categories, B.C. continues to use Conservation Actions v. 2.0 from the IUCN-CMP website. This document will be revised accordingly if the ECCC update is adopted by B.C.
[12] This phrasing provides examples that avoid the term "legally protected," which has a specific meaning under SARA and thus could cause confusion as to the meaning applied in B.C. published documents.

conservation needs to partner agencies and the public. This section must clearly describe the actions required to implement the direction set out in the recovery or management plan and must link directly to mitigating the identified threats (Section 4) and achieving the PDO/MO (Section 5).

To maintain a clear and logical structure, recommended actions are organized by IUCN-CMP Actions Categories. These include ten broad Level 1 action categories, each with associated Level 2 actions. For each recommended action, identify the threat or concern addressed, and its assigned priority. Optional: Level 3 categories[13] may be used to provide finer details. See Appendix 1, Table 2 for details.

Actions may include mitigation or management measures (e.g., installing cattle fencing to prevent trampling), inventory and monitoring activities, and research required to address critical knowledge gaps. Actions may apply within protected areas (e.g., BC Parks, Protected Areas, Ecological Reserves, Wildlife Habitat Areas, National Wildlife Areas, Regional Parks) or on lands with no current species-specific management. In such cases, actions may involve collaborating with land managers or landowners to support stewardship or secure habitat protection through tools such as agreements or covenants.

Knowledge gaps: Include only those that currently prevent effective management or habitat protection. Descriptions must specify what information is needed (e.g., habitat requirements, distribution, life history) and the methods required to obtain it.

Filling in the Recovery Actions Table (RP) /Conservation Actions Table (MP)

Table 5 summarizes recommended actions, organized by IUCN–CMP action categories. Include only actions that directly address threats in Table 3 and support achievement of the PDO/MO. For Category 8 – Research and Monitoring, include only research that addresses threat-related knowledge gaps. Exclude general investigations and actions tied to "Unknown" threats unless essential for recovery and clearly justified. Do not include performance measures in this table.

Populate the table as follows:

- Complete every column for each recommended Level 2 action (e.g., 1.1, 4.3).
- Expand the table as needed to capture all actions required to meet the PDO/MO.
- Include only applicable IUCN–CMP action categories.
- For each action, list the threat(s) addressed using IUCN–CMP threat numbers, or list the concern for knowledge-gap actions.
- Ensure every threat identified in the plan is addressed by at least one action.
- Indicate specific locations where actions are area-specific; add a "Sites/Populations" column if helpful.
- Assign a priority to each action: Essential (urgent and important); Necessary (important but not urgent); Beneficial (helpful but not required to meet the PDO/MO)

6.3 Additional Details for Recovery Actions

| **Recommended length:** 1–2 pages

NEW: This section is now optional. Do not repeat details from Table 5 – use ONLY to add information

[13] Level 3 actions are currently in development by both IUCN_CMP and ECCC. Consult the Recovery Planning Coordinator for the latest standard.

that could not be presented in Table 5. Do not include performance measures.

Provide narrative, as necessary, to expand upon the recommended actions. This section offers an opportunity to explain how several actions together will influence recovery/conservation. Discuss which, if any, of the identified threats are not being addressed in the table and provide an explanation. Delete any of the action categories that aren't used.

7 SPECIES RECOVERY AND SURVIVAL HABITAT (RECOVERY PLANS ONLY)

This section applies to recovery plans only.

The purpose of this section is to provide the best available information about the habitat necessary for the recovery and survival[14]. Any additional work required to fulfill habitat knowledge gaps should be included in the recovery planning table.[15] This section also includes the effects that threats can have on the function, feature, or attribute of the species' habitat.

Although not prescriptive, some sample introductory text for each subsection is provided in the template.

The description of survival/recovery habitat consists of 2 parts:

- biophysical features and their attributes, and
- a spatial description (e.g., amount, area and distribution).

7.1 Description of the Species' Recovery/Survival Habitat

| **Recommended length:** 1 paragraph

Standard text is provided in the template. This section simply refers the reader back to Section 3.3 where the biophysical features and attributes of the species habitat are provided.

7.2 Spatial Description of the Species' Recovery/Survival Habitat

| **Recommended length:** 1–2 pages

In most cases, some spatial description of recovery/survival habitat will be included. The exception to this is when there are no known threats to the species habitat and habitat does not appear to be limiting.

Describe the quantity and quality of recovery/survival habitat required for a species, which is based on the amount of habitat needed to meet the recovery objective[16]. This description must align with and

[14] Note that B.C. recovery plans represent science advice to the provincial government. The legal identification of critical habitat (CH) as defined under the federal Species at Risk Act is the responsibility of the federal minister(s) responsible for species at risk and may be based on the advice provided in this recovery plan and any subsequent government decisions or actions related to habitat protection. The term "recovery/survival habitat" is used in B.C. documents to ensure the reader understands that information provided in this section represents science advice (only) and not the legal identification of critical habitat (CH).

[15] Advice needs to be timely and efficient; therefore publication of the recovery plan is not to be delayed simply because we do not have all of the information for this section.

[16] It is possible that for some species there will be more than sufficient habitat currently available than is needed to meet the recovery goal. In these cases, this section should provide advice regarding how to select habitat for threat mitigation, as not all suitable habitat is needed to be

support the recovery objective listed in the recovery plan.

To complete the spatial description of recovery/survival habitat:

- Choose a spatial scale appropriate to the species' needs (e.g., landscape vs. site level), and explain the method and rationale.
- Recommend specific habitat areas or general regions, and note any exclusions (e.g., developed areas). If relevant, discuss alternative configurations.
- Specify how much habitat is required (e.g., 50-m radius around a nest tree for nesting, plus 500-m foraging buffer with 70% basal area retention), with rationale and references.
- Justify all habitat recommendations, including area, configuration, and location, using references where possible.
- State the total amount of recovery/survival habitat identified in the plan.
- Explain how the habitat amount, quality, and location align with the recovery objective. If not all habitat is described, indicate what remains and whether it is known.
- Document any uncertainties or risks associated with the recommendations.

If the spatial aspects of the habitat cannot be fully described, explain why (e.g., due to knowledge gaps or other reasons). Refer to the recovery planning table for the steps needed to describe the habitat needed for survival and recovery.

Maps showing recovery/survival habitat are not required for this section. However, if maps have been developed, consult with the Recovery Planning Coordinator to determine the most appropriate ways to include them in the document. If there are multiple maps, they may be placed in an appendix, and spatial files should be stored digitally to ensure accessibility within government.

8 MEASURING PROGRESS

| **Recommended length:** 1-2 paragaphs

Performance indicators provide a measurable way to assess progress toward achieving the single Population and Distribution Objective (PDO) or Management Objective (MO). Indicators must be SMART—specific, measurable, achievable, relevant, and time-bound—and should directly reflect the population and distribution outcomes described in the objective. At minimum, performance indicators must capture population change, distribution change, and, where relevant, reductions in key threats or improvements in habitat conditions that directly support long-term recovery or conservation outcomes. Performance indicators should measure achievement rather than administration; logistical steps such as securing funding or forming partnerships are not performance indicators because they do not demonstrate biological progress. For recovery plans, where population responses may unfold slowly, you may include short-term statements alongside the long-term objective, provided they are clearly linked to the PDO and directly measurable within the review cycle. For management plans, indicators should facilitate clear status assessments at each review cycle.

Population performance indicators assess changes in abundance, number of populations, productivity, or overall trend. Examples include:

- Increase the number of mature individuals from 120–150 to at least 200 by 2031.

included as survival/recovery habitat.

- Maintain all five currently known populations with no net loss of occupied area or population size by 2031.

Distribution performance indicators track changes in extent of occurrence, area of occupancy, occupancy of known sites, or prevention of further range contraction. Examples include:

- Maintain the species' extent of occurrence at ≥12,500 km² by 2031.
- Increase the index of area of occupancy from 16 km² to ≥24 km² by 2031.

Threat-reduction performance indicators may be used when they represent a measurable driver of population or distribution outcomes. Examples:

- Reduce the intensity of [key threat] across all occupied sites by at least 30% relative to 2025 levels by 2031.
- Achieve <10% annual mortality attributable to [key human-caused threat] across all monitored populations by 2030.

Habitat- or condition-based indicators may be used to assess short-term statements for species with slow or hard-to-detect demographic responses, provided they are clearly linked to population and distribution outcomes. Examples:

- Increase the amount of reliable spring breeding wetland habitat by 20% at key sites by 2031.
- Reduce invasive plants in occupied meadows to below 10% and increase open, suitable growing spots by 15% by 2030.

If key baselines are missing, one short-term statement may focus on establishing those baselines early in the planning period; however, this cannot replace outcome-oriented indicators. The methodology for collecting or assessing each indicator—such as survey protocols, analysis methods, or monitoring schedules—is documented in the recovery or management planning table rather than within the indicator statement itself.

9 EFFECTS ON OTHER SPECIES

| **Recommended length:** 2-3 paragaphs

List any co-occurring species that share habitat with the target species. Include their federal or provincial status, or most recent COSEWIC status, as appropriate. Flag any other recovery teams, implementation groups, or recovery plans that could be affected by the proposed actions.

Negative effects: Identify any potential adverse effects of the proposed recovery/management activities on non-target species, natural communities, or ecological processes. Indicate the probability and significance of each potential effect. Consider the following guiding questions:

- Would there be impacts on non-target species, land, air, or water, natural communities, or ecological processes?
- Could these effects be compounded by current or future stressors, or concerns such as population declines?
- If adverse effects arise, can they be mitigated, and to what extent? What residual effects would remain after mitigation?
- Does this analysis raise any uncertainties about effects on non-target species, communities, or processes? (If so, these should be addressed in the section on knowledge gaps for design of

appropriate follow-up studies in keeping with the adaptive management principle.)

Positive effects: Identify any expected benefits of the proposed actions for co-located species, ecological communities, or ecosystem processes. Explain how the recovery or management activities may support biodiversity or improve conditions for co-occurring species. Where relevant, describe how the benefits extend beyond the target species, such as through improved habitat quality, habitat protection, reduced threats, or restored ecosystem function.

10 ECOSYSTEM SERVICES

| **Recommended length:** 2-4 pages

The Ecosystem Services section is intended to describe the ecological and social co-benefits of conservation by linking the recovery of at-risk species to human well-being through ecosystem functions. This section is not intended to be exhaustive, but rather to demonstrate key links between the recovery of the species and its habitat and positive benefits for people and their livelihoods. When completing this section, reflect on the role of the species and its habitat in the broader landscape and ecosystem. Identify how the species or its habitat provides services that directly or indirectly benefit people, including natural resources, environmental stability, cultural values, and community interests. Consider both the current and potential future contributions to ecosystem services, ensuring that the description remains grounded in the best available ecological understanding.

Consult the template for guidance and prompts on how to approach the content in each subsection.

11 REFERENCES

Begin this section on a new page.

List all references cited in the recovery document, including statutes. Refer to Appendix 3, Formatting Specifications for Recovery Documents for full details.

Personal Communications

Include the full name, affiliation, and location of all personal communications and observations cited in the text.

Appendix A. Current management framework (management plans only)

This optional section applies only to management plans. Include as an appendix.

For species that are currently managed by the Province, especially harvested species, it may be beneficial to provide an outline and evaluation of the current management framework to give context for the management section. Details on the current management framework should include a summary of protection (legal, policy, or stewardship) and management provisions already in place. This section should also be used to provide concise information on how to manage for the species and/or its habitat (i.e., a brief overview of known best management practices) where this information is known.

For examples, see the Management Plan for Bull Trout in B.C. (2023).