



## ***SPECIES AT RISK ACT***

2007 Legal Listing Consultation Workbook:  
Freshwater Fish

MISTY LAKE STICKLEBACKS AND  
WESTSLOPE CUTTHROAT TROUT

### **Objective of this Consultation**

Your views are being sought to assist the Government of Canada in making an informed decision on whether to add any or all of the following two aquatic species to Schedule 1 (List of Wildlife Species at Risk) of the *Species at Risk Act* (SARA). The species have been designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), and include: Misty Lake sticklebacks (Endangered) and Westslope cutthroat trout (Special Concern).

This workbook provides background information on SARA and the two species being considered for legal listing. At the end of this workbook, questions are provided to guide your feedback. Please complete any or all of the questions starting on page 10 and provide any additional comments you feel are relevant. Your ideas, knowledge, and advice are important to this process and will help the Government of Canada assess the impacts of adding any or all of these three species to Schedule 1.

A downloadable workbook and contact information are available at:

[http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/Consultation2007/main\\_e.htm](http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/Consultation2007/main_e.htm) under: *Species at Risk Act*. For further information on how to submit your workbook please see page 9.

To make sure your comments are considered, please send in your submission by December 14th, 2007.

### **What is the *Species at Risk Act*?**

The *Species at Risk Act* (SARA) was created to ensure the survival of wildlife species and the protection of our natural heritage. It requires Canada to provide for the recovery of species at risk due to human activity, and to manage species of special concern to make sure they do not become endangered or threatened. It provides protection for species, their residences and critical habitat.

### **Legal Listing – What does this mean?**

A species is not protected under SARA until it is included in the List of Wildlife Species at Risk (Schedule 1 of the Act).

Following receipt of COSEWIC assessments and public consultations, the federal government must do one of the following:

- Accept the assessment and add the species to the List;
- Decide not to add the species to the List; or
- Refer the current assessment back to COSEWIC for further information or consideration.

The decision on whether to add the species to the list takes into account the COSEWIC assessment, information received from consultations and factors such as potential social and economic impacts of the listing.

Once a species is legally listed as extirpated, endangered, or threatened, specific protection measures come into effect barring any harmful actions against species and their residences. In addition, a recovery process must be completed within prescribed timelines.

### **Protection**

Once species are legally listed as extirpated, endangered or threatened, automatic prohibitions apply. SARA has general prohibitions against killing, harming, harassing, capturing, taking, possessing, buying and selling, collecting and damaging or destroying the residences and critical habitats of species that are legally listed.

SARA prohibitions only apply to species listed as extirpated, endangered and threatened, and not to species of special concern. Further, existing protections and prohibitions, such as those authorized by the *Fisheries Act*, *Migratory Birds Convention Act* and the *Canada National Parks Act*, continue to be in force.

### **Recovery and Management Planning**

The recovery process is designed to improve the status of species at risk. There are two parts to the recovery planning process for species listed as either extirpated, endangered, or threatened: 1) the development of a recovery strategy, which identifies threats to the species, describes recovery objectives for that species, and identifies the species' critical habitat; 2) and the development of an action plan, which describes activities to be carried out to promote the recovery of the species. Action plans are the method used to implement the recovery strategies. Recovery strategies and action plans are only developed for species listed as extirpated, endangered or threatened. For species of special concern, management plans are to be developed (or existing plans may be adopted if adequate) outlining conservation measures and species' habitats.

The timeline for recovery strategies and management plans is one year from the time of legal listing for endangered species, two years for species listed as extirpated or threatened, and three years for species of special concern.

### **Species Information**

This workbook is structured to provide you with specific information on each of the two COSEWIC-designated species that are being considered for SARA legal listing. Information on the species directly from the COSEWIC status report is provided on the status, distribution and biology, the reason for designation by COSEWIC, potential protective measures, and impacts. For the full status report for each species, including the threats and limiting factors, please visit: [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca).

When discussing any impacts associated with legally listing a species, it is important to consider what impacts could result from recovery or management actions implemented to: comply with the automatic prohibition provisions in the Act for species listed as extirpated, endangered, and threatened; and achieve recovery or management objectives.

In general, actions taken to comply with automatic prohibitions are immediate, while those implemented to achieve recovery or management objectives are longer term. A recovery strategy will likely expand the initial management measures taken to protect species listed as extirpated, endangered, or threatened. Measures recommended in a recovery strategy or management plan will only be implemented after further consultations.

Misty Lake sticklebacks (Endangered) pg. 5  
Westslope cutthroat trout (Special Concern) pg. 7

*Note: To provide your comments on other COSEWIC-designated species currently proposed for listing under SARA, please use workbooks provided for rockfish (bocaccio, longspine thornyhead, and rougheye), sharks (basking shark, sixgill shark, and tope (soupfin shark)) and sea otters.*

**Misty Lake sticklebacks (*Gasterosteus spp.*)**

**Status:** Endangered

**Last Examination by COSEWIC:** November 2006

**Species biology and distribution:** The Misty Lake sticklebacks, a highly divergent parapatric lake-stream pair of threespine stickleback, are found in a single small lake on Vancouver Island, British Columbia (BC). Similar parapatric lake-stream pairs have also been well documented in two other systems in BC, Mayer and Drizzle lakes on Graham Island (Queen Charlotte Islands). These pairs live in contact without a significant amount of overlap or interbreeding. Differences in body shape are believed to be adaptations to the different feeding strategies used by each member of the species pair. Genetic evidence suggests that each of the three highly divergent lake-stream pairs has evolved separately through parallel evolution. Of the lake-stream pairs examined to date, the Misty Lake inlet stream and lake populations appear to be the most genetically and ecologically differentiated from one another. The Misty Lake outlet stream population is intermediate in morphology between the inlet and lake populations and is considered part of the lake-stream complex.

The lake-stream pair of threespine stickleback occurs only in Misty Lake and its inlet and outlet tributary system, on northeastern Vancouver Island, BC.

**COSEWIC Reason for Designation:** This lake-dwelling fish is part of an endemic, highly divergent species pair restricted to a single stream-lake complex on Vancouver Island with an extremely small area of occurrence. This species pair could quickly become extinct due the introduction of non-native aquatic species or perturbations to the habitat. Proximity of this complex to a major highway and public access makes an introduction likely. Logging activities in the watershed, as well as highway use and related maintenance, could impact habitat quality to some degree.

**Possible Protective Measures and Impacts:** No immediate impacts from the Act's general prohibitions are expected. Potential threats to the species include impacts hydrocarbon and pesticide runoff from a nearby highway and rest-stop, declines in water quality due to timber extraction, non-native species introductions, and detrimental recreational uses of the lake (e.g., canoeing and illegal fishing).

Examples of recovery measures to comply with the general prohibitions and with future potential recovery planning objectives may include:

- Restrictions on instream and riparian activities.
- Ongoing research and monitoring of population status, biology, critical habitat, and threats.
- Restrictions on activities that result in killing, harming or harassment of the species.

Therefore, potentially affected stakeholders may include industries, and recreational and academic users of the Misty Lake watershed.

It should be noted that recovery measures would be developed through the recovery planning process and implemented after further consultation.

Listing Misty Lake sticklebacks as Endangered could benefit protection and recovery of this unique part of Canada's biological diversity. Misty Lake sticklebacks are one of only three known pairs of highly-divergent lake-stream sticklebacks known to exist, and their evolutionary history is of significant value to the scientific community in understanding evolutionary processes.

**Westslope cutthroat trout (*Oncorhynchus clarkii lewisi*)**

**Status:** Special Concern

**Last Examination by COSEWIC:** April 2007

**Species biology and distribution:** The cutthroat trout, *Oncorhynchus clarkii* (formerly *Salmo clarkii*), is a polytypic species of salmonid native to western North America. Two subspecies occur naturally in Canada: the coastal cutthroat trout (*O. c. clarkii*) and the westslope cutthroat trout (*O. c. lewisi*). Cutthroat trout are highly variable in terms of phenotypic traits and life history characteristics. The most conspicuous character distinguishing cutthroat from similar species is the presence of bright orange-red slashes beneath the lower jaw. Based on genetics and range disjunction, two Designatable Units are recognized, viz an Alberta population and a B.C. population.

The distribution of westslope cutthroat trout straddles the Continental Divide and includes drainages in Montana, Idaho, Washington, Oregon, and Wyoming in the United States. In Canada, they are restricted to southeastern British Columbia (primarily the Upper Kootenay and Upper Columbia drainages) and southwestern Alberta (primarily the South Saskatchewan drainage). Globally, their range has become extremely fragmented (in high elevation, isolated headwater areas) and the heart of their distribution now centers on the upper Kootenay River drainage in southeastern BC.

**COSEWIC Reason for Designation:** Populations are stressed by hybridization and competition with introduced species. Furthermore, expanding urban development, agricultural activities and resource-based industries are expected to lead to additional stresses associated with habitat loss and degradation, as well as increased exploitation. It should be noted that this assessment includes only genetically pure, native populations of the species occurring within their historical range. Any populations known to be hybridized significantly (i.e. >1%) with other trout species, or to have been introduced into a system previously free of native populations, were not assessed.

**Potential Protective Measures and Impacts:** No immediate impacts from listing under SARA would be expected, as the general prohibitions would not apply. However, because activities that cause habitat loss, and overexploitation are primary threats to the species,

management actions that reduce impacts from timber extraction, mining and hydroelectric developments, as well as recreational fishing, may need to be implemented.

Examples of management actions to prevent Westslope cutthroat trout from becoming further at risk may include:

- Modification to existing water withdrawal and flow control measures.
- Restrictions on instream and riparian activities.
- Directed harvest and bycatch reductions to below recent levels.
- Recreational fishery restrictions based on changes to current time, area, and gear regulations to meet catch objectives.
- Ongoing research and monitoring of population status, biology, and threats.

Therefore, potentially affected stakeholders may include recreational fisheries, industries, First Nations, and other interest groups.

It should be noted that management actions would be developed through the management planning process and implemented after further consultation.

Listing Westslope cutthroat trout as Special Concern could benefit the management of this unique part of Canada's biological diversity. The species is of traditional value to First Nations, as well as significant recreational value as a sport fish. Due to strict habitat requirements, cutthroat trout also serve as a good indicator of the health of the ecosystems in which they are found.



## Contact Information

If you have questions about the *Species at Risk Act* or the consultation process, or would like to submit a workbook please feel free to contact us.

**Mail:**

Fisheries and Oceans Canada  
Attn: Species at Risk Consultations  
200 – 401 Burrard Street  
Vancouver, BC  
V6C 3S4

**Tel:** (604) 666-2792

**E-mail:** [sara@pac.dfo-mpo.gc.ca](mailto:sara@pac.dfo-mpo.gc.ca)

**In Person:** Any Fisheries and Oceans Office

## Consultation Workbook Survey

The government's decision on whether or not to list a species under the *Species at Risk Act* will be based on a full description and understanding of the costs and benefits protection and recovery may have on First Nations, individuals, organizations, industries and Canadian society in general. Legally listing a species may provide additional benefits through species recovery and/or may cause disruption in your ability to access the species. SARA prohibitions only apply to species listed as extirpated, endangered, or threatened, and not to species of special concern.

Individuals value the existence of a species for many reasons, including harvest for food, social and ceremonial, income or recreational purposes for present and future generations; the role it plays within the ecosystem in maintaining a healthy, diverse environment; and scientific and academic research. The purpose of this survey is to better understand your values, opinions and preferences in regards to potential legal listing of the species discussed in this workbook.

The options available for submitting the workbook survey are:

1. Submit written responses at the consultation sessions.
2. Download a Word version of the workbook at:  
[http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/Consultation2007/main\\_e.htm](http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/Consultation2007/main_e.htm)  
and e-mail completed electronic versions to: [sara@pac.dfo-mpo.gc.ca](mailto:sara@pac.dfo-mpo.gc.ca)
3. Download a Word or pdf version of the workbook, fill it out by hand and fax to: 604-666-3341, or mail to the address above.

**Workbooks must be submitted by December 14<sup>th</sup>, 2007.**

## Questionnaire

### Contact Information (optional):

Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

### 1) Which sector(s) do you represent? Check all that apply.

- Academic
- Commercial Fishing/Processing/Sales
- Agriculture
- Forestry
- Recreational Fishing
- Environmental Organization
- Government
- Stewardship Group
- Tourism
- Other \_\_\_\_\_

### 2) Are you familiar with the *Species at Risk Act*? Yes No

Check all that apply.

- Not familiar
- I have read all or part of the Act
- I have received written information (e.g. pamphlets)
- I have participated in information and/or consultation sessions
- I have received information from the media
- Other

### 3) Have you read the COSEWIC status report for any of these three aquatic species being considered for legal listing?

Misty Lake sticklebacks	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Westslope cutthroat trout	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

**4) Where do you reside?**

- British Columbia
- North Coast BC
  - Central Coast BC
  - Vancouver Island
  - Sunshine Coast
  - Lower mainland
  - Interior BC
  - Other In BC
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- Outside British Columbia

**5) For each species below, please indicate your support for, or against, legal listing. A species is not protected under SARA unless it is legally listed, which means included in the List of Wildlife Species at Risk.**

	YES Legal List	NO Don't list	Undecided	Not familiar with species
<b>Misty Lake sticklebacks</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Westslope cutthroat trout</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**6) If a species is legally listed, a recovery process would automatically start for endangered, threatened or extirpated species. Recovery measures could curtail activities that negatively affect the species (see the summary of each species for examples). In your opinion, what would be the effects of future recovery efforts for each of the following species on you and your family? Please check one box per species.**

	Substantial benefits	Moderate benefits	No effects (no benefits & no costs)	Moderate costs	Substantial costs
<b>Misty Lake sticklebacks</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Westslope cutthroat trout</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**7) Are you of First Nations descent?**

- Yes** ➔ Did you participate in or were you able to access any of the species being considered for legal listing (those listed in Q.1) for Food, Social and Ceremonial purposes?
  - Yes** ➔ Which species? \_\_\_\_\_
  - No**
- No**

**8) For which species are you answering the question below?**

- Misty Lake sticklebacks
- Westslope cutthroat trout
- All of the above species

**Please select one of the following for each statement below:**

	<b>STRONGLY DISAGREE</b>	<b>SOMEWHAT DISAGREE</b>	<b>INDIFFERENT</b>	<b>SOMEWHAT AGREE</b>	<b>STRONGLY AGREE</b>
I believe this species needs special protection or care from human interactions and/or activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe protection of this species will have a positive effect on my business/career.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe listing is the best way to have the Government of Canada allocate federal funding to support recovery of this species.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<b>STRONGLY DISAGREE</b>	<b>SOMEWHAT DISAGREE</b>	<b>INDIFFERENT</b>	<b>SOMEWHAT AGREE</b>	<b>STRONGLY AGREE</b>

I believe a legal listing of this species may restrict my recreational, employment or personal activities.

    

I am prepared to suffer a loss in revenue to protect a species at risk.

    

I value this species even though I may never see one personally.

    

**Please specify any additional reasons for your decision to either support or oppose listing of this species. In particular, please provide information that you feel the Government of Canada should use in making its decision.**

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**Workbooks must be submitted by Friday, December 14, 2007.**

## Appendix 1: Glossary of Terms

**Action Plan:** A document that sets out specific ways to put a recovery strategy into effect.

**Aquatic species:** All ‘fish’ including:

- a) parts of fish;
- b) shellfish, crustaceans, marine animals, and any parts of shellfish, crustaceans, or marine animals; and
- c) the eggs, sperm, spawn, larvae, spat, and juvenile stages of fish, shellfish, crustaceans, and marine animals.

**Competent Minister:** The Minister of Fisheries and Oceans is the competent minister for listed aquatic species. The Minister of the Environment, through Parks Canada Agency, is the competent minister for listed species found in national parks, national historic sites, and other national protected heritage areas. The Minister of the Environment is also the competent minister for all other listed species and for the overall administration of the law.

**COSEWIC:** Committee on the Status of Endangered Wildlife in Canada.

**Critical habitat:** The habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the recovery strategy or action plan.

**Habitat:** In respect to aquatic species, spawning grounds and nursery, rearing, food supply, migration, and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced.

**Endangered species:** A wildlife species that is facing imminent extirpation or extinction.

**Extirpated species:** A wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.

**Recovery Strategy:** A document prepared by the competent minister in cooperation and consultation with other governments, wildlife management boards, Aboriginal organizations, landowners, and others who are likely to be affected by the strategy. It identifies the population goal and objectives, and broad recovery approaches to abate threats.

**Species of special concern:** A wildlife species that may become a threatened or endangered species because of a combination of biological characteristics and identified threats.

**Threatened species:** A wildlife species that is likely to become an endangered species if nothing is done to reverse the factors leading to its extirpation or extinction.