



Rainbow

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Information summary and [survey](#) for the consultations on potentially down-listing the Rainbow from “Endangered” to “Special Concern” on the List of Wildlife Species at Risk – **Please provide input by April 3, 2017**

Consultations

Let your opinion be heard

Canada’s *Species at Risk Act* (SARA) provides legal protection for wildlife species at risk to conserve biological diversity. It also acknowledges that all Canadians have a role to play in the conservation of wildlife species.

Before deciding whether the Rainbow (*Villosa iris*) will be down-listed on the List of Wildlife Species at Risk from Endangered to Special Concern, we would like to hear your opinion, comments, and suggestions regarding the possible ecological, cultural, and economic impacts of downlisting or not downlisting this species under SARA.

Down-listing a species from “Endangered” to “Special Concern” on the List of Wildlife Species at Risk

The process of down-listing a species under SARA consists of several steps: it begins with a status reassessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and ends with a Government of Canada decision on whether or not to down-list a species on the List of Wildlife Species at Risk. Public consultations are conducted to gather the opinions of Canadians and are an important step in this process.

Facts about the Rainbow

The Rainbow is a small (average of 5.5 cm in length) freshwater mussel that belongs to the family *Unionidae*. It gets its common name, “Rainbow”, from the shimmering, iridescent inside of its shell. Freshwater mussels are sensitive indicators of ecosystem health, including water and habitat quality and the fish community on which they depend. The Rainbow may be a particularly good indicator because of its sensitivity to toxic chemicals.



In Canada, the Rainbow occurs only in Ontario where it is now found in low numbers in the St. Clair River delta and the Saugeen, Maitland, Bayfield, Ausable, Sydenham, Thames, Grand, lower Trent, Salmon and Moira rivers (Figure 1). The Maitland still supports the largest remaining population of Rainbow; overall however, this mussel has been lost from 30 percent of its historical Canadian range.

The Rainbow is most often found in shallow, well-oxygenated reaches of small to medium-sized rivers, and sometimes lakes, on substrates (bottoms) of cobble, gravel, sand and occasionally mud.

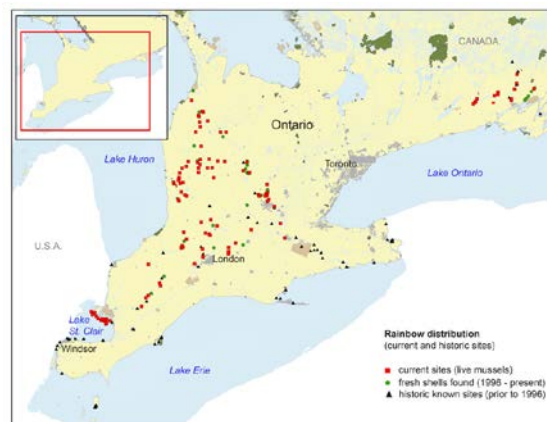


Figure 1. Rainbow distribution in Canada





Who assigned the Special Concern status to the Rainbow?

COSEWIC is an independent committee of experts that assesses which wildlife species are in some danger of disappearing from Canada and assigns a status to these species. It conducts its assessments based on the best available information including scientific data, local ecological knowledge, and Aboriginal traditional knowledge. In 2006 COSEWIC assessed the Rainbow as Endangered within Canada. However, in 2015, COSEWIC reassessed Rainbow as Special Concern as it was found to be more abundant and widespread than previously thought. Under SARA, a Special Concern species is defined as one that may become a Threatened or an Endangered species because of a combination of biological characteristics and identified threats.

Why is Rainbow at risk?

Although more abundant and widespread than previously thought, COSEWIC assessed the Rainbow as 'Special Concern'. Two subpopulations show signs of continuing decline and the species could become Threatened if threats are not effectively managed or mitigated.

The two greatest threats contributing to the decline of the Rainbow are invasive species and pollution. Zebra and Quagga Mussels (*Dreissena polymorpha* and *D. bugensis*) can form a blanket of shells effectively smothering native mussels below. The invasive Round Goby (*Neogobius melanostomus*), can also affect Rainbow populations by disrupting the relationship with its host fish, effectively acting as a sink for larval mussels and displacing hosts. Many populations of Rainbow are within watersheds that are primarily agricultural with urban centers that include wastewater treatment facilities. These populations are exposed to run-off of known toxins to Rainbow (road salt, endocrine disruptors, ammonia, mercury and copper), as well as high nutrients and sediment loading. Other threats include damming and other modifications to natural river flows.

Over the past several years, the Rainbow has received ongoing benefit from ecosystem-based recovery programs for several watersheds with Rainbow populations present (e.g. Ausable, Thames, Grand and Sydenham rivers). Recovery activities implemented include research and monitoring programs and active stewardship and outreach/awareness programs to reduce identified threats.

If a species is down-listed under the *Species at Risk Act*

If the Rainbow is down-listed from Endangered to Special Concern, the prohibitions of SARA would no longer apply. However, DFO would be required to produce a SARA Management Plan (to replace the existing Recovery Strategy and Action Plan) for the species in an effort to ensure that it does not become Endangered due to human activity.

We would like to receive your comments on the potential impacts of down-listing the Rainbow (or maintaining its current status as Endangered) on the List of Wildlife Species at Risk under SARA.

Your comments are important.

Please fill out the [survey](#): we want to hear from you.

Before completing this survey, you may wish to review the following background information found at the links below:

- [2015 COSEWIC Assessment and Status Report on the Rainbow](#)
- [Recovery Strategy and Action Plan for the Rainbow \(proposed\)](#)
- Other information can be found on the Species at Risk Public Registry at www.sararegistry.gc.ca.

**Thank you for completing this [survey](#).
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