

Proposed granular Bayluscide surveys on the Salmon River to capture larval sea lamprey

The Sea Lamprey Control Program of Fisheries and Oceans Canada conducts larval sea lamprey assessments in tributaries that flow into the Great Lakes. The purposes of these surveys are to identify tributaries that harbour larval sea lamprey, determine if these streams require future treatment, recommend appropriate locations for the application of lampricide, and determine the effectiveness of previous treatments and of barriers. In May 2024, staff from the Sea Lamprey Control Program hope to conduct larval sea lamprey assessments on the Salmon River below the sea lamprey barrier at York Road in Tyendinaga Mohawk Territory to evaluate the larval lamprey population, and determine if future control efforts are needed on the river. The last sea lamprey treatment completed on the Salmon River was in 2016. Lampricide was applied just above the lamprey barrier.

The primary method to assess sea lamprey populations in wadeable streams is backpack electrofishing. However, in deep (>0.8 m) or turbid waters like the lower Salmon River, the application of the lampricide granular Bayluscide (gB) is used. When spread across the surface of the river, gB granules sink to the stream bottom and dissolve, irritating the larvae out of their burrows. Granular Bayluscide is spread evenly over a plot at a rate of 8.75 kg/500 m². The plot is monitored for at least one hour after application, and all lamprey larvae that surface are collected, preserved in 10% formalin solution, identified, and measured. Pesticide permits are obtained from the Ministry of Environment Conservation and Parks prior to any gB application.

Proposed surveys will be completed in six 500 m² plots below York Road. Specific plot locations will be determined at the time of sampling. Plot locations depend on available larval habitat, depth, and vegetation. We hope to complete the surveys on May 27 and 28, before plant growth becomes too dense for gB granules to reach the sediment and effectively irritate lamprey out of their burrows.

Bayluscide surveys to monitor larval sea lamprey populations have been conducted on the Salmon River regularly since the late 1990s. A summary of sea lamprey caught in each survey is presented below.



Location of plots surveyed by Sea Lamprey Control Centre (DFO) crews in June 2022 for larval sea lamprey. No lamprey were captured during the survey.

Details on the application of granular Bayluscide to the Salmon River for assessment purposes, and total number of larval sea lamprey caught.

Sample Year	Number of 500 m ² plots	Total larval sea lamprey catch
1999	6	6
2002	6	9
2003	6	6
2005	6	8
2006	6	2
2008	6	4
2010	6	5
2012	6	5
2014	6	3
2015	6	13
2017	6	0
2019	6	1
2022	6	0