



STATUS OF SEA LAMPREY CONTROL IN LAKE ONTARIO

Adult Sea Lamprey:

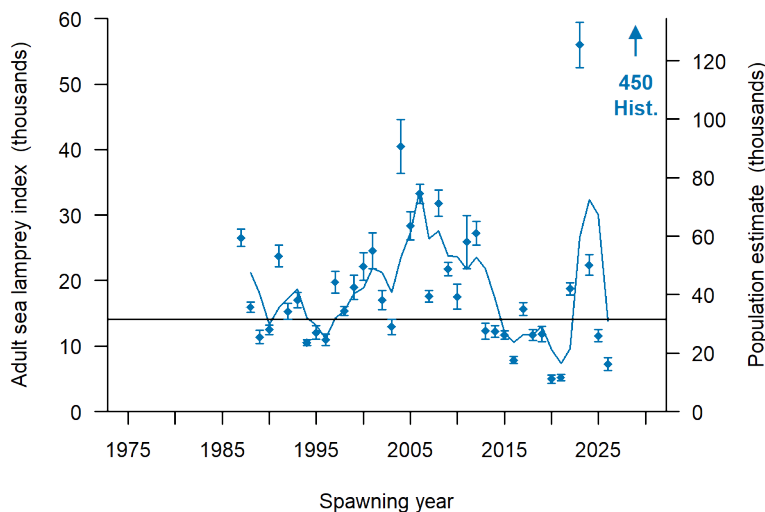


Figure 1. Index estimates with 95% confidence intervals (vertical bars) of adult sea lampreys, including historic pre-control abundance (as a population estimate) and the three-year moving average (line). The population estimate scale (right vertical axis) is based on the index-to-PE conversion factor of 2.24. The adult index in 2026 was 7,300 with 95% confidence interval (6,300-8,300). The three-year (2024-2026) average of 14,000 met the target of 14,000. The index target was estimated as the mean of indices during a period with acceptable marking rates (1993-1997).

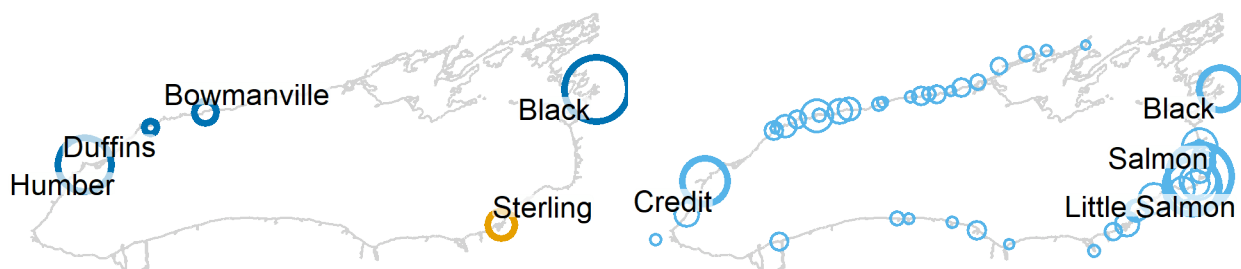


Figure 2. LEFT: Estimated index of adult sea lampreys during the spring spawning migration, 2026. Circle size corresponds to estimated number of adults from mark-recapture studies (blue) and model predictions (orange). All index streams are labelled. RIGHT: Maximum estimated number of larval sea lampreys in each stream surveyed during 1995-2012. Tributaries composing over half of the estimated maximum lake-wide larval population are identified (Salmon 1,400,000; Little Salmon 970,000; Credit 590,000; Black 470,000).

- Index estimates were generated for 4 of 5 index streams using mark-recapture data. The estimate for Sterling Creek was modeled due to insufficient recaptures of marked sea lamprey.
- Stream specific estimates from the Black and Humber Rivers contributed most to the lake-wide index estimate in 2025 (54% and 35% respectively).



Lake Trout Marking and Relative Abundance:

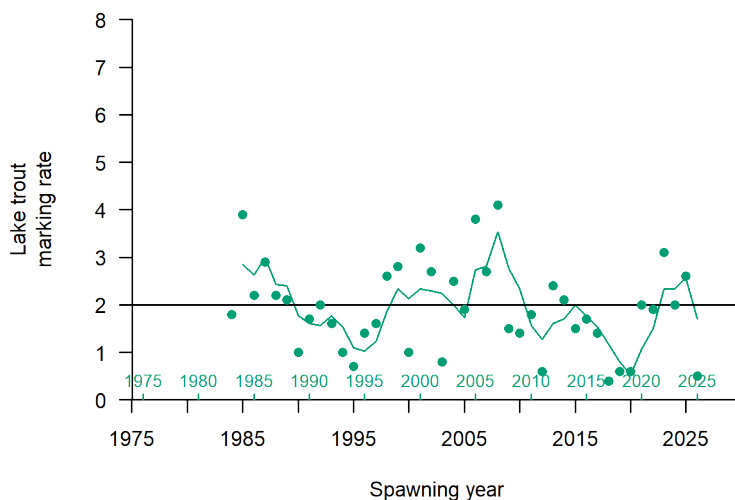


Figure 3. Number of A1 marks per 100 lake trout > 431 mm from standardized assessments plotted against the sea lamprey spawning year, including the three-year moving average (line). The three-year (spawning years 2024-2026) average marking rate of 1.7 met the target of 2 A1 marks per 100 lake trout > 431 mm (horizontal line). A second x-axis shows the year the lake trout were surveyed.

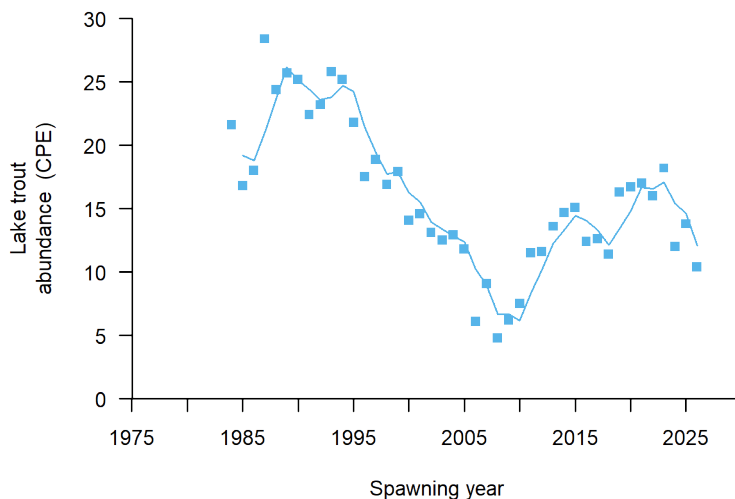


Figure 4. Lake trout relative abundance plotted against sea lamprey spawning year, including the three-year moving average (line). CPE = fish/km/net night of lean lake trout > 431 mm (17") total length.



Lampricide Control - Adults vs. Field Days, TFM, and Bayluscide:

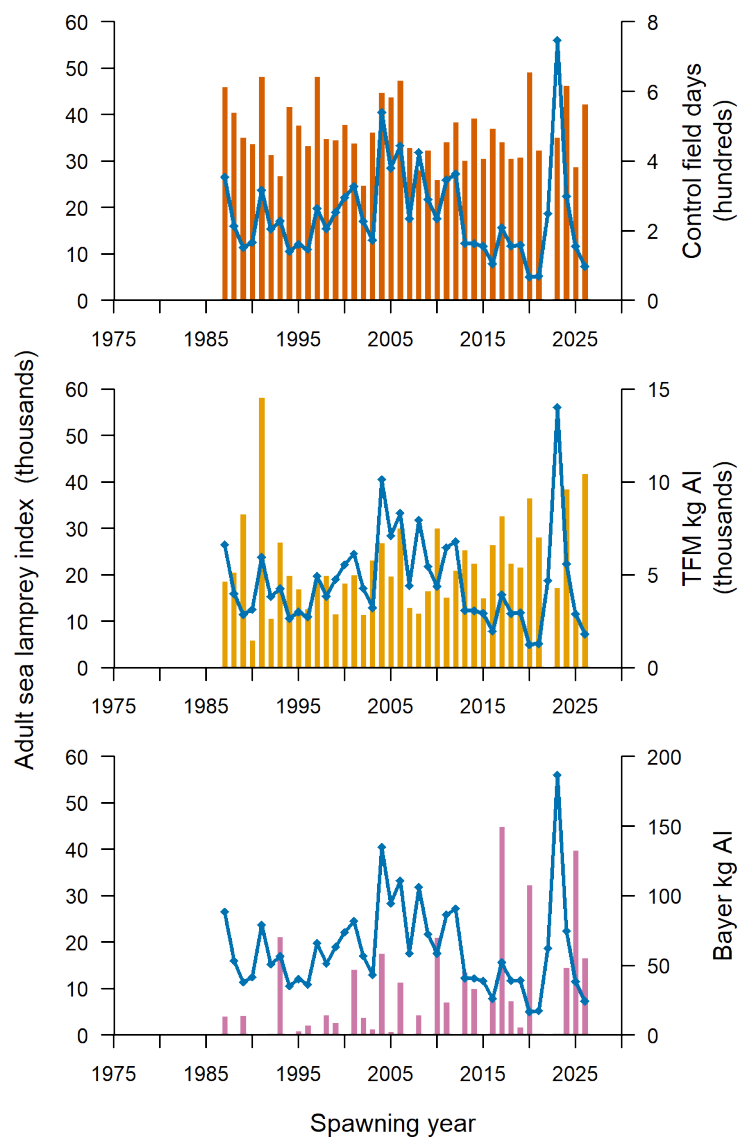


Figure 5. Index of adult sea lampreys (blue lines) and number of control field days (salmon colored bars), TFM used (kg active ingredient; orange bars), and Bayluscide used (kg active ingredient; purple bars). Field days, TFM, and Bayluscide are offset by 2 years (e.g., field days, TFM, and Bayluscide applied during 1985 is plotted on the 1987 spawning year, when the treatment effect would first be observed in adult sea lamprey populations).