

# LAMPRICIDES

## and Facts about Stream Treatments

Lampricides have been approved for use since 1958 to control sea lampreys in tributaries to the Great Lakes, the Finger Lakes, and Lake Champlain. Sea lamprey larvae live in certain Great Lakes tributaries for three to five years before transforming into parasitic adults that migrate to the Great Lakes and harm or kill fish. Failure to rid streams of larvae would result in significant damage to the Great Lakes fishery. Infested tributaries must be treated every three to five years with lampricides to control sea lamprey populations.

Two lampricides have been successfully applied to control sea lampreys for over 40 years. These selective pesticides, TFM (3-trifluoromethyl-4-nitrophenol) and Bayluscide (2', 5-dichloro-4'-nitrosalicylanilide), were selected after testing thousands of potential compounds. TFM is most widely used to treat the streams that provide nursery habitat to larval sea lampreys. TFM is remarkably selective, removing sea lamprey larvae while generally not harming fish and other organisms. Scientific studies have shown the effects of lampricides are minor and have no long-term impact to the stream ecosystem.

Lampricides, as all pesticides sold or distributed in the United States and Canada, must be registered by the U.S. Environmental Protection Agency and Health Canada Pest Management Regulatory Agency. Because of advances in scientific knowledge, the law requires that pesticides undergo review to assure that they meet current, more stringent



***Lampricides are applied to Great Lakes tributaries to remove larval sea lampreys. By carefully measuring the amount of lampricides applied, stream treatments are lethal to sea lamprey larvae but generally safe to other fish and organisms. A small number of more sensitive fish may be killed during treatment.***



requirements. Registration requires scientific studies to show that lampricides can be used with minimal risk to people or the environment.

Since 1988, \$6 million has been spent by the governments of the United States and Canada to investigate the risk posed by lampricides to the environment or human health.

The Environmental Protection Agency and Health Canada have reviewed human health and environmental safety data for lampricides, and in 2003 concluded that the lampricides (TFM and Bayluscide) pose no unreasonable risk to the general population and the environment. Further detailed information is available at the Environmental Protection Agency's web site: <http://www.epa.gov/oppsrrd1/REDs/3082red.pdf>

more 

**Great Lakes Fishery Commission**

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The following statements summarize the risk associated with exposures to lampricide-treated waters. The public should consider this information when determining whether or not to use water from, or recreate in, treated streams.

**Irrigation** – Agricultural irrigators must turn off irrigation systems during and for 24 hours following treatment. Exposure to lampricides may slow the growth of some broad-leaf plants.

**Livestock and pets** – There are no EPA or Health Canada restrictions for exposure of domestic animals to lampricides. In laboratory studies animals exposed to 500 times typical treatment concentrations for extended periods of time showed no adverse effects.

**Domestic use** – There are no EPA or Health Canada restrictions for domestic use of water containing lampricides. Studies have produced estimates that a person would have to drink greater than 360 gallons of treated water at one time to exhibit harmful effects. However, as with any pesticide, the public is advised to use discretion and minimize unnecessary exposure.

**Recreational use** – There are no EPA or Health Canada restrictions for recreational use of waters containing lampricides. Studies have shown that no



***After hatching, sea lampreys spend the first 3-6 years as filter feeding larvae in the soft sediment of streams. This stage in their life cycle makes sea lampreys vulnerable to lampricide applications.***

The Great Lakes Fishery Commission was established by Convention between Canada and the United States in 1955 to improve and perpetuate fishery resources.

## **Great Lakes Fishery Commission**

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***State of the art equipment is used to analyze water in the streams to ensure safe and effective stream treatments.***

***Highly trained staff of the United States Fish and Wildlife Service, Department of Fisheries and Oceans Canada and New York and Vermont State agencies carry out all aspects of stream treatments in partnership with the Great Lakes Fishery Commission.***



adverse effects result from contact with lampricides at greater than 15,000 times typical treatment concentrations. Again, the public is advised to use discretion and minimize unnecessary exposure.

**Fish consumption** – There are no EPA or Health Canada restrictions for consumption of fish caught from treated waters. Lampricides are not persistent in fish and are readily eliminated. Greater than 95% of TFM residues are eliminated from fish one day after treatment.

Fish caught during treatment should be filleted to further reduce exposure to lampricides. Greater than 95% of lampricide residues in a fish are contained in parts other than the fillets.

Studies provided an estimate that at lampricide levels found in fillet tissue a person must consume more than seven tons of fillets in one sitting to exhibit harmful effects.

Persons concerned about exposure should consider catch-and-release during treatment and for 24 hours after. For further information contact:

- In Canada and New York 1-800-553-9091
- In rest of United States 1-800-472-9212