

TOP 014.51  
Effective Date: 1/16/2020  
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U.S. Fish and Wildlife Service  
Marquette Biological Station  
1924 Industrial Parkway  
Marquette, Michigan 49855  
U.S.A.

and

U.S. Fish and Wildlife Service  
Ludington Biological Station  
5050 Commerce Drive  
Ludington, Michigan 49431  
U.S.A.

and

Department of Fisheries and Oceans  
Sea Lamprey Control Centre  
1219 Queen Street East  
Sault Ste. Marie, Ontario P6A 2E5  
Canada

## **TECHNICAL OPERATING PROCEDURE**

### **PROCEDURE TITLE:**

Procedures for the Supplemental Application of TFM

### **APPLICABILITY:**

Procedures apply to all applications of TFM to lentic areas, backwater areas, seepage areas, isolated pools, and low discharge tributaries.

### **PRINCIPLE:**

Standard procedures for the application of TFM (EPA Registration Number 6704-45; Health Canada Pest Control Products Numbers 21124 and 11763) to backwaters.

### **SAMPLE COLLECTION AND PRESERVATION:**

Not applicable

### **EQUIPMENT REQUIRED:**

Equipment for the application of TFM includes a variety of pumps, sprayers, or mixing devices calibrated to provide adequate dispersal of lampricide into a body of water. Range/depth finders may be used for large backwaters.

### **POTENTIAL INTERFERENCES:**

Heavy emergent vegetation  
Soft bottom

**SAFETY:**

I. Environmental Hazards

State, local, and provincial fish and game agencies must be contacted before product is applied. Municipalities that use streams requiring treatment as potable water must be notified of the impending treatment at least 24 hours prior to application. Agricultural irrigators that use streams requiring treatment as a source of irrigation water must be notified of the impending treatment at least 24 hours prior to application. Agricultural irrigators must turn off their irrigation system for a 24-hour period during and after treatment.

II. Personal Safety

TFM is a restricted use pesticide. Personal protective equipment should include long-sleeve shirt, apron, chemical resistant gloves, and goggles or face-shield. See additional precautionary statements on pesticide label (Appendix E) and SDS (Appendix F).

**DISPOSAL:**

Per label instructions: "Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Lampricide spray mixture or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides. Triple rinse (or equivalent) and offer container for recycling, reconditioning or disposal in approved landfill."

**REAGENTS:**

No reagents are required.

**PROCEDURES:**

I. Identify and delineate the application site

- A. Obtain site description and location from assignment schedule. Obtain maps of sufficient detail to access application site and detail the infestation limits.
- B. Estimate the volume of the backwater in cubic feet or hectare-meters. For irregular shaped areas, divide the area into rectangular shaped subunits. Measure the depth at several sites per rectangular unit. Estimate the volume by multiplying length by width by average depth.

II. Determine quantity of liquid TFM to apply.

- A. Determine concentration of TFM to apply. This information is on the work schedule or is determined from pH/alkalinity prediction charts.
- B. If estimating volume in cubic feet, determine the total milliliters of TFM to apply using the chart on the back on the secondary application form which was derived from the following calculation:

$$\text{mL TFM to apply} = \frac{\text{Volume (ft}^3\text{)} \times \text{desired ppm} \times \text{constant 4.35}}{60}$$

- C. If using hectare meter, multiply hectare-meters (from I.B.) by desired concentration of TFM, and by 25,000 to estimate the total milliliters of TFM to be applied.

III. Application

- A. If necessary, dilute the desired amount of TFM with water prior to application. Apply an even concentration of lampricide throughout the measured area. Large areas are often divided into subsections.
- B. Some attempt should be made to ensure the chemical applied is adequately mixed throughout the treated area. For example, one could use the boat and propeller to mix it in larger areas.
- C. Where feasible, in large application areas, sample and analyze several water samples from the plot for TFM concentration.

IV. Documentation

- A. Stream observations and lampricide use are recorded on the Backwater/Secondary/Lentic Plot Data Form (U.S.) or the Secondary Application of Lampricide and Stream Observation Form (Canada).
- B. New features (e.g. beaver dams, backwaters, tributaries) are recorded on a Geographic Features Form (U.S.).

**REFERENCES:**

Restricted Use Pesticide Label: Sea Lamprey Larvicide

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This procedure has been reviewed and approved by the undersigned representatives of the U.S. Fish and Wildlife Service and Fisheries and Oceans Canada.

REVIEWED/APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
Field Supervisor (U.S.)

REVIEWED/APPROVED *Mike Spivey* DATE 05 MAR 2020  
Program Manager (Canada)