

**TOP:014.5**

January 20, 2015

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  
229 South Jebavy 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, de-watered areas, 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 across the surface of the treated body of water.

### **POTENTIAL INTERFERENCES:**

No interferences are noted on the product restricted use pesticide label.

**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. See precautionary statements on pesticide label (Appendix E) and MSDS (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 acre-ft 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. Divide total volume by 43,560 to estimate acre-feet or by 10,000 to determine hectare-meters.

**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. Multiply acre-ft (from I.B.) by desired concentration of TFM, and by 3,000 to estimate the total milliliters of TFM to apply or,
- C. 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 about one-half of the estimated amount of TFM to the application area.
- B. Some attempt should be made to ensure the chemical is mixed to properly cover the area with respect to spraying or glugging. For example, one could use the boat and propeller to mix it in larger areas.
- C. In large application areas sample and analyze several water samples from the plot for TFM concentration.
- D. Apply the remainder of the TFM, if necessary. The portion of the remaining TFM which is applied is determined by the results of TFM analysis.

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

---

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 Robert K. Dain DATE 3-24-15  
Field Supervisor (U.S.)

REVIEWED/APPROVED Paul D. Dain DATE March 25/2015  
Division Manager (Canada)