

TOP 015.61
Effective Date: 1/17/2020
Replaces TOP 015.60
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U.S. Fish and Wildlife Service
Marquette Biological Station
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Marquette, Michigan 49855
U.S.A.

and

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

Fisheries and Oceans Canada
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 Bar Formulation

APPLICABILITY:

Procedures apply to the application of TFM bar formulation.

PRINCIPLE:

Standard procedures for the application of TFM bar formulation (EPA Registration Number 6704-86, Health Canada Pest Control Products Number 22610)

SAMPLE COLLECTION AND PRESERVATION:

Not applicable

EQUIPMENT REQUIRED:

Chemical resistant gloves
Safety goggles

POTENTIAL INTERFERENCES:

Not applicable

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

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

DISPOSAL:

Product label statement "Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Dispose of in a landfill approved for pesticides."

REAGENTS:

No reagents required

PROCEDURES:

I. Determination of application site

- A. Typically, TFM bars are applied to small tributaries with less than 3 cubic ft/sec stream and only to streams that are not known to be positive for sea lamprey. Application is used to prevent refuge for sea lampreys activated during the treatment.
- B. Check the assignment schedule for stream name and site description, access location, and number of TFM bars to apply. Obtain a map of sufficient detail to locate the application site.
- C. Locate a suitable site on the tributary, typically within 100 meters of the junction of the tributary and mainstream, with water velocity of 0.3 - 0.5 ft/sec and a depth of less than one foot.

II. Application

- A. Estimate the discharge of the tributary to nearest 0.3 cfs.
- B. Determine the concentration of TFM (mg/L) to be applied. This information is predetermined based on the pH/alkalinity of the tributary and/or the treatment concentration applied in the mainstream.
- C. For water temperatures $>12^{\circ}\text{C}$, multiply cfs by desired concentration (mg/L) and by four to obtain the number of TFM bars to apply. For water temperatures of $\leq 12^{\circ}\text{C}$, multiply cfs by desired concentration (mg/L) and by 5 to obtain the number of TFM bars to apply.

Dissolution rates of Iofina TFM bars produced since 2011 are higher than that of those previously produced. These bars should be applied at half the label rate. In addition, the TFM bars only last about 5 hours and will need to be reapplied if a 10-hr block is desired.

- D. Remove TFM bars from containers and place TFM bars in an area of the stream with a bottom cover of rock, gravel, or sticks. Place TFM bars in a location where the stream velocity is as stated in procedure section I subsection C of this protocol. Do not place TFM bars on sand, mud or silt.
- E. Rinse packaging and dispose in garbage.

III. Documentation

- A. Stream observations and lampricide use are recorded on the Backwater/Secondary/Lentic Plot Data Form or the TFM Application 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:

TFM bar formulation label

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 Julie Stives DATE 05 MAR 2020
Program Manager (Canada)