



Fisheries and Oceans    Pêches et Océans  
Canada                      Canada  
Aquatic Invasive Species Program  
P.O. Box 5030  
Moncton, New Brunswick  
E1C 9B6

JUN 7 2021  
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19-IGLF-00001

Jim Ward  
38 MicMac Road  
Eel Ground, New Brunswick  
E1V 4B1

**Subject:        Application of Noxfish Fish Toxicant II in Miramichi Lake and River,  
New Brunswick – *Aquatic Invasive Species Regulations* authorization**

Dear Mr. Ward:

Pursuant to Section 19(3) of the *Aquatic Invasive Species Regulations*, Fisheries and Oceans Canada (DFO) authorizes the carrying on of your proposed project which will result in:

- the deposit of a deleterious substance in water frequented by fish which is prohibited under subsection 36(3) of the *Fisheries Act*

The proposed project involves the deposit of Noxfish Fish Toxicant II for the purpose of eradicating Smallmouth Bass (SMB) from Miramichi Lake, Lake Brook, and an approximate 17.2 km stretch of the Southwest Miramichi River in the Parish of Douglas, New Brunswick. The deposit is proposed to be undertaken between August 15, 2021 and September 30, 2021. The authorization under paragraph 19(3) of the *Aquatic Invasive Species Regulations* is attached.

Failure to comply with any of the terms or conditions of the attached authorization may lead to prosecution under the *Fisheries Act*.

A copy of this authorization should be kept on site while the work is in progress and, upon request, be provided to relevant federal or provincial officials. The authorization holder is responsible for ensuring work crews are familiar with, and able to adhere to, its conditions.

If you or anyone conducting work on your behalf have any questions please contact DFO's Aquatic Invasive Species Program at [Invaders.glf@dfo-mpo.gc.ca](mailto:Invaders.glf@dfo-mpo.gc.ca).

Yours sincerely,

Serge Doucet  
Regional Director General

Attachment: *Aquatic Invasive Species Regulations* authorization

cc.        Sheila Goucher (NBDELG)  
            Timothy LeBlanc (NBDELG)

Canada



JUN 7 2021

## **PARAGRAPH 19(3) AQUATIC INVASIVE SPECIES REGULATIONS AUTHORIZATION**

### **Authorization issued to**

North Shore Micmac District Council Inc. (*hereafter referred to as the "Proponent"*)

Attention to: Jim Ward  
38 MicMac Road  
Eel Ground, NB  
E1V 4B1

### **General location of Proposed Project**

Nearest community (city, town, village): Napadogan  
Municipality, district, township, county: Douglas Parish  
Province: New Brunswick  
Name of watercourse, waterbody: 1) Miramichi Lake, 2) Lake Brook, and 3) Southwest Miramichi River

Latitude and Longitude, UTM Coordinates: UTM Zone 19N

- 1) Miramichi Lake: Latitude 46.460370, Longitude -66.972512; UTM North 5147200, UTM East 655684.
- 2) Lake Brook: from Latitude 46.463471°, Longitude -66.964974°; UTM North 5147556, UTM East 656254 to Latitude 46.494147°, Longitude -66.982741°; UTM North 5150930, UTM East 654803.
- 3) Southwest Miramichi River: from Latitude 46.494274°, Longitude -67.010347°; UTM North 5150890, UTM East 652684 to Latitude 46.519050°, Longitude -66.925637°; UTM North 5153810, UTM East 659112.

### **Product name and registration number**

NOXFISH FISH TOXICANT II, Pest Management Regulatory Agency Registration no.33247

Note: The use of Noxfish Fish Toxicant II is not authorized in flowing waters until the Emergency Use Registration process is completed by Health Canada's Pest Management Regulatory Agency (PMRA). It is a condition of this authorization that this process be completed before such use occurs.

### **Anticipated death of fish**

The deposit(s) of Noxfish Fish Toxicant II will result in the death of the targeted species, Smallmouth Bass (*Micropterus dolomieu*), and all other fish in the defined authorized treatment area(s).

### **Anticipated Impacts to fish and fish habitat**

The deposit(s) of Noxfish Fish Toxicant II will modify the food web, the fish habitat ecological structure and the nutrient input in the project area as a result of the anticipated death and subsequent decomposition of fish, insects and other invertebrates.

### **Work, undertakings and activities associated with the authorized activities**

- Beaver dam removal where necessary to ensure proper chemical dispersal
- Temporary floating dock installation in Miramichi Lake for chemical transfer to delivery system on boats
- Clearing of access trails/roads for site access along watercourses
- Temporary drip station installations



The above work, undertakings and activities are subject to the New Brunswick Department of Environment and Local Government's Environmental Impact Assessment (EIA) and Watercourse and Wetland Alteration (WAWA) regulatory processes.

### **Conditions of this *Aquatic Invasive Species Regulations* Authorization**

The authorized activities must be carried on in accordance with the following conditions:

#### **Authorized activities, dates and locations**

##### **1. Timing of Authorized Deposit(s)**

- 1.1 This authorization, including conditions pertaining to monitoring, is valid from the **Date of Issuance until December 31, 2026**.
- 1.2 This authorization allows deposit(s) of Noxfish Fish Toxicant II in 2 separate phases between August 15, 2021 and September 30, 2021.
- 1.3 Phase I: The first deposit will occur in Miramichi Lake, including sections (exact length to be determined based on pre-treatment electrofishing survey, minimum of 100 meters) of tributary inlets just above the confluence of the lake (see specific locations of tributaries below), Lake Brook (including East Branch Lake Brook) and the approximate 17.2 km stretch of the Southwest Miramichi River defined above, including sections of the tributary inlets above the confluence of the Southwest Miramichi River (see specific locations of tributaries below). This deposit will occur over a 2 day period.
- 1.4 Phase II: The second deposit will occur in the same year, approximately 30 days after the first deposit (Miramichi Lake) and will occur only in Lake Brook (including East Branch Lake Brook) and the defined stretch of the Southwest Miramichi River including sections of the tributary inlets above the confluence of the Southwest Miramichi River (see specific locations indicated below). This deposit will occur over a 1 day period.

##### **2. Locations of Authorized Deposit(s)**

Authorized Treatment Area(s):

- 2.1 Miramichi Lake (entire lake): Latitude 46.460370, Longitude -66.972512; UTM North 5147200, UTM East 655684. (UTM Zone 19N)
- 2.2 Miramichi Lake inlet tributaries: For each identified inlet, a section of 100 meters above the confluence with the lake will be treated, unless Smallmouth Bass (SMB) are discovered in the pre-implementation electrofishing survey, if so then treatment will be begin 300 meters above the location of last SMB caught. Identified inlets (approximate locations) to be treated with drip stations (4): 1) Latitude 46.4637, Longitude -66.9908; UTM North 5147530, UTM East 654273; 2) Latitude 46.4569, Longitude -66.9817; UTM North 5146800, UTM East 654985; 3) Latitude 46.4514, Longitude -66.9585; UTM North 5146230, UTM East 656783; 4) Latitude 46.4547, Longitude -66.9563; UTM North 5146600, UTM East 656946. Identified inlets/backwater to be treated with backpack sprayers (approximate locations)(2): 1) Latitude 46.4572, Longitude -66.9775; UTM North 5146840, UTM East 655310; 2) Latitude 46.4582, Longitude -66.9591; UTM North 5146980, UTM East 656724. (UTM Zone 19N).



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- 2.3 Lake Brook: from Latitude 46.463471°, Longitude -66.964974°; UTM North 5147556, UTM East 656254 to Latitude 46.494147°, Longitude -66.982741°; UTM North 5150930, UTM East 654803. (UTM Zone 19N).
- 2.4 East Branch Lake Brook (Lake Brook tributary): from the confluence of Lake Brook, Latitude 46.476691°, Longitude -66.96582°; UTM North 5149020, UTM East 656152 to approximately 1 km upstream Latitude 46.479403°, Longitude -66.955682°; UTM North 5149350, UTM East 656922. (UTM Zone 19N).
- 2.5 Southwest Miramichi River: from Latitude 46.494274°, Longitude -67.010347°; UTM North 5150890, UTM East 652684 to Latitude 46.522000°, Longitude -66.923557°; UTM North 5154142, UTM East 659263 (UTM Zone 19N).
- 2.6 Southwest Miramichi River inlet tributaries (within the treatment area): For each identified inlet/seep/spring a section of 30 meters will be treated, unless SMB are discovered in the pre-implementation electrofishing survey, if so then drip station will be installed 300 meters above the last SMB caught. Identified inlets (approximate location) to be treated are: Eleven (11) brook locations: 1) Latitude 46.49401°, Longitude -66.99736°; UTM North 5150886, UTM East 653681; 2) Latitude 46.49420°, Longitude -66.98280°; UTM North 5150935, UTM East 654798; 3) Latitude 46.50307°, Longitude -66.98512°; UTM North 5151916, UTM East 654595; 4) Latitude 46.49899°, Longitude -66.96726°; UTM North 5151498, UTM East 655977; 5) Latitude 46.49176°, Longitude -66.94206°; UTM North 5150745, UTM East 657931; 6) Latitude 46.49992°, Longitude -66.93883°; UTM North 5151658, UTM East 658155; 7) Latitude 46.50169°, Longitude -66.93777°; UTM North 5151857, UTM East 658232; 8) Latitude 46.50942°, Longitude -66.95147°; UTM North 5152688, UTM East 657158; 9) Latitude 46.51666°, Longitude -66.94969°; UTM North 5153496, UTM East 657274; 10) Latitude 46.51983°, Longitude -66.94058°; UTM North 5153867, UTM East 657963; 11) Latitude 46.51486°, Longitude -66.93380°; UTM North 5153328, UTM East 658498. Five (5) spring locations: 1) Latitude 46.49709°, Longitude -66.98775°; UTM North 5151247, UTM East 654410; 2) Latitude 46.49758°, Longitude -66.94088°; UTM North 5151394, UTM East 658005; 3) Latitude 46.50324°, Longitude -66.93889°; UTM North 5152027, UTM East 658141; 4) Latitude 46.51647°, Longitude -66.93053°; UTM North 5153514, UTM East 658744; 5) Latitude 46.51692°, Longitude -66.92650°; UTM North 5153572, UTM East 659052. One brook/spring (unknown) location: Latitude 46.521093°, Longitude -66.924854°; UTM North 5154039, UTM East 659166 (UTM Zone 19N)

### Conditions of the deposit(s)

#### 3 Conditions related to the timing of the deposit(s)

- 3.1 If the authorized deposit(s) cannot be undertaken in 2021, the proponent must inform Fisheries and Oceans Canada no later than August 15, 2021.
- 3.2 If the authorized deposit(s) cannot be completed within the authorized timeframe, the proponent must inform Fisheries and Oceans Canada no later than September 15, 2021.
- 3.3 Fisheries and Oceans Canada must be notified at least 48 hours before starting any work, including preparatory works, associated with this authorization.



**Conditions related to the preparation and application of the deleterious substance**

**4 General Conditions**

- 4.1 The authorized deposit(s) shall not proceed until an Emergency Use Registration has been approved by Health Canada's Pest Management Regulatory Agency.
- 4.2 The proponent must adhere to all requirements of the Noxfish Fish Toxicant II label(s) for its intended use.
- 4.3 Target rotenone concentration(s) must be within the limits indicated in the Noxfish Fish Toxicant II label(s) for its intended use.
- 4.4 All required Provincial permits for the application of pesticides must be obtained prior to undertaking the authorized deposit(s).
- 4.5 Under no circumstance does this authorization allow the deposit or discharge of NoxFish Fish Toxicant II outside of the authorized treatment area(s) defined in the "Authorized activities, dates and locations" section of this authorization. In the event that fish mortality occurs outside the authorized treatment area(s), all works associated to the deposit(s), with the exception of activities to prevent the discharge of NoxFish Fish Toxicant II downstream from the project area and monitoring activities, must stop and Fisheries and Oceans Canada must be immediately notified.
- 4.6 All machinery/equipment (including boats) shall arrive and leave site in a clean condition and be maintained free of fluid leaks, noxious weeds, and invasive species. Machinery shall be washed, refuelled, and serviced in such a way as to prevent any deleterious substance, other than the approved Noxfish Fish Toxicant II, from entering the water.

**5 Preparation (pre-deposit)**

- 5.1 The Proponent must provide results of bioassays to determine site specific (Miramichi Lake, Lake Brook and the Southwest Miramichi River) treatment rate(s) of NoxFish Fish Toxicant II to Fisheries and Oceans Canada 1 month before undertaking the authorized deposit(s).
- 5.2 The Proponent must provide results of electrofishing surveys (including dates, electrofishing efforts and extension covered) conducted in all project area inlet tributaries (for determination of upstream drip station locations) to Fisheries and Oceans Canada 2 weeks prior to undertaking the authorized deposit(s).
- 5.3 Baseline ecological monitoring data must be collected prior to any deposit of Noxfish Fish Toxicant II (as outlined in the approved monitoring plan, Section 9.4).

**6 Application of Noxfish Fish Toxicant II in Miramichi Lake**

- 6.1 Drip stations must be operational in the lake inlet tributaries prior to lake treatment (to avoid fish refuge in the inlet tributaries).
- 6.2 The deposit must be completed within 48 hours (to ensure maximum efficiency of treatment).
- 6.3 Dead fish shall be removed from the lake surface and from the shoreline and disposed of in a Provincially approved manner.

**7 Application of Noxfish Fish Toxicant II in downstream flowing waters (Lake Brook and Southwest Miramichi River).**

- 7.1 Drip stations must be operational in stream inlets of the river project area prior to commencement of the deposit in the main stem of the river (to avoid fish refuge in the inlet streams).



- 7.2 A salmon migration barrier shall be installed at Slate Island Camp (Latitude 46.535262° Longitude - 66.880830°; UTM North 5155700, UTM East 662501 (UTM Zone 19N)) two weeks (early-August) prior the deposit of NoxFish Fish Toxicant II. The barrier shall be removed upon project completion and when levels of NoxFish Fish Toxicant II are maintained at safe levels. (As per Rotenone Standard Operating Procedures<sup>1</sup>, safe levels are attained when rotenone concentrations have subsided to an undetectable concentration of < 0.002 ppm and when replenished sentinel fish survive and show no signs of stress for a minimum of four hours).
- 7.3 Following installation of the salmon migration barrier and prior to undertaking authorized deposit(s), adult Atlantic Salmon, and incidental catch (excluding *Micropterus dolomieu*), shall be removed from holding pools in the authorized treatment area(s) and relocated downstream from the salmon migration barrier.
- 7.4 The stability (anchorage) of the salmon migration barrier shall be continuously monitored on a daily basis (for the entirety of its installation) to ensure its proper working order. If a problem is detected, the barrier must be repaired immediately and Fisheries and Oceans Canada must be contacted (to determine if another fish rescue is required).
- 7.5 Dead fish must be prevented from floating downstream from the salmon migration barrier (for the entirety of its installation) and collected for disposal in a Provincially approved manner.

## 8 Prevention of Impacts to fish and fish habitat in areas other than those authorized by this authorization

- 8.1 Noxfish Fish Toxicant II must be prevented from causing unintended deleterious effects to fish and fish habitat in areas downstream from the authorized treatment area(s) (including Noxfish Fish Toxicant II deactivation activities as outlined in the Proponent's Application for authorization).
- 8.2 Activities related to 8.1 must be maintained and be continuously monitored until Noxfish Fish Toxicant II levels are no longer lethal to fish (through sustaining sentinel fish in an unstressed state for a minimum of 4 hours).
- 8.3 Backup equipment (for the purposes of satisfying condition 8.1) must be on site and ready for immediate use in the event of any equipment failure.

## 9 Conditions related to monitoring and reporting

- 9.1 All notifications and reporting to Fisheries and Oceans Canada related to all conditions of this authorization must be sent to [Invaders.glf@dfo-mpo.gc.ca](mailto:Invaders.glf@dfo-mpo.gc.ca)
- 9.2 Within 30 days from completion of dead fish collection, Fisheries and Oceans Canada must be provided with a report of the total number of dead Smallmouth Bass collected.
- 9.3 Within 30 days from completion of dead fish collection, Fisheries and Oceans Canada must be provided with a report of the fish species collected (estimated biomass per species).
- 9.4 A 5-year monitoring plan must be submitted for review and approval by Fisheries and Oceans Canada at least 2 months prior to commencement of the authorized deposit(s).
  - 9.4.1 Monitoring must be conducted as outlined in the approved monitoring plan and reports must be provided to Fisheries and Oceans Canada.
- 9.5 Upon deposit(s) and until Noxfish Fish Toxicant II levels are no longer lethal to fish, the proponent must monitor in real-time the responses of sentinel fish and collect water samples for rotenone analysis upstream

<sup>1</sup> Finlayson, B., Skaar, D., Anderson, J., Carter, J., Duffield, D., Flammang, M., Jackson, C., Overlock, J., Steinkjer, J., and Wilson, R. 2018. Planning and standard operating procedures for the use of rotenone in fish management – rotenone SOP manual, 2nd edition. American Fisheries Society, Bethesda, Maryland.



and downstream of the lower extent of the project area (i.e. Latitude 46.522000°, Longitude -66.923557°; UTM North 5154142, UTM East 659263 (UTM Zone 19N)).

- 9.6 Upon deposit(s) and until Noxfish Fish Toxicant II levels are no longer lethal to fish, the proponent must collect and analyse samples of any other substance(s) used, in accordance with Noxfish Fish Toxicant II label(s), downstream of the lower extent of the project area (i.e. Latitude 46.522000°, Longitude -66.923557°; UTM North 5154142, UTM East 659263 (UTM Zone 19N)).
- 9.7 A report containing the information collected to satisfy condition 9.5 must be provided to Fisheries and Oceans Canada no later than one month after the completion of the authorized deposit(s).
- 9.8 A report on the effectiveness of activities related to section 8.1, including information collected to satisfy condition 9.6, must be provided to Fisheries and Oceans Canada no later than one month after the completion of the authorized deposit(s).
- 9.9 After 2 years post-treatment, if monitoring indicates that non-migratory fish species (adults and juveniles) have not successfully re-established in the Lake, the proponent must contact Fisheries and Oceans Canada and conduct species re-introduction activities as per Appendix D of the Proponent's application for authorization.

#### **Authorization Limitations and Application Conditions**

If there is a need to modify the scope of the authorized activities, Fisheries and Oceans Canada must be notified immediately and a new application must be submitted for review and approval.

The Proponent is solely responsible for plans and specifications relating to this authorization and for all design, safety and workmanship aspects of all the works associated with this authorization.

The holder of this authorization is hereby authorized under the authority of Paragraph 19(3) of the *Aquatic Invasive Species Regulations* SOR 2015 to deposit Noxfish Fish Toxicant II, a deleterious substance from a class of substances described in s. 21 of the *Aquatic Invasive Species Regulations* to eradicate an aquatic invasive species where that species harms fish, fish habitat, and/or the use of fish.

This authorization does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

This authorization does not permit the deposit of a deleterious substance, other than the deleterious substances approved for use by the Section 19(3) Authorization under the Aquatic Invasive Species Regulations in water frequented by fish. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of any deleterious substances into waters frequented by fish unless authorized by regulations made by Governor in Council.

This authorization does not permit the Harmful Alteration, Disruption, or Destruction of fish habitat by means other than by the result of the action of depositing the deleterious substance.

This authorization does not permit the killing, harming, harassment, capture or taking of individuals of any aquatic species listed under the *Species at Risk Act* (SARA) (s. 32 of the SARA), or the damage or destruction of residence of individuals of such species (s. 33 of the SARA) or the destruction of the critical habitat of any such species (s. 58 of the SARA).

At the date of issuance of this authorization, no individuals of aquatic species listed as an extirpated species, an endangered species or a threatened species under the *Species at Risk Act* (SARA) were identified in the vicinity of the authorized works, undertakings or activities.

The failure to comply with any condition of this authorization constitutes an offence under Paragraph 40(3)(a) of the *Fisheries Act* and may result in charges being laid under the *Fisheries Act*.



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A copy of this authorization should be kept on site while the work is in progress and upon request be provided to relevant federal or provincial officials. The authorization holder is responsible for ensuring work crews are familiar with, and able to adhere to, the conditions.

This authorization cannot be transferred or assigned to another party. If the work(s), undertaking(s) or activity(ies) authorized to be conducted pursuant to this authorization are expected to be sold or transferred, or other circumstances arise that are expected to result in a new Proponent taking over the work(s), undertaking(s) or activity(ies), the Proponent named in this authorization shall advise DFO in advance.

Date of Issuance:                      JUN 7 2021

Approved by:                     

Serge Doucet  
Regional Director General  
Gulf Region  
Fisheries and Oceans Canada