

**SUBJECT:** RECREATIONAL FISH STOCKING POLICY

Policy Number: FWB 019 2006 File Number: 750 00 0004

Effective Date: October 31, 2019

Approval: Original signed by Tom MacFarlane, Deputy Minister

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# 1.0 Purpose and Policy Statement

#### 1.1 Purpose

The purpose of this policy is to provide guidance and direction to staff of the Department of Energy and Resource Development (Department) with respect to the Department's recreational fish stocking program.

### 1.2 Policy Statement

It is the policy of the Department to only stock brook trout and landlocked salmon for recreational fisheries purposes in selected provincial waters where justified based on biological, economic and social costs/benefits, and if it is consistent with the conditions outlined in this policy.

## 2.0 Background and Definitions

#### 2.1 Background

The Department shares responsibility for freshwater fisheries management with the Department of Fisheries and Oceans (DFO). As described in the "Canada - New Brunswick Memorandum of Understanding on Recreational Fisheries", the province has the primary responsibility to manage recreational fisheries for 19 freshwater fish species, including landlocked salmon and brook trout.

The Department's Recreational Fisheries Section aims to sustain fish populations and biodiversity while providing quality recreational angling opportunities in New Brunswick (NB). In keeping with these goals, the Department's fish management strategies focus on responsible management of fish habitat and populations to promote natural reproduction of wild fish populations. Despite this, fish stocking is one of the strategies often used to sustain or enhance recreational fisheries.

When applied haphazardly, stocking can be detrimental to the natural aquatic biota and can result in a loss of resources through competition, predation, and gene pool dilution. Given the costs and risks associated with fish stocking, the Department does consider other management options prior to stocking.

Stocking fish in NB's inland waters was initiated by DFO in the 1870's. The Department began rearing and stocking fish in 1976 and continued to raise fish for stocking purposes until 2004, when a decision was made to decommission the provincial fish hatchery. In 2005, a mandatory five dollar "Fish Stocking Fee" was added to the cost of angling licenses (except for Crown Reserve and Day Adventure licenses) to generate revenue for the purchase of fish rearing and stocking services from private facilities. While these rearing services are tendered through a Request for Proposal process, the Department determines which waters to stock and the species, strains, and quality of fish to be raised for the Department's stocking initiatives.

#### 2.2 Definitions

#### Brook trout

Salvelinus fontinalis, a species of trout that is native to and common in NB waters.

# Certified disease free

Absence of diseases as required by the Federal/Provincial/Territorial (FPT) Introduction and Transfers Committee (I&T). In the Atlantic Provinces, provided the fish have met the Canada Food Inspection Agency's (CFIA) requirements under the National Aquatic Animal Health Program (Domestic Movement), the I&T Committee will recognize:

- 1) the Certificate of Health for Transfer (COHFT) for live cultured finfish under the Health Policy for the Transfer of Live Cultured Finfish in Atlantic Canada as the disease risk evaluation; and/or
- 2) equivalent disease risk evaluation which will often take the form of testing under the DFO's previous Fish Health Protection Regulations.

## Introduction and Transfers (I&T) Committee

A committee made up of FPT governments and established in each province/territory to ensure that the National Code on Introduction and Transfers of Aquatic Organisms is adhered to.

# Landlocked salmon

Salmo salar, a native strain of Atlantic salmon which spends its entire life cycle in fresh water.

#### Marking

The act of removing a specific, pre-determined fin (adipose, ventral or a combination); or applying a tag/mark to an individual to be able to identify and age the stocked fish when/if it is caught.

### Native fish

A fish species that is indigenous to NB waters.

#### Strain

A group of individuals with common ancestry that exhibits genetic, physiological or morphological differences from other groups of the same species.

## Triploid fish

A fish that has three sets of chromosomes instead of the usual two, rendering it sterile. Although triploids can be naturally occurring most are created by forcing the egg to retain a chromosome that is normally ejected during development. There are various ways to create triploid eggs; one of the most popular is through pressure shocking. Triploid fish are not genetically modified organisms as the genes of a triploid fish have not been changed in any way.

#### Wild fish

Any species of fish occurring, growing, or living in a natural state in provincial waters that has not been artificially reared or domesticated.

#### Wild strain

A fish having the genetic, physiological and morphological characteristics unique to a self-sustaining, naturally reproducing population of fish. This can include hatchery-reared fish that are no further removed from the wild than two generations (f2).

# 3.0 Policy Objectives

# 3.1 Policy Objectives

The objectives of this policy are to:

- Ensure that the Department's recreational fish stocking program is based on biological principles that minimize negative impacts to naturally-occurring populations;
- Ensure that the Department's stocking practices are consistent throughout the province;
- Provide and implement a decision-making framework that ensures objective decisions in determining the waters to be stocked;
- Optimize public benefits; and
- Ensure that the Department assesses any proposal to proceed with recreational fish stocking with respect to protecting Aboriginal and treaty rights in accordance with the Government of New Brunswick's (GNB) Duty to Consult Policy and any other relevant legislation. Aboriginal Nations in NB will be notified and engaged as required in consultations in an effort to mitigate or accommodate any impacts to Aboriginal and treaty rights.

# 4.0 Scope and Application

### 4.1 Application

This policy applies to the Department's recreational fish stocking program. It outlines the requirements, principles and general procedures of the program while detailed fish stocking procedures and information can be found in the Department's procedural guidelines.

While this policy does not apply to fish stocked by others in NB, all proponents interested in stocking fish in provincial waters must follow the federal "Procedural Guide: Private Sector Involvement in Enhancement of the Public Fisheries Salmonid Resources", available from the I&T Committee by contacting DFO by telephone at (506) 755-5033 or by e-mail at NBITC.XMAR@dfo-mpo.gc.ca.

This policy does not apply to stocking efforts for the rehabilitation or recovery of species. Such efforts are addressed under the recovery planning process according to the federal *Species at Risk Act* and the NB *Species at Risk Act*.

#### 4.2 Authority

Provincial Statutes or Agreements

Fish and Wildlife Act

Canada - NB Memorandum of Understanding on Recreational Fisheries

#### Federal Statutes

Fisheries Act
Fish Health Protection Regulations
Fishery (General) Regulations

## 5.0 Stocking Principles

# 5.1 General Principles

Recreational fish stocking will be used to provide increased recreational angling opportunities in waters deemed suitable for stocking and where the stocked fish should not significantly impact the naturally-occurring aquatic community.

## The Department will:

- Only stock fish that are:
  - a strain appropriate for the waterbody to be stocked (as identified in section 5.3); and
  - certified disease free.
- Only stock waters that:
  - have been surveyed;
  - have a capability to support the stocked fish (e.g. suitable water conditions such as temperature, pH, dissolved oxygen, etc.);
  - have acceptable public access; and
  - have been approved by the DFO's I&T Committee.
- Generally, only stock a fish species in a natural waterbody if that species is known to exist or has previously existed in that body of water. In rare circumstances, the Department may consider stocking landlocked salmon and/or brook trout in natural waterbodies where it is not native; however, stocking will not occur unless a comprehensive risk assessment is completed. The Department will use the framework of the "Aquatic Organisms Risk Assessment" from the National Code on Introductions and Transfers of Aquatic Organisms to evaluate risks. The Department's Recreational Fisheries staff will be responsible for completing the risk assessment which would then be evaluated by the I&T Committee.
- Ensure a broad review of the potential impacts of stocking by involving staff
  with expertise in other areas (e.g. biodiversity, species at risk, etc.) and/or
  staff from other relevant Departments in new stocking proposal reviews and
  other components of the program as required.

### 5.2 Decisions Not to Stock

In general, there will be no stocking of waters:

 That are producing landlocked salmon and/or brook trout near their carrying capacity;

- With an existing self-sustaining, quality recreational fishery, as determined by the Department;
- With previous poor stocking results, as determined by the Department;
- Without prior consultation with neighboring jurisdictions where stocked fish could migrate to waters in those jurisdictions (e.g. boundary waters);
- Where stocking could harm other species at a population level;
- Specifically, for direct commercial benefit; and
- Identified as being unique or having unique features (e.g. pristine nature of the waterbody, presence of rare strain or species, etc.). This includes waters located within a Protected Natural Area (PNA); however, waters that were stocked prior to the designation of a PNA may be grandfathered.

#### 5.3 Fish Standards

The Department's recreational fish stocking procedural guidelines will be used to establish a stocking rate and fish requirements (e.g. species, genetics, age, health, marks, etc.) specific to each stocking initiative. While these criteria may vary from water to water, the Department has established the following general principles with respect to fish standards:

### Species:

The recreational fish stocking program will focus on brook trout and landlocked salmon only.

#### Strain:

To maintain the genetic integrity of wild populations, and while maximizing stock availability, the Department will use caution when determining the fish strains to stock in each waterbody. For landlocked salmon, all stocked fish will be wild NB strain. For brook trout the strain will be dependent on the waterbody to be stocked:

- Triploid strain: For the majority of the Department's brook trout stocking, triploid fish will be used. Triploid brook trout are sterile which mitigates the negative genetic impacts on the wild population of a reproductively capable stock.
- Wild NB strain: In some cases, a reproductive stock may be necessary. In these circumstance, only wild NB strain brook trout will be used.
- Domesticated/neighbouring strains: Some provincial waterbodies have been repeatedly stocked in the past with different strains; some of which originated outside of NB. If these waters are heavily angled and/or have a low risk of escapement by stocked fish, then domesticated and/or neighbouring strains of brook trout may be considered for stocking.

#### Fish age:

Based on the chosen management strategy, the Department will generally stock fish as either fall fingerlings (age 0+), spring yearlings (age 1) or fall yearlings (1+). Other age classes will be considered for stocking on a case by case basis.

#### Health and condition:

Prior to stocking, the fish should meet quality standards based on an inspection

by the Department. All fish must also meet the health requirements as per the I&T Committee. This generally means the absence of diseases as defined in the DFO's previous Fish Health Protection Regulations Schedule II, which are: Viral Hemorrhagic Septicemia, Infectious Hematopoietic Necrosis, Infectious Pancreatic Necrosis, Whirling Disease, Ceratomyxosis, Furunculosis, and Enteric Redmouth Disease.

### Marking/tagging:

To ensure hatchery origin fish can be easily distinguished from wild fish, each fish should be given a mark prior to stocking. The ability to identify stocked fish in the wild is essential when conducting follow-up monitoring to evaluate the success of stocking efforts and for anglers to adequately report their catches. Generally, the mark is a fin-clip that varies based on the year or location of stocking.

# 6.0 Stocking Procedures

#### 6.1 General Process

The Department's recreational fish stocking program is contingent on:

- A lack of effective alternative management options,
- The suitability of the receiving waters,
- Current and anticipated demand/use by anglers, and
- Resource availability.

The following three-step process will be used to decide which waters to stock:

- 1) A broad and objective analysis of the waterbody's survey data to determine if stocking is an appropriate management strategy,
- 2) The development of a prioritized stocking list, and
- 3) A determination of the availability of resources (e.g. fish of the appropriate species, strain and/or age class).

Generally, opportunities for stocking initiatives will be identified by the Department when routine fish population and habitat monitoring work indicates an opportunity to enhance a fish population. In other instances, it may be when a group or individual expresses interest in having the Department stock a particular body of water.

### 6.2 Prestocking Assessment

To determine if the waterbody is suitable for stocking, an analysis of the survey information that details the physical, chemical, and biological characteristics of the waterbody must be undertaken. Other additional surveys may be necessary if a species of conservation concern is suspected or known to exist in the waterbody. The requirement for, and the nature and extent of these additional surveys will be determined on a case by case basis by the Department.

The survey information is used to determine the factors limiting the production or growth of a managed fish population, and the appropriate management strategy(ies) to address these limitations. In many cases, fish stocking is not the most appropriate or effective management option. It may only be effective when implemented with other strategies such as harvest reductions or habitat enhancement. As a result, stocking will be considered after other management options are evaluated.

# 6.3 Public Requests

Any public inquiries for the Department to stock a waterbody should be directed to the Regional Biologist by contacting the appropriate Regional Office (see Appendix A) for an initial discussion. The Regional Biologist will determine whether there is enough survey information to adequately review the stocking request.

If additional information is needed, the proponent may ask the Department to complete the required surveys as time permits, or alternately, the proponent may expedite the process by having qualified individuals conduct the surveys at their own expense. All applicable permits must be obtained, and survey information must be provided to the appropriate Regional Biologist(s) for their review and submission of stocking proposals.

# 6.4 Submission of Proposals

Using the survey information, and in accordance with the Department's procedural guidelines, stocking proposals will be developed by the Regional Biologist for each suitable waterbody in their respective region. Proposals will detail the appropriate species, strain, age class, stocking frequency, stocking rate and objective (e.g. trophy, enhancement, urban) for that waterbody.

It is critical that the number of fish stocked and the frequency they are stocked is appropriate for the target waterbody. If waters are under-stocked there may be little benefit realized from stocking efforts (e.g. poor angler success), while over-stocking can increase competition and predation on wild fish populations.

## 6.5 Priority Evaluation Criteria

To ensure that funds from the Fish Stocking Fee and fish are utilized to the greatest benefit, the Department will prioritize each stocking proposal with priority given to those that:

- Have the greatest likelihood of meeting the stocking objectives;
- Minimize negative impacts to the natural aquatic community; and
- Have the greatest potential to benefit anglers.

Based on this evaluation, a list that ranks water bodies in order of their stocking priority will be generated annually. If resources (fish/funds) are insufficient to meet the total stocking requirements, the higher priority waters will be stocked first. Inclusion on the stocking list does not guarantee that an "approved water"

### 6.6 Evaluation, Monitoring and Re-assessment

Stocked waters require a periodic re-assessment to determine the success of stocking efforts and to determine if stocking is still necessary or appropriate. This monitoring should include fish population surveys and angler creel surveys to assess stocked fish survival, growth, and catch by anglers as indicators of stocking success. These surveys must be conducted according to methodologies outlined in the Department's procedural guidelines.

For new stocking initiatives, follow-up monitoring should be conducted prior to the next stocking event to determine if the stocking strategy is appropriate and succeeding or needs to be modified (e.g. stocking rate or timing, fish size, etc.).

## 7.0 Communication

#### 7.1 General

Detailed fish stocking information, including the number, age, size and species of fish distributed to specific locations will be posted on the Department's website after the stocking season is complete. Information can also be requested from Recreational Fisheries Section staff.

## 8.0 References and Supporting Documentation

#### 8.1 General

- National Code on Introductions and Transfers of Aquatic Organisms.
   June 2017. Canadian Council of Fisheries and Aquaculture Ministers (CCFAM).
- New Brunswick Department of Energy and Resource Development's Procedural guidelines for recreational fish stocking.
- Procedural Guide: Private Sector Involvement in Enhancement of the Public Fisheries Salmonid Resources.

# 9.0 Inquiries

## 9.1 Written Inquiries

Written inquiries concerning this policy may be forwarded to:

Director, Fish and Wildlife, or Manager, Recreational Fisheries Section Department of Energy and Resource Development P.O. Box 6000 Fredericton, NB E3B 5H1

# 9.2 Telephone Inquiries

Telephone inquiries concerning this policy may be directed to the Director, Fish and Wildlife, or Manager, Recreational Fisheries Section, by calling (506) 453-3826.

# 9.3 E-mail Inquiries

E-mail inquiries concerning this policy may be forwarded to the Director, Fish and Wildlife, or Manager, Recreational Fisheries Section, by e-mailing dnr mrnweb@gnb.ca.

# 10.0 Appendices

APPENDIX A – Department of Energy and Resource Development's Regional Boundaries and Contacts Map

