APPLICATION GUIDELINES FOR CAGE AQUACULTURE FACILITIES

2015

Ontario Ministry of Natural Resources and Forestry

In cooperation with:

Ontario Ministry of the Environment and Climate Change,
Ontario Ministry of Agriculture, Food and Rural Affairs
and
Fisheries and Oceans Canada

Fisheries Section
Species Conservation Policy Branch
Policy Division
Ministry of Natural Resources and Forestry
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# TABLE OF CONTENTS

Glossary of Terms .................................................................................................................. iii

1 Introduction.......................................................................................................................... 1

2 Preparing and Submitting an Application ........................................................................ 1
   2.1 Application Type ........................................................................................................ 1
   2.2 Before Submitting an Application ............................................................................. 2
   2.3 MNRF Contact and Submission Offices .................................................................... 2

3 Application Review Process .............................................................................................. 3
   3.1 Application Review Process and Timelines ................................................................ 3
   3.2 Application Pre-screen Eligibility Criteria .................................................................. 6
   3.3 Review Committee ...................................................................................................... 6

4 Relevant Legislation, Regulations, Policies and Guidelines ........................................ 7
   4.1 Provincial ................................................................................................................... 7
      4.1.1 Fish and Wildlife Conservation Act, 1997 and Ontario Regulation 664/98 ........ 7
      4.1.2 Public Lands Act ............................................................................................... 8
      4.1.3 Ontario Water Resources Act and the Environmental Protection Act ............. 8
      4.1.4 Provincial Parks and Conservation Reserves Act, 2006 .................................... 9
      4.1.5 Endangered Species Act, 2007 ......................................................................... 9
      4.1.6 Environmental Bill of Rights, 1993 ................................................................. 9
      4.1.7 Class Environmental Assessment for MNRF Resource Stewardship and Facility Development Projects (Class EA-RSFD) ............................................. 10
   4.2 Federal ...................................................................................................................... 10
      4.2.1 Fisheries Act ...................................................................................................... 11
      4.2.2 Species at Risk Act .......................................................................................... 11
      4.2.3 Navigation Protection Act ................................................................................ 12

5 Consultation and Notification Requirements ................................................................... 12
   5.1 Aboriginal Consultation ............................................................................................ 12
   5.2 Public Consultation and Notification ......................................................................... 13

Appendix A: Governmental Contact Information ................................................................. 14

Appendix B: Applicant Instructions for Sampling and Reporting Requirements ................. 16
   1. Baseline Water Quality Report .................................................................................. 16
   2. Supplemental Water Quality Monitoring ................................................................. 16
   3. Sediment Monitoring and Depositional Modelling .................................................... 17
   4. Fisheries Background Report .................................................................................... 17
   5. Spawning Habitat Survey .......................................................................................... 20
   6. Fish Spawning Survey ............................................................................................... 20
   7. Fish Containment Assessment .................................................................................. 20
Glossary of Terms

Assessment Area: the area of Crown lake bed applied for occupational authority (e.g. Land Use Permit or other form of Crown land tenure) plus the lakebed area extending 200m in all directions from the boundary of the proposed Crown land occupation.

Aquaculture: as defined in the FWCA means: The breeding or husbandry of fish, and the verb “culture” has, with respect to fish, a corresponding meaning.

Cage culture (cage aquaculture): A cage culture facility consists of floating or submersible enclosures that maintain an open exchange of water for rearing fish at higher densities, usually in large bodies of water such as lakes, offering an alternative production system where open water conditions are suited to aquaculture development.

Class environmental assessment (Class EA): An environmental assessment for a class of undertakings that is approved under Part II.1 of the EAA.

Crown land: For the purposes of aquaculture licences, this only includes lands administered under the Public Lands Act by the Ministry of Natural Resources and Forestry.

Culture: Defined in the definition of “aquaculture” and when used as a verb with respect to fish has a corresponding meaning with aquaculture.

Eligibility Criteria: criteria that will result in refusal of the aquaculture licence application as identified in this Guide.

Environment: as defined in s.1. of the EAA means:
   a) air, land or water,
   b) plant and animal life, including human life,
   c) the social, economic and cultural conditions that influence the life of humans or a community,
   d) any building, structure, machine or other device or thing made by humans,
   e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
   f) any part or combination of the foregoing and the interrelationships between any two or more of them, in or of Ontario.

Environmental Registry: An internet site established pursuant to the Environmental Bill of Rights 1993 that provides the public with electronic access to information about the environment, including information about certain ministry proposals, decisions and events that could affect the environment.

Facility: Generally, includes equipment, infrastructure, buildings or improvements that are built, installed, or established to provide the physical means or assistance in relation to an action, operation, or course of conduct.
G1 - Special Native Stocks: native species or sub-species that have been reduced to a few local stocks and are threatened by extinction or extirpation (e.g. spotted gar); and native stocks within species that are "glacial relics", i.e. stocks differentiated prior to the last ice age (e.g. Haliburton Highlands lake trout); and remnant native stocks in large lakes for which most similar stocks with overlapping distribution have been lost, i.e. stocks differentiated since the last ice age (e.g. Lakes Huron and Superior lake trout stocks); and remnant native stocks which are genetically distinct and do not occur together, and other identified sensitive native stocks, that have been physically isolated from other stocks since the last ice age (e.g. Lake Simcoe lake trout, aurora trout, Kawartha lakes muskellunge).

G2 - Native Stocks: this is basically all native stocks (i.e. those within their native range) that do not meet the criteria for G1 classification. However they can be more specifically described as native stocks that do not occur together and have been physically and genetically isolated from each other since the last ice age (e.g. most native lake trout and brook trout stocks); and native stocks with overlapping distribution that are isolated by behaviour from each other and are locally adapted to their habitats, but some gene flow between stocks may still occur; and a lost stock that may be rehabilitated from a neighbouring stock (e.g. Lake Nipissing walleye, brook trout in headwater streams).

G3 - Introduced Stocks: These are stocks relocated to an area where they do not occur naturally. Introductions can be deliberate or accidental and can include exotics, naturalized species (e.g. Great Lakes rainbow trout), and stocks native to Ontario which are stocked beyond their native range (e.g. some bass waters).

Mitigation: includes the elimination, reduction or control of the adverse environmental effects of the project, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means.

Operational Boundary: the perimeter of the cage aquaculture operation, defined as 120 m from the edge of the cages/ cage array, or as outlined in an approved Sediment Quality Monitoring Plan, within which the effects of the operation are expected to be contained.

Primary Site: the geographic location of the primary aquaculture operations

Secondary Site: a geographically discrete site from the primary operational site where fish from the primary site may be moved to an annual or seasonal basis.

Species Review List: the list of species which will be considered throughout the review of an aquaculture licence application for impacts of the proposed aquaculture facility or operations on the species or it habitat.

Type 1 Site: enclosed (lake like) basins /embayments with limited flushing;

Type 2 Site: partially exposed sites having good epilimnion/metalimnion flushing but limited or no hypolimnion exchange; and

Type 3 Site: exposed locations where the hypolimnion is also well flushed.
Waste Assimilation: consumption of aquaculture waste materials by benthic invertebrates and their conversion into invertebrate tissue indicated by benthic invertebrate densities that are more than the maximum reference density at >50% of near-field waste footprint sampling stations.
1 Introduction

The Ministry of Natural Resources and Forestry (MNRF) has the legislative mandate for the management of Ontario's natural resources, and has the authority to issue licences for aquaculture. The licensing process includes requirements and procedures so that cage aquaculture in Ontario is conducted in an ecologically sustainable manner. This Guide provides guidance on preparing and submitting an application for:

- A cage\textsuperscript{1} aquaculture licence under the \textit{Fish and Wildlife Conservation Act, 1997} (FWCA) and Ontario Regulation 664/98 (Fish Licensing), and
- Securing occupational authority issued under the \textit{Public Lands Act} and regulation for the use of Crown land associated with the cage aquaculture licence.

MNRF will also act as the 'One Window' for the applicant to facilitate the coordinated review of the application by provincial and federal agencies that are responsible for regulating and issuing of approvals, permits and authorizations required for cage aquaculture activities in Ontario.

The Guide will be updated from time to time in response to the results of monitoring programs, scientific research, experience and regulatory changes.

2 Preparing and Submitting an Application

2.1 Application Type

An application form is required for all applications. The applicant is required to indicate on the Application Form what type of application is being submitted. An application may be prepared and submitted for one of the following:

- \textbf{Type A Applications} are used to apply for approvals for a new aquaculture site and associated operations (i.e. no existing approvals);

- \textbf{Type B Applications} are used to apply for a modification to current approvals for existing operations including:
  - Production (e.g. species cultured, annual production, feed quota) levels associated with the aquaculture licence, or
  - Facilities that would require a change to Crown land occupational authority (e.g. increase, decrease or relocation of boundaries), or
  - Addition of a Secondary Site.

- \textbf{Type C Applications} are used to apply for a standard renewal or minor administrative amendment of current aquaculture approvals for existing operations due to the up-coming expiry of the current approvals. Type C applications reflect the same production, facility and Crown land occupational

\textsuperscript{1}Applications for land based facilities are considered through a separate process as outlined in the Issuance of Aquaculture Licences, Renewals, Transfers, Amendments, Refusals and Cancellations Policy (FisPo. 9.2.1). Community hatcheries are required to use the Application for Aquaculture-Related Licences for Community Hatcheries).
authority as that in the current approvals. Type C applications may also be submitted to request a minor administrative amendment (e.g. change of owner address).

An application package consists of a complete Cage Aquaculture Application Form with all required attachments.

2.2 Before Submitting an Application

In order to ensure the timely processing and review of applications incomplete applications will not be accepted. In order to gather the necessary background information and assess the feasibility of the proposal, it is recommended the following steps be undertaken:

- Conduct a preliminary assessment of the application area to determine if there are any interests or conflicts overlapping or in the vicinity of the proposed area;
- Share information with local First Nation and Métis communities (see last bullet);
- Share information with applicable adjacent land users and owners and the local municipality;
- Ensure the area is zoned for the intended use by contacting local government;
- Ensure species proposed to be cultured is on the list of species eligible for culture (Schedule B of Fish Licensing Regulation, O. Reg. 664/98) and present in the receiving waterbody;
- Arrange a Pre-Submission Meeting with MNRF for Type A and B Applications. (Appendix A). Prior to the pre-submission meeting the applicant should provide, general information to the MNRF including, the species proposed for culture, proposed production levels, general facility information, and a map of the proposed location. This will allow MNRF to identify any known concerns, potentially impacted First Nation and Métis communities and requirements of the applicant with respect to Crown delegation of procedural aspects of Aboriginal consultation early in the process.

2.3 MNRF Contact and Submission Offices

For applications in the Great Lakes the appropriate contact and submission office is the Lake Unit responsible for the area in which the site is being proposed or currently located. For inland lake applications the appropriate contact and submission office is the local MNRF District Office. Regular communication between the Applicant and MNRF throughout the application and review process is encouraged.

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2 Applicants requesting to culture species currently not listed on Schedule B, be advised that the application cannot be further processed until such time that the Introduction and Transfers Committee has been engaged. Contact the Fisheries Section, MNRF for further information.
3 Application Review Process

3.1 Application Review Process and Timelines

The timelines required to process an application will vary depending on the scope and nature of the application, as well as the resulting need for data collection and analysis, Aboriginal consultation requirements, and public consultation that may be triggered as a part of the class environmental assessment process (Section 6.1.5). General application review timelines are anticipated as follows:

- Type A or Type B applications that require more comprehensive data collection, consultation and notification could take up to 2 years;
- Type C applications may be processed within 6-9 months.

Changes to an application under review also have the potential to impact the review time. All changes to an application must be submitted by the applicant in writing to MNRF and will be reviewed in terms of the potential for environmental impacts. MNRF will notify the applicant of any additional documentation, notification, or requirements related to delegated procedural aspects of Aboriginal consultation resulting from the submitted change(s). Public consultation (e.g. landowners, municipalities etc.) and Aboriginal Consultation is required throughout the application review and approval process as outlined in Sections 4.1.6 and 5. The main steps for the submission, review and approval of ALL applications are as summarized in Table 1.
Table 1: The main steps for the submission, review and approval of all applications for cage aquaculture licences.

<table>
<thead>
<tr>
<th>PRELIMINARY APPLICATION REVIEW</th>
<th>STEP 1.</th>
<th>Pre-Submission Meeting between Applicant and MNRF (Section 3.2)</th>
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<tbody>
<tr>
<td></td>
<td>STEP 2.</td>
<td>Applicant prepares and submits application (Section 4)</td>
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<td>STEP 3.</td>
<td>MNRF reviews application for completeness</td>
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<td>STEP 4.</td>
<td>MNRF Pre-screens application for Eligibility (Section 4.1)</td>
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<td>STEP 5.</td>
<td>Preliminary Review of Application by Review Committee (Section 6, Section 7, Appendix B, C and D)</td>
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<tr>
<td>ACTIVE APPLICATION REVIEW</td>
<td>STEP 6.</td>
<td>Applicant is notified of:</td>
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<td>• Provincial and federal permit, approval or authorization requirements</td>
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<td>• Additional information/monitoring requirements to support the application review (e.g. Spawning Survey, Supplemental Water Quality Monitoring or Sediment Quality Monitoring and Depositional Modelling, Containment Assessment, additional requirements under the Class EA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The applicant’s responsibilities if the Province chooses to delegate any procedural aspects of the Crown’s duty to consult Aboriginal communities</td>
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<td></td>
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<td>• Public/municipal consultation and notification requirements</td>
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<td>• Outstanding social or environmental impacts requiring mitigation</td>
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<td>• Outstanding non-compliance issues with current approvals (if applicable)</td>
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<td>Aboriginal consultation process continues and MNRF commences fulfilling Public consultation and notification requirements.</td>
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<td>STEP 7.</td>
<td>Application reviewed by the Review Committee for outstanding impacts requiring mitigation</td>
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<td>FINAL REVIEW AND DECISION MAKING</td>
<td>STEP 8.</td>
<td>Applicant prepares and submits management and monitoring plans (Appendix F)</td>
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<td>STEP 9.</td>
<td>Review Committee makes recommendations for licence approval (with conditions on approvals). Federal agencies confirm approval in principle for required federal permits or authorizations (if applicable).</td>
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<td></td>
<td>STEP 10.</td>
<td>MNRF Lake Manager reviews Review Committee recommendations and makes final decision regarding licence approval. MNRF notifies applicant of final decision</td>
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</table>

Figure 1 outlines a typical application review process for ALL application types. It is important to emphasize that Figure 1 is an overview of the main steps and should not be interpreted as depicting a definitive sequence of events.
Figure 1: Application Review and Approval Process for Type A, B and C Cage Aquaculture Applications
3.2 Application Pre-screen Eligibility Criteria

Type A and B applications will be refused if any of the following criteria are identified at any stage of the application process:

- Application is inconsistent with area-specific land use policy found in the Crown Land Use Policy Atlas (CLUPA), and for areas south of CLUPA coverage, within District Land Use Guidelines or other land use plans;
- Application is inconsistent with Crown land management policies (e.g. Public Lands Act policy PL 4.02.01 Application Review and Land Disposition Process);
- Species proposed to be cultured is not included on the list of species eligible for culture (Schedule B of Fish Licensing Regulation, O. Reg. 664/98) or is not present in the receiving waterbody (i.e. genetics protection);
- The proposed location is within an area where a cage operation will significantly impact the navigability of the waters in the area (See Navigation Protection Act).
- The proposed location is within an area regulated under the Provincial Parks and Conservation Reserves Act, 2006.
- Where there is advice to the effect that, in the face of an Aboriginal land claim, the proposal should not go ahead.

3.3 Review Committee

The purpose of the Review Committee is to co-ordinate, to the extent possible, the review of the application for an aquaculture licence and other required provincial and federal approvals. The MNRF will be the ‘One Window’ between the applicant and the Review Committee.

For Great Lakes cage aquaculture applications, the Review Committee will be chaired by the MNRF Lake Management Supervisor. For cage aquaculture applications for inland lakes the Review Committee will be chaired by the MNRF Resources Operations Supervisor.

Review Committee membership will include, but is not limited to:

Ministry of Natural Resources and Forestry (MNRF)
- Lake Management Supervisor or Resource Operations Supervisor

Ministry of the Environment and Climate Change (MOECC)
- MOECC District Office

Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
- Aquaculture Specialist, Agriculture Development Branch

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3 Applicants requesting to culture species currently not listed on Schedule B, be advised that the application cannot be further processed until such time that the Introduction and Transfers Committee has been engaged. Contact the Fisheries Policy Section, MNRF for further information.
Government of Canada

- DFO Aquaculture Representative (federal lead)
- Transport Canada (TC)

Ministries or agencies responsible for the issuance of additional approvals, permits and authorizations or those in a position to provide technical advice and support may also be invited to be on the Review Committee.

Members of the Review Committee will participate in each stage of the review process with roles and responsibilities specific to the applicable legislation for which their agency is responsible. At the completion of the review process each agency will make its independent decision regarding approvals, permits and authorizations under the applicable legislation within their agency mandate.

4 Relevant Legislation, Regulations, Policies and Guidelines

The operation of an aquaculture facility may trigger obligations under a number of Provincial and Federal Statutes. Applications will be reviewed in consideration of the following key provincial and federal legislation, regulations, polices and guidelines.

There may be permits and approvals that may be required under additional legislation and regulations (e.g. Ontario Oil, Gas and Salt Resources Act, Ontario Heritage Act etc.) depending on the unique features of each application. Note that while every attempt has been made to make this Guide as complete as possible as of this Guide’s publication date, applicants are responsible for determining their legal obligations. Applicants are responsible for meeting the requirements of all applicable legislation and regulations and are advised to refer to the legislation and regulations directly (Appendix E).

4.1 Provincial

The key provincial legislation, regulations, and polices for cage aquaculture are identified below. Please refer to the statutes and regulations for the full legal requirements.

4.1.1 Fish and Wildlife Conservation Act, 1997 and Ontario Regulation 664/98

An aquaculture licence is required to culture fish in Ontario under the Fish and Wildlife Conservation Act, 1997 (FWCA), and is subject to any conditions either set out on the licence or in regulation made under the Act. The regulation applicable to aquaculture is the Ontario Regulation 664/98 (Fish Licensing). The fish species that may be approved for culture are limited to those prescribed in Schedule B of the Fish Licensing Regulation. Licence conditions may include requirements to mitigate potential environmental impacts, such as impacts that could result from operations or that relate to escapement of fish (Appendix F). Such conditions may also include the strain of species approved for culture. Fish culture may only occur in the location as described and listed on a licence.

An aquaculture licence application is reviewed to assess the potential impacts of the proposed operation on the receiving ecosystem and existing fish populations...
(Appendix D). Type B and Type C applications will also be reviewed to confirm compliance with current aquaculture approvals.

4.1.2 Public Lands Act

Provincial Crown (public) land, including shore-lands and the beds of most lakes and rivers in Ontario, is managed by the MNRF under the Public Lands Act. For the purposes of aquaculture licences, Crown land excludes provincial parks and conservation reserves, which are managed by the MNRF under the Provincial Parks and Conservation Reserves Act. Cage aquaculture facilities on Crown land require occupational authority under the Public Lands Act. Approvals for Crown land occupational authority must adhere to land use planning and strategic policy direction, environmental assessment requirements (Section 6.1.2), and ensure any constitutional or legal obligations are fulfilled where the Crown’s duty to consult with Aboriginal peoples may be triggered (Section 7.1).

Review of an application for Crown land is required to ensure that the disposition of public lands contributes to the environmental, social and economic well-being of the province by providing for orderly use and sustainable development of Ontario’s public land. The approved occupational authority, if granted (i.e. land use permit, licence of occupation, lease) will be issued simultaneously with an approved aquaculture licence. Occupational authority is typically granted when all other provincial approvals are in place and first years rent has been paid. Crown land rental rates are based on market value. Type B and C applications will also be reviewed to confirm compliance with existing occupational authority approvals.

(NOTE: For applications to establish an aquaculture facility on First Nation reserves, occupational authority pursuant to the Indian Act)

4.1.3 Ontario Water Resources Act and the Environmental Protection Act

The purpose of the Ontario Water Resources Act (OWRA) is to regulate sources of water pollution while the Environmental Protection Act (EPA) prohibits the discharge of contaminants to the natural environment. Both of these Acts are administered by the MOECC.

The MOECC’s Water Management Policies, Guidelines and Provincial Water Quality Objectives (PWQO), more commonly known as the “Blue Book,” are tools used to assist in safeguarding the quality of Ontario’s public waters and fulfill Provincial obligations under the two Acts.

The Draft Provincial Policy Objectives for Managing Effects of Cage Aquaculture Operations on the Quality of Water and Sediment in Ontario’s Waters (MOECC, 2016) sets out cage aquaculture specific water and sediment quality objectives to ensure long-term environmental sustainability of commercial-scale cage aquaculture in Ontario. Further, these objectives indicate that cage aquaculture with proposed annual feed allocation of more than 2500 tonnes of low
phosphorus feed may require information in addition to what is outlined in these Application Guidelines.

Applications will be reviewed to ensure that the facility is sized and situated to minimize potential impacts to water and sediment quality that may result from dissolved oxygen depletion, phosphorus enrichment or sediment toxicity (Appendix C).

Aquaculture licences will require the implementation of sediment and water quality monitoring plans (Appendix F) to ensure that the facility is managed and monitored in accordance with the water and sediment quality policy objectives.

4.1.4 Provincial Parks and Conservation Reserves Act, 2006

The Provincial Parks and Conservation Reserves Act, 2006 (PPCRA) provides direction for the planning and management of provincial parks and conservation reserves in Ontario. Provincial parks and conservation reserves protect representative ecosystems, natural and cultural heritage, maintain biodiversity and provide opportunities for compatible, ecologically sustainable recreation. Protected areas are planned and managed to maintain their ecological integrity. Aquaculture is not consistent with the legislative and policy framework for provincial parks and conservation reserves. Cage aquaculture facilities would not be granted occupational authority under the PPCRA.

4.1.5 Endangered Species Act, 2007

The purposes of the Endangered Species Act, 2007 (ESA) are:

- To identify species at risk based on the best available scientific information;
- To protect species that are at risk and their habitats;
- To promote the recovery of species that are at risk; and,
- To promote stewardship activities to assist in the protection and recovery of species that are at risk.

If at any point throughout the application review period it is determined that any species at risk are in the area, additional information and approvals may be required.

For an up to date list of species at risk that are listed provincially and protected under the ESA, please see Ontario Regulation 230/08 (Species at Risk in Ontario List). Please note, the list of species at risk and their classifications may be different under the Federal Species at Risk Act (refer to Section 6.2.2). It is the applicant’s responsibility to comply with both the Provincial and Federal species at risk legislation.

4.1.6 Environmental Bill of Rights, 1993

The Environmental Bill of Rights, 1993 (EBR) sets out minimum levels of public participation that must be met before the Government of Ontario makes decisions
on certain kinds of environmentally significant proposals. A licence that authorizes a person to engage in cage aquaculture is prescribed as a Class I proposal under the EBR and requires giving notice on the Environmental Registry. Exceptions to the requirement to give notice on the Environmental Registry for a Class I proposal are set out in Part II of the EBR and may apply.

4.1.7 Class Environmental Assessment for MNRF Resource Stewardship and Facility Development Projects (Class EA-RSFD)

The MNRF is subject to the requirements of the Environmental Assessment Act (EAA). The MNRF’s Class EA-RSFD provides EAA coverage for resource stewardship and facility development projects, including their planning, design, construction, operation, maintenance, rehabilitation, and retirement or decommissioning. The disposition of certain or all rights to Crown resources (i.e. Crown land administered under the Public Lands Act) is one of the MNRF projects to which the Class EA-RSFD applies.

The Class EA-RSFD has requirements that the MNRF must follow before proceeding with a proposed project. Class EA-RSFD screening process enables a proposed project to be assigned to one of four categories (Category A, B, C or D) based on the potential net environmental effects and level of public concern.

A few examples of projects that could fall into various Class EA Categories include:

- Category A: A transfer of land tenure documents (e.g., Type C applications)
- Category B: Type B applications requesting expanding land tenure to allow for infrastructure upgrades or improvements, and in some cases, may include some production increase
- Category C: Applications requesting land tenure to allow for production greater than 2500 tonnes (metric).

Each Class EA category has specific requirements for project evaluation and consultation, tailored to the potential risk associated with that category of project. For example Category B and C projects require a minimum of a Public Notice inviting the public for comment on the proposed project (Step 6) and an Notice of Completion confirming that the requirement of the Class EA have been met. In addition, evaluation of the environmental effects and/or issues raised throughout this process may identify the need for additional information and/or mitigation measures. Where there remain significant concerns the project may be elevated to a higher Class EA category.

4.2 Federal

Approvals, authorizations and/or permits may need to be obtained from federal agencies that have a regulatory responsibility for aquaculture operations. The
most relevant federal permitting and approvals for cage aquaculture are identified below. Please refer to the statutes and regulations for the full legal requirements.

4.2.1 **Fisheries Act**

The *Fisheries Act* requires that projects avoid causing serious harm to fish unless authorized by the Minister of Fisheries and Oceans Canada. Under subsection 35(1) of the *Fisheries Act*, no person shall carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery. Serious harm to fish is defined in the Act as “the death of fish or any permanent alteration to, or destruction of, fish habitat”.

Proponents are responsible for avoiding and mitigating serious harm to fish that is part of or support commercial, recreational or Aboriginal fisheries. When proponents are unable to completely avoid or mitigate serious harm to fish, their projects will normally require authorization under Subsection 35(2) of the *Fisheries Act* in order for the project to proceed without contravening the Act.

Under section 36 of the *Fisheries Act* the deposit of a deleterious substance is prohibited unless carried out under a regulation. The Aquaculture Activities Regulation (AAR) under the *Fisheries Act* outlines the conditions and reporting requirements under which aquaculture operators may treat their fish for disease and parasites as well as deposit organic matter under sections 35 and 36 of the *Fisheries Act*. Aquaculture operators are responsible for meeting the requirements of all applicable legislation and regulations and are advised to refer to the legislation directly.

4.2.2 **Species at Risk Act**

The purposes of the *Species at Risk Act* (SARA) are to prevent species from becoming extirpated or extinct, provide for the recovery of species that are extirpated endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened. If at any point throughout the application review period it is determined that any species at risk are in the area there may be further information and approvals required.

For an up to date list of species at risk that are federally listed and protected under SARA, please see Schedule 1 of the Act. Please note, the list of species at risk and their classifications may be different under the Provincial *Endangered Species Act* (refer to Section 6.1.3). It is the applicant’s responsibility to comply with both the Provincial and Federal species at risk legislation.
4.2.3 **Navigation Protection Act**

A primary purpose of the *Navigation Protection Act* (NPA) is to regulate works and obstructions that risk interfering with navigation in the navigable waters listed on the schedule to the Act. Any construction, placement, alteration, repair, rebuilding, removal or decommissioning (related activities) undertaken on works located on these waters requires review by Transport Canada (TC).

Owners of works in waterways not listed on the schedule to the NPA that were previously approved under the former *Navigable Waters Protection Act* may choose to opt-out of the new NPA regime, until such time as they opt-out a Notice to the Minister is required. Where the owner chooses to opt-in under section 4 of the NPA a Notice to Minister is also required.

Information and plans submitted to TC is reviewed through a Navigation Impact Assessment (NIA) to identify potential interferences with shipping and boating activities, and possible mitigate of these interferences. Other steps may be required, such as review of potential environmental affects, consultation with Aboriginal communities or notifying the public of the project; owners will be notified by Transport Canada if any of these steps are required. Following the NIA, works may be deemed to be a “permitted work” or they may be subject to a Ministerial Approval provided impacts to the public right to navigation are acceptable or can be mitigated through the terms and conditions.

Proponents are encouraged to contact Transport Canada to discuss potential requirements as they relate to the Navigation Protection Program. For contact information refer to Appendix A.

5 **Consultation and Notification Requirements**

5.1 **Aboriginal Consultation**

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. For example, the Crown’s duty to consult is triggered when it considers issuing a permit, authorization or approval for a project which has the potential to adversely impact an Aboriginal right, such as the right to hunt, fish, or trap in a particular area.

The scope of consultation required in particular circumstances ranges across a spectrum depending on both the nature of the asserted or established right and the seriousness of the potential adverse impacts on that right.

Depending on the particular circumstances, the Crown may also need to take steps to accommodate potentially impacted Aboriginal or treaty right. For example, the Crown may be required to avoid or minimize the potential adverse impacts of the project.
The Crown has the responsibility for ensuring that the duty to consult and accommodate where appropriate is met. However, the Crown may delegate the procedural aspects of consultation to a proponent. Where this occurs the Crown will clearly communicate to the applicant what their role and responsibilities are. Refer to A Proponent’s Introduction to the Delegation of Procedural Aspects of Consultation with Aboriginal Communities for further information.

5.2 Public Consultation and Notification

The specific requirements for consultation and notification will vary, depending on whether the Class EA RSFD applies and, if so, the project category to which the MNRF project is assigned. For cage aquaculture applicants, the Class EA-RSFD will apply with respect to any dispositions of rights related to Crown resources (e.g. Crown land).

Consultation with agencies and parties that may be affected by a project is an important part of conducting project evaluations under the Class EA. The overall purpose of public consultation is to provide opportunities for the public to contribute to and influence decisions relating to the project. Public consultation offers a mechanism for identifying and resolving potential issues of a project. The Class EA outlines minimum points of contact for MNRF staff, partners and applicants. Additional opportunities for public consultation may be required where MNRF considers it appropriate to the scale, level of complexity, potential environmental effects with each project.

A Public Consultation and Notification Plan will be developed by MNRF. MNRF may delegate certain procedural aspects of the applicable Class EA-RSFD requirements to the applicant. This may include, notification, disclosing information, discussing issues, providing opportunity to make submissions, providing written responses to comments and modifying proposals to address comments and timelines.

MNRF may delegate certain procedural aspects of the applicable consultation requirements of the Class EA-RSFD to the applicant. This may include, notification, disclosing information, discussing issues, providing opportunity to make submissions, providing written responses to comments and modifying proposals to address comments and timelines.

MNRF will be responsible for posting any required notices on the Environmental Registry for an aquaculture licence. Where possible, opportunities to coordinate the timing of provincial and federal public notices and consultation will be considered. All comments received throughout the consultation period will be forwarded to the Review Committee to ensure they are considered in the review process.
# Appendix A: Governmental Contact Information

<table>
<thead>
<tr>
<th>Ministry of Natural Resources and Forestry</th>
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</table>
| Fisheries Section, Species Conservation Branch | 300 Water Street, 5th Floor North Tower  
P.O. Box 7000  
Peterborough, ON K9J 8M5  
705-755-1907 |
| Upper Great Lakes Management Unit – Lake Huron | 1450 Seventh Ave. East, 1st Floor  
Owen Sound, Ontario N4K 5R1  
519-371-0420 |
| Upper Great Lakes Management Unit – Lake Superior | c/o OFRI  
1235 Queen St E  
Sault Ste. Marie ON P6A2E5 |
| Lake Ontario Management Unit | 41 Hatchery Lane, RR 4  
Picton ON K0K2T0  
613-476-2400 |
| Lake Erie Management Unit | Exeter Road Complex  
659 Exeter Rd  
London ON N6E1L3  
519-873-4610 |
| Sudbury District Office | Suite 5  
3767 Hwy 69 S  
Sudbury ON P3G1E7  
705-564-7823 |
| Parry Sound District Office | 7 Bay St  
Parry Sound ON P2A1S4  
705-746-4201 |

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<tr>
<th>Ministry of the Environment and Climate Change</th>
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| Environmental Monitoring and Reporting Branch | West Wing, 1st Floor  
125 Resources Rd  
Toronto ON M9P3V6 |
| Land and Water Policy Branch | 6th Flr  
135 St Clair Ave W  
Toronto ON M4V1P5 |
| Sudbury Technical Support, Operations Divisions | 12th Floor  
199 Larch St.  
Sudbury, ON P3E 5P9  
705-564-3237 |

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<tr>
<th>Ministry of Agriculture, Food and Rural Affairs</th>
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</table>
| Agriculture Development Branch: Beef Cattle, Sheep, Goats, Alternative Livestock and Aquaculture | 1 Stone Rd W, 3rd Floor SW  
Guelph ON N1G4Y2  
877-424-1300 |
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<tr>
<th><strong>Federal Government</strong></th>
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<tr>
<td><strong>Fisheries and Oceans Canada</strong></td>
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<tr>
<td>Fisheries and Aquaculture Management Branch</td>
<td>Regional Aquaculture Coordination Office 501 University Crescent Winnipeg, Manitoba R3T 2N6 204-983-5000</td>
</tr>
<tr>
<td><strong>Transport Canada</strong></td>
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| Transport Canada Navigation Protection Program | **Regional Manager – Ontario**  
Navigation Protection Program  
Transport Canada, Marine Office  
100 S Front Street, 1st Floor  
Sarnia, ON  
N7T 2M4 |
|  | **Phone:** 519-383-1863  
**Fax:** 519-383-1989  
**Email:** NPPONT-PPNONT@tc.gc.ca |
Appendix B: Applicant Instructions for Sampling and Reporting Requirements

This Appendix provides the Applicant detailed information on how to fulfil application requirements as part of i) the initial application submission or ii) as required throughout the review process. Additional details on when these reports are required and how they are used throughout the review process can be found in Appendix C and D. Please contact the appropriate MNRF office with any outstanding questions about these reporting requirements.

1. Baseline Water Quality Report

The Baseline Water Quality Report required for Type A applications provides water quality data and information for the area of the proposed aquaculture operation. The applicant is required to carry out water quality sampling as follows. Four sampling stations are to be located to characterize the water quality of the area in the immediate vicinity of, and surrounding area of the proposed aquaculture site. Two reference sampling stations representing background conditions relative to the proposed site are to be established at depth, exposure, orientation and circulation similar to the proposed cage site location. If the proposed cage location is situated where water depth is <20 m, an additional station within 20 to 500 m from the cages is to be established where water depth is >20 m for temperature and dissolved oxygen monitoring. At each sampling station water sampling is to be conducted as follows:

- Three times prior to thermal stratification (spring);
- Five times during the thermally stratified period (obtained at approximately monthly intervals during the period late-May through mid-October); and
- Three times following fall turnover.

Temperature and dissolved oxygen (DO) profiles are to be collected at each site and all samples are to be analyzed for total phosphorus (TP).

The Baseline Water Quality Report will include a summary of available water quality information including results of water quality sampling data, a geo-referenced map indicating the sampling station locations, and a summary of the sampling methodology.

2. Supplemental Water Quality Monitoring

As outlined in Appendix C, an Applicant may be required to complete Supplemental Water Quality Monitoring to document water quality simulations (i.e. modelling) covering a range of receiving water current velocity conditions with a particular emphasis on periods of peak feeding). This will require the application of a suitable water quality model and, depending on the availability of existing data, may require the collection of current velocity and thermal profile data. This modelling, when required, would be completed for both Baseline and Long-term Production levels as indicated on the application to demonstrate probable compliance with licence conditions. The
Supplemental Water Quality report will include a summary of water quality modelling results and include:

- A description of the modelling approach selected and the rationale for its selection;
- Current velocity monitoring data;
- The rationale for the range of modelled periods and assumptions related to nutrient inputs associated with peak feeding periods;
- The range of predicted total phosphorus (TP) concentrations 30m from the cages and at the operational boundary; and
- Dissolved oxygen (DO) modelling predictions of late season (pre-turnover) DO profiles for Type 1 and Type 2 sites.

3. Sediment Monitoring and Depositional Modelling

As outlined in Appendix C, an Applicant may be required to complete Sediment Monitoring and Depositional Modelling to demonstrate probable compliance with sediment quality objectives. This will require estimating the pattern of solid waste dispersion and deposition. A range of receiving water current velocity conditions with a particular emphasis on periods of peak feeding will be required. This will require the application of an appropriate model and, depending on the availability of existing data, may require the collection of current velocity profile data. The Sediment Monitoring and Depositional Modelling report will summarize the sediment quality modelling and include:

- A description of the modelling approach selected and the rationale for its selection;
- Current velocity monitoring data;
- The rationale for the range of modelled periods and assumptions related to nutrient inputs associated with peak feeding periods; and
- Predicted annual solid waste deposition rates (gC m$^{-2}$d$^{-1}$) from the vicinity of the cages to the outer edge of the waste depositional footprint (defined by the 1.0 gC m$^{-2}$d$^{-1}$ contour).

4. Fisheries Background Report

A Fisheries Background Report is a comprehensive collection of existing fish and fish habitat background information for the area within 5 km of the cage aquaculture site and is required for Type A and certain types of Type B applications. The report will include a summary of fish and fish habitat information (e.g. maps, inventory reports). This report will be used to provide a general understanding of the broader aquatic system as well as specific information on any fisheries or fish habitat that may be impacted. Sources and examples of information that may be available are listed in Table 1 of this appendix.

NOTE: The list is not exhaustive and the level of data available will vary across the province.
Table 1: Fisheries Background Information Sources and Types

<table>
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<th>SOURCE OF INFORMATION</th>
<th>TYPE OF INFORMATION</th>
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| Fisheries and Oceans Canada (DFO) | • Fisheries and habitat information;  
• Species at Risk (SAR) information. |
| • Aquatic SAR mapping, reports, studies, etc.;  
• SAR database/ Canadian Freshwater Fisheries Database. |
| Ministry of Natural Resources and Forestry (MNRF) Land Information Ontario | • Fish community, population information;  
• Fish habitat and habitat use (spawning, rearing or nursery locations);  
• SAR species occurrence and habitat data;  
• Species distribution and migration information;  
• Waterbody names (Note- Gazetteer to be used for consistent naming);  
• General waterbody size;  
• Bathymetry and lake/embayment reports;  
• Potential barriers to fish movement;  
• Groundwater.  
• Coastal wetlands, provincially significant wetlands or other significant aquatic communities or ecosystems  
• Location of provincial parks and conservation reserves. |
| • Mapping (topographic, base mapping, soils, Quaternary Geology, bedrock, physiography groundwater, provincial parks and conservation reserves, etc.);  
• Digital Terrain/elevation mapping;  
• NRVIS;  
• Aerial photographs. |
| Upper Great Lakes Unity (UGLMU) Data Holdings | • Databases that include information collected during nearshore, offshore, smallfish, sturgeon, cormorant, fishway, commercial fishery catch sampling, commercial harvest reporting, benthic sampling, sportfish surveys and creel surveys. |
| First Nation and Métis Communities and/or organizations | • Aboriginal Traditional and Ecological Knowledge  
• Fish community, population information  
• Fish habitat and habitat use (i.e. spawning/rearing/nursery)  
• SAR species occurrence and habitat data  
• Species distribution and migration information  
• Fish stewardship and habitat enhancement/restoration initiatives and projects  
• Fish habitat restoration specifications  
• Navigation maps |
| Other interest groups and resource users | • Anglers / angling groups and outfitters;  
• Bait and Commercial fishermen;  
• Stewardship groups such as Ontario Streams, Trout Unlimited, naturalists;  
• Universities and colleges;  
• Aboriginal Traditional and Ecological Knowledge  
• Fish community, population information  
• Fish habitat and habitat use (i.e. spawning/rearing/nursery)  
• SAR species occurrence and habitat data  
• Species distribution and migration information  
• Fish stewardship and habitat enhancement/restoration initiatives and projects  
• Fish habitat restoration specifications  
• Navigation maps |
| Ontario Hydro; Knowledgeable local residents; | Potential barriers to fish movement |
5. **Spawning Habitat Survey**
As outlined in Appendix D, an applicant may be required to complete a Spawning Habitat Survey. The purpose of the Spawning Habitat Survey is to collect bathymetry and substrate composition data in the Assessment Area to determine the potential for the presence of suitable spawning habitat. The applicant will receive confirmation regarding the design, methodologies and reporting requirements of the Spawning Habitat Survey in Step 6a of the review process.

6. **Fish Spawning Survey**
As outlined in Appendix D, an applicant may be required to complete a Fish Spawning Survey to determine the potential use of the suitable habitat identified by the spawning habitat survey for each species on the Species Review List. The spatial scope of the fish spawning survey will be in the immediate vicinity of any potential spawning habitat in the Assessment Area. The fish spawning survey will be carried out to span the duration of all relevant spawning activity using appropriate methods (i.e. gear size) to assess the utilization of these sites by all species on the Species Review List. The applicant will receive confirmation regarding the design, methodologies and reporting requirements of the Fish Spawning Survey in Step 6a and as per Appendix D, of the review process.

7. **Fish Containment Assessment**
A Fish Containment Assessment is a comprehensive assessment (Step 6a) of the aquaculture infrastructure’s capacity to minimize the potential ecological risk associated with escaped fish and must consider the following factors of the facility design:
- the manufacturer’s design specifications for cages and other equipment;
- the layout and design of the mooring system (for risk minimization); and,
- the experience of the mooring crew or mooring consultants in relation to:
  - meteorological conditions and seasonal weather patterns;
  - oceanographic conditions, and currents; and,
  - upland topography, site bathymetry and substrate.

This assessment should be completed by a qualified professional engineer licensed to practice in Ontario. The professional should have technical expertise to plan the design and/or installation of improvements and containment structures at an aquaculture facility.

The assessment must include a covering letter identifying the qualified professional, as well as curriculum vitae outlining the individual’s knowledge, skills and abilities. Where possible, references should also be provided from others who have observed and evaluated this person’s work.
Appendix C: Application Review: Water and Sediment Quality

Introduction

This Appendix provides a summary of the review process to determine the potential impacts of proposed operations on water and sediment quality. The review process applies to all Type A applications. The review process also applies to all Type B applications unless the Applicant has been notified in Step 6 of the application review process that the Province is of the opinion that the proposed changes to operations do not require any baseline sediment and water quality data to be submitted for review in addition to the data available from the monitoring program under conditions of the existing licence for the operation.

The proposed Draft Provincial Policy Objectives for Managing Effects of Cage Aquaculture Operations on the Quality of Water and Sediment in Ontario’s Waters sets out the water and sediment quality policy objectives for the long-term environmental sustainability of commercial-scale cage aquaculture operations in Ontario’s public waters. The key water quality and sediment environmental policy objectives for cage aquaculture operations as set out in the proposed objectives are that they are sized, situated, and managed to:

- Ensure that the release of waste materials associated with the operation does not result in measurable water or sediment quality effects beyond the permitted area (e.g., land tenure boundary);
- Ensure that the release of waste materials associated with the operation does not result in lowering dissolved oxygen concentrations within the local receiving water body below levels that are essential for healthy functioning of all forms of local aquatic life throughout its aquatic life cycles;
- Ensure that the release of waste materials associated with the operation does not result in excessive nutrient enrichment contributing or leading to nuisance concentrations of algae and aesthetic deterioration of the local receiving water body; and
- Ensure that the release of waste materials associated with the operation does not result in the degradation of sediment quality conditions above the levels that are toxic to benthic aquatic life or exceed the capacity of the local environment to maintain non-toxic sediment through ongoing waste assimilation.

Further, the Draft Provincial Policy Objectives indicate that cage aquaculture with proposed annual feed allocation of more than 2500 tonnes of low phosphorus feed may require information in addition to what is outlined in these Application Guidelines.

1. Preliminary Water Quality Review

The Province will complete a Preliminary Water Quality Review on applications. It will be concluded that the proposed site, scale and/or configuration of the proposed operation is ineligible if the Preliminary Water Quality Review determines that the receiving water body at the proposed location would be designated as a “Policy 2” receiver under Water
Management Policies, Guidelines, Provincial Water Quality Objectives 1993 (i.e., not meeting PWQO), as indicated by:

- Average Total Phosphorus (TP) concentrations for the ice-free period that exceed 10 µg/litre for lakes naturally below this value; or
- Dissolved Oxygen concentrations that is below 47% saturation for warm water biota (e.g., centrarchid fish communities) or 54% saturation for cold water biota (e.g., salmonid fish communities).

If this is the case, the Review Committee will provide the applicant an opportunity to undertake additional sampling and site assessment or to modify the application (e.g., relocate the site or reduce the scale of proposed operation) to mitigate the potential environmental impacts. If the applicant chooses not to undertake this additional investigation or to modify the application to mitigate the potential environmental impacts, the application will be refused.

If the Preliminary Water Quality Review indicates that the PWQOs are currently being met the application can proceed. The Applicant will be notified regarding any requirements for a Supplemental Water Quality Report or Sediment Quality Report necessary to demonstrate that the proposed new or expanded operation is likely to meet water and sediment quality objectives once fully operational.

2. Supplemental Water Quality Review

A Supplemental Water Quality Review is intended to determine whether the proposed operations will be able to meet the water quality objectives contained in the licence conditions. In this case an Applicant will be notified (Step 6) of the requirement to complete Supplemental Water Quality monitoring to support the review. This would be the case for applications proposing operations that significantly exceed the current operational scale in the Manitoulin/North Channel area, or for applications at Type 1 (lake like) or Type 2 (locally bounded hypolimnion) locations.

If the Supplemental Water Quality Review determines that:

- Predicted seasonal (i.e. spring, summer, fall) Total Phosphorus (TP) median concentration will exceed 10 µg/litre at a distance of 30m from the cages; or
- Predicted late season DO profiles indicate less than 47% or 54% saturation (for warm water or cold water biota)

it will be determined that the water quality objectives contained in the licence conditions are not likely to be met and the proposed site, scale and/or configuration is not eligible. The Review Committee will provide the applicant an opportunity to modify the application (e.g. relocate the site, change the cage configuration, etc.) to mitigate the potential environmental impacts. If the applicant chooses not to modify the application or to mitigate the potential environmental impacts, the application will be refused.

If the review indicates that the water quality objectives contained in licence conditions are likely to be met the application can proceed.
3. **Sediment Quality Review**

A Sediment Quality Review is required to determine whether the proposed operational scale, configuration and location will be able to meet the sediment quality objectives contained in the standard licence conditions.

If the Sediment Quality Review indicates that:

- Predicted solid waste deposition rates exceed 5 gC m⁻² d⁻¹ for more than 50% of the waste depositional footprint for Type A applications; or
- Existing benthic invertebrate density report data for Type B applications demonstrate insufficient waste assimilation (i.e. invertebrate densities that are less than the maximum reference density for >50% of near-field sampling stations); or
- Existing sediment chemistry data for Type B and Type C applications demonstrate that the depositional waste footprint exceeds the operational boundary (i.e. sediment concentrations at any operational boundary station that exceed the reference station mean plus 2 standard deviations)

it will be determined that the sediment quality objectives contained in licence conditions cannot be likely met and the proposed site, scale and/or configuration is ineligible. The Review Committee will provide the applicant an opportunity to modify the application (e.g. relocate the site, change the cage configuration, etc.) to mitigate the potential environmental impacts. If the applicant chooses not to modify the application to mitigate the potential environmental impacts, the application will be refused.

If the review indicates that the sediment quality objectives contained in licence conditions are likely to be met, the proposed operations will be determined to be suitable.
Figure 1: Summary of the review process to determine the potential impacts of Type A and Type B applications on water and sediment quality.

Preliminary Water Quality Review
(based on review of Baseline Water Quality Report (Type A Applications) or Water Quality Reports (Type B Applications))

Are water quality objectives currently being met?
- Do current seasonal (i.e. spring, summer, fall) Total Phosphorus (TP) median concentration exceed 10 ug/L; or
- Do current DO profiles fall below the Provincial Water Quality Objectives

NO

Supplemental Water Quality Review required?

YES

Supplemental Water Quality Review
(based on review of Supplemental Water Quality Report)

Are water quality objectives currently being met?
- Does predicted seasonal (i.e. spring, summer, fall) Total Phosphorus (TP) median concentration exceed 10 ug/L at a distance of 30m from the cages; and
- Does predicted late season DO profiles indicate less than Provincial Water Quality Objectives?

NO

Sediment Quality Review required?

YES

Sediment Quality Review
Based on review of Sediment Monitoring and Deposition Modelling Report

Does the predicted solid waste deposition rates exceed 5 g C m$^{-2}$d$^{-1}$ for more than 50% of the waste depositional footprint? or

Does the existing benthic invertebrate density report data demonstrate insufficient waste assimilation; or

Does the existing sediment chemistry data demonstrate that the depositional waste footprint exceeds the operational boundary?

NO

Site/Scale/Configuration Eligible

* Applicants will be provided an opportunity to undertake additional sampling and/or modify the application to mitigate the potential for impacts (e.g. site relocation, modify cage configuration). However, if the impact cannot be mitigated the application will be refused.
Appendix D: Application Review: Fisheries

Introduction

This Appendix provides a summary of the review process to determine the potential impacts of Type A and Type B applications requesting an expansion of the land occupational authority boundaries on fish and fish habitat. Figure 1 outlines the overall assessment and review process. These applications require a Fisheries Background Report to be submitted with the initial application. Upon review of this report a Spawning Habitat Survey and/or Fish Spawning Survey may be required. Details on these surveys can be found in Appendix B. The applicant will receive confirmation regarding the design, methodologies and reporting requirements of the Fish Spawning Survey in Step 6a of the review process. The applicant may request modified timing of studies to accommodate the coordination of field work. Applications on inland lakes also may require additional fish and fish habitat surveys to ensure that the proposed operations do not impact fish or fish habitat.

1. Preliminary Fisheries Review

MNRF will review the Fisheries Background Report to support the preliminary review of the application. Specifically the report will be used to gain a better understanding of the broader aquatic ecosystem surrounding the proposed site, as well as to develop a Species Review List specific for each application. The Species Review List will generally include important game and commercial fish, species of importance to First Nations and Métis, prominent species or species assemblages featured in Fish Community Objectives and Fisheries Management Plans, and Species at Risk (identified under SARA or the ESA or both). In addition MNRF will review the Fisheries Background Report to assess whether there are known fish habitat values (i.e. spawning habitat) for any species on the Species Review List in the Assessment Area, defined as the area of Crown land lake bed applied for occupational authority (e.g. Land Use Permit) plus the lakebed area extending 200m from the boundary of the proposed Crown land occupation (e.g. land use permit).

If MNRF determines that there is known spawning habitat(s) for species on the Species Review List in the Assessment Area, the proposed site will be deemed ineligible due to the high potential of the proposed operations having a negative impact on the identified spawning habitat. The applicant will be provided an opportunity to modify their application to move their proposed location to an area with no known spawning habitat. If the applicant chooses not to modify their application, the application will be denied.

If MNRF determines that there remains uncertainty regarding the presence of spawning habitat the applicant will be required to confirm the absence of suitable spawning habitat by completing a Spawning Habitat Survey.
2. **Spawning Habitat Survey**

If the Spawning Habitat Survey does not indicate the presence of suitable spawning habitat for species on the Species Review List, MNRF will deem the site eligible and the applicant will have fulfilled the fish habitat assessment requirements for the application.

If the Spawning Habitat Survey indicates the presence of suitable spawning habitat for species on the Species Review List, MNRF will deem the Assessment Area to have reasonable potential to contain fish spawning habitat. The applicant will be provided an opportunity to modify their application (i.e. relocating their proposed site to another location). If the applicant chooses not to modify their application, the applicant will be required to conduct a Fish Spawning Survey.

3. **Fish Spawning Review**

A Fish Spawning Survey is an assessment program specifically designed to determine the potential use of any identified suitable spawning for the species on the Species Review List. The detection of one or more fish on the Species Review List in a reproductive condition that strongly indicates use of the spawning habitat any point in time during the survey will result in deeming the habitat to have a high probability to support spawning of fish and the proposed site location will be deemed ineligible. The applicant will be provided an opportunity to modify their application by proposing a new location to mitigate any potential impacts to spawning habitat. If the applicant chooses not to modify their application, the application will be denied.
Figure 1. Summary of the review process to determine the potential impacts of Type A and Type B applications on fish and fish habitat.

Preliminary Fisheries Review
(based on review of Fisheries Background Report and Species Review List)
Is there known spawning habitat(s) for species on the Species Review List?
- YES: Site Ineligible
- NO:
  - Spawning Habitat Review
    (based on results of the Spawning Habitat Survey)
    Is there suitable spawning habitat present for species on the Species Review List?
    - YES: Site Eligible
    - NO:
      - Fish Spawning Review
        (based on results of the Fish Spawning Survey)
        What is the probability that species on the Species Review List are using habitat in the Assessment Area for spawning purposes?
        The detection of one or more fish on the Species Review List in a reproductive condition that strongly indicates the use the spawning habitat at any point in time during the survey will result in deeming the habitat to have a high probability to support spawning.
        - HIGH: Site Ineligible
        - LOW: Site Eligible

*Applicants will be provided an opportunity to modify the application to mitigate the potential for impacts (e.g. site relocation, modify cage configuration). If the impact cannot be mitigated the application will be refused.
Appendix E: Relevant Legislation

Relevant Legislation, Regulations, Polices and Guidelines

Provincial:

Ministry of Natural Resources and Forestry:
   Fish and Wildlife Conservation Act, 1997
   Fish Licensing Regulation (Ontario Regulation 664/98)
   Public Lands Act
   Strategic directions for management of Ontario Crown land policy
   Application review and land disposition process
   Crown land rental policy
   Provincial Parks and Conservation Reserves Act
   Endangered Species Act, 2007
   Ontario Regulation 230/08 (Species at Risk in Ontario List)
   Environmental Bill of Rights, 1993
   Environmental Registry
   Class Environmental Assessment for Resource Stewardship and Facility Development Projects

Ministry of the Environment and Climate Change:
   Ontario Water Resources Act
   Environmental Protection Act
   Provincial Policy Objectives for Managing the Effects of Cage Aquaculture Operations on the Quality of Water and Sediment in Ontario’s Public Waters (proposed)
   Water Management Policies, Guidelines and Provincial Water Quality Objectives

Federal:
   Fisheries Act –
   Aquaculture Activities Regulation (Proposed)
   Species at Risk Act
   Navigation Protection Act
Appendix F: Cage Aquaculture Management and Monitoring Plans

Prior to the issuance of an aquaculture licence the operator will be asked to submit a number of management and monitoring plans. Management and monitoring plans will be reviewed by the appropriate members of the Review Committee and, upon approval, will be placed as conditions on the aquaculture licence.

**Fish Health Management Plan**

A Fish Health Management Plan will be required with the objectives of keeping fish healthy at the site by minimizing disease from arising at the facility, transferring from the facility to the receiving waterbody and/or from spreading within a facility. Components of a Fish Health Management Plan should include husbandry, monitoring and reporting requirements for:

- Maintenance of proper environmental conditions to ensure suitable rearing environment for fish;
- Routine monitoring of fish to observe behaviour and early indications of health problems and stress;
- Fish handling procedures to minimize stress, injury, escape and predisposing fish to disease;
- Limits on fish densities to minimize stress and mortalities;
- Predator management methods to exclude predators from the facility and from interacting with the fish;
- Rapid diagnosis, isolation, and treatment of disease outbreaks;
- Implementation of appropriate biosecurity measures;
- Utilization of comprehensive production strategies to optimize feed efficiency and waste management;
- Reporting of fish disease to the MNRF as required by Ontario Regulation 664/98
- Reporting on fish health/disease, drug/pesticide use and any mortalities as required by applicable federal Legislation and/or Regulations.

**Fish Containment Plan**

A Fish Containment Plan will be required with the objective of minimizing the potential ecological risk associated with escaped fish. Components of a Fish Containment Plan should include management, monitoring and reporting requirements for:

- Any recommendations, advice or outcomes from the review of the Fish Containment Assessment Report;
- Equipment used at the aquaculture facility to be designed and constructed to meet generally accepted standards or best management practices of the aquaculture industry; and compatible with conditions at the proposed location of the aquaculture facility and with containment requirements;
- All equipment, materials and structures employed to be designed, constructed, installed, inspected and maintained in a manner that prevents escapes, including escapes caused by damage, holes or tears to net cages or containment structures;
• Monitoring, evaluation and maintenance of containment structures, including cage support systems and net cages, to prevent escapes and to detect and respond to any escapes once detected or suspected;
• Containment structures to be installed by a person who knows the risks of fish escapement from the containment structures and the measures needed to minimize these risks;
• Ensuring that all equipment coming into contact with the net be designed to prevent entanglement and chaffing of the net;
• Open-top nets to be extended to a height above the surface to prevent jumping fish from escaping;
• Net mesh sizes sufficient to contain the smallest fish in the cage;
• Inspection of all nets for ice damage immediately following ice-in and ice-out and repairs are made as required;
• All nets to maintain more than 67% of their manufactured rating at all times;
• Logs to be maintained recording the use and maintenance of each net.

Fish transfer techniques to prevent stray fish escapement during transfer;
• Contingency plans to address unplanned releases of farmed fish;
• Reporting of fish escapes to MNRF in accordance with Ontario Regulation 664/98;
• Recapture of escaped fish to MNRF in accordance with Ontario Regulation 664/98.

Sediment Quality Monitoring Plan

Licence conditions will require the implementation of a Sediment Quality Monitoring Plan to meet the following objectives to:

i. Ensure that the aquaculture operation does not result in the degradation of sediment quality conditions above the levels that are toxic to benthic aquatic life or exceed the capacity of the local environment to maintain non-toxic sediment through ongoing waste assimilation, and

ii. Ensure that the aquaculture operation does not result in measurable sediment quality effects beyond the permitted area (e.g. occupational authority boundary).

In the case that the sediment quality monitoring results indicate that the above objectives are not being met, the Licensee may be required to implement a response management plan in order to mitigate the operations impacts on sediment quality. The applicant will receive additional direction regarding the preparation of the Sediment Quality Monitoring Plan (i.e. sampling design, reporting requirements) at Step 8a of the review process.

Water Quality Monitoring

Licence conditions will require the implementation of a Water Quality Monitoring Plan to ensure that the Provincial Water Quality Objectives (PWQO’s) are being met. In the case that water quality monitoring indicates that the PWQO objectives are not being met the Licensee may be required to implement management actions in order to mitigate the operations impacts on water quality. The applicant will receive additional direction
regarding the preparation of the Water Quality Monitoring Plan (i.e. sampling design, reporting requirements) at Step 8a of the review process.

**Decommissioning Plan**

A Decommissioning Plan is required to ensure that, upon expiry, cancellation, termination or revocation of the Crown land occupational authority, the site is left in a clean and safe condition; returned as much as possible to its original state. A Decommissioning Plan will be required to address changes to fish habitat structure and complexity or short-term increases in suspended sediment concentrations and deposition of suspended material on benthic habitat. The Decommissioning Plan should include the following:

- Schedule, methods, materials and equipment to be used to remove all structural and support features;
- Description of any improvements that will be done to restore natural conditions;
- Description of monitoring that will be carried out to ensure environmental impact issues are resolved, including but not limited to annual benthic invertebrate and sediment monitoring until benthic invertebrate communities and sediment chemistry meet reference conditions;
- Description of any other procedures that will occur if operations cease;
- Description of the removal of equipment and site remediation activities which may result in the removal or alteration of shoreline, bottom or water column structure and the suspension or release of silt, organisms and organic debris to the water column. (Note: Activities involved in the removal of structures and site remediation may also interfere with navigation. When planning the decommissioning of a site Transport Canada should also be consulted.)

**Waste Disposal Plan**

A Waste Disposal Plan will be required to minimize the potential impact of the operations on the receiving waterbody and any upland areas associated with the facility. The Waste Disposal Plan will describe how waste will be managed, including, but not limited to:

- Mortality and offal collection and disposal;
- A contingency plan for the disposal of fish in the event of large scale mortality; and
- Disposal of chemicals (e.g. pesticides), therapeutants and refuse.