

AQUACULTURE LEGISLATION IN ONTARIO

IMPROVE LIFE.

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SUMMARY

The legislative and regulatory systems affecting aquaculture in Ontario are complex and dynamic. No single agency is responsible for all aquaculture related regulations. The principle regulating agencies are: Fisheries and Oceans Canada, Canadian Food Inspection Agency, the Ontario Ministry of Natural Resources and Forestry, the Ontario Ministry of the Environment and Climate Change and local municipalities. However, depending on the type of operation or farming activity, numerous other Acts administered by various federal, provincial, municipal agencies or conservation authorities may be involved. Where applicable, these Acts can invoke requirements for multiple additional, licences or certificates. This factsheet has been revised to reflect changes in legislation since the June 2000 version.

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INTRODUCTION

Legislation affecting commercial aquaculture in Ontario is principally concerned with the orderly development of the industry, management of the environment and its indigenous organisms, the safety of fish products and the protection of consumers. This requires a balance between allowing new and diverse forms of farming activity while preventing, or at least managing, the effects of these activities. The laws affecting aquaculture involve federal, provincial and municipal governments in a complex and dynamic legislative network. This fact sheet provides a brief overview of Ontario aquaculture legislation, and summarizes the applicable Acts, Regulations, important agencies and those licences and permits which relate to these agencies (Tables 1 and 2).



Figure 1. Cage (net-pen) aquaculture has unique requirements for licencing

The Oxford Dictionary defines ‘Law’ as a “rule enacted or customary in a community and recognized as enjoining or prohibiting certain actions”. The aim of Law is to ensure some measure of justice and protection of the rights of society and its citizens.

This encompasses a belief that future generations of people and the environment in which they will live, should also be protected. Canadian Law is classified as either Common Law or Statute Law. Common Law consists of rules, principles and customs used as a basis for decision making, while Statute Law consists of Acts of Legislature or Parliament developed to protect society. Each Act embodies a series of ‘Regulations’ which provide details about the interpretation and administration of the respective Act.

AGENCIES INVOLVED IN AQUACULTURE

In part, the complexity of the legislation affecting aquaculture in Ontario is due to the way that provincial and federal jurisdiction affects property rights. “Aquaculture” is simply the culture of any aquatic plant or animal and as, such, involves the propagation of essentially “private property” in water that may also be “private property”. The laws affecting private property are primarily bound by provincial jurisdiction. However federal jurisdiction comes into force when “private property” is moved between provinces or out of the country. In law, federal legislation usually takes precedence over provincial legislation, which in turn takes precedence over municipal by-laws.

The key provincial government agencies involved in the regulation and administration of aquaculture in Ontario are: the **Ontario Ministry of Natural Resources and Forestry**, the **Ontario Ministry of the Environment and Climate Change**, the local **Conservation Authority**, the **Ontario Ministry of Municipal Affairs and Housing** and the local **Municipality**.



Figure 2. Land-based raceway production of rainbow trout

The key federal government agencies are: **Fisheries and Oceans Canada**, **Transport Canada**, **Canadian Food Inspection Agency**, **Health Canada** and **Environment Canada**. In addition, several provincial and federal government agencies that regulate most business ventures are also involved in aquaculture regulation, such as the **Ontario Ministry of Labour**, the **Ontario Ministry of Consumer and Commercial Relations** and **Canada Revenue Agency**.

The administrative agencies and respective legislation permits and certificates that may apply to aquaculture are listed in Table 2. Although there is considerable overlap of regulatory mandates, both within and between agencies, granting of an approval, permit or licence from one agency in no way confers sanction or approval for any other permit or licence from another agency. Often each agency administers its own legislation independently and it is the aquaculturist's responsibility to ensure that all required approvals have been obtained at the appropriate time. A summary of the principle criteria that can result in the rejection of an "**Application for an Aquaculture Licence**" is given in Table 3.

The legislation described in the following sections is primarily concerned with regulating the development of new farms. Once a farm has begun operations and is producing fish, or other aquacultural products, further regulations may come into effect. Established aquaculturists should be aware that changes to their operation, for example the amount of water taken, method of obtaining water, soil excavations, changes to waste treatment systems etc. invariably require amendments to existing permits and/or the granting of new or additional permits.

A. PROVINCIAL GOVERNMENT AGENCIES

i. Ontario Ministry of Natural Resources and Forestry

The Federal Government is responsible for fisheries in Canada, as empowered by the **Fisheries Act of Canada**. To aid in the administration of the Fisheries Act a number of regulations have been established. Of these, the **Ontario Fishery Regulations** deal with the management of fish in Ontario. The Ontario Fishery Regulations confer the authority for administering certain aspects of fish and fisheries management in Ontario to the Ontario Ministry of Natural Resources and Forestry (MNR). MNR also administers **The Fish and Wildlife Conservation Act of Ontario** (with its associated regulations) which provides for the management, perpetuation and rehabilitation of all Ontario's fish and wildlife resources.



Figure 3. Pond culture can involve a wide variety of fish species

It is lawful to raise and sell certain gamefish and baitfish species indigenous to Ontario, in addition to certain exotic species such as tilapia, shrimp and crayfish (Table 1). The culture of a specific fish species, or other aquatic organisms, is subject to licensure and approval by the local MNR District office. Licences to culture and sell fish, stock fish in Ontario waters and collect fish and/or their gametes from the wild are issued by MNR.

An **Aquaculture Licence** permits the licence holder to culture, purchase, sell and transport the named species specified in the licence. The granting of an Aquaculture Licence depends upon recommendations by MNR specialists who assess the potential ecological impacts of the proposed fish farm. The licence is valid for a fixed length of time as specified in the licence. An aquaculture licence may be renewable and transferable, providing the licence conditions are complied with. The cage culture of fish on public lands (i.e. lakes) requires the monitoring and a maintenance of water and sediment quality as specified on the Aquaculture Licence. The implementation of this specific condition is regulated by three application types. Type A is for approvals of new cage aquaculture operations, and Type B for existing operations requesting modifications. These applications may require up to two years or more for completion. Type C approvals are for standard renewals or administrative amendments of existing operations and typically require 6-9 months. Details of the application and review process

are given in the “Application Guidelines for Cage Aquaculture Facilities” (MNR 2017). The objectives of the *Application Guidelines for Cage Aquaculture Facilities (Application Guidelines)* are to:

- Support an open, transparent, efficient and timely approach for the review of an application;
- Provide the applicant with guidance and information on preparing and submitting an application for cage aquaculture approvals; and
- Provide the applicant with information on the review process including consultation and engagement with First Nation and Metis communities and stakeholders.

Fee-for-fishing operations require an Aquaculture Licence. An Aquaculture Licence is not required by commercial display aquariums open to the public or for most, but not all, educational facilities which culture fish for teaching or research purposes.

A **Licence to Stock Fish in Ontario Waters** permits the transportation and stocking of fish into any ponds or waters either connected to open waters or situated within an area designated as a flood plain. Permission to stock fish in these regions will be in accordance to MNR policies and guidelines. This licence is valid for three years. A Licence to Stock Fish in Ontario Waters is not required for “artificial waters” (i.e. constructed ponds on private property that are not contiguous with natural waters).

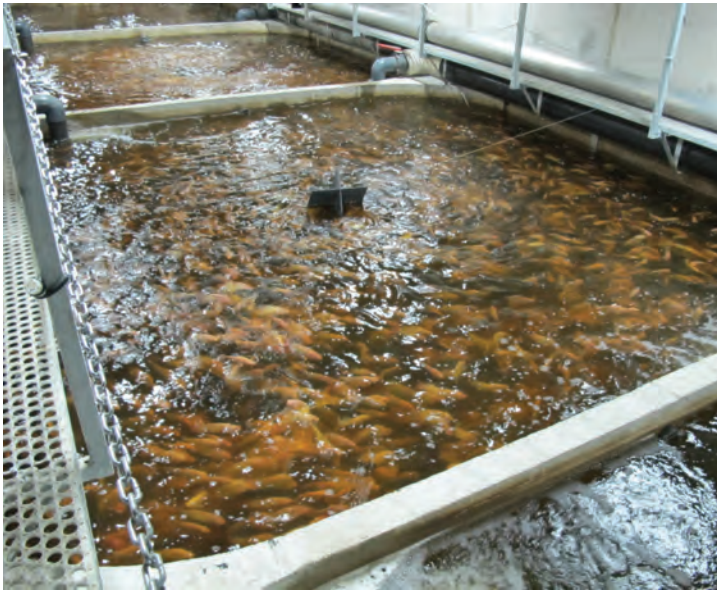


Figure 4. Warm-water recirculation facility to culture tilapia

A **Licence to Collect Fish From Ontario Waters** is required before wild fish or their gametes are taken from Ontario public waters. The issuing of this licence is based on a variety of criteria including conservation needs, aboriginal or treaty rights and the needs of all other resource users, including aquaculture.

Fee-for-fishing operations, where users pay a fee to catch cultured fish, require an **Aquaculture Licence**. This licence exempts the holder and all persons angling on the premises from requiring a sport fishing licence, catch limits and season restrictions. There are

additional licences that cover commercial fishing, baitfish harvesting and the collection of fish from the wild for scientific purposes. The Fish and Wildlife Conservation Act also has a provision for the protection and control of certain fish eating birds which are known to frequent fish farms such as kingfishers and ospreys.

In Ontario, the law respecting watercourses is based on the maxim of Common Law “Aqua currit et debet currere”, which translates as “water flows naturally and should be permitted to thus flow”. MNR is responsible for administering the **Lakes and Rivers Improvement Act** which requires the Ministry’s approval before construction of any works in or near water. Examples of these works include: dams, diversions, channels, fill, crossings and removal of existing structures. This Act pertains to both new structures, or changes to existing ones (e.g. dam repairs).

MNR also administers the **Beds of Navigable Waters Act** and the **Public Lands Act**, which requires a **Land Use Permit or Lease Permit** for cage (or net pen) culture operations, and the **Provincial Parks and Conservation Reserves Act** that excludes aquaculture from these areas. Under the **Environmental Bill of Rights**, MNR is required to provide notice on the Environmental Registry of any cage aquaculture application.



Figure 5. Fee-for-fishing operations require an Aquaculture Licence.

The **Endangered Species Act** is enforced by MNR and protects species at risk by restricting activities that may affect these ‘endangered’ plants and animals or their habitats. Similarly, the Invasive Species Act provides a mechanism to prohibit or restrict invasive species as listed in regulations. As such, an aquaculture application will not be approved for any regulated species.

ii. Ontario Ministry of the Environment and Climate Change

In addition to MNRF's interest in the use of lakes and rivers, the Ontario Ministry of the Environment and Climate Change (MOECC) has a statutory mandate governing the supervision and management of surface and ground water resources throughout the province. MOECC administers several Acts which directly affect aquaculture, including: the **Ontario Water Resources Act (OWRA)**, the **Environment Protection Act (EPA)** and the **Pesticides Act**.

The **Ontario Water Resources Act** requires a **Permit to Take Water (PTTW)** before the start-up of any facility that takes (which includes the diversion of water) more than 50,000 litres of water per day (approximately 35 litres per minute or 8 Imperial gallons per minute). The application for a PTTW requires details about the type of water source and the proposed use of the water, including purpose, location of water taking, quantity of water to be taken and timing. In some cases, an application may also require a hydrological study of local wells and surrounding zones, installation and monitoring of additional observation wells, flow records, pump testing and other conditions. Aquaculture is exempt from the administrative fees for a PTTW.

An **Environmental Compliance Approval (ECA)** under **Part II.1 of the EPA** is normally required under Section 53 of the OWRA to use, operate, establish, alter, extend or replace sewage works (e.g., any works that collect, store or treat sewage/wastewater), to ensure that any discharges of wastewater from such works do not have the potential to cause adverse effects on the natural environment. An **ECA for Sewage Works** is required for all facilities that discharge wastewater into a surface water or groundwater, or onto the surface of the ground, and for facilities that discharge more than 10,000 litres per day of wastewater into the subsurface of the ground (i.e., large septic systems) and this includes most



Figure 6. Well pump installation

land-based aquaculture facilities. Under O. Reg. 255/11 (Applications for Environmental Compliance Approvals) under the EPA, an application for an ECA must include, among other things, a project description for the proposed activity (e.g., use, operation, establishment, alteration, extension or replacement of sewage works). This description of the activity must contain a description and flow diagram of all processes that will be part of the activity, including any sewage/wastewater and waste (e.g., sewage sludge) treatment and disposal, and any air/noise emission control processes (e.g., emissions from a stationary combustion engine, such as a standby power generator), as well as a description of the sewage/wastewater generated, treated and discharged, including its volume/quantity and quality, and a description of any waste (e.g., sewage sludge) generated, treated and disposed of, including the waste quantity. Particular attention must be given to the method and location of sewage sludge treatment and disposal. For example, while land application of sewage sludge generated by a fish farm within the immediate property of the farm may be approved as part of



Figure 7. Solids require removal before water is discharged

the ECA for Sewage Works, under Section 27 of the EPA, disposal of the sewage sludge outside the farm's immediate property requires a separate **ECA for Organic Waste Management System and Site** issued under Part II.1 of the Act.

The **Pesticides Act** requires a **Permit to Purchase and/or Perform a Water Extermination** from MOECC before any pesticide is applied to surface waters in Ontario. In addition, a **Water Exterminator's Licence** may be required when using certain substances such as water born disease control compounds. The actual pesticides that can be used must also be registered under the federal **Pest Control Products Act** and scheduled under Ontario's Pesticides Act.

An additional act that may apply is Ontario's **Environmental Assessment Act** and an environmental impact assessment may be required for proposed aquaculture facilities. The Class Environmental Assessment – Resources Stewardship and Facilities Development Project have requirements that MNRF must follow during an application for a cage aquaculture licence. Details of these are given in the Application Guidelines for Cage Aquaculture (MNRF 2017).

MOECC have produced several publications on water, wastewater and aquatic weed management (see Further Reading).

iii. Conservation Authority

The local Conservation Authority has partial authority (under MNR) to regulate development within floodplains and headwater wetlands. Consultation may be required if your property lies in an environmentally sensitive area. It should be noted that the Conservation Authority will generally prohibit the construction of any permanent dwelling within a river flood plain. MNR staff at the local District or Area Office and Conservation Authority staff will advise on the specific situation.

iv. Ontario Ministry of Municipal Affairs and Housing and the local Municipality

The Ontario Ministry of Municipal Affairs and Housing oversees the **Planning Act** under which there is provision for Municipal Governments to control local development through by-laws. Although in many cases the architect or contractor will obtain the necessary municipal permits, the farmer is ultimately responsible for having them issued and should therefore be familiar with them. In Ontario, a **Zoning Bylaw** is a precise legal document used by the local municipality to regulate land use. It states what land uses are permitted in an area, where buildings can be located, the types of uses for buildings, sizing of buildings and many other details. If your plans do not comply exactly with the zoning bylaw, a **Minor Variance** may be obtained. A Committee of Adjustment will hear applications for a minor variance and decisions can be appealed to the **Ontario Municipal Board**. The actual rules governing the requirement of a **Building Permit** vary among municipalities, but generally any construction work over 100 square feet requires a building permit. The building permit is issued by the Building Department to ensure compliance with zoning bylaws, the **Building Code Act** and other applicable regulations.

Most municipal permits and approvals are straightforward and easy to obtain, provided the right preparation is made. In all cases, municipal staff are available for consultation.

v. Ontario Ministry of Agriculture, Food & Rural Affairs

The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the local Municipality administer **The Drainage Act**. This Act can affect aquaculture facilities that intend to discharge effluent into a municipal drainage system.

The **Nutrient Management Act** requires an approved Nutrient Management Strategy for all farms that generate more than five nutrient units. The determination of nutrient units that pertain to aquaculture are being finalized.

OMAFRA is also responsible for Ontario's **Veterinarians Act**, though certain aspects (but not all) of the diagnosis and treatment of fish is exempt from the provincial legislation. Drug prescription is only permitted by a qualified and registered veterinarian (see Federal Government Agencies, Health Canada).

Fish products sold within Ontario may be subject to the **Fish Inspection Act**. As part of the **Fish Interim Audit Program**, OMAFRA audits non-federally registered fish processors. The Aquaculture



Figure 8. Fresh products of Ontario aquaculture

Licence allows the sale of fish species specified in the licence. Processed product sold at the “farm gate” normally requires no additional permits. However, sale of smoked fish products and other high risk ready-to-eat fish products, regardless of the point of sale, may be regulated by Health Canada and the local Health Department. When fish and fish products are moved between provinces or exported from Canada they are subject to federal jurisdiction (see Federal Government Agencies, Agriculture and Agri-Food Canada, Canadian Food Inspection Agency).

vi. Ontario Ministry of Labour

The **Occupational Health and Safety Act** is administered by the Ontario Ministry of Labour. Aquaculturists may come under the regulations which require, for example, guard rails around tanks, life jackets, accompanying person on duty, safety poles etc. Operations that involve ‘SCUBA’ also come under a specific set of diving regulations.

vii. Ontario Ministry of Transportation

Approvals may be necessary if wells or culverts etc. are proposed in proximity to public highways. MNR staff can advise.

B. FEDERAL GOVERNMENT AGENCIES

i. Fisheries and Oceans Canada

Fisheries and Oceans Canada (DFO) is the lead federal ministry with regulatory responsibility for aquaculture. The main legislation includes the **Fisheries Act** and the **Species at Risk Act** (jointly administered with **Environment Canada**). Under the Fisheries Act, DFO's Regional Management Office ensures that all facilities comply with the **Aquaculture Activities Regulations**. This includes: a) land-based operations discharging into fish-bearing waters; b) marine and freshwater cage finfish operations; and c) additional documentation of drug and pesticide use and, where applicable, sediment biological oxygen demand. The Fisheries Act restricts any works that may result in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery.. The Species at Risk Act (SARA) is to prevent listed species from becoming extinct or extirpated and includes a wide variety measures that can be triggered by an aquaculture licence application (especially for cage culture operations). The federal SARA and the provincial Endangered Species Act are complimentary in their action, and adherence to both is required.

Aquaculturists who intend to move live salmonids or eggs into or out of Ontario must be aware of the Fish Health Protection Regulations. This is important because necessary “certification” procedures can require regular inspections of a farm over a minimum two-year period. The details of this certification are given in the “Fish Health Protection Regulations: Manual of Compliance” (Fisheries & Oceans Canada 2011). Eviscerated farmed-fish are exempt from these regulations. Therefore it is acceptable to import or transfer such fish between provinces without an import permit. When fish and fish products are exported to the United States it may be necessary to comply with legislation under **U.S. Title 50 Regulations**. When exporting to the United States further consideration should be given to possible inspection by the U.S. Food and Drug Administration.

The coordination of federal, provincial and territorial activities is assisted by the **Canadian Council of Fisheries and Aquaculture Ministers** and its **Strategic Management Committee on Aquaculture (CCFAM)**. The CCFAM oversees the following: Aquaculture Development Strategy; National Aquaculture Strategic Action Plan and various International collaborations including United Nations (e.g. Canada’s Organic Aquaculture Standard) and the Food and Agriculture Organisation (e.g. Technical Guidelines in Aquaculture Certification, Committee of Fisheries, sub-committee aquaculture).

ii. Canadian Food Inspection Agency

The Canadian Food Inspection Agency (CFIA) administers several acts with their supporting regulations that may apply to or affect an aquaculture business: the **Health of Animals Act** under which the **National Aquatic Animal Health Program** and import and registration of fish vaccines and diagnostic kits are regulated; the **Feeds Act** under which fish feeds and feed additives are regulated; all fish and fish products that are marketed and subsequently transported between provinces or exported from Canada must be processed in accordance with the **Fish Inspection Act** in a federally registered fish and seafood processing plant; the **Fertilizers Act** under which fertilizers, including fertilizers made from fish, and soil supplements are regulated; and the **Canada Agricultural Products Act**, for example, the Organic Products Regulations.



Figure 9. Fertilized trout eggs can be imported under permit

The **National Aquatic Animal Health Program (NAAHP)** is a federal program that prevents the introduction into and spread of serious aquatic animal diseases within Canada. There is now a requirement for aquaculturists to report suspicion of controlled diseases in their animals to the CFIA (see: <http://inspection.gc.ca/animals/aquatic-animals/diseases/reportable/aquaculturists/eng/1450407254532/1450407255317>). The CFIA will conduct an investigation to verify the presence of the disease and work with the producer, where applicable, to prevent the spread of the disease in Canada. In addition, any planned imports of aquatic animals into Canada or movements of aquatic animals or objects within Canada may require a permit from the CFIA. The services of the CFIA may be required to export aquatic animals and their products out of Canada, if required by the importing country. More information on the diseases, imports, domestic movements and exports can be found on www.inspection.gc.ca.

iii. Health Canada

By a Memorandum of Understanding between Health Canada and Agriculture and Agri-Food Canada, some compounds used to treat animals are regulated as drugs by Health Canada, while others are regulated as pesticides by Agriculture and Agri-Food Canada.

The **Food and Drugs Act** along with various regulations are administered by Health Canada. Within Health Canada, the Veterinary Drugs Directorate is responsible for ensuring that all drugs sold in Canada for use in animals are safe and effective for the animals being treated and their proper use does not result in harmful drug residues in human foods.

While aquaculturists can obtain various pharmaceutical agents from several sources, including veterinarians, feed companies and aquaculture service companies, only a few drugs are registered in Canada for food-producing aquatic animals. These include AQUAFLOR, AQUALIFE TMS, OXYSOL-220, OXYSOL-440 PARASITE-S, PYCEZE, ROMET-30, SLICE, TERRAMYCIN-AQUA and TRIBRISSEN 40%. OVADINE and PEROX-AID are licenced for use on fish eggs. All other drugs used in fish culture are subject to an “Emergency Drug Release Regulation” (under the Food and Drug Regulations, requiring limited use under the supervision and/or prescription of a veterinary practitioner. There is limited data available on the residues remaining in fish flesh from the use of these unapproved drugs. Health Canada publishes Maximum Residue Limits (MRL) for certain drugs. If there is no MRL for a particular drug in a particular animal, then the limit is zero (0). Any product exceeding the MRL cannot be sold for consumption. The **Pest Control Products Act** determines what pesticides can be used and links with Ontario’s Pesticides Act, administered by MOECC. The **Pest Management Regulatory Agency** within Health Canada oversees this act.

The Canadian Food Inspection Agency, reporting to the federal Minister of Health, implements various measures to contain specific animal diseases and regulate the use of veterinary biologics (e.g. vaccines). The **Domestic Disease Control Program** can require a CFIA permit if an aquatic animal, or object, is moved from the Atlantic Ocean watershed into the Hudson Bay watershed, or between provinces.

iv. Environment Canada

The **Migratory Birds Convention Act** affects control measures of heron species, and fish farmers are able to apply to the Canadian Wildlife Service for special permits. The control of other fish eating birds, e.g. kingfishers, is subject to the Ontario Fish and Wildlife Conservation Act (see Provincial Government Agencies, MNRF).



Figure 10. Control measures of bird predators are regulated provincially and federally

v. Transport Canada

The **Navigation Protection Act** is administered by Transport Canada and the **Navigation Protection Program** administers and enforces the NPA. The Navigation Protection Program reviews and authorizes the placement or construction of works in any navigable waterway in Canada and is of concern to those considering the use of cages in the Great Lakes or other open water bodies.

A Guide to the Navigation Protection Program's Notification, Application and Review Requirements is available online.

vi. Canada Customs and Revenue Agency

All businesses with annual sales over \$30,000 are required to register for Goods and Services Tax (GST) and Harmonized Sales Tax (HST) collection. The GST legislation classes fish as “zero-rated” and therefore a fish farmer would not normally collect GST/HST on sales. However, since many purchases needed to operate a fish farm would have GST/HST applied, most fish farmers would benefit from registration, regardless of their sales volume, to permit a tax refund.

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This fact sheet is a general guide to the legislation affecting the aquaculture industry in Ontario. Every effort has been made to ensure a complete and accurate presentation of the facts as the authors understand them. However, the authors, the University of Guelph and the Ontario Ministry of Agriculture, Food and Rural Affairs do not assume any liability for loss or other damage caused by the use of any information contained in this publication.

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FURTHER READING

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 - FisPp.9.2.3 Aquaculture on Private Land – Conditions of Licence. 5 pp.
 - FisPo.9.2.4 Licensing of Fee for Fishing Operations. 3 pp.
 - FisPp.9.2.5 Risk Analysis and Facility Security. 15 pp.
 - FisPp.9.3.1 Issuance of a Licence to Stock Fish in Ontario Waters. 5pp.
 - FisPo.9.4.1 Artificial Waters (ponds) and Application of Ontario Fishery Regulations. 4pp.
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Table 1. List of species eligible for culture in Ontario (subject to approval by the local District Office of the Ontario Ministry of Natural Resources and Forestry)¹

Common Name	Scientific Name
Lake sturgeon	<i>Acipenser fulvescens</i>
Atlantic salmon	<i>Salmo salar</i>
Brown trout	<i>Salmo trutta</i>
Brook trout	<i>Salvelinus fontinalis</i>
Lake trout	<i>Salvelinus namaycush</i>
Arctic char	<i>Salvelinus alpinus</i>
Splake	<i>hybrid of Salvelinus fontinalis and Salvelinus namaycush</i>
Chinook salmon	<i>Oncorhynchus tshawytscha</i>
Coho salmon	<i>Oncorhynchus kisutch</i>
Pink salmon	<i>Oncorhynchus gorbuscha</i>
Rainbow trout	<i>Oncorhynchus mykiss</i>
Lake whitefish	<i>Coregonus clupeaformis</i>
Lake herring (cisco)	<i>Coregonus artedii</i>
Muskellunge	<i>Esox masquinongy</i>
Northern Pike	<i>Esox lucius</i>
Creek chub	<i>Semotilus atromaculatus</i>
White sucker	<i>Catostomus commersoni</i>
Bluntnose minnow	<i>Pimephales notatus</i>
Fathead minnow	<i>Pimephales promelas</i>
Northern redbelly dace	<i>Phoxinus eos</i>
Finescale dace	<i>Phoxinus neogaeus</i>
Common shiner	<i>Luxilus cornutus</i>
Golden shiner	<i>Notemigonus crysoleucas</i>
Emerald shiner	<i>Notropis atherinoides</i>
Common carp	<i>Cyprinus carpio</i>
Goldfish	<i>Carassius auratus</i>
Brown bullhead	<i>Ameiurus nebulosus</i>
Channel catfish	<i>Ictalurus punctatus</i>
American eel	<i>Anguilla rostrata</i>
Largemouth bass	<i>Micropterus salmoides</i>
Smallmouth bass	<i>Micropterus dolomieu</i>
Bluegill	<i>Lepomis macrochirus</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Black crappie	<i>Pomoxis nigromaculatus</i>
Walleye	<i>Stizostedion vitreum</i>
Sauger	<i>Stizostedion canadense</i>
Yellow perch	<i>Perca flavescens</i>
Tilapia of the genera	<i>Oreochromis, Sarotheradon, Tilapia</i>
Calico Crayfish	<i>Orconectes immunus</i>
Virile Crayfish	<i>O. virilis</i>
Northern Clearwater Crayfish	<i>O. propinquus</i>
Robust Crayfish	<i>Cambarus robustus</i>
Appalachian Brook Crayfish	<i>C. bartonii</i>
Marsh Pond Snail	<i>Stagnicola elodes</i>
Pacific White Shrimp	<i>Litopenaeus vannamei</i>
Giant Freshwater Prawn	<i>Macrobrachium rosenbergii</i>
Barramundi	<i>Lates calcarifer</i>

¹ A hybrid can only be cultured if it is explicitly listed.

Table 2. Summary of Legislation and Regulations Pertaining to Aquaculture in Ontario

Administrative Agency and Legislation	Summary of Principle	Permit(s)
A. PROVINCIAL GOVERNMENT AGENCIES		
Ontario Ministry of Natural Resources and Forestry		
Fish and Wildlife Conservation Act + Ontario Regulation 664/98	<i>Provide management, perpetuation and rehabilitation of wildlife.</i>	<i>a,b,c,d,</i>
The Lakes and Rivers Improvement Act	<i>Ensure that alterations to water flow do not pose a hazard.</i>	<i>e,f</i>
The Conservation Authorities Act	<i>Preservation of habitat lying within established flood plains.</i>	
Beds of Navigable Waters Act	<i>A lake-bed lease is required by cage culture operations.</i>	
Public Lands Act	<i>Provides controlled use of public land, and cage culture areas.</i>	<i>g</i>
Provincial Parks and Conservation Reserves Act	<i>Provides controlled use of public land, and cage culture areas.</i>	<i>g</i>
Aggregate Resources Act	<i>Regulates aggregate removal from water courses.</i>	
Endangered Species Act	<i>Restricts activities that may affect endangered species.</i>	
Ontario Ministry of the Environment and Climate Change		
Ontario Water Resources Act	<i>Management of surface and groundwater quality and quantity.</i>	<i>h,i,j</i>
The Environmental Protection Act	<i>Provide protection and conservation of the natural environment.</i>	<i>k,l</i>
Pesticides Act	<i>Control the availability and use of pesticides.</i>	<i>m</i>
Environmental Assessment Act	<i>Allows environmental assessment to be carried out.</i>	
Conservation Authority		
The Conservation Authorities Act	<i>Controls development within flood plains (see OMNR).</i>	
Ontario Ministry of Municipal Affairs and Housing and local Municipality		
The Planning Act	<i>Allow orderly planning and development of land use.</i>	
Provincial Municipal Act	<i>Bylaws established by local government to regulate land use etc.</i>	<i>n,o,</i>
The Niagara Escarpment Planning and Development Act	<i>Additional control of development in this area.</i>	
Ontario Ministry of Agriculture, Food and Rural Affairs		
The Drainage Act	<i>Controls drainage of land, including the discharge of surface water.</i>	
The Veterinarians Act	<i>Regulates drug use.</i>	
Fish Inspection Act	<i>Inspection of products to ensure safety and quality.</i>	
Ontario Ministry of Labour		
Occupational Health and Safety Act	<i>Protect workers against health and safety hazards.</i>	
Ontario Ministry of Transportation		
Highways Act	<i>Wells and structures next to highways.</i>	
Ontario Ministry of Consumer and Commercial Relations		
	<i>Company registration and/or incorporation.</i>	<i>p</i>

Administrative Agency and Legislation	Summary of Principle	Permit(s)
B. FEDERAL GOVERNMENT AGENCIES		
Government of Canada		
Standards Council of Canada	<i>Organic Aquaculture Standards</i>	<i>a,b,c,d,</i>
Fisheries and Oceans Canada		
Fisheries Act of Canada	<i>Protection of fisheries and their habitat. Import/export of fish.</i>	<i>q</i>
+ Aquaculture Activities Regulations	<i>Provides mechanism for regulatory control of aquaculture</i>	
+ Fish Health Protection Regulations	<i>Regulates movement of certain fish species throughout Canada.</i>	
+ Ontario Fishery Regulations		
Species at Risk Act	<i>Fisheries and habitat, species at risk protection</i>	
Canadian Food Inspection Agency		
Health of Animals Act	<i>Import and registration of biologics and fish vaccines.</i>	
	<i>National Aquatic Animal Health Program</i>	
Feeds Act	<i>Regulates feed quality and drugs in feed.</i>	
Fish Inspection Act and Regulations	<i>Inspection of products for export. Ensure product safety and quality.</i>	
Safe Food for Canadians Act	<i>Inspects processing plants</i>	
Health Canada and Pest Management Regulatory Agency		
Food and Drugs Act	<i>Approval of drugs used in animals, including fish and smoked fish products.</i>	
Pest Control Products Act	<i>Registration of pesticides.</i>	
Environment Canada		
Canadian Environmental Assessment Act	<i>Integrates environmental factors into planning process.</i>	
Canadian Environmental Protection Act	<i>Provides protection and conservation of the natural environment.</i>	
Migratory Birds Convention Act	<i>Protection of certain bird species.</i>	<i>r</i>
Species at Risk Act	<i>Protection of wildlife species at risk, including fish</i>	
Transport Canada		
Canada Shipping Act	<i>Vessel requirements and safety</i>	
Navigation Protection Act	<i>Any work or structure placed in navigable water requires approval.</i>	<i>s</i>
Canada Customs and Revenue Agency		
Goods and Services Act	<i>Goods and Services Tax and Harmonized Sales Tax (Consumption tax).</i>	

PERMITS OR LICENCES REQUIRED:

a.	<i>Aquaculture Licence.</i>
b.	<i>Licence to Stock Fish in Ontario Waters.</i>
c.	<i>Licence to Collect Fish from Ontario Waters.</i>
d.	<i>Bait-fish Dealers Licence.</i>
e.	<i>Application for approval of project's location required. Subsequently, detailed plans and specifications to be submitted.</i>
f.	<i>Permit for Construction, Fill or Alteration of a Watercourse required for any construction or fill placed in a flood plain or for alteration of a water course.</i>
g.	<i>A Licence of Occupation of Public Land or Crown Land Lease is required if river or lake bottom owned by the Crown.</i>
h.	<i>Permit to Take Water required if more than 50,000 litres/day (approximately 10,000 l/gpd) taken.</i>
i.	<i>An "Environmental Compliance Certificate" is required for construction of any treatment works.</i>
j.	<i>Well construction permit required by all water well contractors.</i>
k.	<i>A "Certificate of Approval" for Organic Waste Management System and Site required for off-property disposal.</i>
l.	<i>A "Certificate of Approval" is required for stationary combustion engines (e.g. generators).</i>
m.	<i>A Permit to Purchase and/or Perform a Water Extermination must be obtained before any pesticide is applied to surface waters.</i>
n.	<i>Building Permit required for any construction work exceeding 100 square feet.</i>
o.	<i>Additional permits required for electricity, plumbing, heating, fire etc.</i>
p.	<i>Permit required by property owner prior to construction of a well near to a Kings Highway.</i>
q.	<i>Import Permit required to transfer cultured salmonids and eggs from wild fish between provinces.</i>
r.	<i>Scare Permit or Damage-Kill Permit may be issued by Canadian Wildlife Service to deter herons.</i>
s.	<i>A Declaration of Exemption is required by cage culture operations.</i>

Table 3. Summary of Criteria that May Reject an “Application for Aquaculture Licence”

- species not present in the receiving waters
- species requested not listed on the species eligible for culture
- the operation would impact a species and/or habitat covered by Federal Species at Risk (SARA) and/or Ontario’s Endangered Species list
- baseline or proposed operational loading of total phosphorus or dissolved oxygen do not meet water quality criteria (cage aquaculture)
- total phosphorus or dissolved oxygen do not meet water quality criteria (cage aquaculture)
- application to Navigation Protection Program has been rejected
- application for land tenure has been rejected
- there is a land claim dispute
- the applicant disputes Ontario’s regulatory requirement