

# A Review of Aquaculture Policy in Manitoba



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### *Disclaimer*

*The findings, opinions and recommendations contained within this report are those of the author and do not represent the position of the Department of Agriculture, Government of Manitoba.*



## **1.0 Background**

Aquaculture is the fastest growing animal production industry in the world and has surpassed wild fishing as the largest producer of seafood.

In Canada, aquaculture is now the largest livestock product produced in Atlantic Canada and British Columbia. While all forms of food production are being accelerated to meet both an increasing human population and a growing consumer preference for safe and nutritious food, aquaculture provides the best option to expand Canadian animal production without displacing existing terrestrial food production systems or depleting existing wild fishery catches. As Canada's population is concentrated in the landlocked provinces, freshwater aquaculture provides a unique opportunity to expand and diversify food production in these provinces. Given the rapid development of recirculating technologies for aquaculture, the abundance of freshwater resources, and the ready market for fresh and sustainable seafood, aquaculture is an ideal fit to increase Canada's food production and diversify its existing agricultural sector.

Increasing aquaculture production can expand Canada's existing seafood production both in maritime coastal communities and in terrestrial regions by utilizing lakes and groundwater sources.

Much of Canada's coastal regions are reaching aquaculture production capacity. The optimum growing areas which provide the best biological and physical attributes for sustainable and economical aquaculture production are currently in production, being developed or are unavailable due to competing uses, pollution, or public objection to development.

The use of natural freshwater lakes has many of the same issues as noted above as Canada's population is mostly adjacent to major freshwater lakes. This population density in Canada and its adjacency to the large United States markets, with its well-established transportation infrastructure, provides a unique opportunity to expand Canadian freshwater aquaculture. The availability of freshwater resources for land-based aquaculture as well as lake cage rearing in some locations is amongst the largest worldwide. This vast resource when coupled with the history of animal production and the advances in recirculating aquaculture technology, presents a unique opportunity to take advantage of the growing demand for fresh seafood and diversify local economies.

### *1.1 The Importance of Aquaculture Policy*

The definition of policy is a guideline or principle established by an organization, government, or institution. It outlines the desired approach or course of action in specific situations. Policies serve as a framework for decision-making, governance, and consistency. While they are not legally binding, they influence behavior and procedures within an organization or community.

When conveyed clearly and are readily accessible and discoverable to the public, policy documents assist governments to clearly identify aquaculture as a sector that it supports and promotes, as well as, to outline the legislation and regulations governing aquaculture and process to obtain the required approvals and the agencies which are involved.

It is in this context that this report reviews the scope and necessity of aquaculture policy in Canada and provides recommendations to the Manitoba Department of Agriculture on policy options for the development and growth of aquaculture in the province.

## 2.0 Aquaculture Legislation and Policy in Canada

Aquaculture is regulated in Canada by various methods.

Atlantic Canada, British Columbia and Ontario, have created aquaculture specific acts and regulations to govern fish farming activities in their respective jurisdictions. These acts and regulations have largely been in response to the large-scale fish farming industries that have developed in these provinces overtime.

In the remaining provinces, aquaculture has been regulated on an ad hoc basis, given the small-scale aquaculture which has developed in these areas. Aquaculture operations in these inland provinces have largely been developed for the restocking of wild fish by provincial government departments or the development of private U-fish operations and stock ponds for recreational sport fishing. These jurisdictional aquaculture regulations have been embedded into fisheries, agriculture, environment, or wildlife legislation or regulations.

At the federal level aquaculture has largely been regulated through ancillary legislation such as the Fisheries Act, Navigable Waters Protection Act, Environment Act, and others. In the province of British Columbia, the federal government has primary responsibility for aquaculture in the marine environment and has enacted legislation to govern aquaculture in that province. The province maintains an involvement in aquaculture regulation via their lands act and regulation of freshwater aquaculture in the province.

The Government of Canada, through its Department of Fisheries and Oceans, has long expressed an interest in development of a federal aquaculture act. While there has been considerable discussion between provinces, industry, and the federal government on such legislation. A draft aquaculture act was developed by the Canadian Aquaculture Industry Association to spur discussion, but there has been no effort by the federal government to draft or introduce a federal aquaculture act to date.

***Conclusion:*** *Aquaculture specific legislation varies across Canada and is primarily restricted to provinces with large commercial aquaculture production. There are a variety of non-aquaculture specific provincial and federal legislation and regulations which apply to aquaculture across all levels of government.*

## *2.1 Policy and procedures*

In reviewing aquaculture policy and procedures in various provinces and territories it is apparent that the coastal provinces and Ontario, have detailed aquaculture policies and procedures manuals which are readily available to the public. This is largely because most of the intensive Canadian aquaculture production is in these provinces. Additionally, in all these jurisdictions, there is a requirement and/or a public duty to engage the public in the development of new aquaculture enterprises or changes and or additions to existing operations.

It is also important to note the in the shared federal/provincial jurisdiction and responsibility for the marine environment that adds an additional layer of government cooperation and review of new or existing applications in coastal provinces. This is also identified in aquaculture operations proposed in Ontario where an additional layer of consultation is required due to the international boundaries present in the Great Lakes

In Atlantic Canada, the provinces of Newfoundland and Labrador, New Brunswick and Nova Scotia have detailed policies and procedures manuals that are readily available to the public which are clear concise and revised on a regular basis to reflect changes in policies or procedures as well as public input. In Prince Edward Island, aquaculture is a shared responsibility between the provincial and federal governments and their policies and procedures are reflective of this dual responsibility. Links to all these policies and procedures are identified in the attached appendix.

The inland provinces of Canada have a different approach to the development of aquaculture as the provinces have the primary responsibility of both land and water resources in their jurisdictions. The notable difference is in Ontario and Quebec where there is a shared freshwater border on the Great Lakes and the Saint Lawrence Seaway with the United States, requiring federal, provincial and state involvement, legislation and regulation.

The province of Ontario has a very detailed aquaculture policy and application process which is readily available online. It is easy to understand and perhaps, has a greater applicability to the needs of Manitoba given its similar aquaculture species interests.



The province of British Columbia had the primary responsibility for aquaculture licensing for many years, however, starting in 2000 the province relinquished its licensing responsibility in the marine environment to the Government of Canada. The province still retains a significant role in both the freshwater aquaculture production systems and land leasing in the marine environment.

The Prairie provinces have a unique process for aquaculture approvals due to the limited involvement on the federal government in fisheries in these provinces. In all three provinces aquaculture is considered a livestock production industry. This has several benefits over their maritime counterparts as these provinces have primary responsibility for both their lands and water resources. This enables aquaculture producers to have fewer regulatory roadblocks and red tape to deal with in the development or expansion of aquaculture enterprises. Conversely, this results in aquaculture being a lesser known and understood component of the larger agriculture industry in these provinces.

It's important to note that there are numerous departments and agencies in both the federal and provincial governments which have legislation or regulations which may impact aquaculture development. Two key components of related departmental involvement in aquaculture is access to crown land and impacts to the environment.

In coastal provinces aquaculture is largely located in the marine environment where the shared jurisdiction between the provinces and the federal government is relatively well understood and existing policy, programs, and procedures are in place to assist development in these areas.

In the inland provinces, land rights and water access is primarily the responsibility of the provincial governments. There are, however, considerable areas of private land in which aquaculture may also be developed. In both of these cases, legislation regarding the access, use and treatment of water, has various jurisdictional involvement which results in various departmental approvals being required.

Similarly, the effluent discharge from aquaculture operations has the potential to impact the natural environment as well as human water supplies. In all provinces, a variety of legislation and policy processes are in place to address the non-aquaculture specific requirements.

### **3.0 Aquaculture Policy and Legislation in Manitoba**

Within the Government of Manitoba, the Department of Agriculture is responsible for the promotion and development of Aquaculture in the province. From an aquaculture perspective this is refreshing, as the processes and issues which commercial fish farmers face daily, is more akin to their terrestrial counterparts than the traditional wild fisheries departments who have the primary responsibility for aquaculture in other provinces.

The Department's public-facing website is limited to a single page imbedded in the livestock section of the departmental website which provides a brief description of the industry but no details of production or locations are available. It also Identifies land based recirculating aquaculture systems as the growing primary method with a focus on cool-water fish species such as trout and char.

The page provides several helpful technical resources links provided, including:

- A land based Recirculating Aquaculture System model with links to a generic design and includes costing, detailed description, and production process. These documents are dated 2011 and 2018. The technology may need some refreshing, as costing and economics have changed dramatically since these were first published.
- A link is provided to a Fish Farm Technical Training Manual produced in 2013 which is helpful; however, it may be dated. Links to various training institutions across Canada may also be helpful.
- Two workshop reports from 2005 and 2018 are also linked and provide context to the development of aquaculture in the province as well as stakeholder input and recommendations. These reports provide valuable context on both the historical issues facing the industry and recommendations for the future.
- There are no specific aquaculture policies, legislation or procedures provided on the site. Also, there are no contacts for information or the government's position on developing its aquaculture sector.

- There is no information on approvals required for aquaculture development or links to government agencies and departments where approvals will be required.

The department has no specific legislation, regulations, license, or policy which directly relates to aquaculture that could be identified.

There are other departments who have direct or indirect involvement in aquaculture. Several of these are noted as follows:

The Department of Economic Development, Investment, Trade and Natural Resources is responsible for leading the responsible development of Manitoba's natural resources and includes some legislative mandate related to aquaculture. This department has legislation and regulations specific to the development of aquaculture including responsibilities for licensing and processing. These responsibilities are identified in legislation as follows:

*The Fisheries Act, C.C.S.M. c. F90*

Fish dealer licence requirement.

8.1(1) Subject to sections 9 and 10, no person shall purchase or sell fish in Manitoba unless he or she holds a fish dealer licence issued in accordance with the regulations.

Processing facility licence requirement.

10.1(1) No person shall operate a processing facility unless he or she holds a licence for that facility issued in accordance with the regulations.

And aquaculture,

14.5(1) The minister may make regulations:

(q) respecting the propagation, rearing, keeping, disposition, marketing, transportation, importation, or stocking of live fish, including those acquired and raised for aquaculture purposes.

Under this section of the Act, the Department issues a Fish Farming Licence which is renewed annually. An application for the license is available online and an example is noted in the appendix.

The Department of Environment and Climate Change has responsibility for the provinces surface and groundwater resources which may also impact aquaculture development. The department is also responsible for waste management and environmental assessment, and have a variety of acts and regulations to which aquaculture may be subject to. These responsibilities may also impact aquaculture development in the province.

While the departments noted above are the most obvious to have interaction and involvement in aquaculture development, other departments and agencies may have responsibilities and /or legislation which aquaculture may be subject to.

***Conclusion:** Aquaculture in Manitoba requires approval from a variety of provincial departments and agencies. While the Department of Agriculture is the lead point of contact for aquaculture development, there is no readily available directory of policies, programs, legislation, regulations, or procedures available. This limits the ability to attract, sustain and promote aquaculture development in the province.*

## **4.0 Discussion**

Aquaculture is the fastest growing food production system in the world. Investors are actively seeking opportunities to develop new aquaculture ventures. The availability of land and quality water supplies in Manitoba provides an opportunity for investment and diversification of the agriculture sector in the province.

Opportunities for aquaculture development elsewhere in Canada are becoming limited as the marine environment space for aquaculture is now approaching full production. The province of Ontario's land availability is decreasing as pressures on its existing agriculture sector and population growth compete for land use in their province.

The Prairie Provinces, including Manitoba, hold several competitive advantages to increase aquaculture production in Canada. These include, a culture of animal production, including feed production, veterinary support, and processing and marketing infrastructure. More importantly the family farming culture in Manitoba provides a unique starting point to embrace and develop new animal production systems. These attributes plus the proximity to large Canadian and US markets, seeking freshwater fish products, holds great potential for development of this industry in Manitoba.

To capitalize on these advantages, the province needs a public, transparent, concise, and readily available aquaculture policy which outlines the rationale for aquaculture development, the responsible agencies, the process to develop new operations and contacts, and the supports and programs available.

## 5.0 Recommendations

To capitalize on aquaculture opportunities in Manitoba, it is recommended that an aquaculture development policy be created which will outline the following:

- I. A single provincial department/agency be identified to lead aquaculture development, business, and technical support for the coordination with other provincial and federal departments and agencies to assist in industry development.
- II. This department/agency should designate a contact individual and office to ensure that all inquiries regarding aquaculture development are handled appropriately and efficiently within government.
- III. The development of a public policy and procedures document, involving all relevant departments and agencies, to provide clear and concise information as to how to obtain approval for an aquaculture development. The document must provide clear understanding of the regulations and policies to be met and be readily available and discernible in plain language.
- IV. A standing interagency aquaculture working group, with representation from those departments/agencies identified in III above, be established to jointly develop a comprehensive aquaculture development policies and procedures.
- V. The definition of aquaculture or fish farming should be identical across government departments. This will ensure that potential investors and existing aquaculture operators can easily find and identify policies, legislation, regulations, and procedures related to their operations. It is also critical that these definitions are recognized by the government of Manitoba's search engines.
- VI. The aquaculture policies and procedures should be reviewed and revised on a five-year basis or, when substantive changes are made. This will ensure that new inquiries and existing operations have up to date information.

**Conclusion:** *Aquaculture in Manitoba would benefit from the development of a clear and concise aquaculture development policy jointly developed with all relevant provincial departments and agencies and made publicly available in line with the recommendations noted above.*

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## 6.0 Appendix

### Links to Provincial Aquaculture Legislation, Regulation and Policy

Province	Legislation	Regulation	Policy
Newfoundland and Labrador	<a href="#">RSNL1990 CHAPTER A-13 - AQUACULTURE ACT (assembly.nl.ca)</a>	<a href="#">RSNL1990 CHAPTER A-13 - AQUACULTURE ACT (assembly.nl.ca)</a>	<a href="#">licensing-pdf-aquaculture-policy-procedures-manual.pdf (gov.nl.ca)</a>
Nova Scotia	<a href="#">Aquaculture Licence and Lease Regulations - Fisheries and Coastal Resources Act (Nova Scotia)</a>	<a href="#">Aquaculture Licence and Lease Regulations - Fisheries and Coastal Resources Act (Nova Scotia)</a>	<a href="#">Rules of Procedure and Policies   Aquaculture Review Board (novascotia.ca)</a>
Prince Edward Island	<a href="#">Fisheries Act (princeedwardisland.ca)</a>	<a href="#">Fisheries Act Regulations (princeedwardisland.ca)</a>	
New Brunswick	<a href="#">2019, c.40 - Aquaculture Act (gnb.ca)</a>	<a href="#">2022-28 - General (gnb.ca)</a>	<a href="#">Publications - Aquaculture (gnb.ca)</a>
Quebec	<a href="#">Leases   Gouvernement du Québec (quebec.ca)</a>		<a href="#">Plan d'action ministériel pour l'industrie maricole 2018-2025 (quebec.ca)</a>
Ontario	<a href="#">Fish and Wildlife Conservation Act, 1997, S.O. 1997, c. 41 (ontario.ca)</a>	<a href="#">Fish and Wildlife Conservation Act, 1997, S.O. 1997, c. 41 (ontario.ca)</a>	<a href="#">Aquaculture issuing policy (FisPp.9.2.1)   ontario.ca</a>  <a href="#">Aquaculture on private land policy (FisPp.9.2.3)   ontario.ca</a>  <a href="#">Aquaculture and fish stocking licences   ontario.ca</a>
Manitoba	<a href="#">C.C.S.M. c. F90 (gov.mb.ca)</a>	<a href="#">C.C.S.M. c. F90 (gov.mb.ca)</a>	
Saskatchewan	<a href="#">Publications Centre (saskatchewan.ca)</a>	<a href="#">Publications Centre (saskatchewan.ca)</a>	
Alberta	<a href="https://open.alberta.ca/publications/fl6">https://open.alberta.ca/publications/fl6</a>	<a href="#">Fisheries (Ministerial) Regulation - Open Government (alberta.ca)</a>	<a href="https://www.alberta.ca/fish-culture-licence">https://www.alberta.ca/fish-culture-licence</a>
British Columbia	<a href="#">Land use - aquaculture - Province of British Columbia (gov.bc.ca)</a>		<a href="#">aquaculture.pdf (gov.bc.ca)</a>