

Government of Newfoundland and Labrador **Department of Fisheries, Forestry and Agriculture**

Schedule C: Land-Based Operations

Part 1: Plans and Reporting

As part of a complete application package, various plans and reports are required to be included with a proposal. Table 1 identifies the plans and reports applicants are required to provide depending on the type of development. Applicants are encouraged to consult an Aquaculture Development Officer when preparing application packages.

Table 1

Type of Development	Plans and Reports Required			
New/Site Boundary	 Business Plan (Commercial) 			
Amendment	 Consultation Report 			
	$_{\odot}$ Environmental and Waste Management Plan			
	$_{\odot}$ Fish Health Management Plan (includes Biosecurity and			
	Integrated Pest Management Plan)			
	 Incident Management System Plan 			
	 Production Plan 			
	 Project Plan (Non-Commercial) 			
Species Add-on	$_{\odot}$ Business Plan (Commercial) if existing plan does not			
	accommodate the proposed add-on			
	\circ Project Plan (Non-Commercial)			
	\circ Production Plan			
	$_{\odot}$ Updated management plans			
Change of Ownership	$_{\odot}$ Business Plan (Commercial) if existing plan does not			
	accommodate the transition			
	 Project Plan (Non-commercial) 			
	\circ Production Plan			
	$_{\odot}$ Updated management plans			

Part 2: Development/Production

1. Complete the areas that apply to the proposed operation. Label the equipment on site layout diagrams.

Incubation units:

Number _____Egg Total _____

Larval Tanks: Number	_Total Water Capacity
Tanks: Number	_Total Water Capacity
Raceways: Number	_Total Water Capacity
Phytoplankton Tanks: Number	_Total Water Capacity
From start-up to full opera a) estimated year and mo b) animal stage to be sto c) number to be stocked	ntion, please indicate in Table 2 the: onth the animals will be stocked; cked (eggs, larvae, or juveniles);

- d) estimated growth period in months;
- e) average final weight;
- f) expected losses over the growth period; and
- g) expected production at the end of the growth period.

Table 2

2.

Year/Month	Animal Stage	Stocking Number	Growth Period (months)	Average Final Weight (kg)	Expected Losses (%)	Expected Production (kg)

3. Schedule of Production:

Month and Year the starting stock will be introduced

Month and Year the facility will be in full production_____

Amount of production at full capacity ______kilograms

4. In Table 3, provide the range of biomass on site within the following five calendar years.

Table 3

Year	Biomass (kg)			
	Minimum	Maximum		

- **Note:** Minimum biomass is usually the amount of product at the facility immediately after shipment of production. Maximum biomass is usually the amount of product at the facility just before shipment of production starts.
- 5. In Table 4, provide the feed schedule for the entire growth cycle. Include planned amounts to be used.

Table 4

Year/Month	Species Biomass (kg)	Monthly Feed Amount (kg)

- 6. Indicate the type of feed to be used.
- 7. Indicate if automatic feeders will be used.
 □Yes □No
- 8. Indicate if a feed-fine recovery system will be used.
 □Yes □No
- 9. Silage or other feed manufacturing proposed.

10. Describe the disposal methods for solid waste (e.g. mortalities, feed bags, etc.).

Part 3: Site Suitability

1. Describe any fishing activities (e.g., commercial, Indigenous, or recreational fisheries), tourism operations, cabins, recreational activities (e.g., boating, diving, water skiing, swimming, etc.) or industrial facilities, and water uses that are located within a 2km radius of the site lease boundary. Provide information on the activities time(s) of operation and proximity to the site.

2. Identify potential impacts other resource users may have on the proposed development, if applicable. Include the measures to be established to minimize potential interactions and possible negative impacts by other resource users.

3. Identify any potential impacts the proposed operation will have on other resource users during the development phase of the project and while it is in operation, if applicable. Provide details on the measures to be established to minimize the impacts.

Complete either Section A if the proposed operation will use seawater or Section B if the proposed operation will use freshwater.

Identify source body of water, intake and discharge lines, and other relevant details on site layout diagrams.

Name the source body of water
Does the water source have a disease profile? □Yes □No
a) If yes, identify the source of information.
Indicate if the facility will be a flow-through system. □Yes □No a) If no, please provide details on recirculating facility.
Describe filtration disinfection system to be used, if applicable.
Indicate the intake rate:litres/day
Indicate the maximum and minimum depth of intake:
a) Maximummetres b) Minimummetres
Indicate the depth of discharge:metres
Indicate the distance from discharge to intake:metres

9.	Indicate the discharge rate:	litres/day

- 10. Indicate the intake and/or outlet grid size:
- 11. Indicate the distance from discharge to nearest aquaculture facility. _____kilometers
- 12. Describe the wastewater treatment method.

- 13. Indicate if the water quality parameters fall within the water quality requirements for the proposed species? □Yes □No
 - a) If no, indicate how the water quality parameters will be brought within accepted requirements for the species?

Section B: Site / Water Suitability for Freshwater Operation

- 1. Indicate the water supply type:
 □ Municipal
 □ Private
 - a) If municipal, indicate if the following:
 - i. Supplied by lake, stream, dug well, drilled well, or flowing spring:_____
 - ii. Pumped or gravity flow:
 - iii. Name of the source body of water: _____
 - b) If private, indicate the following:
 - i. Supplied by lake, stream, dug well, drilled well or flowing spring:_____
 - ii. Pumped or gravity flow:
 - iii. Name of the source body of water:_____

a) If yes, identify	the source of information.
Indicate if the faci	lity will be a flow-through system. □Yes □No
b) If no, please p	rovide details on recirculating facility.
Describe filtration	disinfection system to be used, if applicable.
Describe filtration	disinfection system to be used, if applicable.
Describe filtration	disinfection system to be used, if applicable.
Describe filtration	disinfection system to be used, if applicable.
Describe filtration	disinfection system to be used, if applicable.
Describe filtration	disinfection system to be used, if applicable.
Describe filtration Indicate the intake If using surface w a) Maximum b) Minimum	disinfection system to be used, if applicable.
Describe filtration	disinfection system to be used, if applicable.
Describe filtration Describe filtration Indicate the intake If using surface w a) Maximum b) Minimum Identify where the □ lake □ municipal sewe	disinfection system to be used, if applicable.

If discharging to a water body, provide the following: a. Name of the water body: b. Depth of discharge: _____metres

- 9. Indicate the discharge rate: _____litres/day
- 10. Indicate the intake and/or outlet grid size:
- 11. Indicate the distance from discharge to the nearest aquaculture facility. _____kilometers
- 12. Does the water source provide for future expansion? \Box Yes \Box No
- 13. Determine the seasonal levels of the following water quality parameters.

Parameter (mg/l = ppm)	Spring	Summer	Fall	Winter
Dissolved oxygen (mg/l)				
Carbon dioxide (mg/l)				
Total alkalinity (mg/l)				
Hardness (as calcium carbonate) (mg/l)				
Dissolved Reactive phosphorous (mg/l)				
Ammonia (mg/l)				
Nitrate (mg/l)				
Nitrite (mg/l)				
Copper (mg/l)				
Zinc (mg/l)				
Iron				
Total suspended solids				
рН				
Hydrogen Sulphide (mg/l)				
Temperature(°C)				

- 14. Describe the wastewater treatment method.
- 15. Indicate if the water quality parameters fall within the water quality requirements for the proposed species? □Yes □No b) If no, indicate how the water quality parameters will be brought within accepted requirements for the species? 16. Identify an alternative water source if the primary source fails. 17. Indicate the provision(s) for aeration and/or denitrification?

Part 4: Economic Development

1. Provide an overview of the benefits of the proposed development to the Province. Include the socio-economic benefits, supply and service opportunities, potential direct and indirect spin-off industries and other relevant information that demonstrates the impacts and scale of benefits. For this response, include direct and indirect employment creation and targets/commitments that must be accessible and inclusive of all genders, Indigenous peoples, persons with disabilities, visible minorities, and youth. Please identify if employment expertise availability is local and/or national/international.

2. In Table 5, identify direct and indirect employment creation that will result from the proposed development for the next three years. Identify duration of employment and if possible, provide the types of positions (e.g. managerial, supervisory, technical, administration, etc.).

Table 5

	Number of Employees			
Year	Full Time	Time Part Time Seasonal		Type of Position

3. Indicate if the required labour supply and level of skill is available to operate the proposed development. Explain how this has been determined.

4. In the event the required skill-set is not available within the labour supply, describe any training plan and/or other measures to be established to address.