

Aquaculture site in a marine environment

Application form

PART A: Shellfish site for commercial purposes



Basic information required for analysis of an application for or
modification to an aquaculture site in a marine environment in Quebec
April 2012 version

PART A**BASIC INFORMATION REQUIRED FOR ANALYSIS OF AN APPLICATION FOR OR MODIFICATION TO AN AQUACULTURE SITE FOR COMMERCIAL PURPOSES IN A MARINE ENVIRONMENT IN QUEBEC¹**

Ref. no: _____

1. Identification			
	Proponent	Contact person	Consultant
Name			
Address			
City			
Postal code			
Telephone	() - ext.	() - ext.	() - ext.
Fax	() -	() -	() -
E-mail			
<input type="checkbox"/> Letters patent <input type="checkbox"/> Authorization or power of attorney <input type="checkbox"/> Aquaculture licence number _____ <input type="checkbox"/> CIDREQ number _____			

2. Nature of application
<input type="checkbox"/> New site <input type="checkbox"/> Modification of site <input type="checkbox"/> Modification of activities

3. SUMMARY OF PROJECT (250 words) (Where, what, how, when, why, etc)

SIGNATURE OF PROPONENT: _____

DATE: _____

¹ PS: Use a different form for each site.

4. LOCATION																									
Name of the main waterway	<p align="center">GEOGRAPHICAL COORDINATES DELIMITING THE AQUACULTURE AREA</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Latitude</u></th> <th><u>Longitude</u></th> </tr> </thead> <tbody> <tr> <td>_____ ° ' _____" _____ ° ' _____"</td> <td></td> <td></td> </tr> <tr> <td>_____ ° ' _____" _____ ° ' _____"</td> <td></td> <td></td> </tr> <tr> <td>_____ ° ' _____" _____ ° ' _____"</td> <td></td> <td></td> </tr> <tr> <td>_____ ° ' _____" _____ ° ' _____"</td> <td></td> <td></td> </tr> <tr> <td>_____ ° ' _____" _____ ° ' _____"</td> <td></td> <td></td> </tr> <tr> <td>_____ ° ' _____" _____ ° ' _____"</td> <td></td> <td></td> </tr> <tr> <td>Central point _____ ° ' _____" _____ ° ' _____"</td> <td></td> <td></td> </tr> </tbody> </table> <p>NOTE: One-tenth of a second precision is required.</p> <p>Coordinates from: <input type="checkbox"/> GPS <input type="checkbox"/> Map</p> <p>Datum: <input type="checkbox"/> NAD 83</p>	<u>Points</u>	<u>Latitude</u>	<u>Longitude</u>	_____ ° ' _____" _____ ° ' _____"			_____ ° ' _____" _____ ° ' _____"			_____ ° ' _____" _____ ° ' _____"			_____ ° ' _____" _____ ° ' _____"			_____ ° ' _____" _____ ° ' _____"			_____ ° ' _____" _____ ° ' _____"			Central point _____ ° ' _____" _____ ° ' _____"		
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Central point _____ ° ' _____" _____ ° ' _____"																									
Name of secondary waterway (bay, river mouth, etc.)																									
In front of:																									
Municipality																									
Administrative region																									
Nautical chart #: _____ _____																									
If there are land bases, indicate the topographic map number																									
Topographic map #: _____																									
DIMENSIONS OF THE AQUACULTURE AREA																									
Length _____ Width _____ (metres)																									
Surface area _____ (metres ²)																									
	FARMING TECHNIQUE AND USE OF THE SITE																								

5. TARGETED SPECIE(S)			
Specie(s)	Scientific name	Origin	Production target
			mt
			mt
			mt

6. Targeted locations and nearby usage
<input type="checkbox"/> 6.1 Indicate the location of the requested surface(s) on a nautical chart extract. <input type="checkbox"/> 6.2 Indicate and locate the use of infrastructures or area on dry land on a topographic map extract (e.g. access, storage, etc). <input type="checkbox"/> 6.3 Indicate and specify any wastewater outfall, on a topographic map extract, located less than 7.5 km from any part of the surfaces involved.

Note: The proponent must adapt the form and information required for specific species and aquaculture techniques while respecting the requirements.

Note: The different departments reserve the right to modify or add requirements according to the nature of the request or particular context.

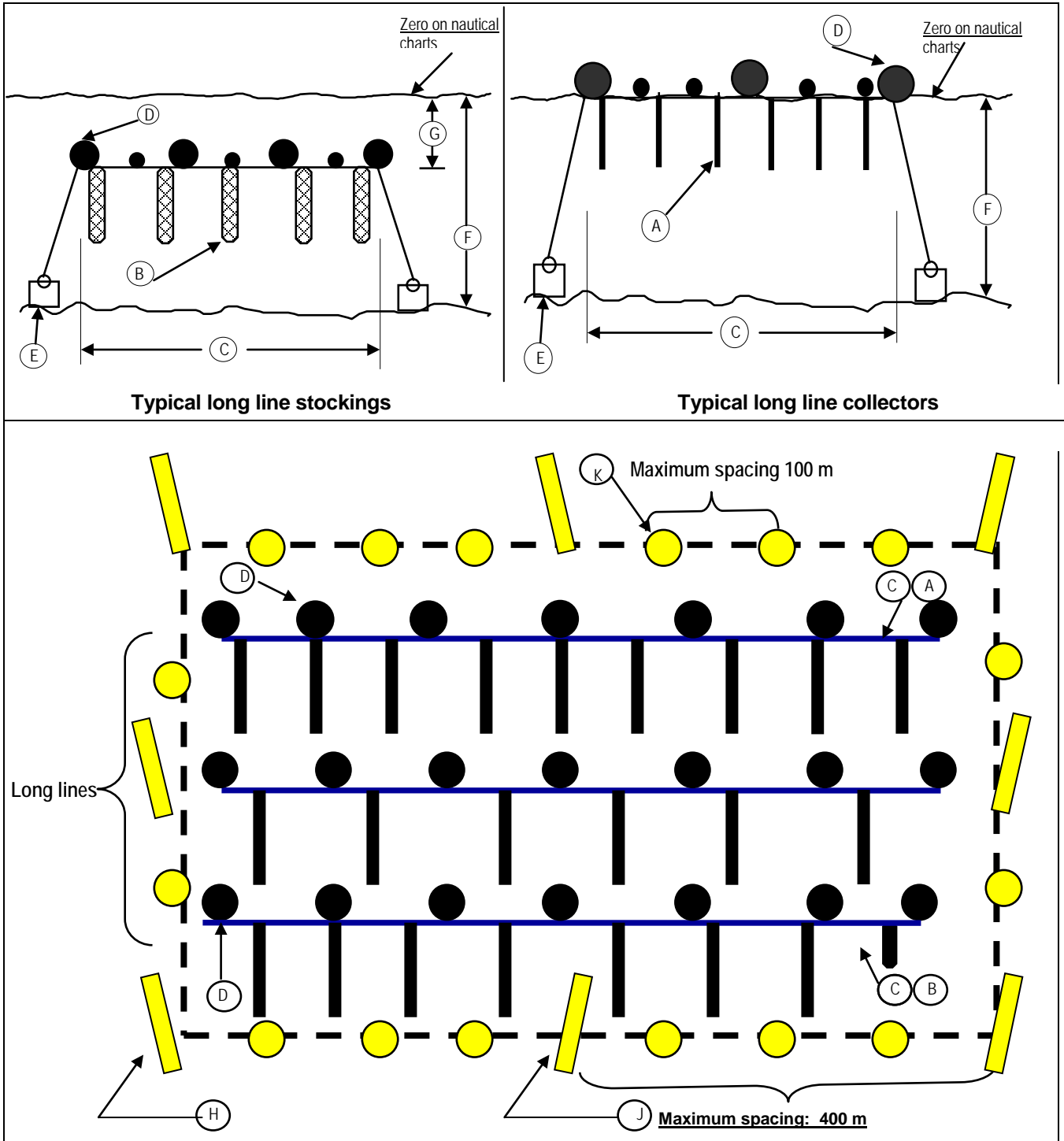
SIGNATURE OF PROPONENT: _____

DATE: _____

7. MARKING SYSTEM: (Refer to the illustrations on the following pages for a marking system diagram of an aquaculture infrastructure)		
A & B. STOCKINGS OR COLLECTORS Type: _____ Length: _____ (metres)	C. LONG LINES Type: _____ Number: _____ Length: _____ (metres)	
D. FLOATS Colour: _____ (OTHER THAN YELLOW) Form: _____ Size: _____	E. ANCHORAGES A) Type: _____ Size: _____ Weight: _____ (tm) Number: _____ B) Type: _____ Size: _____ Weight: _____ (tm) Number: _____	
F. DEPTH OF SITE: _____ metres (Zero reference on nautical charts)		
G. MINIMUM CLEARANCE BENEATH THE SURFACE Summer season, buoyed site: _____ (metres) Winter season, site non-buoyed: _____ (metres) (Reference: Chart Datum) Note: A minimum clearance of 2 metres must be maintained between long lines and the surface of the water (with the exception of collectors)		
H. CORNER BUOY (see notes at the bottom of the page) <u>Number</u> ___ Yellow cautionary buoys ___ Port buoys (green) ___ Starboard buoys (red) In accordance with NWPA requirements ___ radar reflectors ___ (Fl) 4S light(s)	J. INTERMEDIARY BUOY <u>Maximum spacing: 400 (metres)</u> <u>Number</u> ___ Yellow cautionary buoys ___ Port buoys (green) ___ Starboard buoys (red) In accordance with NWPA requirements ___ radar reflectors ___ (Fl) 4S light(s)	K. COMPLEMENTARY MARKING <u>Maximum spacing: 100 (metres)</u> Colour: yellow Shape: spherical or barrel Size: minimum diameter: 40 cm
MARKING BUOY TENDING PERIOD Marking buoys are tended annually during all the navigation period, <u>or in accordance with Transport Canada – NWPA requirements</u>		OTHER RELEVANT INFORMATION
THE PROPONENT AGREES TO REMOVE ALL EQUIPMENT FROM THE WATER IN THE TIME REQUIRED BY TRANSPORT CANADA IF HE/SHE ABANDONS OR CLOSES THE AQUACULTURE SITE.		
SIGNATURE OF PROPONENT: _____		DATE: _____

- Note 1:** The proponent must produce a detailed plan for the buoy marking system, specific to the present application and indicate the position of each type of buoy
- Note 2:** Refer to the design type of buoy on pages A-4 for corner buoys (H) and intermediary buoys (J)
- Note 3:** Anchorages, buoys, and equipment are located inside the limits of the aquaculture area.
- Note 4:** The marking system delineates the area used by anchorages and aquaculture equipment in place.

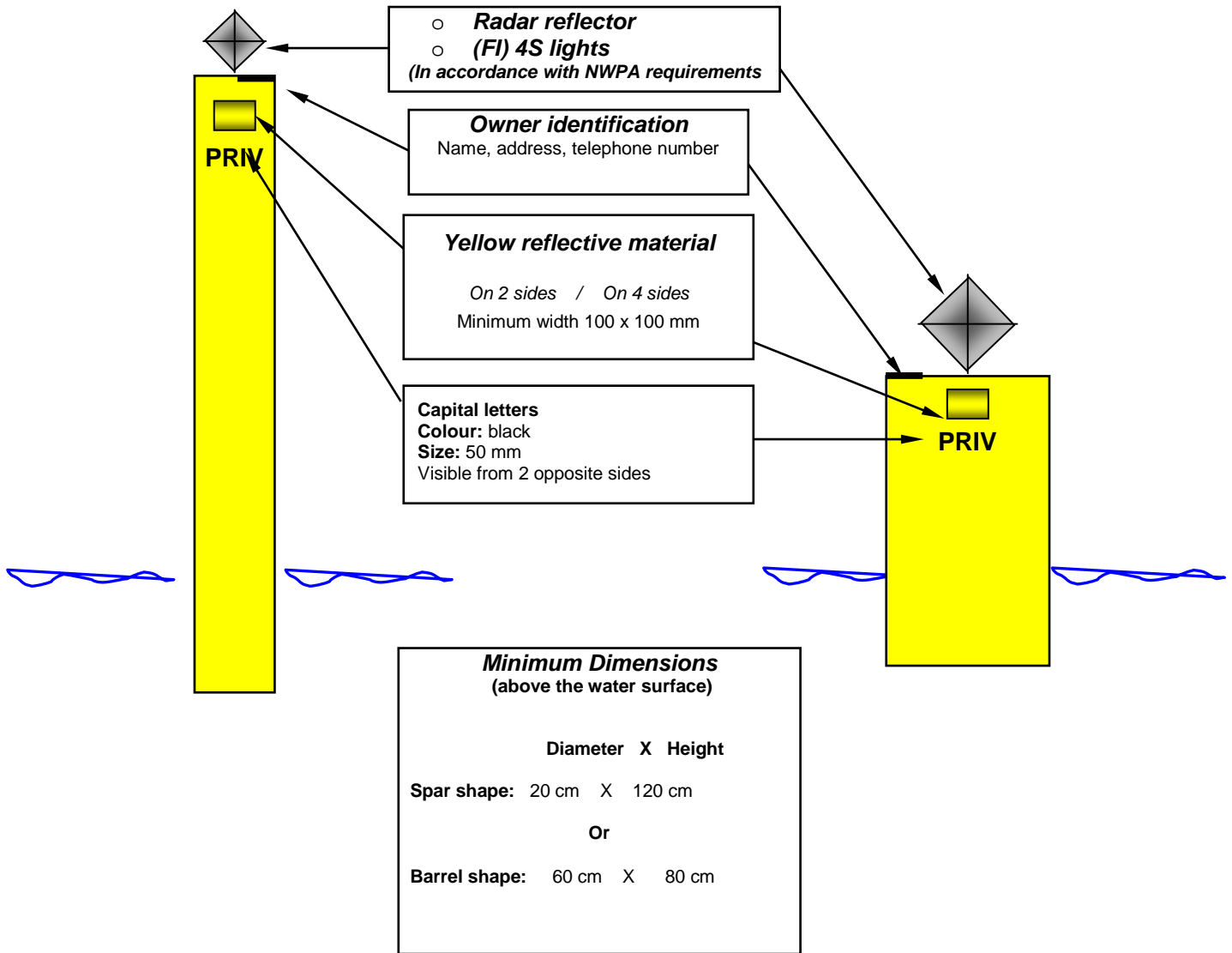
Typical marking of an aquaculture infrastructure (molluscs)



SIGNATURE OF PROPONENT: _____

DATE: _____

Typical Yellow Cautionary Buoy Delimiting the Aquaculture Area (in compliance with *Private Buoy Regulations*– SOR/99-335)



SIGNATURE OF PROPONENT: _____

DATE: _____

The following information must also be provided so that the authorities involved can begin the analysis of your application. Please note that, during the environmental assessment, data acquisition and fees for the sampling of a non-classified site are the responsibility of the proponent.

8. PROJECT DESCRIPTION

- 8.1 Targeted activities– Plant species aquaculture (laminaria, etc.) and invertebrates (echinodermata, molluscs, crustacean)**
- Specify the species to be cultivated, farmed or kept in captivity and production targets.
 - Part of the life cycle and length of production cycle.
 - Farming methods as well as culture and catch methods, provisioning of juvenile fish method, fish release, maintenance and harvesting methods.
 - Production schedule and maximum production volume forecast.
 - Origin and destination of the cultivated organisms. Specify if wild individuals must be captured or picked up for aquacultural purposes.
 - Type of products sold, targeted markets and consumers. If the product targeted is scallop, specify how they will be sold (whole, [live or shelled] / muscle and gonad / adductor muscle only).
 - Specify the total biomass of fish release and estimated production (harvesting) on site.
 - Specify the location and methods of elimination for shells, lines, stockings, net scraps, etc.
 - Provide a detailed schedule of forecast activities (production and construction) as well as their location.
 - Confirm that transfers will meet the requirements of the National Code on Introductions and Transfers of Aquatic Organisms (http://www.dfo-mpo.gc.ca/science/aquaculture/code/prelim_f.htm).

Note: The breeding method (s) and production goals must be presented for a minimum of 3 years or a complete production cycle if it is more than 3 years.

- 8.2 Relevant Proponent Experience or Training**
- Describe relevant technical experience or training
 - Describe relevant business management experience or training.

9. DESCRIPTION OF FACILITIES

- 9.1 Description of facilities**
- Type of work.
 - Details of proposed work (cages, long line systems, wharfs, ice booms, etc.).
 - Provide copies of the plans (elevation and section) of the proposed facilities.
 - Provide details pertaining to other structures and buildings that need to be built or modified because of the project.
 - Specify the access requirements to the site (ex. water supply, wharf, etc).
 - Supply an overview of the methods of construction or installation (equipment to be used, temporary construction) which could have impacts on navigation or the environment.
 - Establish the proposed seasonal marking schedule.
 - Describe the site selection process, especially the possibilities and constraints that were assessed.

10. DESCRIPTION OF RECEIVING ENVIRONMENT **10.1 Environmental and Biological Context**

- Describe an overview of the main biological features of the environment (fauna and flora in place).
- List all contributing factors with respect to organic material and sources of contaminants which could be present in the sector (raw or treated sewage, agricultural or industrial activities, etc.).

 10.2 Features of the environment

- Identify and describe the existing fixed or floating aids to navigation located near the site (buoys, navigation lights, signs).
- Describe the visibility: periods of fog or reduced visibility.
- Describe fishing activities (commercial, aboriginal or recreational fishing), aquaculture activities, tourist and recreational activities (pleasure boating, scuba diving, water skiing, swimming, etc.) practised within a 2 km radius surrounding the project area. Indicate these activities on a nautical chart extract.
- Specify the minimum and maximum clearance between the bottom of the sea and the aquaculture structures/facilities at lowest tide and highest tide, in reference to the chart datum on a nautical charts (metres).
- Indicate the depth (metres) at the location of structures as well as at the corners of the aquaculture site.
- Indicate the location of potential hazards to navigation, such as rocks, shoals, a ship wreck, etc.
- Describe all of the specific features pertaining to the navigable waterway, such as wharfs, floating pontoons, slipways, established harbour limits, overhead lines, bridges, ferry routes, seaplane bases, etc.
- Specify if the proposed site is located near an existing or potential *Marine Protected Area* or other federal or provincial sanctuaries or parks. List their names and location.

 10.3 Geographical Location and Site Details

- Provide pictures of the sector where the structures will be installed (if the project involves structures in the tidal zone).
- In a 2 km radius, locate the ecologically vulnerable areas (e.g. spawning ground, salmon river, eelgrass, grass beds) surrounding the proposed site.

 10.4 Features of the Waterway

- Rise and fall, ebb and rising tide (referenced to the chart datum).
- Determine the average, minimum and maximum current speed (cm/s or knots).
- Specify the direction of dominant currents.
- Features of ice formation.
- Origin of prevailing winds in summer and winter.
- Visibility: periods of fog or reduced visibility.

 10.5 Biological and Physical Environment

- Describe the nature of the sea floor at the aquaculture site (silt, sand, gravel, pebbles, parent rock, etc).
- Describe and identify the plants (eelgrass, brown algae), aquatic organisms (sea urchins, lobster, crab, sea cucumbers, fish, marine mammals and other benthic organisms, etc.) and all other important elements of the fish habitat.
- Provide a qualitative evaluation of the abundance of each element (e.g. surface covered in percentage or number of individuals observed in a given area).
- Characterize the gathering grounds for the fish, as well as the feeding, reproduction, growth and wintering grounds.
- Specify if the structures are on the migration route of a known species of fish. If this is the case, name the species and indicate the migration period.

- Specify the distance to the nearest other waterway(s).
- Make a list of the type(s) of potential predators (e.g. birds, starfish, crab, gastropods, marine mammals, etc.) that could adversely affect the aquaculture activities.
- Determine if there are species at risk on the site or nearby. If this is the case, give details of species at risk that could be temporary or permanent residents of the area.
- Indicate the depth reached using a Secchi disc (turbidity index). Indicate, among others, the method used (with or without a window, time of the year, hour of the day, weather conditions before and during the test, etc).

10.6 Socio-Economic Environment

- Specify if the proposed project could have a bearing on aboriginal people and the use of their land and resources for traditional purposes and describe the methods proposed to mitigate these impacts. Summarize the discussions and correspondence exchanged with aboriginal people.
- Specify if the proposed site houses an important historical, archaeological, paleontological or architectural element. If so, explain its importance and describe the methods planned to mitigate the impact on these elements.

10.7 Public Consultation

- Specify and provide copies of all notices given or announcements made to the population in general and groups in particular with a connection to the project, specifying the date(s), as well as the method used. Provide the names of the contact persons and the meeting or interaction dates.
- Provide information on the favourable or unfavourable comments and recommendations received with regard to the proposed project.
- Indicate, when relevant, if the project was discussed at your sector's integrated management table.

11. DESCRIPTION OF FACILITIES

11.1 Infrastructure

- Describe the maintenance and inspection procedures, including their frequency. Specify the monthly and yearly maintenance requirements.
- If the beginning of operations is gradual, provide details pertaining to the operation expansion and a calendar of events.
- Provide a copy of the plans and a description of future expansion projects within the same sector.
- Specify the operating procedures and mitigation measures planned to reduce the potential negative effects of infrastructure to be implemented.

11.1.1 Bottom Culture

- Provide a description of the types of structure(s) to be used, and associated work such as predator nets/car cover, fences and supporting structures.
- Specify the area of the bottom covered by these structures.

11.1.2 Near-Bottom Culture

- Describe the culture technology to be used (bags, stockings, trays, cages, tables, rafts, etc.).
- Supply the dimensions and a description of the planned structures and the proposed number of units at the time of full site utilization.
- Specify the surface covered by the structures on and below the surface.
- Describe the husbandry techniques and practices (raising and dropping of long lines, cleaning methods for wet gear, etc.) to be implemented.

12. DESCRIPTION OF OPERATIONS **12.1 Predator Control and Anti-Fouling**

- Describe the measures to be undertaken to minimize the attraction of predators and restrict their interaction with culture organisms
- Describe the methods used for fighting predators.
- Provide details on all anti-fouling agents that could be used and describe the methods of application for each while specifying the method and frequency of application used as well as the location of use.
- Describe the mechanical fouling removal processes used. Explain where the fouling organisms and other material will be disposed of.

 12.2 Hazardous Material

- Provide a list of any hazardous materials that may be used on site (e.g., cleaning agents, fuels, etc.).
- Provide details pertaining to the transportation, use, storage, and disposal of these materials and their containers (e.g. paint cans, oil containers).

 12.3 Water Quality and Human Residues

- Describe in detail the temporary facilities (on land or water) used to house or maintain culture organisms and specify the measures taken to prevent them from contaminating the waters of the proposed aquaculture site.
- If temporary housing facilities are installed on a boat, raft or floating platform, specify their distance from the proposed aquaculture site.
- Specify if the proposed site is located in a classified harvesting site. If so, specify the actual classification and the date of the most recent survey. Otherwise, specify the location of the nearest classified sector and the date of the most recent survey.

13. Access to Wild Stock and Introduction and Transfer of Aquatic Organisms

13.1 Access to Wild Stock for Aquaculture Purposes

- If a fishing licence is required, provide the following information:
 - Targeted species,
 - Quantity and characteristics of sought-after individuals (size),
 - Location of collection sites or fishing activity sites,
 - Capture methods and quantity of gear required,
 - If applicable, how is the preferred capture method selective (only targeted species and necessary individuals will be taken?),
 - Capture period,
 - Boats used,
 - Name of the person who will perform the capture,
 - Will catches provide self-sufficiency for years to come?
 -

13.2 Introductions and Transfers of Aquatic Organisms

- Fill in **Table1**.
- Include an extract of the map of the specific area where the organisms will be released (body of water or ditch's drainage area, reservoir, wharf or bridge).
- Specify the date of proposed transfers.
- Specify the method of transportation.
- Specify if the licence application has been made with the Introductions and Transfers Committee for the transfer of livestock from one location to another.
- Specify if this transfer was performed before. If so, when?
- Specify if this request is part of your annual operations.
- Specify if you will require the same type of licence every year.
- Provide all available information pertaining to the state of health of organisms to be released. Provide a copy of the certificate stating the specific pathogenic conditions or attesting to the lack of any diseases.
- Indicate which vaccines, antibiotics, microbial and antifungal substances were used at the source and/or during the transfer.
- Provide a description of the mitigation measures used to reduce eventual impacts on indigenous species.
- Describe the disinfection/destruction methods of contaminants and material.

Table 1. Information pertaining to the Proposed Introductions and Transfers

Original location of the organisms	Licence no.	Stock	Size	Date
Receiving site	Site no.	Quantity forecast	Transferred quantity	Date

14. Contingency Plans and Follow-Up **14.1 Changes Made to the Project Due to the Environment**

- Assess the effects which could be caused by the environment (climate, weather conditions, tide, proliferation of toxic algae, wind and waves, ice, etc.) on the project and the facilities. Indicate what changes were made to the project and the measures planned for the mitigation of these effects.

 14.2 Accidents and Defects

- Identify potential risks connected to malfunctions or accidents which may occur during the installation, operation and disposal phases of the project (e.g., fuel spills, storm destruction, extraordinary loss of fish livestock, etc.).
- Specify the follow-up methods which will be in place to ensure the identification and limitation of impacts on navigation and identify the measures to be undertaken after an incident.

Note: In cases when equipment would be moved outside the approved site, the proponent must immediately issue a notice to navigation describing the situation and must replace the equipment in its approved location as soon as possible. The proponent must remove from the water all equipment which does not meet approval in accordance with the Navigable Waters Protection Act. An emergency plan must be supplied and kept up to date at all times.

15. OTHER RELEVANT INFORMATION (IF AVAILABLE)

- Impact study performed by the proponent.
- Certificate of approval from the Department of Environment.
- Comments received from marine environments consulted (include coordinates).
- Comments received from other interested participants.
- Any zoning plan from the area or a reference to such.
- Definition of any known cumulative effect and known mitigation measures (change of seaways, area volume and capacity for supporting such a project, etc.).
- All other authorizations required and already obtained (municipal, MRC and governmental departments).