



SHELLFISH MANAGEMENT PLAN

Ministry of Agriculture
Food and Fisheries

GENERAL INFORMATION:	
Name of Company:	Home Telephone Number: ()
Name in Full of Applicant:	Business Telephone Number: ()
Contact Name (if different from above):	Fax Number: ()
Mailing Address of Applicant:	Cellular Phone: ()
City, Province, Postal Code	Email Address:
SPECIES INFORMATION:	
Check appropriate Species:	<input type="checkbox"/> Pacific Oyster <input type="checkbox"/> Blue Mussel <input type="checkbox"/> Manila Clam <input type="checkbox"/> Geoduck <input type="checkbox"/> Red Algae <input type="checkbox"/> Brown Algae <input type="checkbox"/> Other (Please Specify): _____ _____
APPLICATION INFORMATION:	
This is a: <input type="checkbox"/> First Time Application <input type="checkbox"/> Amended Application <input type="checkbox"/> Replacement	
TYPE OF OPERATION:	
<input type="checkbox"/> Land Based <input type="checkbox"/> Water Based <input type="checkbox"/> Marine <input type="checkbox"/> Freshwater	
OPERATION IS ON:	
<input type="checkbox"/> Provincial Crown Land <input type="checkbox"/> Federal Harbour or Port <input type="checkbox"/> Private Upland or Foreshore	
<input type="checkbox"/> Native Reserve <input type="checkbox"/> Provincial Park <input type="checkbox"/> Federal Park	

MAFF Reference Number	Canadian Coast Guard File Number	BC Assets and Land Corporation File Number

SECTION A: DESCRIPTION OF SITE

1. Legal Description of Site (Land District and Lot Number): _____

2. Geographical Description of Site: _____

3. Geographic Coordinates of the centre of the proposed site:

N. Latitude: _____° _____' _____"

W. Longitude: _____° _____' _____"

Canadian Hydrographic Services Marine Chart No. _____

4. Total area of site _____ hectares.

SECTION B: SCALE OF OPERATIONS

1. Assuming the site is in full production, provide the following information.

a) Total production hectares (grow-out) _____ hectares.

b) Total non-production hectares (seed holding, conditioning area, etc.) _____ hectares.

c) Total unusable hectares (soft substrate, rocky substrate, too shallow, etc., as well as the area taken up by anchors and anchor lines.) _____ hectares.

d) Grow-out system: Bottom _____ Near Bottom _____ Deep Water _____

e) Total length of longline (for deep water) _____ metres and/or, total number of structures (rafts, racks, stakes, etc.) _____.

f) Number of grow-out units (string, trays, socks, etc.) _____ per metre of longline and/or _____ per structure.

g) Oyster beach culture - Seed type: singles
vexar:

- Expected no. of gallons/singles per vexar _____ gal/singles
- Expected grow-out period _____ years

- Oyster string culture
- Length of individual strings _____ meters
 - Number of shell pieces /string _____
 - Number of gallons produced per string _____ gal.
 - Expected grow-out period _____ months

- Oyster tray culture
- Tray type - _____
 - Tray dimensions _____ cm x _____ cm x _____ cm
 - Number of trays per stack _____

- Number of seed per tray _____
 - Number of harvestable oysters per tray _____
 - Expected grow-out period _____ months
- Mussel Culture
- Length of individual socks _____ meters
 - Number of seed per metre of sock _____
 - Number of kgs produced per meter of sock _____ kg.
 - Expected grow-out period _____ months
- Clams Culture
- Number of seed planted per m² _____.
 - Number of kgs produced per m² _____ kgs.
 - Expected grow-out period _____ years
- Scallop Culture
- Grow-out system _____ ear-hanging
_____ tray/nets
 - Tray or net type _____
 - # of trays or nets per stack _____
 - # of seed per tray/net _____
 - # of harvestable scallops per tray/net _____
 - Expected grow-out period _____ months
- Geoduck Culture
- Intertidal
- # of tubes/m² _____
 - # of seed/tube _____
 - grow-out period _____ years
 - # geoduck harvested/m² _____
 - # kg harvested/m² _____

2. Schedule of Improvements

Description of Improvements	Total Area Covered	Date of Completion

3. Planned Seeding

Species	Year 1 =	Year 2 =	Year 3 =	Year 4 =	Year 5 =	Seed Units

4: Planned Production:

Species	Class	Year 1		Year 2		Year 3		Year 4		Year 5		Units (not \$)
		= Min	Max	= Min	Max	= Min	Max	= Min	Max	= Min	Max	
	Market Size											
	Seed											
	Market Size											
	Seed											
	Market Size											
	Seed											
	Market Size											
	Seed											
	Market Size											
	Seed											

SECTION C: OPERATIONAL FACILITIES AND LAYOUT

Please attach the following maps and diagrams; they should be drawn/drafted in ink, and if stated, to scale and be consistent with the other information in the Management Plan. **Consult the Shellfish Management Guide for more detailed information.**

LOCATION MAP:

1. **A CHS Marine Chart** (1:40,000) showing the area under application and any resources or other uses in the area that you are aware of.

OPERATIONAL LAYOUT DIAGRAM (S):

2. Show detail of operations and all intended improvements (as per 5 year Schedule of Improvements) and indicate culture areas and associated uses (e.g. seed holding) in relation to tenure boundaries and tide heights.
3. Indicate the areas to be used for the culture of each species. Include both upland and foreshore uses and facilities **if applicable**. If beach or Crown upland modification is required, show areas to be modified and indicate proposed changes to the beach.
4. If this is an application for the expansion of a site, also provide maps and drawings of existing tenure and infrastructure.
5. Describe and mark the location of other facilities associated with the proposed aquaculture operation, either existing or proposed. These may include wharves, access roads, staff facilities, portable washrooms, etc.

DETAILS OF OPERATIONAL COMPONENTS:

6. Where applicable, provide detailed diagrams of operational components such as stacks, racks, rafts, near bottom and deep water longlines, anchoring and mooring systems, cages, raceways, grow-out tanks, trays, predator netting, perimeter fencing etc. Include profile and top view diagrams, dimensions and construction details of all components described in Schedule of Improvements.

SECTION D: LAND USE OPERATIONS

1. Type Of System (check appropriate description)

Raceways _____

Man-made ponds _____

Grow-out tanks _____

Other (please specify) _____

2. Main Water Source

a) Geographic description of main water source (indicate on Site Layout Map)

b) Volume required _____ l/min. Discharge rate _____ l/min.

c) Depth of intake _____ m. (below M.L.W.)

d) Effluent treatment

ENVIRONMENTAL INFORMATION/ MANAGEMANT PACKAGE:

Will you be living: on site in a float cabin? No Yes
 in a vessel? No Yes

if yes:

1. Describe sewage disposal system to be employed at the float cabin or vessel (i.e. composting toilet, holding tank with disposal in seawater away from site or at pump-out facility, etc.)

2. Describe method of disposal of unused materials associated with shellfish culture (i.e. rope ends, netting, paint cans, oil containers, garbage, etc.).

3. Has the main water source been inspected by the Federal Department of the Environment for sanitary growing water quality? Yes ____ No _____. If yes, indicate the date and the results of the survey.

- 4(a) **Changes to the project caused by the environment can occur, and must be considered in the siting and design phases of your operation. Are you aware that:**

- Toxic algae bloom, inputs of raw sewage/effluent/fertilizers will restrict harvesting opportunities.
- Adverse weather conditions have the potential to damage structures which will require additional surveillance and maintenance by the operator.
- Predators (including invertebrates, birds and marine mammals), can be very detrimental to your stock if left unchecked. Control measures that are undertaken must not result in harm to the animal.

- (b) **Damage or changes to the environment or negative effects on the health of plants, animals or fish can occur during the installation, operation and decommissioning phases of your project. The following is a list of practices recommended to mitigate environmental impacts:**

- Activities be timed to minimize impacts on plants and animals (e.g. avoiding main spawning windows).
- Operators comply at all times with Section 36 of the Fisheries Act, which specifically prohibits the discharge of deleterious substances into fish bearing waters. Due diligence is required at all times to prevent such discharges.

- All works be completed in a manner that prevents the release of construction waste, excavation waste, overburden, soil, silt, sediment, concrete, concrete-laden water, oil, grease or any other substance deleterious to fish or other aquatic life into any water course or water body.
- Fisheries and Oceans authorization be obtained before any machinery is taken onto the beach for the purpose of harvesting or beach alteration.
- Fisheries and Oceans authorization be obtained before any foreshore modification, fill (i.e. addition of sand or gravel), or dredging is undertaken.
- Installation of any structures must not alter or disrupt saltmarsh or eelgrass habitats.
- No shellfish culture activities or structures to occur within 5 metres of any eelgrass habitat.
- No gear and/or floating structures to be established over rocky reef, kelp bed or eelgrass habitats.
- For tenures that include upland, all works along the upland be conducted in such a manner as to minimize the removal of vegetation, such as shrubs and trees. Upon completion of the work, all disturbed areas should be rehabilitated and/or replanted with vegetation indigenous to the local area.
- All operations be restricted to the shellfish lease site. No disturbance to the adjacent upland and surrounding foreshore should occur.
- All landing or grounding vessels, including barges, be restricted to the shellfish tenure to prevent disturbance to adjacent and surrounding intertidal habitat.
- Vehicle driven on the tidal foreshore be restricted to areas of firm substrate and away from inter-tidal vegetation.
- Cleaning of equipment (e.g. oyster traps and predator nets) to remove bio-fouling be done in such a manner that the resulting grey water and fouling organisms do not smother the benthic communities below or deplete oxygen in the water column.
- Shellfish culture not to be conducted within the braided channels of any salmonid creeks.
- Herring spawn on longlines be left until eggs hatch and larvae emerge.
- Inspection and maintenance of all equipment be conducted on a regular basis as required.
- The operator to adhere to all applicable legislation, guidelines, and best management practices.

I HAVE READ THE ABOVE AND AGREE TO ADHERE TO ALL APPLICABLE LEGISLATION, GUIDELINES AND BEST MANAGEMENT PRACTICES.

Signature

Date