



Shellfish Aquaculture Licence under the Pacific Aquaculture Regulations

Licence For: Aquaculture

Date Issued: Dec 03, 2012

Licence No: AQSF 105602 2012

Expiry Date: Mar 31, 2013

ISSUED TO: BC Pacific Oysters Ltd.
6 South Albion Street
Amherst, Nova Scotia

B4H 2W3

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This licence is issued under the authority of the *Fisheries Act* and confers, subject to provisions of the *Fisheries Act* and Regulations made there under, the authority to carry out aquaculture activities including cultivation and harvest of fish and prescribed activities under the conditions included herein and/or attached hereto.

It is the responsibility of the licence holder to obtain all other forms of authorization from federal or provincial agencies that may have jurisdiction for shellfish aquaculture facilities. As well, it is your responsibility to be informed of, and comply with, the *Fisheries Act* and the regulations made there under, in addition to these conditions.

The above licence holder is authorized by this licence to carry on the business of aquaculture at the following location and for the following species:

Site Reference Number	Location and Legal Description
756	Hardy Island, Jervis Inlet UF, Group 1 Jervis Inlet New Westminster District. Land File No: 2402982 DFO Area: 16-11





Common Species Name / Scientific Species Name:

- 1 California Sea Cucumber (*Parastichopus californicus*)
- 2 Eastern Blue Mussel (*Mytilus edulis*)
- 3 Gallo Mussel (*Mytilus galloprovincialis*)
- 4 Geoduck Clam (*Panopea generosa*)
- 5 Pacific Scallop (*Patinopecten caurinus x yessoensis*)
- 6 Western Blue Mussel (*Mytilus trossulus*)

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Site Specific Conditions:

1. California sea cucumber shall be cultured using suspended culture gear methods only as approved in the Pacific Shellfish Aquaculture Application management plan. Uncontained or on-bottom culture and harvest of California sea cucumber is prohibited.

Required Record Keeping and Reporting: Details are contained within the attached conditions of this licence.

Compliance Advisory: Contravening a condition of this licence is an offence under the *Fisheries Act*.

This licence includes further conditions that are included herein and/or attached hereto. These conditions form part of the licence and may not be removed.



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SHELLFISH AQUACULTURE LICENCE CONDITIONS

PART A. Definitions

“Aquaculture activities” include the seeding, culturing and harvesting of fish, the operation of machinery including vehicles and vessels, the installation of structures and anchors and the maintenance of machinery, structures and equipment.

“By-catch” means non-cultivated individuals of the licensed species taken in addition to the fish deliberately placed on the licensed area.

“Department” means the Department of Fisheries and Oceans.

“DFO Management Subarea” means areas described in the *Pacific Fishery Management Area Regulations* and available at <http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/areas-secteurs/index-eng.htm>.

“Facility” means the collective structures licensed and required for the purposes of aquaculture, including growing area, walkways, barges, floats and living accommodations plus associated lines and anchors.

“Important and/or sensitive fish habitat” means fish habitat including eelgrass areas, kelp beds, intertidal stream channels, and marine riparian areas.

"Importation" means bringing shellfish into British Columbia from another province or country.

“Incidental Catch” for the purposes of marine shellfish aquaculture means fish species that:

- (a) are not specifically named on the face of the aquaculture licence; and
- (b) set naturally on aquaculture gear or with the licensed species.

“Intertidal growing area” means the area between high tide and chart datum.

“Introduce” means introduce fish to the marine environment from a hatchery or other fish breeding or holding facility.

“Introduction” means the transport and release of live fish (seed, spat, eggs, juveniles or adults) into waters outside their present range, and includes movement of fish from a hatchery or other fish breeding or holding facility to the marine environment.

“Introductions and Transfers Committee” means the Federal-Provincial joint committee responsible for reviewing applications for the introductions and transfers of fish and providing recommendations on issuance of the associated licences.

"Licensed Area" means the area within which aquaculture activities that are authorized by the aquaculture licence may occur.

“Operator” means a person who oversees the operation of a site, who owns or tenures the site or is authorized by the licence holder to act for the licence holder respecting the operation of the licensed site.

“Processing” includes filleting, icing, packing, canning, freezing, smoking, salting, cooking, pickling, drying or preparing fish for market in any other manner.

“Qualified Individual” means a licence holder, an individual employed by or contracted by the licence holder who, in the opinion of the licence holder, possesses a combination of knowledge, expertise and experience necessary to complete the task and who can provide an attestation to the integrity of new or amended facilities.

"Riparian area" or Riparian vegetation" means the vegetated area immediately above the high tide line.

“Seed” means a submarket size bivalve shellfish requiring a minimum of 6 months to reach market size under normal growing conditions, and that has been gathered directly from the wild or grown in a hatchery.

"Shellfish Site Management Plan" means a site management plan or a joint Provincial/ Federal Pacific Shellfish Aquaculture Application that has been submitted to the Department for approval and may form a part of the Conditions of the Licence

"Spat" means a bivalve mollusc in the larval stage, especially when it settles to the bottom and begins to develop a shell.

”Transfer” means the movement of individuals of a species or population of live fish (seed, spat, eggs, juveniles or adults) from one location to another within its present range and includes transfers to or from a hatchery or other fish breeding or holding facility.

“Wet Storage” means the temporary storage of live shellfish from approved sources, intended for marketing, in containers or floats in natural bodies of seawater or in tanks containing natural or synthetic seawater.

PART B. General Licence Conditions

1. Application and Licensed Species

- 1.1 This licence authorizes the licence holder to:
 - (i) cultivate and harvest the species listed as part of the “Species” section on the face of this licence.
 - (ii) conduct aquaculture activities within the licensed area described on the face of this licence.
- 1.2 This licence, or a copy of it, shall be kept on-site or on persons working at the site and shall be made available for inspection upon the request of a fishery officer, fishery guardian, observer, or inspector.

2. Site Management Plan

- 2.1 The licence holder shall have a shellfish aquaculture site management plan containing the elements described in Appendix I and shall submit the plan to Front Counter British Columbia for approval when changes to the plan are requested.
- 2.2 The shellfish aquaculture management plan submission shall be in the form of either a DFO Interim Shellfish Site Management Plan, or a joint Provincial/Federal Pacific Shellfish Aquaculture Application.
- 2.3 Once the shellfish aquaculture site management plan is approved, the licence may be amended to include the site management plan and its implementation shall be a condition of licence.

3. Facility Installation and Inspection

- 3.1 The licence holder shall ensure that site improvements, grow-out equipment and structures are capable of withstanding adverse weather conditions.
- 3.2 The licence holder shall have the facility (other than intertidal growing area) inspected by a qualified individual who can confirm and attest that the facility design, equipment and anchoring systems are designed and installed in such a way and using such equipment as to be able to withstand the prevailing oceanographic and meteorological conditions of the licensed location.
 - (a) The inspection required shall be carried out:
 - (i) When the facility is first installed and before any fish are introduced or transferred to the facility; and
 - (ii) Any time alterations to the facility are authorized under the licence.

- (b) The licence holder shall require the inspection attestation report in writing prior to the introduction or transfer of fish to the facility.
- 3.3 The written attestation described in Section 3.2 above shall be made available for inspection upon request of a fishery officer, fishery guardian, observer, or inspector.

A sample attestation is provided in Appendix II.

- 3.4 The licence holder shall conduct inspections of equipment, installation methods and anchoring systems at the licensed area, as required, or at least once a year, to identify and address site structural or equipment integrity that may influence the ability of the facility to withstand the prevailing oceanographic and meteorological conditions of the licensed location.

4. Introduction or Transfer of fish

- 4.1 The licence holder shall ensure that all permits required for the importation, introduction, transport and transfer of fish at any stage of the culture and husbandry process are obtained prior to these activities commencing.
- 4.2 The licence holder shall not transfer bivalve shellfish from licensed areas that are closed by Prohibition Order made under the *Management of Contaminated Fisheries Regulations*, unless also in possession of a valid specific licence issued under the *Management of Contaminated Fisheries Regulations*.
- 4.3 Subject to subsection 4.2, the licence holder may transfer live seed, spat, juvenile shellfish (except Geoduck, Varnish Clam or Olympia Oyster) to or from the licensed area and another licensed area possessing a valid aquaculture licence provided that:
 - (a) The species of live shellfish are listed as part of the “Species” section on the face of this licence.
 - (b) The receiving area possesses a valid aquaculture licence for the species.
 - (c) The licensed areas are within the following Shellfish Transfer Zones (as identified in Appendix III (Figure 1 Map of Shellfish Transfer Zones) and are licensed for:
 - (i) Manila Clams (*Venerupis philipinarum*) – may transfer within all Zones; to Zone 5 from any zone; or between Zones 1, 2, 3 and 4;
 - (ii) Pacific Oysters (*Crassostrea gigas*) – may transfer within or between Zones 1 and 2;
 - (iii) Pacific Oysters (*Crassostrea gigas*), subject to subsection 11.3, may transfer within or between Zones 3, and 4 and from Zones 3 and 4 to Zone 5, and within Zone 5;

- (iv) Kumomoto Oysters (*Crassostrea sikamea*) – may transfer within Zone 4 only; and
- (v) For all other licensed species – may transfer within the same Zone only
- (d) The shellfish at the source licensed area do not display any observable symptoms of significant diseases as listed in Appendix IV (List of Known Shellfish Diseases of Concern) or other infectious agents of concern to the Introductions and Transfers Committee.

4.4 For transfers between shellfish transfer zones or for transfers of species not listed in Section 4.3(c) of this licence or where the above conditions cannot be met, a Specific Shellfish Transfer Licence (SSTL) licence must be applied for and issued prior to transfer.

- (a) A copy of the Introductions and Transfers (SSTL) Licence shall accompany all shipments of fish to and from this licensed area.

Note: Application for this SSTL licence must be made to the Introductions and Transfers Committee at famitc@dfo-mpo.gc.ca. Find further information and application forms at the website :

<http://www.dfo-mpo.gc.ca/aquaculture/regions/pac/introduction-eng.htm>

5. Access to Wild Fish

5.1 The licence holder may:

- (a) collect spat of the licensed species on the licensed area;
- (b) retain by-catch of wild shellfish of the licensed species on the licensed area when they are harvested as by-catch along with the farmed licensed species

5.2 For access to wild fish other than described in 5.1 (a) and 5.1(b) a separate licence must be applied for and issued prior to collecting or retaining wild fish.

Note: Find further information by contacting the Department at famitc@dfo-mpo.gc.ca. A form for Application for Access to Wild Aquatic Resources will be made available at the website:

<http://www.dfo-mpo.gc.ca/aquaculture/regions/pac/introduction-eng.htm>

6. Fish Health

6.1 The licence holder and operator shall ensure that the fish cultivated and grown in the licensed area are given care and attention consistent with their biological requirements.

7. Escapes or Releases

- 7.1 The licence holder and operator shall take all reasonable precautions to prevent the escape or release of cultured fish:
- (a) while transporting fish on, over or through fresh or tidal waters;
 - (b) while transporting fish to or from the licensed area or facility; and
 - (c) while transferring fish between containment structures within the licensed area or facility.

8. Incidental Catch

- 8.1 The licence holder shall not retain incidental catch, with the exception of Varnish Clams which may be retained.

(Note: incidental catch must be returned to waters within or immediately outside the aquaculture facility or licensed area, and if the fish is alive, in a manner that causes it the least harm.)

9. Predator Control

- 9.1 The licence holder shall report immediately upon discovery any marine mammal accidental drowning mortality to the Department's Observe, Record and Report (ORR) fax line at 1-604-607-4156 or call 1-800-465-4336. The report is to be in the form found in Appendix V.
- 9.2 Should a Marine Mammal be observed entangled but not dead, the licence holder shall, upon discovery, make all reasonable attempts to free the animal without harm and report to the Department's Observe, Record and Report (ORR) fax line at 1-604-607-4156 or call 1-800-465-4336.
- 9.3 The licence holder is prohibited from using acoustical deterrents for marine mammals.
- 9.4 The licence holder shall confine predator exclusion devices (netting) to the licensed area.
- 9.5 The licence holder shall ensure that, when predator exclusion devices are approved in a shellfish site management plan:
- (a) predator exclusion devices are constructed of an acceptable material and of acceptable size to minimize entrapment and potential injury to fish species or wildlife; and
 - (b) predator exclusion devices are maintained, inspected and repaired on a regular basis.

10. Protection of Fish Habitat

- 10.1 Dredging, infilling or redistribution of native beach materials is prohibited by this licence, unless expressly approved in a DFO approved Site Management Plan.
- 10.2 The licence holder shall not conduct harvest activities, or handle equipment that is covered with herring spawn through to the hatch of herring eggs that may occur from February through May, depending on the area.
- 10.3 The licence holder shall not disrupt specific sand lance spawning substrates (sand) in upper intertidal (above 2.6 m) during spawning windows (November to February).
- 10.4 The licence holder shall not disturb squid spawn if present on equipment or structures.
- 10.5 The licence holder shall not conduct aquaculture activities in eelgrass beds.
- 10.6 The licence holder shall operate machinery in a manner that minimizes disturbance to the intertidal areas and other fish habitat.
- 10.7 Machinery Operations:
 - (a) The licence holder shall ensure all machinery used on-site is in clean condition and maintained free of fluid leaks.
 - (b) The licence holder shall keep an emergency spill kit on board or on site where machinery is used in case of fluid leaks or spills from machinery.
- 10.8 The licence holder shall avoid locating moorings in important fish habitat and shall minimize disturbance to submerged aquatic vegetation when securing mooring structures to the seabed.
- 10.9 The licence holder shall ensure moorings (including anchors and floats) are made of clean material. Concrete anchors shall be pre-cast and pre-cured away from the water before use to prevent seepage of potentially toxic substances into the water body.
- 10.10 The licence holder shall ensure mooring anchors are adequately sized to secure culture apparatus, floats and equipment and prevent the anchor from shifting or dragging along the seabed.
- 10.11 The licence holder shall not use native beach material (i.e. logs, sand, gravel, boulders) as mooring structures unless approved in the Site Management Plan and in the written attestation for the licensed area as per Section 3(2).
- 10.12 The licence holder shall ensure that “Styrofoam” used for floatation is securely wrapped in an acceptable containment material. Any floatation material that is

degrading or is otherwise no longer in use shall be removed from the marine environment and disposed of at land-based facilities.

- 10.13 The licence holder shall design, construct and maintain structures to maximize openings to increase light penetration and prevent shading of subtidal eelgrass (*Zostera marina*) and other fish habitat.
- 10.14 The licence holder shall ensure biofouling, fish mortalities and shell debris are disposed of within the licensed area in such a way that build-up on the seabed does not occur, or at an approved composting facility. Non-biological refuse shall be taken to a landfill or off-site for disposal as appropriate.
- 10.15 The licence holder shall prevent culture equipment from smothering or damaging marine life and/or habitat.
- 10.16 The licence holder shall not store any aquaculture gear, materials, equipment or debris in any intertidal zone or riparian vegetation, unless the gear is utilized in that location as part of the regular farm activity that is approved for the licensed area.

11. Harvesting and Handling

- 11.1 In respect of tagging containers of harvested shellfish:
 - (i) The licence holder shall immediately place all shellfish that are removed from their growing area or structure for transport to market sale in containers that have a visible waterproof tag identifying the Harvester's Name, Species, DFO Subarea, Land File or Parcel Identification Number, Date of Harvest, and Aquaculture Licence Number.
 - (ii) No container of shellfish that are removed from their growing area or structure shall be left unattended and untagged at the licensed area.
 - (iii) Each container of shellfish that are removed from their growing area or structure and left unattended at the licensed area shall be identified with a tag displaying, at minimum, the Aquaculture Licence Number.
 - (iii) No container of shellfish shall remain untagged during transport to market sale.
- 11.2 For the purposes of wet storage of market-sized bivalves, the licence holder shall not wet-store shellfish originating from other than the licensed area unless written approval has been received from the Canadian Food Inspection Agency.

Note: Information and applications on wet storage are available from:

Canadian Food Inspection Agency

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457 East Stanford Ave.
Parksville, BC
V9P 1V7
Phone: 250-248-4772; Fax: 250-248-6776

11.3 Measures to prevent the spread of European Green Crab.

- (a) In Areas 23 to 27 the licence holder shall thoroughly examine harvested shellfish (oysters, clams, scallop, and mussels) for signs of European Green Crab, and rinse the harvested shellfish prior to being removed from the harvest area.
- (b) Shellfish culture gear (trays, lines, etc) shall be thoroughly examined and rinsed prior to removal from growing areas in Areas 23 to 27 for use in another area.
- (c) Shellfish harvested from Areas 23 to 27 shall be wet stored or grown out only at approved licensed areas in Areas 23 to 27. Shellfish may be wet stored in tanks within licensed processing facilities where such activity is approved in the Quality Management Plan.
- (d) Shucked oyster shell from Areas 23 to 27 shall not be placed in or adjacent to the intertidal zone where it may be washed by the tide or where any entrapped crabs may reasonably travel to the shore until the shell refuse is sufficiently desiccated to kill any crab or crab larvae that may have accompanied the shipment.
- (e) Transport water from Areas 23 to 27 discharged in other areas shall be disposed of in such a manner that the water does not run back to the intertidal shore or enter intertidal waters.
- (f) Transport containers from Areas 23 to 27 shall be rinsed in such a manner that the water does not run back to the intertidal shore or enter intertidal waters.

Note: Additional requirements for harvest by species may be found in Part C.

12. Records

- 12.1 The licence holder shall maintain records relating to the licensed aquaculture activities throughout the species growing cycle for shellfish. Records shall be produced upon request by a fishery officer, fishery guardian, observer or inspector.
- 12.2 The licence holder shall record, at maximum within 24 hours, the importation or introduction of shellfish to the licensed area, the transfer of shellfish from the licensed area (see 12.6) and harvest for market sales, in a format approved by the Department.

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Note: The Importation, Introduction and Transfer Record Logbook (Appendix VI) is an approved format and is available upon request from the Department.

- 12.3 For the purposes of record keeping in the DFO approved format logbook only, licence holders with more than one licensed area (farm) located within in a Fisheries and Oceans Canada (DFO) Management Subarea may use a single logbook for those licensed areas and may consider their licensed areas as a single unit for recording importations, introductions and transfers. Routine introductions and transfers of licensed shellfish species may occur between such licensed areas as long as the individual licensed areas (farms) have a valid aquaculture licence for the species and type of culture activity. Such licensed areas (farms) may operate as a single unit without recording individual introductions and transfers between those licensed areas (farms).
- 12.4 The licence holder shall record the activity, species, number of containers and average container weight for each date that importation or introduction of shellfish occurs to the licensed area(s) from another other authorized source, from another licence holder or from another DFO Subarea location, including shellfish wet-stored from another source prior to going to market.
- 12.5 The licence holder shall record the activity, species, number of containers and average container weight for each date that transfer of shellfish occurs from the licensed area(s) to another DFO Subarea, to another licence holder or to market sale.
- 12.6 For transfers of shellfish that are leaving the licensed area for grow-out at another destination, (at a site held by another licence holder, or in a different Subarea), either a copy of the source Aquaculture Licence or the completed Importation, Introduction and Transfer Record Logbook white copy page shall accompany the shellfish to that destination. The completed white copy logbook page shall remain on file with records kept for that destination site.

Note: Container tagging requirements apply to shellfish products that are destined to market sales (Section 11.1)

- 12.7 The licence holder shall keep and maintain a log of facility inspections conducted under Section 3.4 and of equipment maintenance actions. The facility inspection and maintenance log above shall be made available for inspection upon request of a fishery officer, fishery guardian, observer, or inspector.

13. Annual Aquaculture Statistical Report

- 13.1 The licence holder shall complete and submit an Annual Aquaculture Statistical Report:
 - (a) for the period of January 1, 2012 to December 31, 2012, not later than January 25, 2013.

- (b) for the period of January 1, 2013 to December 31, 2013 not later than January 25, 2014.
- (c) Annual Aquaculture Statistical Reports shall be submitted to Fisheries and Oceans Canada at the following email address: fishstats@dfo-mpo.gc.ca

Note: The Annual Aquaculture Statistical Report may be found in Appendix VII and at the following web address: <http://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/shell-coq-eng.htm>

14. Processing

- 14.1 The licence holder shall not process fish at the licensed facility unless authorized by a valid processing licence issued by the appropriate government authority.

15. Administrative Matters

- 15.1 Unless otherwise noted in specific licence conditions, all other reports and submissions required by this licence shall be submitted by email, fax or mail to the Department at:

Aquaculture Management Division
 Pacific Region, Fisheries & Oceans Canada
 #200/#1410 – 401 Burrard Street
 Vancouver, BC, V6C 3S4
 Fax: (604) 666 1076
 Email: Shellfish.Aquaculture@dfo-mpo.gc.ca

PART C. Additional Conditions by Species or Activity

1. General Culture of Bivalve Species

In addition to conditions in Part B and Part C (3), where applicable, the following conditions are applicable if licensed for any of the following species:

Pacific Oyster	<i>Crassostrea gigas</i>
American Oyster	<i>Crassostrea virginica</i>
European Oyster	<i>Ostrea edulis</i>
Kumamoto Oyster	<i>Crassostrea sikamea</i>
East Coast Blue Mussel	<i>Mytilus edulis</i>
Olympia Oyster	<i>Ostrea conchaphila</i>
Gallo Mussel	<i>Mytilus galloprovincialis</i>
Japanese Scallop	<i>Mizuhopecten yessoensis</i>
Pacific (Hybrid)	<i>M. yessoensis x Patinopecten</i>
Giant Rock Scallop	<i>Crassadoma gigantea</i>
Pink Scallop, Spiny Scallop	<i>Chlamys rubida, Chlamys hastata</i>
Horse Clam	<i>Tresus capax</i>
Pacific Geoduck	<i>Panopea generosa</i>

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Littleneck Clams	<i>Protohaca staminea</i>
Manila Clams	<i>Tapes philippinarum</i>
Varnish Clams	<i>Nuttallia obscurata</i>
Butter Clams	<i>Saxidomus giganteus</i>
Cockles	<i>Clinocardium nuttallii</i>

1.1 The licence holder shall:

- (a) Land all harvested bivalves at a federally registered processing plant prior to sale for human consumption.
- (b) Mark intertidal tenure boundaries with the industry standard red concrete blocks as specified in Appendix VIII, or equivalent as approved on the Site Management Plan.
- (c) With respect to areas licensed for aquaculture and located within Baynes Sound, (portions of Subareas 14-8 to 14-11) comply with the Baynes Sound Conditional Management Plan that is in effect (see Appendix IX).
- (d) With respect to varnish clams (*Nuttallia obscurata*):
 - (i) Not seed, transplant or in any other manner engage in aquaculture activities with varnish clams other than harvesting for market sale.
 - (ii) Varnish clams may be harvested and retained as incidental catch.
- (e) With respect to Pacific Oyster, undertake spat collection activities in the following areas only:
 - (i) Pendrell Sound - portion of Subareas 15-5 - for Introductions and Transfers within and between Zones 3, 4, and 5.
 - (ii) Hotham Sound - Subarea 16-12 – for Introductions and Transfers within and between Zones 3, 4, and 5.
 - (iii) Pipestem Inlet - portion of Subarea 23-10 – for Introductions and Transfers within Zone 5 to Areas 23 to 27 only.
 - (iv) Nesook Bay – portion of Subarea 25-5 - for Introductions and Transfers within Zone 5 to Areas 23 to 27 only.
- (f) With respect to spat collection activities from locations identified in Section 1.1(e), notify the Department using the Spat Collection Notification Form in Appendix X, prior to setting out spat collection gear.

1.2 The licence holder shall not:

- (a) Cultivate, store, or harvest bivalves within 125 m of any floating living accommodation on the licensed area unless:

- (i) the cultivated bivalves are seed, and
 - (ii) a licence under *Management of Contaminated Fisheries Regulations* has been obtained for the licensed area to harvest seed from a prohibited area; or
 - (iii) An approved Zero Discharge Waste Management Plan is in place that reduces the prohibited harvest area to 25m (see Appendix XI).
- (b) Harvest bivalves within 125 m of any fin fish net pen unless an approved Integrated Multi-Trophic Aquaculture Management Plan is in place that specifies the prohibited harvest area.

2. General Culture of Sea Urchin/Sea Cucumber

2.1 In addition to conditions in Part B, the following conditions are applicable if licensed for any of the following species:

a) Sea Urchin:

Red	<i>Strongylocentrotus franciscanus</i>
Green	<i>S. droebachiensis</i>
Purple	<i>S. purpuratus</i>

b) Sea Cucumber: California *Parastichopus californicus*

2.2 If a licence holder is cultivating one or more of the species listed in Part C 2.1, the licence holder shall:

- (a) Related to his/her Harvest Plan
 - (i) Not less than 30 days prior to the first intended harvest at the licensed area, submit a written Harvest Plan to the Department for approval;
 - (ii) The Harvest Plan shall contain a summary of sea cucumber or sea urchin seeding or husbandry activities that have taken place, an estimate of inventory of marketable sea cucumber or sea urchin in the licensed area including wild set individuals, the projected harvest dates or number of harvest days, anticipated harvest amount for the current year, and the destination processing plant or plants.
 - (iii) Not harvest any sea urchins or sea cucumbers without a Harvest Plan approved by the Department; and
 - (iv) Follow and comply with the Harvest Plan approved by the Department at all times and have it available for inspection upon the request of a fishery officer, fishery guardian, observer, or inspector .

Note: Upon approval of the Harvest Plan the Department (or its designate) will provide the licence holder with an Aquaculture Harvest Notification Form for Sea Cucumber or Sea Urchin and a Sea Cucumber/Sea Urchin Aquaculture Landing Logbook.

(b) Related to Harvest Notification

- (i) Notify the Department not less than 72 hours prior to any Sea Cucumber/Sea Urchin harvest, using a completed Aquaculture Harvest Notification Form for Sea Cucumber or Sea Urchin (Appendix XII);
- (ii) Notify all contacts identified on the Aquaculture Harvest Notification Form for Sea Cucumber or Sea Urchin by facsimile or electronic mail.; and
- (iii) Submit an amended Notification (Appendix XII) if harvest plans change.

(c) Landing Reports

- (i) Complete an approved Sea Cucumber/ Sea Urchin Aquaculture Landing Logbook form for each shipment landed. A copy of the completed landing log shall accompany each shipment of harvested sea cucumber or sea urchin from licensed area to the buyer or processing plant.
- (ii) Scan and email or fax a copy of each days Landing Logbook form(s) to the following location not later than 24 hours following product landing:

Aquaculture Resource Management
Fax: 250-754-0391
or by email to shellfish.aquaculture@dfo-mpo.gc.ca

- (iii) Submit the completed DFO copy of Landing Logbook forms quarterly (i.e. during the 1st week of April, July, October and January) to:

Aquaculture Resource Management
1965 Island Diesel Way
Nanaimo, BC V9S 5W8
Fax: 250-754-0391
or by email to shellfish.aquaculture@dfo-mpo.gc.ca

Note: Licence holders are responsible for ensuring a scale, legal for trade, is used to obtain accurate weights of sea cucumber or sea urchin landed.

3. General Culture of Geoduck

3.1 In addition to conditions in Part B and Part C (1), where applicable for the species, the following conditions apply if licensed for

(a) Geoduck (*Panopea generosa*)

3.2 Site Marking

The licence holder shall mark and maintain boundary marking of the licensed area as follows:

(a) In intertidal areas of the licensed area (shallower than chart datum), immediately upon receipt of an aquaculture licence for geoduck and before seeding or harvesting, mark tenure boundaries with the industry standard red concrete blocks as specified in Appendix VIII or equivalent as approved on the Site Management Plan.

(b) In subtidal areas of the licensed area (deeper than chart datum), immediately upon receipt of an aquaculture licence for geoduck and before seeding or harvesting, mark the tenure boundaries of the licensed area in the following manner, or by other means explicitly approved in writing by the Department:

(i) with 25 lb cement blocks spaced every 50 meters and bounded by sinking ground line.

3.3 Seeding

(a) The licence holder shall not seed a new site without authorization from the Department.

Note: authorization may be dependant on a pre-seed fishery. The requirement for a pre-seed fishery will determined by the Department.

(b) Prior to seeding a new site the licence holder shall collect tissue samples from 100 individual geoducks from wild stocks within the **subtidal** licensed area and submit to the Department.

Note: Contact the DFO genetics lab at 250 756-7316 for specific equipment and instructions.

(c) The licence holder shall obtain separate authorization to transfer seed to the licensed area.

Note: An Introductions and Transfers licence issued under Section 56 of the Fishery General Regulations is required prior to the transfer of seed. Application for this licence must be made to the Introductions and Transfers Committee at famitc@dfo-mpo.gc.ca. Application forms are available on the website at <http://www.dfo-mpo.gc.ca/aquaculture/regions/pac/introduction-eng.htm>.

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3.4 Harvest Plan

The licence holder shall:

- (a) At least 30 days prior to the first intended harvest at the licensed area, submit a written Harvest Plan to the Department for approval;
- (b) The Harvest Plan shall contain a summary of geoduck seeding and husbandry activities that have taken place, an estimate of inventory of marketable geoduck in the licensed area including wild set individuals, the projected harvest dates or number of harvest days, anticipated harvest amount for the current year, and the destination processing plant or plants.
- (c) Not harvest any geoduck without a Harvest Plan approved by the Department; and
- (d) Follow and comply with the Harvest Plan approved by the Department at all times and have it available for inspection upon the request of a Fishery Officer.

Note: Upon approval of the Harvest Plan the Department (or its designate) will provide the licence holder with a Aquaculture Harvest Notification Form for Geoduck (Appendix XII) Geoduck Aquaculture Landing Logbook, Geoduck Tag Inventory Record, and site specific Serial Numbered Tags.

3.5 Harvest Notification

The licence holder shall:

- (a) Notify the Department 72 hours prior to any Geoduck harvest, using a completed Aquaculture Harvest Notification Form for Geoduck (Appendix XII);
- (b) Notify all contacts identified on the Aquaculture Harvest Notification Form for Geoduck by facsimile or electronic mail; and
- (c) Submit an amended Aquaculture Harvest Notification Form for Geoduck (Appendix XII) if harvest plans change.

3.6 Harvest Container Tags

- (a) The licence holder shall attach a completed site specific Serial Numbered Tag to each container of harvested geoducks on the vessel or beach where harvested. No container shall be left untagged on the site or during transport.
- (b) Tags are to be visible and remain in the containers of harvested geoducks until delivered to a registered shellfish processing plant.

- (c) Disposition of tag numbers shall be recorded on a Geoduck Tag Inventory Record. Geoduck Tag Inventory Records shall be kept up to date and shall be made available for inspection upon request. Lost or stolen tags must be reported to the Department immediately.

Note: Serial Numbered Tags and Tag Inventory Records are available from the Department (or its designate) after approval of the Harvest Plan.

3.7 Landing Reports

The licence holder shall:

- (a) Complete an approved Geoduck Aquaculture Landing Logbook form for each shipment landed. A copy of the completed landing log must accompany each shipment of harvested geoduck from the licensed area to the registered processing plant.
- (b) Scan and email or fax a copy of each days Landing Logbook form(s) to the following location not later than 24 hours following product landing:

Aquaculture Resource Management
Fax: 250-754-0391
or by email to shellfish.aquaculture@dfo-mpo.gc.ca

- (c) Submit the completed DFO copy of Landing Logbook forms quarterly (i.e. during the 1st week of April, July, October and January) to:

Aquaculture Resource Management
1965 Island Diesel Way
Nanaimo, BC V9S 5W8
Fax: 250-754-0391
or by email to shellfish.aquaculture@dfo-mpo.gc.ca

Note: Licence holders are responsible for ensuring a scale, legal for trade, is used to obtain accurate weights of geoduck landed and recorded.

Note: All geoduck brood stock must be obtained via Brood stock Collection Permit issued by the Minister. In addition, an Introductions and Transfers licence is required to transfer brood stock to a hatchery.

PART D. Information and Requirements for Shellfish Aquaculture Licence Holder

Appendix I Elements of a Site Management Plan

1. Information provided as part of the Shellfish Site Management Plan (the management plan for the licensed area) will, at a minimum, include the following elements:

- Location and legal description of the site, including map(s)
- Culture Species
- Type of culture conducted at the site i.e. intertidal, subtidal on/in bottom, deepwater suspended, nursery operation
- Culture gear and structures details including rafts, longlines, nets, predator nets, etc. and the amount and placement of gear and structures
- Licence area layout, structures, boundary marking where applicable
- Maximum estimated production of cultured fish by species from this site per year or growing cycle
- Site infrastructure inspection and maintenance plans
- Waste disposal including sewage from floating living accommodation, biofouling and other debris

2. A Shellfish Site Management Plan template, as part of the Provincial/ Federal Pacific Shellfish Aquaculture Application, may be obtained from Front Counter BC.

Appendix II Attestation as to the Design and Structural Integrity of a Shellfish Aquaculture Operation

As required under Section 3 of the conditions of a **Shellfish Aquaculture Licence**: The licence holder shall have the facility (other than intertidal growing area) inspected by a qualified individual who can confirm and attest that the facility design, equipment and anchoring systems are designed and installed in such a way and using such equipment as to be able to withstand the prevailing oceanographic and meteorological conditions of the licensed location. The inspection is required when a new site is first installed, or when changes are made to the infrastructure. The Qualified Individual shall provide an attestation that shall be kept on file by the licence holder and provided for inspection upon request of the Department.

A “Qualified Individual” means a licence holder, or an individual employed by or contracted by the licence holder who, in the opinion of the licence holder, possesses a combination of knowledge, expertise and experience necessary to complete the task and who can provide an attestation to the integrity of new or amended facilities.

I hereby attest that I am a Qualified Individual under the above noted definition:

Name: _____ Ph: _____

Address: _____ email: _____

My qualifications, knowledge and experience to accomplish the task are as follows:

I hereby attest and confirm that I did carry out an inspection of the shellfish aquaculture site located at: _____

Aquaculture Licence Number: _____ and

Aquaculture Land File Number: _____ on the date: _____,

and that the facility, including the equipment and anchoring systems are designed and installed in such a way and using such equipment as to be able to withstand the prevailing oceanographic and meteorological conditions of the licensed location.

Please print name

Signature

Date

Appendix III Introductions and Transfers

Sections 54, 55 and 56 of the Fishery (General) Regulations, made under the federal *Fisheries Act* allow the Minister to issue a licence to release fish into fish-bearing waters or to a fish-rearing facility.

Application for a licence must be made to the Introductions and Transfers Committee at famitc@dfo-mpo.gc.ca. Application forms for an Introductions and Transfers licence are available on the Department's website at: <http://www.dfo-mpo.gc.ca/aquaculture/regions/pac/introduction-eng.htm>.

Shellfish Transfer Zones

Figure 1 shows the five zones established for shellfish introductions and transfers in BC. These zones are generally delineated based on definable oceanographic and ecographic discrete areas (e.g. oceanic vs. inside waters). Consideration is also given to historical movements of shellfish in the aquaculture and commercial fisheries sectors for trade and commerce. For consistency and clarity, the zones are defined by Fisheries and Oceans Canada (DFO) Pacific Fisheries Management Areas* as described in and Figure 1 and Table 1(below).

The terms of a General Shellfish Transfer Licence (GSTL) specify the conditions under which licence holders may move shellstock within and between zones.

Only licensed shellfish growers will be free to move stocks between licensed shellfish growing facilities ***within the same zone*** under the conditions of their Shellfish Aquaculture Licence as long as the receiving facilities are licensed for the species to be transferred

Additional authority under a Specific Shellfish Transfer Licence (SSTL) Conditions amendment may be required for species and or /zones not listed below.

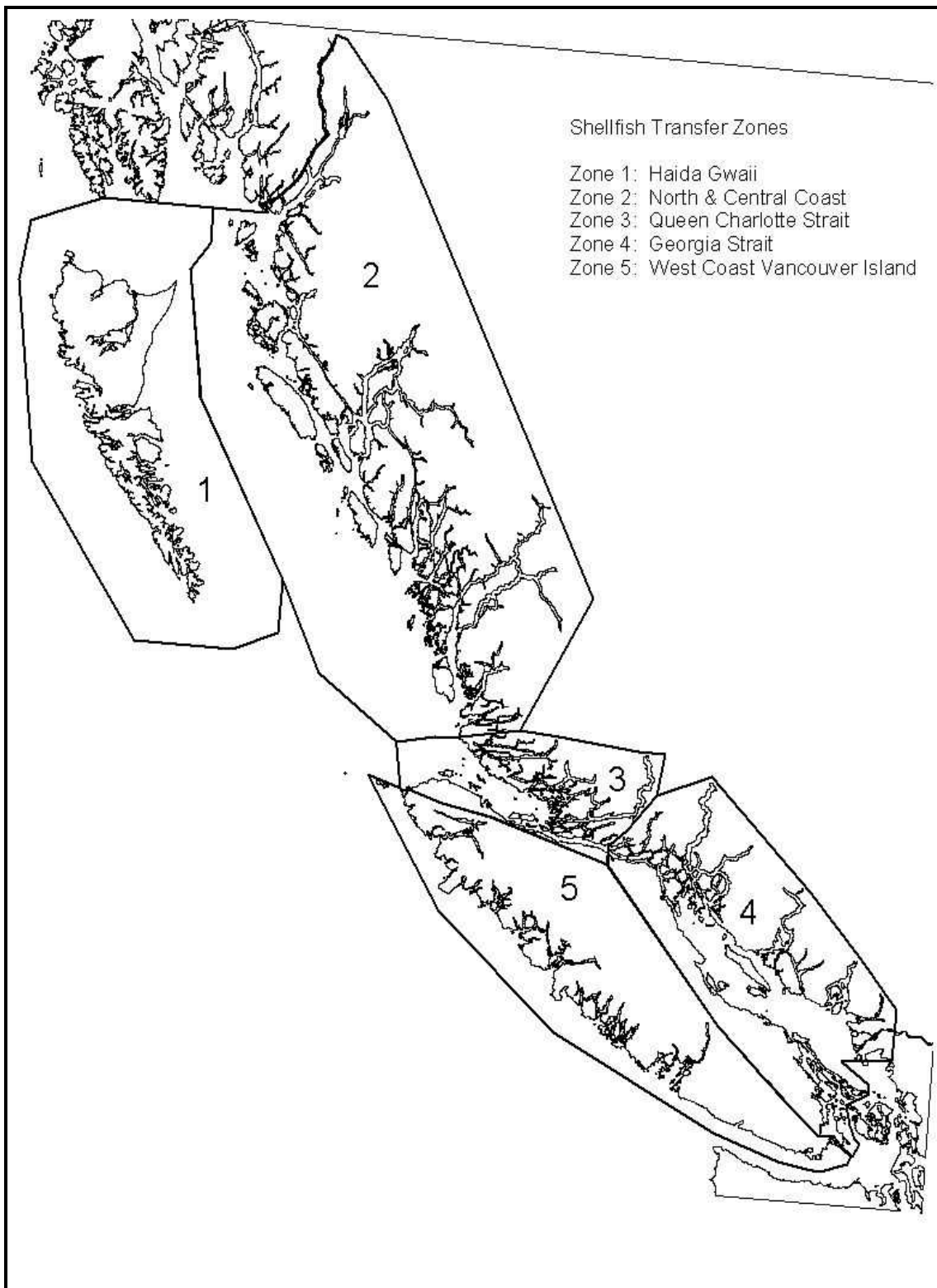


Figure 1. Map of Shellfish Transfer Zones

Table 1: Description of Shellfish Transfer Zones

<i>Zone</i>	Name	Description
1	Haida Gwaii	Contiguous waters surrounding Haida Gwaii within Areas 101, 102 and 142, and Areas 1 and 2.
2	North & Central Coast	Contiguous waters of the mainland coast within Areas 103 to 110, inclusive and Areas 3 to 10, inclusive.
3	Queen Charlotte Strait	Contiguous waters of Queen Charlotte and northern Johnstone Straits within Areas 111, 11 and 12.
4	Georgia Strait	Contiguous waters of southern Johnstone, Georgia and Juan de Fuca Straits within Areas 13 to 18, 19-4, 19-5, 19-6, 19-7, 19-8, 19-9, 19-10 inclusive, and Area 28 and 29.
5	West Coast Vancouver Island	Contiguous waters of the west coast of Vancouver Island within Areas 121 to 127, inclusive, Subareas 19-1, 19-2, 19-3, and Areas 20, to 27, inclusive.

SHELLFISH ZONES BY SPECIES

Shellfish already in natural waters may be susceptible to diseases or parasites found in that area. Not all disease and parasites are common to all areas and so movements of shellfish from one zone to another present risk of disease transmission, especially if a disease or parasite known in one zone is not known to occur in a receiving zone. Similarly, there may be risks of adverse ecological and genetic effects from moving shellfish from one zone to another. Based on our current knowledge of shellfish diseases and parasites in BC waters, and in consideration of ecological and genetic concerns, the following guidelines have been developed for movements of shellfish in natural waters.

Non-native Species

Table 2: Movement of Non-native Shellfish within Natural Waters

Species	From	To	Licence	Comments
Oysters Pacific	Zones 1 & 2	Zones 1 & 2 Zones 3, 4 & 5	GSTL SSTL	<i>See Note 1</i>
	Zones 3, 4	Zones 3, 4, 5	GSTL	
		Zones 1 & 2	SSTL	
	Zone 5 *	All movements	SSTL	
Oysters European	All Movements	All Movements	SSTL	<i>See Note 2</i>

American Kumamoto	All Movements	All Movements	SSTL		
	Zones 1, 2 &3 Zone 4 Zone 5*	Other Zone Zone 4 No Movement	SSTL GSTL		
Clams:	Manila	Zones 1, 2, 3, & 4	All Movements	GSTL	<i>See Note 3</i>
		Zone 5*	No Movement		<i>See Note 4</i>
	Varnish	No Movement	No Movement		
Mussels	Same Zone	Same Zone	GSTL	<i>See Note 5</i>	
	Any Zone	Any Other Zone	SSTL		
Japanese Scallops (incl. hybrid)	Same Zone	Same Zone	GSTL	<i>See Note 6</i>	
	Any Zone	Any Other Zone	SSTL		

* movements in Zone 5 are restricted to within Pacific Fishery Management Areas 23 to 27 in order to prevent the inadvertent spread of European Green Crab from these Areas to other areas of the coast

Notes:

1. Pacific Oysters (*Crassostrea gigas*): Zones are divided north and south.

Rationale: To date, two infectious diseases of oysters occur in BC, mikrocytosis and nocardiosis. *Mikrocytos mackini*, the causative agent of Denman Island disease, is thought to be ubiquitous throughout the Strait of Georgia, and has been detected at several locations in on the West Coast of Vancouver Island and Queen Charlotte Strait. Nocardiosis, caused by the Actinomycete bacterium, *Nocardia crassostreae*, seems to be confined to warm water conditions in the Strait of Georgia area. Due to the extensive historical exchange of oysters throughout southern British Columbia there is little justification for dividing this area into separate zones. However, the results of laboratory experiment indicate that *M. mackini* is more pathogenic to oysters under cool water conditions. Thus, Denman Island disease may be more problematic to oysters cultured in northern areas of the Province. Until further information is available northern BC will be considered a separate zone in attempts to protect this region from the consequences of an inadvertent disease introduction.

2. Oysters (*Ostrea edulis*; *Crassostrea virginica*; *Crassostrea sikamea*)

Although European and American oysters were introduced in limited areas to BC at the turn of the last century, they did not naturalize to the extent that the Pacific oyster has. Some remnant populations still exist in the wild and on a few tenures in Zone 4 and 5. In addition to the disease concerns expressed in Note 1, there may also be ecological and genetic concerns associated with these species that were not considered at the time of initial introduction. These concerns will need to be addressed through Risk Assessment before more widespread introductions and transfers of these two species to other zones will be considered.

Kumamoto oysters have received a satisfactory Risk Assessment for Zone 4 and will continue to be allowed movement within that zone under a GSTL. All other movements require an SSTL.

3. Manila clams (*Venerupis philippinarum*): Entire coast is one zone)

Rationale: To date, no infectious diseases of concern have been detected in clams in British Columbia, despite extensive sampling. [This is not the case internationally. A protozoan pathogen, *Perkinsus* sp., is causing significant mortalities in some locations along the Pacific coast of Asia, and brown ring syndrome (caused by *Vibrio tapetis*) is detrimental to clam production in Europe.] The apparent lack of pathogens in manila clams in BC and their natural colonisation of most areas in southern BC justify having only one zone for this species.

4. Varnish clams (*Nuttallia obscurata*): Harvesting only. No movements are allowed.

Rationale: Varnish clams are an invasive exotic that probably came to British Columbia in the early 1980. Since then, they have proliferated on beaches in the Georgia Basin to the extent that some shellfish culture beaches are overrun with this species. While little is known about diseases particular to the varnish clam, its invasive nature warrants limiting any intentional movements to other areas where it is currently not found until its biology and control are better understood.

5. Mussels (*M. galloprovincialis* and *M. edulis*): Each zone applies.

Rationale: Blue and gallo mussels are now cultured in limited amounts in all zones; however there is little information on the geographical distribution of diseases affecting native and non-native mussels. Therefore, all introductions of non-native mussels to any zone will require an application under SSTL so that a health check can be performed prior to movement. However, on the basis of the oceanographic separation of waters among zones, licensed shellfish growers are permitted under GSTL to transfer their non-native mussel stocks between aquaculture facilities within the same zone, providing the receiving facilities are licensed for the species to be moved.

6. Japanese Scallops and Hybrids (*Mizuhopectin yessoensis*, and *M. yessoensis* x *P.caurinus*): Each zone applies.

Rationale: The parasite *Perkinsus qugwadi* is indigenous to BC and does not appear to affect native swimming scallops; however, it is a lethal pathogen of Japanese scallops. Its distribution seems to be patchy within BC such that some areas are known to harbour this organism and others not. To date, several batches of seed produced in a BC hatchery in different years have been examined for pathogens and have been found free of infection.

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However, to prevent the inadvertent spread of this pathogen to unaffected areas, scallop stocks placed in the environment at one location must not be moved to the open waters of a second location. Movements between zones require a SSTL application so that the health condition of the stock can be verified.

This is likely a disease of concern only to scallop growers and their cultured stock; therefore, precautions against infecting neighbouring aquaculture operations in the same zone must be taken. Licensed scallop growers should exercise caution when moving non-native scallops between sites within the same zone during grow out, and are advised to contact a Department Fish Health specialist for information on the occurrence of this pathogen in their zone.

Native Species

Table 3: Movement of Native Shellfish within Natural Waters

Species	From	To	Licence	Comments
Native Olympia Oysters	All Movements	All Movements	SSTL	<i>see Note A & Note 9</i>
Clams:				
Littleneck	Same Zone Any Zone	Same Zone Any Other Zone	GSTL SSTL	<i>see Note 3, Table 3 and Note A</i>
Geoduck	All Movements	All Movements	SSTL	<i>see Note A & Note 10</i>
Butter	Same Zone One Zone	Same Zone Other Zone	GSTL SSTL	<i>see Note A</i>
Cockles	Same Zone Any Zone	Same Zone Any Other Zone	GSTL SSTL	<i>see Note A</i>
Mussels	Same Zone Any Zone	Same Zone Any Other Zone	GSTL SSTL	<i>see Note A</i>
Scallops	Same Zone Any Zone	Same Zone Any Other Zone	GSTL SSTL	<i>see Note A</i>
Spot Prawn	Same Zone Any Zone	Same Zone Any Other Zone	GSTL SSTL	<i>see Note A</i>
Urchins	Same Zone Any Zone	Same Zone Any Other Zone	GSTL SSTL	<i>see Note A</i>
California Cucumber	Same Zone Any Zone	Same Zone Any Other Zone	GSTL SSTL	<i>see Note A</i>

Note A: Although there is a great deal of biological and ecological information for most native species, health and genetic information upon which to base zone delineation for any particular

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species is not always available. Information on known indigenous parasites and pathogens indicates that their distributions are not uniform throughout the Province. Population and stock genetics for most native shellfish species are not well understood; however, it is reasonable to assume that exchange of genetic material between conspecific stocks in different areas of the Province is either oceanographically restricted or naturally infrequent, depending on the circumstances. Consequently, a more cautious approach to transfers of native species from an area is required to prevent adverse health and genetic impacts to resident native stocks in the receiving area.

7. Native (Olympia) Oyster (*Ostrea conchaphila*): All movements require SSTL.

Although once abundant throughout the Pacific Northwest, the native oyster was fished almost to extinction at the turn of the last century. Small remnant populations exist. In 2004, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed the native oyster as a species of “Special Concern.” Species of special concern are those which are sensitive to habitat change and human activities. Movement of this species *for any purpose* will be reviewed by the ITC on a case-by-case basis.

8. Geoduck Clam (*Panopea abrupta*): All movements require a SSTL.

Geoduck aquaculture and enhancement is still under development. There are concerns about disease and genetic impacts, as well as proper management and control of movements. All movement of cultured geoduck will be reviewed under SSTL in consultation with DFO Fisheries Management.

Appendix IV List of Known Shellfish Diseases of Concern

Oysters:

Mikrocytos spp.
Nocardia crassostreae
Bonamia spp.
Haplosporidium spp.
**Marteilia* spp.
**Perkinsus marinus*

Clams:

Nuclear Inclusion X (NIX) of Pacific razor clams
(*Siliqua patula*) Haemocytic neoplasia of soft shell clams (*Mya arenaria*)
**Perkinsus* spp.
**Vibrio tapetis* (cause of brown ring disease)

Mussels:

**Marteilia* spp.

Scallops:

Perkinsus qugwadi (SPX agent)

Crayfish:

Aphanomyces astaci (cause of crayfish plague)
**Psorospermium* spp. (Protozoan Disease)
**Thelohania* spp. (Microsporidian Disease)

Shrimp and prawns:

Sylon (Rhizocephalan Disease) of Shrimp and Prawns
Hematodinium-like Organism of Pandalid Shrimp
Rickettsia-like Infection of Pandalid Shrimp
*Various viral disease of Penaeid Shrimp

Sea Urchins:

**Paramoeba invadens*
*Endoparasitic nematode infection

Abalone:

Labyrinthuloide haliotidis
**Candidatus Xenohaliothis californiensis* (Rickettsiales-like prokaryote responsible for Withering Syndrome)
**Margolisiella haliothis* (Abalone kidney coccidia)
**Perkinsus olseni*
**Terebrasabella heterouncinata* (Sabellid polychaete invader)

*Indicates pathogens that have not been detected in British Columbia

Appendix V Marine Mammal Accidental Mortality Report

MARINE MAMMAL INCIDENTAL REPORTING FORM PLEASE REPORT ALL INCIDENTS UPON DISCOVERY (fax 1-604-607-4156)

Company information Company: _____ Licence #: _____ Site Name: _____ Contact name: _____ Address: _____ Phone: _____ Email: _____	Dates Reported to ORR Date/time: _____ / _____ Discovery date/time: _____ / _____ Location details Pen #: _____ <input type="checkbox"/> Fish on site <input type="checkbox"/> No fish on site **indicate how long site has been without fish on site** Avg size of fish On site: _____	File numbers RR #: _____
---	--	------------------------------------

Incident Details Harbour seal California sea lion Other, please specify: _____

Animal condition	Incident type	System Component
Fresh or Adv-mod decomposition	Accidental drowning / entanglement	Containment net, predator net, shark guard, other(please specify)

Mitigation Measures

Describe in detail the mitigation measures in place at this facility to prevent drowning and/or entanglement (these can include infrastructure and/or procedures)
Describe in detail the circumstances that led to the failure of these mitigation measures.
Describe in detail what corrective measures are being undertaken to prevent recurrence of this event. (Please include procedural and/or infrastructural modifications.)

Actions taken with Marine Mammal:

- | | |
|--|---|
| <input type="checkbox"/> Collected, stored until DFO advises further | <input type="checkbox"/> Collected, discarded with fish mortalities |
| <input type="checkbox"/> Photograph of tooth dentition pattern with date stamp | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Released | |

DFO requests all dolphins & porpoises are collected and stored on ice until arrangements can be made for their collection & necropsy

Comments: _____

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Appendix VI Importation, Introduction, and Transfer Record Logbook sample



2012-13 Shellfish Aquaculture
Importation, Introduction and Transfer
Record Logbook

► LICENCE HOLDER Name: _____
 ► Address: _____

Report for the licensed aquaculture areas(s) located in DFO Subarea: -

Report for Licensed Area(s):

AQSF#:	Landfile#:	AQSF#:	Landfile#:

► REPORT DETAILS

ACTIVITY DATE (mm/dd/yyyy)	SPECIES Common Name	ACTIVITY CODE: (see below)	Number of Containers	Est. Avg Container Wt (lb)	Container Type (see below)	Source of Shellfish arriving at the Site (licence # or other)	Destination of Shellfish being removed from the site (destination site licence #; or market sale processor)

Activity Codes: please use : **(IP)** Importation: **(IN)** Introduction: or **(TS)** Transfer ; **(H)** Harvest for Market sale
 Container Type: please use : **(B)** Bag: **(T)** Tote: **(C)** Crate: **(O)** Other

Appendix VII Annual Aquaculture Statistical Report (AASR) : Page 1



Fisheries and Oceans
Pêches et Océans

Reporting Year (Jan 1-Dec 31):	20 _____
DFO Licence #:	_____
Licence Holder:	_____
Site Reference #	_____
Land File (Tenure) #	_____
Legal Description & Location:	_____
Grand Total Sales \$	

Annual Aquaculture Statistical Report

Confidential within the provisions of the *Access to Information and Privacy Act*

SHELLFISH

Introduction

Fisheries and Oceans Canada is responsible for the collection and analysis of production statistics for the British Columbia aquaculture industry. This information is collected via the Annual Aquaculture Statistical Reports (AASR). All aquaculture licence holders are required to complete the AASR under Section 61 of the Federal Fisheries Act. The completed forms are due no later than January 25 of the following licence year. The 2012 report is due January 25, 2013 and the 2013 report is due on January 25, 2014.

Instructions for Completing the AASR

- Complete all sections (1 through 5) on this form.
- The completed form may be sent by fax to (604) 666 1076. An electronic version of the form is available on request or may be downloaded from <http://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/shell-coq-eng.htm>, completed and submitted via email to fishstats@dfo-mpo.gc.ca.

Section 1 - Harvest For Food Market Sales If nil, please check here:

Species	Gallons	Value (\$)	Dozens	Value (\$)	Pounds	Value (\$)
Total Food Market Sales \$						

Section 2 - Processing Information If not applicable please check here:

▶ Who processed your shellfish? _____
▶ Did you own the shellfish after processing and sell to market (i.e. have your shellfish custom-processed)? <input type="checkbox"/> No <input type="checkbox"/> Yes, all of it <input type="checkbox"/> Yes, a portion of it. Provide details: _____

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Appendix VII Continued: Annual Aquaculture Statistical Report (AASR): Page 2

DFO Lic#: _____

SHELLFISH - Annual Aquaculture Statistical Report - 2012-2013 (continued)

Section 3 - Sales of Live Seed or Larvae for Restocking

If nil check here:

(Include SALES ONLY not purchases or acquisitions)

Species	Larvae or Seed	Type of Cultch*	Total Number	Total Value (\$)
Total Live Seed or Larvae Restocking Sales \$				

* Singles, Vexars, Tubes, Chinese Hats, Diamond Chip, Other (specify)

Section 4 - Stock on Hand and Future Plans - Reporting Year: _____

▶ Was any stock brought on-site during the reporting year (Jan1 to Dec 31)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If YES, what species?	_____	
If YES, amount by species?	_____	
▶ Did this site have any stock on hand on December 31, of the reporting year?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If YES, what species?	_____	
▶ Will this site be operating next reporting year?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
▶ Additional comments on site activity?	_____	

Section 5 - Declaration

DECLARATION:		
I have read all information contained on this report and it is true to the best of my knowledge and belief.		
_____ Name (please print)	_____ Signature	_____ Date
_____ Position in Company	_____ Email address	_____ Phone #

DFO Rev. Jan 11 2012

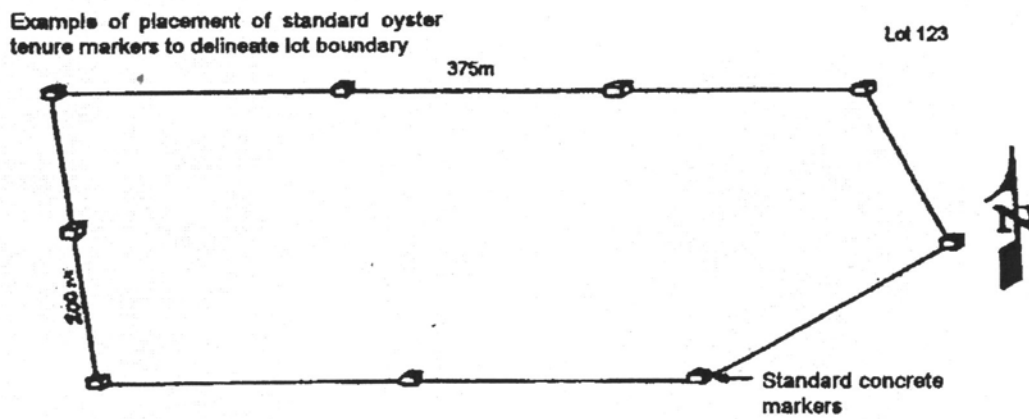
Appendix VIII Intertidal Tenure Marking Method

Standard marking methods for intertidal shellfish aquaculture tenures and licensed areas.

In intertidal areas of the licensed area (shallower than chart datum), tenure boundaries must be marked with the industry standard red concrete blocks as specified below **or** with alternative methods as approved in a site management plan.

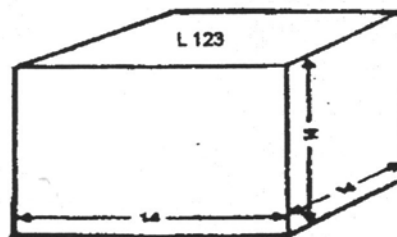
Example of placement of standard intertidal tenure markers to delineate lot boundaries

Standard Tenure Markers



STANDARD MARKER

- Marker to be of standard red coloured concrete, 14 x 14 x 14
- markers to be visible in line of sight of the adjacent lot



Example of Placement of Standard Markers to Delineate Tenure Boundary

Appendix IX Baynes Sound Conditional Management Plan Summary

The Baynes Sound Conditional Management Plan sets special bivalve shellfish harvest conditions for portions of Pacific Fishery Management Areas 14-8 and 14-15 (portions of Baynes Sound).

Licence holders within the areas described below shall not harvest bivalve shellfish during closure conditions identified in the Baynes Sound Conditional Management Plan unless authorized by a special licence under the authority of the *Management of Contaminated Fisheries Regulations*.

1. Conditions Requiring Closure

If there is shown to be a presence of marine biotoxins exceeding the CSSP standard (80 ug/100 g) the areas will close under the authority of the *Management of Contaminated Fisheries Regulations*.

Each Section of the Baynes Sound Conditional Management Plan areas have been identified as requiring closure under the following conditions:

- 1.1 CMP Section A (sanitary closure area 14.22A)
For the annual period rainfall exceeding 35 mm, over a 24 hour period (10 am to 10 am Pacific Standard Time) recorded at Comox Airport in effect for the period Jan 1 to Dec 31.
- 1.2 CMP Section B (sanitary closure area 14.22B)
For the annual period, rainfall exceeding 40 mm, over a 24 hour period (8 am to 8 am) recorded at the Fanny Bay Oyster Co. rainfall station, and from the period May 15th to June 15th.
- 1.3 CMP Section C (sanitary closure area 14.22C)
For the period from May 1 to December 31 rainfall exceeding 40 mm, over a 24 hour period (8 am to 8 am) at the Fanny Bay Oyster Co. rainfall station, and from the period May 15th to June 15th.

2. Description and Location of Baynes Sound Conditional Management Plan Areas

Baynes Sound Conditional Management Plan area boundaries may be revised from time to time. For current area boundary descriptions for sanitary closures 14.22A, 14.22B and 14.22C, and current open or closed status information check on the internet at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/contamination/sani/area-secteur-14/area-secteur-14-eng.htm>

or contact the nearest Fisheries and Oceans Canada office.

AQSF COL 3-Feb-2012

Appendix X Oyster Spat Collection Notification Form

This form shall be submitted to Fisheries and Oceans Canada offices noted below at least 24 hours prior to setting out spat collection gear for Pacific Oyster in public marine waters in the following locations:

	Location (check applicable)	DFO Subarea	Nearest Point of Land description
<input type="checkbox"/>	Pendrell Sound	15-5	
<input type="checkbox"/>	Hotham Sound	16-12	
<input type="checkbox"/>	Pipestem Inlet	portion of 23-10	
<input type="checkbox"/>	Nesook Bay	portion of 25-5	

Collection will be undertaken by:

Licence Holder Name: _____ DATE: _____

Or if applicable:

Harvester Name: _____

Spat Destination:

DFO Aquaculture Licence No. _____ Land File No. _____

Location: _____ DFO Subarea: _____

Designated Harvest Vessel Name (if applicable): _____

VRN or DOT Registration #: _____ Vessel Master : _____

Scheduled Spat Harvest Commencing Date (dd/mm/yy):	Estimated Arrival Date at Destination(s): (dd/mm/yy):

Offices for Notification	Facsimile	Telephone	Email Address
DFO Radio Room, Vancouver	(604) 607-4156	(604) 607-4186 (604) 607-4187 1-800-465-4336	PACRadioRoomRHQ@dfo-mpo.gc.ca
DFO Aquaculture Management, Nanaimo	(250) 754-0391	(250) 754-0210	Shellfish.Aquaculture@dfo-mpo.gc.ca

Appendix XI Zero Effluent Discharge Facility and Zero Discharge Waste Management Plan

Shellfish licence holders with floating living accommodation within the licensed area are subject to the standard Prohibition Order that prohibits bivalve shellfish harvest within 125 m of the floating living accommodation, unless the harvest is for seed (as defined in Part A) and is authorized by a licence issued under the *Management of Contaminated Fisheries Regulations*.

Provisions under the Canadian Shellfish Sanitation Program (CSSP) allow for a reduction of the bivalve shellfish harvest prohibition zone surrounding floating living accommodations within the shellfish tenure from 125 to 25 metres where a Zero Discharge Waste Management Plan is approved by the Pacific Region Interdepartmental Shellfish Committee and the implementation of the approved waste management plan is a condition of the shellfish aquaculture licence.

The 125 metre prohibited bivalve shellfish harvest zone may be reduced to 25 meters when an approved zero waste management plan is implemented as follows:

1. The licence holder shall :
 - 1.1 Construct the facility in accordance with the approved Zero Discharge Waste Management Plan;
 - 1.2 Keep a copy of the approved Zero Discharge Waste Management Plan on site at all times and make it available upon the request of a fishery officer, fishery guardian, observer, or inspector;
 - 1.3 Maintain and operate the facility according to the provisions of the approved Zero Discharge Waste Management Plan ;
 - 1.4 Periodically inspect the components of the facility related to the approved Zero Discharge Waste Management Plan;
 - 1.5 Maintain inspection and maintenance records related to the approved Zero Discharge Waste Management Plan that are available upon the request of a fishery officer, fishery guardian, observer, or inspector.
2. Failure to comply with the approved Zero Discharge Waste Management Plan and conditions of licence shall result in a bivalve shellfish harvest prohibition zone of 125 meters surrounding floating living accommodations.

Appendix XII Aquaculture Harvest Notification Form

Geoduck, Sea Urchin or Sea Cucumber

This form must be submitted to Fisheries and Oceans Canada offices noted below at least 72 hours prior to harvest of any cultured Geoduck, Sea Urchin or Sea Cucumber.

<u>Check one:</u>	Geoduck	Sea Cucumber	Sea Urchin	

Licence Holder Name: _____ Date: _____

Or if applicable:

Harvester/Vessel Master Name: _____ Cell Ph. # _____

DFO Aquaculture Licence No: AQSF _____ Land File No. _____

Location: _____ DFO Subarea: _____

Designated Harvest Vessel Name (if applicable): _____

VRN or DOT Registration #: _____ Vessel Master: _____

Landing Location (public wharf or other):

Buyer / Processing Plant Destination: _____

Scheduled Harvest Commencing Harvest Date (dd/mm/yy)	Product Arrival at Processing Plant Date (dd/mm/yy)

Offices for Notification	Facsimile	Telephone	Email Address
DFO Radio Room, Vancouver	(604) 607-4156	(604) 607-4186 (604) 607-4187 1-800-465-4336	PACRadioRoomRHQ@dfo-mpo.gc.ca
DFO Aquaculture Management, Nanaimo	(250) 754-0391	(250) 754-0210	Shellfish.Aquaculture@dfo-mpo.gc.ca

