

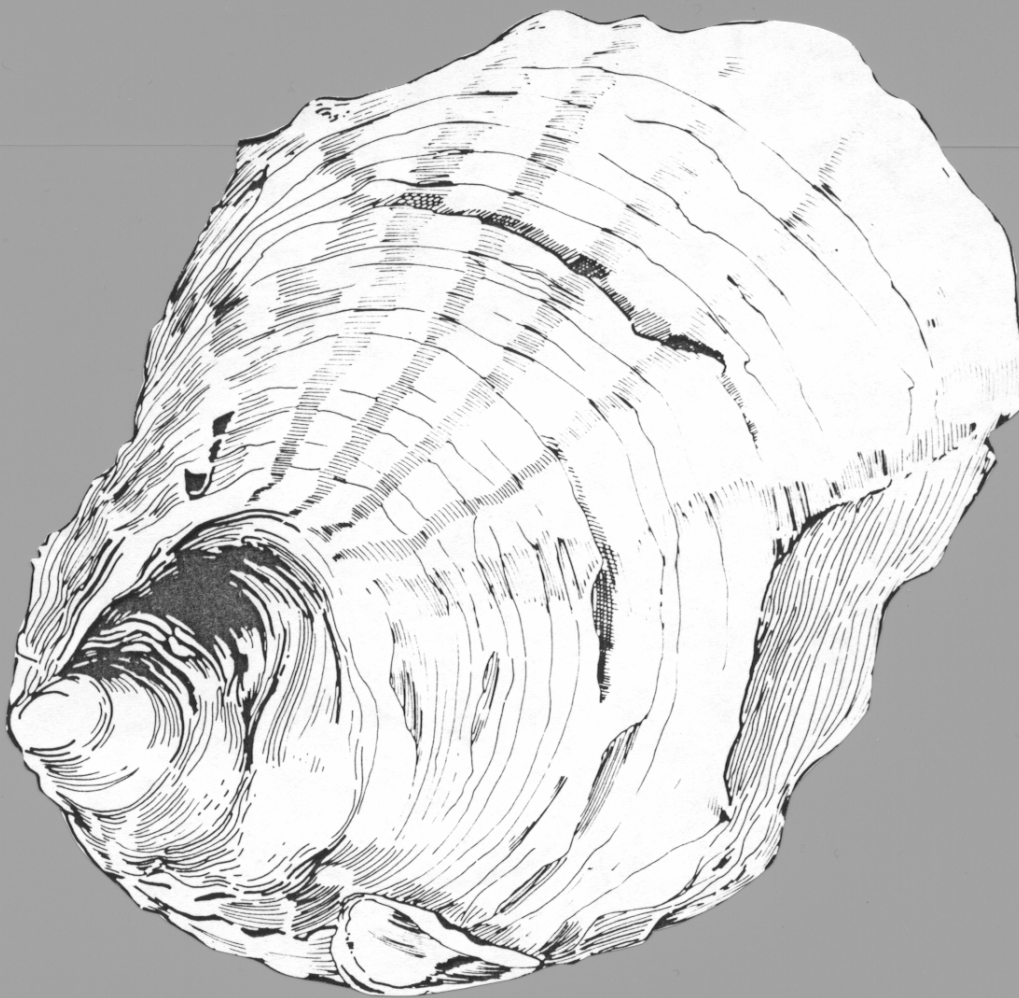


Fisheries and Oceans
Canada

Pêches et Océans
Canada

**AMERICAN OYSTER (*Crassostrea virginica*)
INTEGRATED FISHERY MANAGEMENT PLAN**

**Eastern New Brunswick area
Gulf Region**



2009-2012

Canada

**AMERICAN OYSTER INTEGRATED FISHERY
MANAGEMENT PLAN (IFMP)**

**EASTERN NEW BRUNSWICK AREA
GULF REGION**

2009-2012

FOREWORD

This IFMP is not a legally binding instrument which can form the basis of a legal challenge. The IFMP can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

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MANAGEMENT PLAN**

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2009-2012

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AMERICAN OYSTER INTEGRATED FISHERY MANAGEMENT PLAN

Eastern New Brunswick Area

Gulf Region

2009-2012

INTRODUCTION

This American oyster integrated fishery management plan concerns the commercial fishery (including fishing in contaminated areas) and the subsistence fishery (Aboriginal) of American oyster (*Crassostrea virginica*). It also includes oyster farming activities managed by the Department of Fisheries and Oceans (DFO). DFO's role with respect to aquaculture is described in section 1.4.3. There is no recreational oyster fishery in the Eastern New Brunswick Area.

This plan applies to the Eastern New Brunswick Area within statistical districts 63 to 80 (Appendix 1) and covers the period from 2009 to 2012 inclusively. It is designed for joint implementation with an annual update in which specific management measures concerned with harvesting – in particular fishing areas, seasons and catch limits – can be adjusted to suit conservation imperatives. Its objectives are sustainable development through a precautionary and ecosystem-based approach, as well as integrated co-management in the spirit of the *Oceans Act*, the *Fisheries Act* and associated Department of Fisheries and Oceans policies.

BACKGROUND

New Brunswick oysters have been harvested for over a century. Many species of shellfish, including soft-shell clams, mussels, quahogs and American oysters are harvested in the Gulf Region. Oyster is the second most profitable bivalve in terms of landed value, and of employment in the Gulf Region.

Following the ravages of Malpeque disease, which decimated most oyster stocks in the Maritimes, landings hit a historical low of only 2.7 tonnes in 1960. Government initiatives to rebuild the oyster populations included the seeding of public beds with disease-resistant oysters and the granting of leases bordering on public beds. The massive seeding of disease-resistant oysters enabled some growing areas to recover in the late 1950s and early 1960s. Landings since 1960 show an upward trend, although short-term fluctuations are considerable. Some of this increase is attributable to the development of farming since the early seventies.

In the Maritimes, American oysters are harvested from natural or public beds or growing areas and from private leased areas. Tidal waters not occupied by leased areas constitute the public area where public oyster beds are to be found. Oysters does not reproduce north of Caraquet Bay, but are deposited in these waters as spat by the action of the currents. These growing areas are a resource owned by the community.

1. OVERVIEW OF THE FISHERY

1.1 PARTICIPANTS

1.1.1. Commercial fishery

Anyone participating in the commercial oyster fishery in the Gulf Region must hold a licence. In 2006, there were 1574 commercial oyster licence holders in the Eastern New Brunswick Area. Fifty-three percent (53%) were coastal fishers and almost twenty-five percent (25%) of them had no other fishing licence. The First Nations held 61 of these oyster licences (community commercial) in 2006: 2 for Eel River Bar First Nation, 1 for the Papineau Band, 24 for the Elsipogtog First Nation (Big Cove), 23 for the Burnt Church Band, 3 for the Eel Ground Band, 3 for the Metepenagiag Mi'kmaq Nation (Red Bank), 2 for the Indian Island Band, 1 for the Buctouche First Nation and 2 for the New Brunswick Aboriginal Peoples Council.

The following table (table 1) shows the distribution of licences between core fishers and coastal fishers by statistical district. Table 2 shows the number of commercial licences that were issued from 2001 to 2006.

Table 1. Number of core and coastal fishing licences by statistical district for 2006

Statistical district	Coastal licences	Core licences	Other licences	Total licences
63	0	3		3
64	1	2		3
65	114	55		169
66	134	129		263
67	75	38		113
68	17	25		42
70	152	89		241
71	17	9		26
73	221	116	2	339
75	27	100		127
76	24	41		65
77	40	28		68
78	6	62		68
80	14	32	1	47
Total	842	729	3	1574

Table 2. Number of commercial licences issued from 2001 to 2006

Year	Number of licences
2001	1754
2002	1724
2003	1682
2004	1636
2005	1602
2006	1574

1.1.2. Subsistence fishery (Aboriginal fishery)

Members of Aboriginal communities fish for food, social and ceremonial purposes. In 2006, in the Eastern New Brunswick Area, the following First Nations had this type of licence: Elsipogtog First Nation (Big Cove), Burnt Church Band, Eel Ground Band, Indian Island Band, Buctouche First Nation and the New Brunswick Aboriginal Peoples Council.

* The conservation measures applicable to these licences are the same as those for the commercial oyster fishery. Fishing is usually done in the waters off the First Nation.

1.2 LOCATION

1.2.1. Location of the commercial fishery (public beds)

Public beds for commercial oyster fishing are located in the coastal and tidal waters of New Brunswick that flow into the Gulf of St. Lawrence and Northumberland Strait. The three main beds in the Eastern New Brunswick Area are located in the Acadian Peninsula, the Miramichi area and in Northumberland Strait (Biorex Atlantique, 1991). Some public beds located in contaminated areas are harvested by relaying.

The Acadian Peninsula beds: The largest oyster bed in the Acadian Peninsula that is commercially fished is located in Caraquet Bay, at the mouth of the two rivers. Part of this public bed is a conditionally approved area. There are other public beds, not as extensive, along the south side of Caraquet Bay, around Pokesudie Island, at Pointe Alexandre, in Lamèque Bay, at Pointe Brulé, etc.

Miramichi Bay beds: Oyster fishers in the area harvest in several public beds located in the Neguac and Miramichi bays. Natural beds in the Neguac area have been decimated and are dependent on beds located in the contaminated areas of the Miramichi River and estuary for recruitment. Three other beds in Miramichi Bay, i.e. Grand Dune (Oak Point), Pointe aux Carr and Sam Lo's, are at a greater depth and are therefore harvested by means of an experimental fishery using drags. These three beds are located in an approved area.

Northumberland Strait beds: The main public oyster beds in the Bouctouche area are located in the Bouctouche River. There are also smaller beds in the Little Bouctouche River, in Fond-de-la-Baie and along the Bouctouche Dune, and elsewhere in Northumberland Strait.

1.3 CLASSIFICATION OF FISHING AREAS

The following excerpts on the classification of fishing areas are taken from the Manual of Operations of the *Canadian Shellfish Sanitation Program (CSSP)* (Fisheries and Oceans Canada, Environment Canada and Canadian Food Inspection Agency).

"In order to reduce the potential health risks associated with consuming bivalve molluscan shellfish and to protect public health, it is necessary that the water quality in shellfish growing areas be surveyed and that actual and potential sources of pollution be identified. Following such surveys, the growing areas are classified as to their suitability for the harvesting of shellfish according to accepted water quality criteria and general sanitary conditions in the growing area.

*Pollution of shellfish growing areas can occur from a variety of sources and under many different conditions. Generally, pollution sources are divided into two broad categories: point and non-point. A point source of pollution is a source of pollution entering the receiving water at discrete, measurable locations. Examples include sewage treatment plants, pulp mills, food processing plants, sewage lift station overflows, etc. Non-point source pollution refers to contamination from sources related to the activities of man and to natural processes in the **watershed** which are diffuse or dispersed. Such sources do not enter at discrete, identifiable locations and are difficult to measure or define. Furfari (1979) has described eight types of non-point source pollution which may affect shellfish growing areas. These include urban runoff, agricultural runoff, animal faecal pollution, sewage discharges from boats, wildlife faecal matter, dredging operations, mining (e.g. leaching) and silviculture practices.*

Both point and non-point pollution sources can release chemical and/or microbiological contaminants of public health concern.

The following classifications are used in the Canadian Shellfish Sanitation Program: "Approved", "Conditionally approved", "Restricted", "Conditionally restricted" and "Prohibited". Each classification is related to the bacteriological quality of the growing waters, the actual and potential sources of pollution and, to some extent, the shellfish resource utilization of the area.

1.3.1. Approved areas

Approved areas are areas not contaminated with faecal material, poisonous or deleterious substances or marine biotoxins.

1.3.2. Conditionally approved areas (conditional areas)

These are approved for shellfish harvesting under certain conditions and at specific times of year which are specified in MOUs. A conditionally approved area is

designated if, during those times when harvesting is permitted, the area meets all of the requirements of an "approved" area and if the conditions which preclude harvesting in areas designated "conditionally approved" are easily identified by routine measurement and reporting and are predictable and/or controllable.

Conditionally approved areas remain closed until a memorandum of understanding is signed. It must be shown that the area in question allows the harvesting and marketing of shellfish. The harvesting and microbiological analysis of the shellfish and water is done by the Canadian Food Inspection Agency (CFIA) and Environment Canada (EC). There are 3 areas designated conditionally approved and managed by MOUs in the Eastern New Brunswick Area: Caraquet, Néguaac and Bouctouche.

1.3.3. Restricted (contaminated) areas

Restricted areas are designated by Environment Canada and the Canadian Food Inspection Agency when the level of contamination does not permit fishing for human consumption without there first being a decontamination process. The process consists of placing contaminated oysters in an area of clean water for a minimum of 14 days (with bacteriological tests) or at least 30 consecutive days (without bacteriological tests). After the minimum period of 14 days, the bacteriological quality of the oysters must be such that no more than 230 faecal coliform are detected per 100g of meat.

Subject to a fishing licence issued pursuant to section 4 of the *Management of Contaminated Fisheries Regulations*, oysters may be harvested in restricted areas under certain conditions. The oysters must then be decontaminated. Oyster harvesting in contaminated areas is described in detail in section 1.4.4.

* A licence is not required for maintenance work on aquacultural leases while the site is closed to harvesting. However, the work must be done within the lease boundaries and no product must be taken out of the lease area.

1.3.4. Conditionally restricted areas

Conditionally restricted areas are shellfish growing areas that meet the restricted classification criteria for a predictable period. The harvesting of shellfish in this area is not permitted when the conditionally restricted area is closed.

The area must meet all the requirements outlined in a conditional management plan during those times when shellfish harvesting is permitted (open status) and the conditions to follow must be easily identified, predictable and controllable.

1.3.5. Prohibited areas

This type of classification prohibits the harvesting of shellfish for any purposes, with the exception of harvesting for seed and spat, which may be collected under special licence. Areas are defined as prohibited when they are located within a minimum 300-metre radius around industrial and sanitary sewage outfalls, within a 125-metre radius of marinas, and where the degree of contamination is so high that adequate depuration or natural purification of the shellfish is not possible.

1.4 FISHING ACTIVITIES

1.4.1. Commercial fishery

Commercial oyster fishing is practiced in public beds in the Eastern New Brunswick Area. The only tool authorized is the rake and/or hand tools, except in Miramichi Bay, where dragging is allowed. Dragging in Miramichi Bay requires a licence issued under section 52 of *the Fisheries (General) Regulations*. It is the only location in the Gulf Region where this gear is authorized. This fishery, which has been ongoing for several years, is still at the experimental stage.

All persons fishing oysters commercially on a public bed must hold a commercial oyster fishing licence and be registered as commercial fishers. Only one boat per licence may be registered for this fishery. Fishing with rakes and/or hand tools is only allowed in the county in which the licence holder resides and no new licences are currently being issued. Dragging in Miramichi bay is a rotational fishery (three distinct beds: Grand Dune, Pointe aux Carr and Sam Lo's) that is operational because of the depth of the water (6 feet and over) and the fact that the oysters are inaccessible by hand raking. It is regulated through the use of a single drag, although fishers are authorized to have a second one on board the boat.

1.4.2. Fishing in contaminated areas (restricted areas)

Relay fishing: Relay fishing consists of fishing for oysters in a restricted area (public area or aquaculture lease) in order to relay them to an approved area (aquaculture lease) for the purposes of depuration prior to human consumption. A relay fishing licence may be issued to a commercial oyster fisher or an aquaculturist.

Commercial oyster fishers may perform relay fishing in public areas designated by DFO in consultation with the Canadian Food Inspection Agency and Environment Canada. Three separate public areas may be authorized on the same licence. Fishing will not be authorized in contaminated areas where there has been no fishing in the past. A relay fishing licence may also be issued to an aquaculturist who wishes to remove oysters of any size from an aquaculture lease in a restricted area and relay them to an aquaculture lease in an approved area.

Relay fishing is regulated by a mandatory activity report and the identification of relaying sites within approved areas. The relay fishing licence holder (commercial fisher or aquaculturist) must hold the leases for the aquaculture sites involved or have permission to use them. All relaying activities must be conducted in the presence of the licence holder. A detailed decontamination plan describing the activities planned under this licence is required.

With the exception of Miramichi Bay and the aquaculture sites, this activity is done using a rake and/or hand tools. In Miramichi Bay, relaying can be done by dragging in a specific area. Only one drag is allowed, though having an additional drag aboard the vessel is authorized.

*The implementation policy for the *Management of Contaminated Fisheries Regulations* is enclosed as Appendix 3.

1.4.3. Aquacultural fishing activities

Spat collection: Spat collection may be authorized in contaminated and approved areas. A contaminated shellfish fishing licence is required to collect spat in a contaminated area. Spat collected in contaminated areas must be deposited in an approved area (aquacultural lease in an approved area) to grow for an acceptable period of a minimum of 6 months.

Spat collection is important to the sustainability of the aquacultural industry. It requires a spat collection licence for activities carried out on a lease (when the lease is not authorized for the suspended cultivation of the species involved) and for all other spat collection activities carried out outside the aquacultural lease. Licence holders can harvest oyster spat in an approved area for sale or for relaying in an aquacultural lease that is also in an approved area.

Spat collecting may be done on one of three designated public sites in approved areas (Caraquet Bay, Bouctouche Bay and Miramichi Bay) or other locations that must be previously approved. In the application, the applicant must indicate the exact location where collection will take place, and the type and number of collectors used. Before beginning any licensed spat collection activities, licence holders are responsible for checking with Transport Canada officials to ensure that facilities meet their requirements and obtain the necessary authorizations as needed.

The operational policy for mollusc spat collection is found in Appendix 5.

Cocktail oysters: The Cocktail Oyster Program is the result of a pilot project for the marketing of oysters less than 76 mm in size. It applies to aquacultural lease holders authorized to cultivate oysters. The harvesting and marketing of cocktail oysters is authorized by a variation order. Aquaculturists may join the program whenever they choose, but once they are members they have to withdraw from all commercial fishing operations. Before the oysters are marketed, they must be processed by a federally or provincially registered plant, depending on the market.

No oysters originating from public beds or leases holding oysters from public beds can be placed or held on the leases identified for the purposes of this program.

A policy has been developed by the Department of Fisheries and Oceans, in cooperation with the three Maritime Provinces, and is found in Appendix 4.

In 2006, there were about 134 aquacultural leases in the Eastern New Brunswick Area participating in the Cocktail Oyster Program.

1.5 FISHING METHODS

In the Eastern New Brunswick Area, the fishing of oysters is done in public oyster beds using tongs and hand rakes that operate without mechanical assistance and by dragging, as allowed in the regulations.

Both rakes and tongs have long handles with one or both heads having rows of teeth. They are operated by hand, without mechanical assistance (Figure 1). The rakes have long slightly curved teeth and are used to harvest oysters at different depths.



Figure 1. Oyster fishing with tongs

Source: Fisheries and Oceans Canada, 2003

The drag is used to fish for oysters at greater depths (6 feet or more) (Figure 2). It is towed over the bottom by a powered boat and hoisted by a mechanical or motor-driven device. Its maximum size, measured on the outside, is 31" wide by 26" deep.



Figure 2. Drag

Source: Fisheries and Oceans Canada, 2003

There are many different types of spat collectors. These include Chinese hats (Figure 3), plastic tubes, egg crates, vexar sheets, tiles, veneer rings, and scallop shells. Chinese hats are often used in Eastern NB by growers, who coat the collectors with a cement mixture to facilitate attachment. Spat are grown in suspension on these collectors until they reach the desired seed size (around mid-fall). In the fall, the spat are detached and either placed on the bottom (bottom culture) or on other types of structures in the water column (off-bottom culture) for grow-out.

Collectors are placed in the water column to promote larvae attachment. They are usually put in the water just before spatfall, around 3 weeks after the water warms above 20°C and spawning occurs.



Figure 3. Chinese hat collectors

Source: Fisheries and Oceans Canada, 2003

2. BIOLOGY, ENVIRONMENT AND HABITAT

(From *Underwater World –American Oyster*, published by the Communications Branch, DFO)

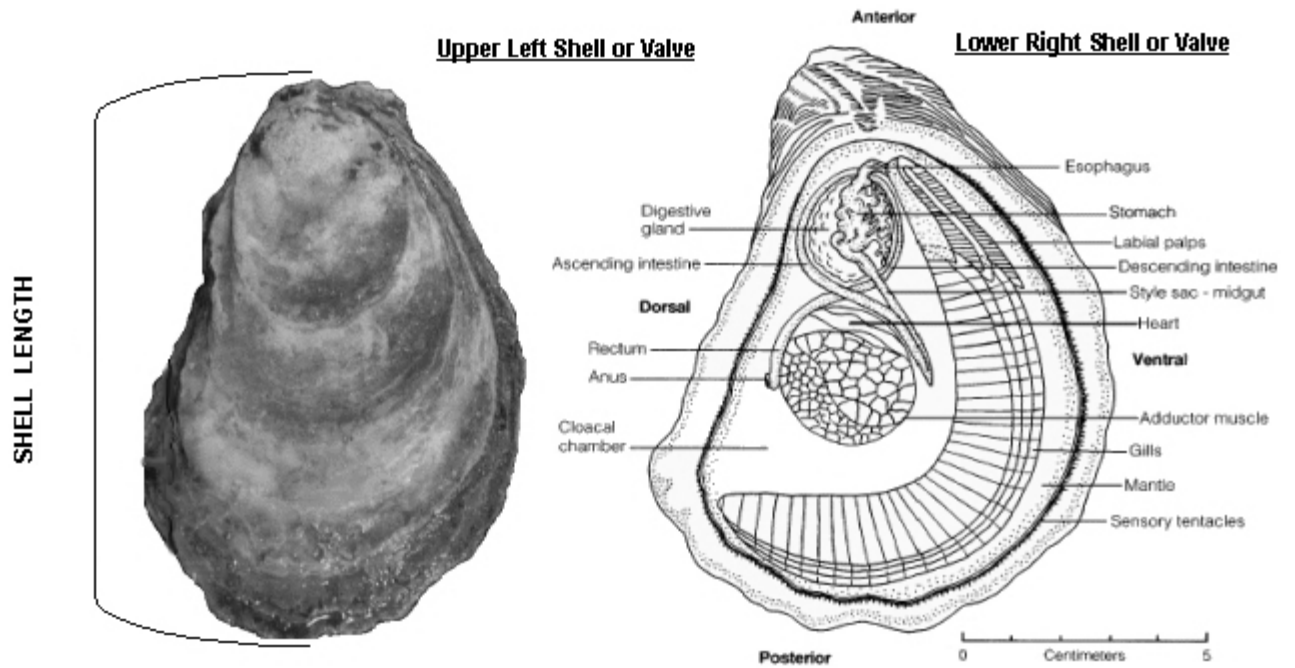
Oysters are sea animals that lack a backbone. They are scientifically classed as molluscs, a word from the Latin meaning soft. Protecting their soft bodies is a hard shell made up of two valves which are joined by a hinge and held together by a strong muscle.

Generally speaking, the shell of the American oyster is thick and has a rough, sculptured appearance. Its colour varies but is mainly a mixture of brown, gray, green, and white shades. The inside is a dull white and smooth to the touch, except for the prominent dark scar of the adductor muscle. There is no way of telling male oysters from females by examining their shells. While oysters have separate sexes, they may change sex one or more times during their life span.

The body is made up of the organs of digestion, respiration and reproduction. Oysters breathe much like fish, using both gills and mantle. The rate of oxygen consumption is influenced by water temperature and salinity, levels of contaminants, and abundance of unicellular algae or other particles.

The two valves of the oyster differ in shape. The lower is cupped to accommodate the body, while the upper is flat and acts like a lid. Together they make an air and water-tight seal. A large adductor muscle, attached to both shells at a point slightly off centre, controls their opening and closing. While the power of the adductor muscle varies with the size and condition of the oyster, it takes a pull of over 9 kg (20 lb) suddenly applied, to open the shell of a 7.5 to 10 cm (3 to 4-inch) American oyster in good condition.

As a filtering mollusc, the oyster can concentrate contaminants present in its environment. Efforts must be made to correct and anticipate sources of bacterial pollution in order to make more growing areas available for sustainable harvesting. Sedimentation can degrade oyster habitat and contribute to inferior quality, thus compromising its marketing and affecting spat survival.



Source : Maryland Sea Grant

Figure 4. American oyster (*Crassostrea virginica*)

Source: Fisheries and Oceans Canada, 2003

The shape and outer appearance of an oyster's shell reflect the conditions under which it was grown. Crowding produces shell distortions. On muddy bottoms and on overcrowded reefs, oysters assume a vertical position and the shells grow long and narrow. On hard, clean bottoms, where there is no overcrowding, the shells grow round, strong, and are deeply cupped, producing oysters of first-rate quality. Similarly, oysters on a hard substratum have harder shells than oysters found on a soft substratum.

Fertilization takes place in the open water and cell division begins immediately. The fertilized egg develops into a microscopic larva. Within 24 hours it forms a shell and develops a swimming and feeding organ consisting of a disc covered with vibrating hairs which can be thrust out and withdrawn at will, allowing free movement. For about three weeks, the little larva swims and drifts in the tidal currents. The mortality rate is very high, and only a small fraction – i.e. one per cent - of the young larvae reach the next stage of development.

When its length reaches about 300 microns, or the size of a grain of pepper, each larva extends a probing foot and seeks a place of attachment. Once it finds a suitable, clean, hard surface, the foot gland ejects a tiny pool of cement-like adhesive. The little oyster then turns on its left side, cements itself to the object, and remains there immobile for the rest of its life. Material to which oysters attach is called cultch. The process of becoming cemented to the cultch is termed setting or spatting, and the young oyster after setting is called seed or spat. Oyster larvae will attach themselves to many types of cultch, but seem to prefer mollusc shells and materials which contain chalky substances.

Except in the earliest stage of their development, oysters lack power of locomotion. They are found lying motionless on the floor of brackish bays, coves and estuaries,

usually attached to rocks or other hard, submerged objects, sometimes in great clusters.

The separate sexes of the American oyster ripen in early summer. When the water warms above a minimum temperature of 20°C, they release eggs and sperm into the water. The spawn is not released all at once, but at intervals over a period of four to six weeks. During the spawning season, a single female, by clapping her shells gently, will puff out many millions of buoyant eggs and a male will release an even greater number of sperm.

Oysters grow by feeding on plankton – microscopic plants and animals present in the water. In the Maritimes, the American oyster's growth period is from May to late November with a recess in July for spawning. It takes a Gulf of St. Lawrence oyster from four to seven years to reach the legal market length of 76 mm (3 inches), while oysters grown in the warm waters of the Gulf of Mexico may take only two years to reach the same size. However, it is noteworthy that Canadian, slow-grown oysters tend to be of excellent quality.

2.1 SPECIES INTERACTION

(From Underwater World –American Oyster)

Maritime oysters - both juvenile and adult-are preyed upon by rock crabs and starfish, and their shell is invaded by boring sponges and mud worms. The eggs and larvae are also consumed by many of the larger animals feeding on the plankton community, including their own parents.

Adverse environmental conditions such as freshets or sudden overflowings of streams, prolonged exposure to freezing temperatures at low tide, heavy silt or marine plant growth (which can smother oysters), as well as many types of industrial and domestic pollution, can all result in high oyster mortality.

In addition to life forms that prey on oysters, there are those which compete with them for available space and food, causing a reduction in their numbers and impairment of their quality. Mussels, for example, are their chief competitor in Maritime waters.

2.2 STOCK ASSESSMENT

The assessment of Canadian oyster stocks is only done on an exceptional basis, as needed. The Mollusc Productivity team from the Science Division at DFO Regional Office in Moncton contributed to the following studies on

- Mollusc productivity in N.-B., P.E.I., N.S. and QC in 1999 and 2000;
- The restoration and improvement of oyster productivity in New Brunswick;
- The assessment of growing techniques;
- Aquatic invasive species;
- Interactions between mollusc cultivation and the environment;
- Interactions between oyster farming and birds.

2.2.1. Outlook for the coming years

The Gulf Region Science Branch recognizes the importance of mollusc productivity for the coastal area, from both a socio-economic viewpoint (fishing and aquaculture) and an ecological viewpoint. For the next five years, the Mollusc Productivity group will be allocated an additional person-year to work on mollusc stock assessments, mainly on scallop. In addition, 1.5 person-years will be available to work on cultured mollusc productivity, which could provide general information on the biology of oyster species and the coastal environment.

2.3 MOLLUSC HEALTH

One of only two laboratories in Canada which specialize in shellfish health is located within the Gulf Region in Moncton, New Brunswick. This unit examines all species of bivalve molluscs for parasites, pests and diseases.

The results obtained act as a reference base for determining the best approaches for avoiding the introduction and spread of disease, as well as managing diseases that are already present.

The Shellfish Health Unit is also frequently called upon to give health advice and training to developing shellfish industries elsewhere in the world.

2.3.1. Introduction and transfers

The transfer of molluscs from one province to another, or between certain waterways of a same province, is governed by the *National Code on Introductions and Transfers of Aquatic Organisms*. The transfer authorization can only be given if the health condition of the aquatic organism has been verified and a licence to release or transfer fish has been issued to the applicant in accordance with section 56 of the *Fishery (General) Regulations*. These measures are applied to minimize the propagation of disease or invasive species. Therefore, the code is designed to protect aquatic ecosystems. It applies to all activities in which live aquatic organisms are introduced or transferred into waterways or breeding facilities for aquacultural, commercial fishery or recreational purposes or for biocontrol programs.

3. ECONOMIC PROFILE OF THE OYSTER FISHERY

3.1 LANDINGS, VALUES AND MARKET

The market for oysters is one of the oldest in Canada. Montréal and Québec are the cities that account for the most oyster sales within Canada, although the product is also sold in other regions, such as Toronto and Ottawa. The market in the United States is also growing.

Statistical data for the last ten years consists of landings by lease holders and the commercial fishery, reported by purchase slips. These landings are underestimated and do not necessarily represent the reality.

The following tables (tables 3 and 4) contain data from landings and value at landing for New Brunswick and the Atlantic Provinces for the years 2001 to 2006. The figures are from the commercial fishery only, except in Prince Edward Island, where the numbers include totals from oyster farming activities. Data from New Brunswick are for the Eastern NB Area.

Table 3. Atlantic landings from 2001 to 2006

	N.B.		N.S.		P.E.I.	
	TM	\$(000)	MT	\$(000)	MT	\$(000)
2001	316	996	97	287	2548	6325
2002	242	820	79	178	2559	5370
2003	279	951	61	124	2936	7409
2004	240	848	42	92	3996	7805
2005	245	899	140	306	3147	7031
2006	264	1102	64	193	2061	5854

Table 4. Landings and landed value by statistical district

STATISTICAL DISTRICTS STATISTIQUES	Quantity (Q) in Metric Tons and Value (\$) in (\$000) thousands of dollars / Quantité (Q) en Tonnes Métriques et Valeur (\$) en (\$000) milliers de dollars																	
	1999		2000		2001		2002		2003		2004		2005		2006		2007	
	Q	\$	Q	\$	Q	\$	Q	\$	Q	\$	Q	\$	Q	\$	Q	\$	Q	\$
63-Comté de Restigouche County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64-Belledune River to/à Bass River	0	0	0	0	14	54	0	0	0	0	0	0	0	0	0	0	0	0
65-Bass River to/à Pokesudie	41	117	34	110	29	87	15	48	16	55	28	102	13	43	15	68	6	29
66-Iles Lamèque & Miscou islands	5	17	5	16	6	20	11	34	13	49	15	57	12	50	18	80	13	61
67-Shippagan to/à Pokemouche Gully	9	21	15	54	24	87	20	78	21	88	16	58	13	46	9	41		
68-Pokemouche Gully to/à Pt. à Barreau	0	0	5	20	2	5	0	0	0	0	1	5	2	6	2	7	1	4
70-Pt. à Barreau to/à Grand Dune	110	418	82	261	60	202	64	243	112	390	81	308	90	386	88	432	50	21
71-Grand Dune to/à Pt. aux Carr	0	0	0	2	20	51	10	32	0	0	0	0	8	41	4	21	0	0
73-Pt. aux Carr to/à Pt. Escuminac	92	279	50	172	67	238	70	241	58	195	53	181	61	212	72	284	46	18
75- Pt. Escuminac to/à Riv. St Louis	0	1	0	0	3	9	0	0	1	4	0	0	0	0	0	1	0	0
76-Riv. St-Louis to/à Chockpish	6	17	2	5	26	82	21	59	30	97	23	74	12	28	27	74	24	57

River																		
77-Chockpich River to/à Shediac Bridge	15	38	23	56	31	58	10	34	22	57	19	51	30	74	23	71	3	6
78-Shediac Bridge to/à Bas Cap Pelé	6	19	0	0	6	24	19	46	5	14	4	12	4	13	6	22	20	55
80-Bas Cap Pelé to/à NS Line Frontière NE.	31	100	32	86	28	79	2	5	1	2	0	0	0	0	0	1	3	9
TOTAL (* preliminary / préliminaire)	315	1027	248	782	316	996	242	820	279	951	240	848	245	899	264	1102	166	61

4. PREVIOUS MANAGEMENT ISSUES

Economic basis of fishing seasons

Issue: Traditionally, the oyster fishing season has been the most important marketing period and the period when oysters are of superior quality. In northern New Brunswick, a fall season allows for the accommodation of lobster fishers. A spring season would stir up the grounds before spawning; once spawning was over, the spat would not be disturbed again until the fishery the following spring, ensuring a higher survival rate. Changing the fishing season would then be to the disadvantage of commercial fishers, for as marketing is done in the fall, fishers would have to sell either to registered plants or to aquaculturists. The result could be a marketing monopoly in the aquaculturists' favour. A spring season would ensure a higher spat survival rate and thus contribute to a more abundant resource. For fishers who hold oyster licenses only, it would make their work profitable and allow for better management of landings. A spring fishery would exclude fishers who conduct a complementary fishery to secure the minimum number of weeks to qualify for employment insurance.

Approach: An in-depth study of fishers with only commercial oyster fishing licences and fishers using the resource for secondary income should be initiated before any change in the season is made.

Update: *It should be noted that there have been no requests from fishers in recent years to modify the oyster fishing season on public beds, which suggests that this is no longer a significant issue.*

Sale of illegal-size oysters

Issue: Certain fishers are reported as selling oysters of all sizes. Small oysters are placed in bags which are temporarily deposited on the bottom to await collection, whereupon they are sold on the black market.

There are fears that a grower marketing cocktail oysters may also market small oysters from the public bed when that bed is opened.

Approach: First of all, control of landing points and increased monitoring should minimize this problem. Secondly, regulations establish the minimum size at 76 mm except for oyster farmers in the Cocktail Oyster Program.

Update: *This issue is addressed by having fishery officers enforce the regulations. Anyone with information about the sale of illegally sized oysters is invited to contact local fishery officers and/or Crime Stoppers.*

Ban on diving for oysters

Issue: Commercial fishing on public beds for oysters by diving is prohibited but is permitted on leases.

Approach: This issue will be addressed by having fishery officers enforce the regulations. Anyone with information about the scuba diving on public beds is invited to contact local fishery officers and/or Crime Stoppers.

Picking ban

Issue: The object of a picking-directed fishery is to provide aquaculturists with an extra source of income and enable them to obtain small oysters. These oysters are harvested from areas where they would not survive on account of tides, ice or currents. It is difficult to define such areas, for they generally vary from year to year at the whim of nature. The density of the oysters found is generally such that reproduction and a directed fishery are not possible. This activity has been prohibited for several years mainly because it is not possible to control such fishing on private beds.

Approach: In the Department's opinion, oyster collection is an activity that is difficult to control and does not have the support of fishery officers. Oyster collection is not authorized in the Eastern New Brunswick area.

Update: *The prohibition on collecting oysters in the Eastern New Brunswick area is maintained.*

Progressive contamination of the oyster environment and status of the resource

Issue: The oyster is a filter feeder that is essential to the health of the waters where oysters are found. Users of this resource are worried about its status and the progressive bacteriological contamination of the oyster fishing areas.

Approach: The prevention and protection work done by integrated coastal management zone and watershed management committees can detect and identify sources of bacterial contamination. Legislation exists for point sources but is not always enforced. As for non-point sources, the situation could be improved by better environmental practices in using the territory. Watershed user awareness and co-operation could be encouraged. Does this issue is still pertinent.

Update: *In the Department's opinion, this issue requires ongoing efforts by all area users.*

Spat collection in Bouctouche bay

Issue: Bouctouche fishers object to spat collection by non-resident fishers.

Approach: The Department does not consider this fishing activity to be a threat to oyster conservation in Bouctouche bay.

Spat collection in Miramichi River

Issue: According to a pilot project on the Miramichi River in 1999, spat collection is reported to be commercially viable in that river. Fishers are asking that collection permits be issued.

Approach: An access policy must be introduced and the collection area defined before permits are issued. An area will be defined for spat collection in that area.

Update: *In 2009, an area has been defined in Miramichi River for spat collection.*

5. CURRENT MANAGEMENT ISSUES

Aquaculture VS Fishery

Issue: Fishing and aquaculture activities are two separate activities. According to aquaculturists, the current regulations have a negative effect on their activities and the development of their industry.

Approach: The Department recognizes industry's concerns and will explore various options to address this issue appropriately.

Biotoxin closures

Issue: The closure of fishing areas, due to the presence of a biotoxin, creates hardship for aquaculture. When an area is closed, the Fisheries Act does not authorize any fishing activity. Aquaculturists would like to perform maintenance activities outside of their aquaculture lease.

Approach: The Department proposed an ad hoc approach for 2008 in order to allow aquaculturists to perform certain maintenance activities outside of the boundaries of their leases when areas are closed on account of biotoxins. This approach is approved in the Canadian Shellfish Sanitation Program (CSSP) manual.

Stock assessment

Issue: Commercial fishers asked that oyster stock assessments be conducted in certain places in the Eastern New Brunswick area to ensure sounder and more proactive management of the resource.

Approach: The Department understands the rationale behind this request; however, it remains subject to the availability of financial or other resources.

Aquacultural sites split by DFO closure

Issue: When closure is recommended by EC and/or CFIA, the boundaries of the closed area sometimes cut through and divide aquaculture sites, making it more difficult to manage these sites.

Approach: The provincial Department of Agriculture and Aquaculture (NBDAA) is responsible for issuing aquaculture leases in New Brunswick. DFO will urge the departments involved (NBDAA, EC and CFIA) to address this issue.

Transfer of oysters from approved to restricted areas

Issue: The Canadian Shellfish Sanitation Program manual does not mention the procedures to be followed for this type of transfer.

Approach: It should be expected that harvesting for marketing purposes will lead to additional costs for the Department, which must provide monitoring as the oysters are located in a restricted area. This situation should be discussed by the Atlantic Regional Interdepartmental Shellfish Committee (ARISC), the committee responsible for the CSSP.

6. DETAILED MANAGEMENT MEASURES PROPOSED FOR 2009

The Department of Fisheries and Oceans manages the commercial oyster fishery through effort controls such as limits on the number of commercial licences, seasons with daily and weekly close times, area closures, gear restrictions, shell-size and daily catch limits, and designating specific landing areas. This part of the document describes in detail the management measures proposed for the year 2009. These measures may change without notice for conservation reasons.

6.1 FISHING SEASONS

Fishing seasons are set under the Maritime Provinces Fishery Regulations. Changes are made by order as the need arises, after consultation with the members of the Advisory Committee and the Eastern N.B. Area Management Committee.

Commercial fishery on open (uncontaminated) public beds:

- All public beds except those indicated below: seven (7) weeks starting the last Monday in September.
- Caraquet Bay west of a straight line drawn from Pointe à Brideau near Caraquet Wharf to Pointe de Maisonnette: five (5) weeks starting the last Monday in September.
- Shemogue Harbour inside a straight line drawn from Petit Cap west of the harbour to Shemogue Head east of the harbour: three (3) weeks starting the last Monday in September.
- Miramichi Bay, between Point aux Carr, Preston Beach (Fleigers Shore) and Channel Ship (between Portage Island and Fox Island): six (6) weeks starting the last Monday in September.
- Deep waters of Miramichi Bay (dragging on Grand Dune, Point aux Carr and Sam Lo's beds): last week of October and first week of November (usually begins the last Monday of October).

Relay fishing: Commercial fishery on restricted (contaminated) public beds:

- All restricted public beds approved for relay fishing: May 1 to July 31 (rake and hand tools).
- Miramichi Bay above a straight line drawn from Grand Dune to Point aux Carr (dragging of contaminated oysters): Fishing period of six weeks from May 1 to July 15, subject to discussions with fishery participants.

* Fishing is not permitted on beds where there has not yet been any activity.

Relay fishing between two aquacultural leases (from a lease located in a restricted area to a lease located in an approved area):

- Aquaculture leases under Cocktail Oyster Program: May 1 to October 1 for northeastern New Brunswick and to October 15 for southeastern New Brunswick. In order for decontamination to be effective, the temperature must be suitable for normal bivalve metabolic activity. For oysters, a minimum temperature of 5°C has been established. No depuration can be carried out after October 1 in northeast N.B. and after October 15 in southeast N.B.

- Aquaculture leases not participating in the Cocktail Oyster Program : May 1 to July 31.

Spat collection

- Begins in July and ends on September 15.

Marketing season in leased areas (aquacultural leases)

- Cocktail Oyster Program: January 1 to December 29.
- Other leased areas (not participating in the Cocktail Oyster Program): September 1 to March 31.

6.2 WEEKLY CLOSURES

Weekly closures are the same for all commercial oyster fishery activities, including relay fishing:

- Fishing is prohibited between sundown and sunrise every day of the week and on Sunday.

6.3 FISHING METHODS

Oyster fishing on public beds is done only with rakes and/or hand tools throughout the Eastern N.B. Area, except in Miramichi Bay, where drags are authorized for some fishing activities.

6.4 MINIMUM SIZES

Commercial fishing on public beds, relay fishing and aquaculture and marketing-related activities involving oysters from aquacultural leases where lease holders are not participating in the Cocktail Oyster Program: 76 mm and more.

Marketing of oysters from aquacultural leases under the Cocktail Oyster Program: Minimum size of 1 mm.

6.5 DAILY LIMITS

No daily limits for fishing activities other than dragging:

- Dragging in approved areas of Miramichi Bay: 400 lbs per day.
- Dragging in the contaminated area of Miramichi Bay: 500 lbs per day.

6.6 LANDINGS

When fishing for oysters in that part of Caraquet Bay west of a straight line from Pointe à Brideau near Caraquet Wharf to Maisonnette Point, (see map of Caraquet 21P/1 and 22 A1&2, NAD 1927), oysters must landed at one of the following sites:

- at the landing stage located near no. 11 Highway Bridge spanning Caraquet River;
- or
- on the north shore of the Caraquet Bay in front of the Village-des-Poiriers Road;
- or
- at Caraquet Wharf;

or

- at Côte des Pinet in Bertrand.

6.7 LOGBOOK

A logbook is mandatory for relay fishing and dragging in the Miramichi area. Logbooks must be returned to the Department by the date indicated on the licence.

6.8 CRITERIA AND REQUIREMENTS

Relay fishing

Upon approval of a decontamination plan, a licence to fish for contaminated oysters is issued to a holder of a commercial oyster fishing licence or an aquaculturist. Other fishers may also be named in the licence. If the licence is issued to a commercial oyster fisher, the named fishers must also hold commercial oyster fishing licences and be registered as commercial fishers. A fee of \$100, plus \$20 for each person named in the licence other than the licence holder, will be charged.

Relay fishing using a drag (Miramichi)

Upon approval of a decontamination plan, a contaminated oyster fishing licence to drag for oysters is issued to a limited number of fishers. A maximum of four other fishers may be named in this licence, two of whom are not required to hold commercial oyster fishing licences, although all four must be registered as commercial fishers. A fee of \$100, plus \$20 for each person named in the licence other than the licence holder, will be charged. To obtain a oyster drag relay fishing licence, the applicant must meet the following requirements:

- have held this licence the previous year; hold a commercial oyster fishing licence and be registered as a commercial fisher.

or

- be registered as a commercial fisher; hold a commercial oyster fishing licence valid for the waters adjacent to the county of Northumberland; have a residence adjacent to the waters of the county of Northumberland; hold a lease in waters adjacent to the county of Northumberland.

Dragging in the approved area of Miramichi Bay

- be registered as a commercial fisher; hold a commercial oyster fishing licence valid for the waters adjacent to the county of Northumberland and have a residence adjacent to the waters of the county of Northumberland.
- Docksides weighing
- One trip per day

Spat collection

Lease holders or oyster commercial fishers may obtain a spat collection licence. Persons wishing to collect spat in a contaminated area must submit a decontamination

plan and have it approved. A fee of \$100, plus \$20 for each person named in the licence other than the licence holder, will be charged for this type of licence.

Cocktail oysters

Lease holders who apply and who meet the requirements can market oysters over 1mm, but they must give up any commercial oyster licence they may hold. The requirements for participation include marketing the oysters through a federally registered plant and tagging the product as a cultured product. The leaseholder and plant must also keep records on the origin and quantity (number) of the oysters marketed as part of the program.

7. LONG-TERM MANAGEMENT OBJECTIVES

7.1 LONG-TERM MANAGEMENT OBJECTIVES FOR THE DEPARTMENT OF FISHERIES AND OCEANS, EASTERN NEW BRUNSWICK AREA

The long-term management objectives for American oyster in the Eastern New Brunswick Area are as follows:

with regard to Science

- Offer opinions to the communities on the impact of various management systems and fishing and aquaculture methods on stock improvement;
- Assess the proportion of oysters removed by fishing and/or aquaculture.

with regard to Statistics

- Account for all oyster landings by watershed and by fishing activity, i.e. commercial fishery, aquaculture and subsistence fishery.

With regard to Resource Management

- Document and quantify fishing efforts for each main growing area to ensure resource conservation.

With regard to Conservation and Protection

- Apply conservation and public health measures;
- Quantify the monitoring activities of fishery officers;
- Update regulations that are no longer appropriate for aquaculture.

With regard to Habitat Management

- Identify instances of disruption, deterioration and destruction of oyster habitat;
- Classify and release to the watershed management committees the number of cases of damaged habitat, project referrals, permits, and restored habitat;
- Consider oyster habitat in evaluating referred system projects;
- Promote environmental stewardship.

With regard to the Oceans group

- Develop oysters conservation objectives;
- Identify oyster reefs that are of interest as potential three-dimensional habitats;
- Develop ecosystemic management plans.

With regard to Aboriginal Fisheries

- Continue to allow Aboriginal groups who request it justified access to the oyster fishery for food, social and ceremonial purposes, after ensuring that resource conservation and protection measures are in place;
- Encourage the participation of Aboriginal groups in the commercial oyster fishery;

- Incorporate in the plan, after consultation with the stakeholders, the management measures following from the Supreme Court decision in the Marshall case.

With regard to Aquaculture

- Coordinate the process of the sites request, including the liaison with the industry promoters, the provinces, the environmental non governmental organization and the public;
- Elaborate, administrate and evaluate the politics and regional programs, including the elaboration of the sustainable aquaculture program and the aquaculture politics;
- Advise managers of DFO.

7.2 ECOSYSTEM-BASED INTEGRATED MANAGEMENT

Given the ultimate objective of supporting sustainable coastal fisheries, the ecosystemic approach seeks to enlist the active participation of licence holders for all species harvested in a particular marine environment (watershed). This marks a clear departure from the species-based integrated approach that has traditionally been adopted. What the ecosystemic approach seeks is the continuing biodiversity and productivity of an ecosystem.

It is desirable that future consultations should be held on a watershed-wide basis, rather than a species-by-species basis. This approach will be conducive to the formulation of measures aimed at ensuring an ongoing sustainable fishery within a watershed, such as by rationalizing the numbers of licences and quantitative deployment of fishing gear for each coastal species and minimizing the impact on one species resulting from the harvesting of another species. Sound, specific management measures based on the distinctive characteristics of the marine environment concerned may be introduced. Consultations with users will heighten their sense of ownership of their particular ecosystem

With the ecosystemic approach, it will be feasible to manage coastal fisheries effectively and develop them sustainably, while also taking into consideration the specific needs of the several watersheds and the users of each. Furthermore, a watershed-based approach to coastal species will make it possible to accommodate, in the future, other stakeholders whose activities may affect those species.

8. INDUSTRY RESPONSIBILITIES

8.1 ADVISORY COMMITTEE

After consulting the users of their respective areas, the representatives designated by their peers or by fishermen's organizations such as the Maritime Fishermen's Union who sit on the oyster fishery advisory committee inform the committee of the status of the fishery in their area, offer recommendations for management of the fishery and propose modifications to the regulations and policy. They inform the Department of existing problems or conflicts that require the Department's intervention. They are the link between all the fishers and users of the resource, the various watershed management committees and the federal and provincial governments. Hence the recommendations submitted to the Department are reached by consensus rather than by vote.

The composition of the advisory committee on the commercial oyster fishery for Eastern New Brunswick is as follows:

- Locals 1, 2 and 10 of the Maritime Fishermen's Union;
- Coopérative des producteurs d'huîtres de la baie de Bouctouche Ltée;
- Caraquet Bay oyster fishermen's association;
- Regroupement des pêcheurs d'huîtres de la baie de Caraquet;
- Miramichi Bay relay and drag oyster fishers group;
- First Nations and New Brunswick Aboriginal Peoples Council;
- New Brunswick Department of Agriculture and Aquaculture;
- New Brunswick Department of Fisheries;
- Canadian Food Inspection Agency;
- Miramichi River Environmental Assessment Committee;
- Representatives from the Department of Fisheries and Oceans, Eastern N.B. Area (Resource Management, Conservation and Protection, Oceans and Habitat, Statistics, Licensing and Aboriginal Fisheries) ;
- Science Branch, Regional Office;
- New Brunswick Professional Shellfish Growers Association;
- Individuals.

9. ROLES AND RESPONSIBILITIES OF THE DEPARTMENT OF FISHERIES AND OCEANS

Fisheries Management and Aquaculture

- direct and consolidate consultations with the various divisions of DFO in order to develop management options ;
- be responsible for consultations with the Industry and the provincial government ;
- be responsible for management before, during and after the season ;
- be responsible for licensing.

Habitat Management

- evaluate potential impacts on habitat of project referrals and major projects ;
- assist local groups with watercourse rehabilitation ;
- assist watershed management committees and Industry with best practices and guidelines for fish habitat protection .

Science

- be responsible for scientific opinions on stock status ;
- identify species conservation concerns ;
- provide opinions on the relevance of management options to encourage species conservation ;
- specify the information necessary to facilitate recommended adjustments during and after the season ;
- provide opinions on water quality ;
- provide opinions on contaminants ;
- help determine causes of fish mortality ;
- provide opinions during evaluation of major projects ;
- provide information on the location of essential habitats.

Aboriginal Affairs

- ensure follow-up for DFO's relations with Aboriginal peoples, food, social and ceremonial fisheries, and DFO consultations, policies and programs ;
- have trustee responsibility to respect treaty decisions rendered by the courts.

Conservation and Protection

- ensure follow-up, control and monitoring of regulatory programs that require fishery officers to be deployed on land, sea and air ;
- carry out the division's activities aimed at complying with legislative policies, plans and programs related to the conservation and protection of Canada's fisheries resources ;
- be responsible for initiating applications to change regulations that are necessary to support DFO management plans and programs.

Oceans

The Oceans Action Plan stems from the Oceans Strategy. It is based on the following four pillars :

International leadership, sovereignty and security : Canada participates in the international management of oceans and promotes such concepts as ecosystemic management, integrated planning and the development of a network of protected marine areas.

Integrated oceans management for sustainable development: A modern approach to managing oceans, integrated management is an open and transparent collaborative process that is based on ecosystemic management.

The health of the Oceans : Managing marine and oceans resources with a view to healthy and productive ecosystems. The Minister of Fisheries and Oceans is responsible for directing and coordinating the establishment of marine protected areas in collaboration with Parcs Canada and the Department of the Environment.

Oceans science and technology : Promote the development, commercialization and use of innovative oceans technologies by providing an environment conducive to sustainable economic development.

Communications

- provide advice on communication strategies for management plans.

GLOSSARY

American Oyster Integrated Management Plan: Designed to enhance the conservation and sustainable use of fishery resources. Plans incorporate conservation, management and scientific requirements for a fishery, as well as conservation and protection measures. The plans promote increased participation by all stakeholders and an integrated approach by DFO sectors. Integrated fisheries management plans set the stage for co-management arrangements by ensuring transparency, establishing all allocations between sectors and fleets, providing relevant contextual information and ensuring that clients and stakeholders are consulted on the overall goals and strategies for the management of the fishery.

Approved area: The classification of a shellfish growing area that has been approved by the shellfish sanitation monitoring agency for production or harvesting purposes for direct marketing, without depuration. This category assignment is made following a sanitary survey conducted by the shellfish sanitation monitoring agency. An approved shellfish area may be temporarily closed when a public health emergency has been declared as, for example, in the event of a hurricane or flood.

Aquaculture: Means the rearing of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants. The term "rearing" implies individual or corporate ownership of the organisms being reared and also implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, and protection from predators and disease.

Bed: An area where molluscs grow or are raised.

Canadian Food Inspection Agency (CFIA): Federal agency responsible for shellfish sanitation and regulations governing the processing, shipping and exporting of shellfish.

Coastal fisher: Means a fisher who is not part of a core enterprise and who holds at least one key commercial non-vessel-based licence. Key commercial non-vessel based licences for the Eastern New Brunswick Area are bay quahog, bar clam, soft-shell clam, eel, gaspereau, oyster and smelt.

Commercial fishery: Harvesting of commercial-size oysters (over 76 mm) for immediate marketing.

Conditionally approved area: Shellfish area that has been conditionally approved by the shellfish sanitation monitoring agency. A conditionally approved shellfish area must meet the same criteria as an approved area during a foreseeable period. That period is conditional upon meeting established water quality standards as set forth in a memorandum of understanding signed by the parties concerned. A conditionally approved shellfish growing area is temporarily closed by the shellfish sanitation monitoring agency if it ceases to meet the criteria required for an approved area.

Conditionally restricted area : Area classified as conditionally restricted by the appropriate shellfish sanitation control authority. This area must meet the restricted classification criteria for a predictable period. The period is conditional upon established performance standards specified in a memorandum of understanding signed by the parties concerned.

Core enterprise: Means a fishing unit composed of a fisher (head of enterprise), registered vessel(s) and the licences he holds, and which has been designated as such in 1996 under the following criteria:

For Bonafide fishers: have bonafide status and hold one key licence (snow crab, category A lobster, groundfish other than handline, scallop, tuna or herring).

For non-Bonafide fishers: hold either two key licences (shrimp, snow crab, category A lobster and ITQ groundfish only) or one key licence and have fished for a full season with minimum landings of \$25 000 from his/her own licences for two of the years 1993, 1994 and 1995.

Decontamination: For oysters, the process consists of placing contaminated oysters in an area of clean water for a minimum of 14 days (with bacteriological tests) or at least 30 consecutive days (without bacteriological tests). Other methods, such as plant deuration, may be accepted, subject to approval by the Canadian Food Inspection Agency (CFIA) and Environment Canada (EC).

Department of Fisheries and Oceans: Federal agency that regulates shellfish harvesting and sees to the application of the *Fisheries Act*.

Ecosystem: The basic ecological unit consisting of a life environment and the organisms, animals and plants that live there.

Environment Canada: Federal agency responsible for monitoring water quality and for classifying shellfish harvesting areas in three categories: approved area, conditionally approved area, contaminated area.

Lease: Defined geographic area in a marine environment described by a federal or provincial agency and approved by the Competent Authority (Shellfish Control Agency or provincial equivalent) for the purposes of culturing, harvesting and/or relaying (exploratory or commercial) bivalve molluscs. This definition includes all tenures, licenses of occupation or permits issued to an individual, group or company by the Competent Authority.

Leased area or oyster lease (private flat): Site granted by the N.B. Department of Agriculture and Aquaculture (NBDAA) for the culture and marketing of oysters.

Oyster farmer: Leaseholder of an aquaculture site (private flat, leased area) who is involved in marketing oysters. Employees of oyster farming enterprises are also oyster farmers.

Oyster farming: Oyster aquaculture.

Oysters spat collection: Process whereby oyster farmers harvest seed stock during spatfall, either naturally (shell cultchs) or artificially (collectors). The spat thus collected (<25 mm) is then detached from collectors to be cultivated in the water column or on the bottom.

Prohibited area: A prohibited area is a separate area or an area situated in a restricted shellfish growing area where shellfish harvesting for any purposes other than seed or spat, which may be collected with a licence, is not permitted. These areas include areas in immediate proximity to sources of wastewater discharge and industrial outfall.

Relay fishing: Process by which oysters harvested in a restricted area as a result of bacteriological contamination are transferred to an approved area for the purposes of

decontamination prior to marketing. This activity (decontamination) is governed by the Management of Contaminated Fisheries Regulations and requires prior approval of a decontamination plan before a licence to fish in a contaminated area is issued.

Relaying: Activity (decontamination) governed by the Management of Contaminated Fisheries Regulations, which requires prior approval of a decontamination plan before a contaminated shellfish fishing licence can be issued.

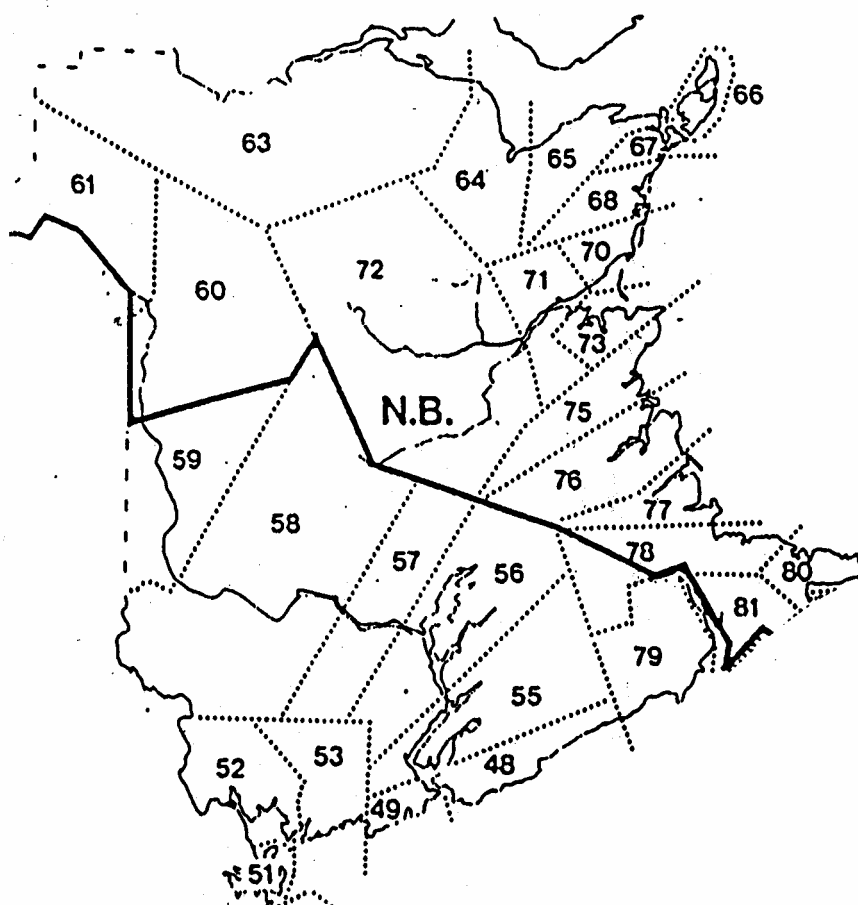
Restricted Area (Restricted areas were formerly classified as “closed” areas.): A shellfish growing area where the harvesting is temporarily or permanently restricted, except by special licence for a specific purpose.

Seed stock: Small oysters from either natural harvested spat or grown in a breeding pond, used for culture or to develop public beds.

Spat: Young oysters that have just been transformed from larvae and which attach to a support medium.

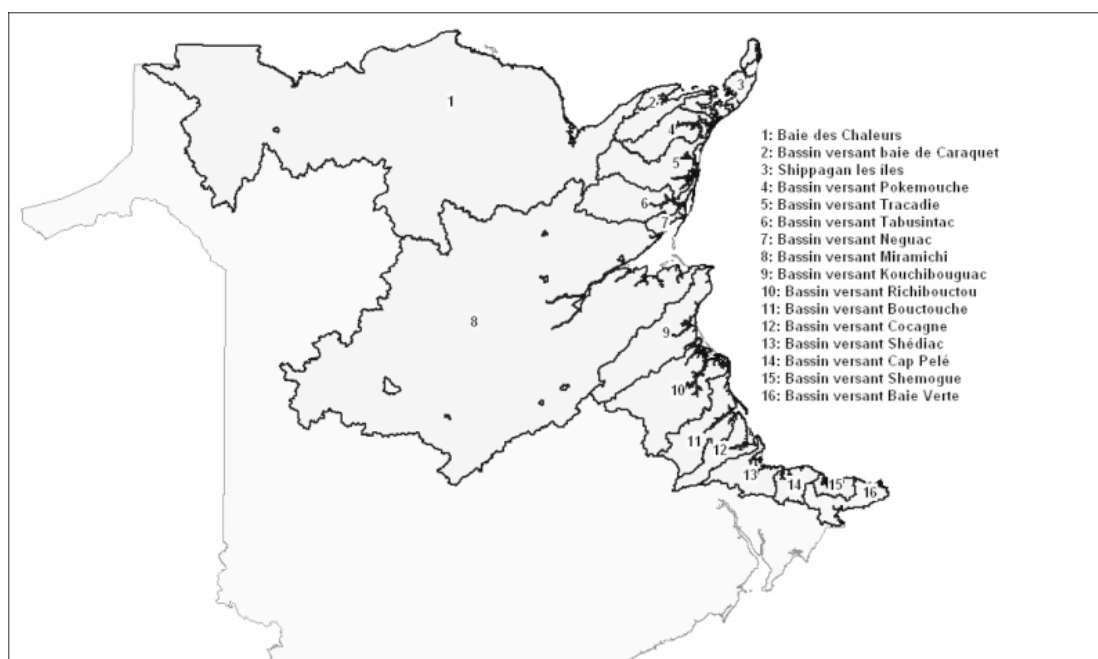
Watershed: A geographic term designating an area draining into a single body of water, such as a bay (the Caraquet Bay watershed) or a river (the Aboujagane River watershed) and includes ground water, surface water and wetlands.

APPENDIX 1 – MAP AND DESCRIPTION OF STATISTICAL DISTRICTS



- 63: Restigouche county
- 64: from the Restigouche county line to Bass River (incl.)
- 65: from Bass River (excl.) to Pokesudie Island (incl.)
- 66: Lamèque and Miscou islands
- 67: from Shippagan to Pokemouche Gully (incl.)
- 68: from Pokemouche Gully (excl.) to the Northumberland county line
- 70: from the Northumberland county line to Grand Dune Island (incl.)
- 71: from Grand Dune Island to Morrisey Bridge on the north side of Miramichi River and from Morrisey Bridge to Point aux Carr (incl.) on the south side
- 73: from Point aux Carr (excl.) to the Kent county line
- 75: from the Kent county line to the south side of St-Louis River (incl.)
- 76: from the south side of St-Louis River (excl.) to Chockpish River
- 77: from the south side of Chockpish River to the Westmorland county line
- 78: from the Westmorland county line to Bas Cap Pelé (incl.)
- 80: from Bas Cap Pelé (excl.) to the N.B. /N.S. border.

APPENDIX 2 – WATERSHED BOUNDARIES



Zone	Description	Comments
1	From Dalhousie to Pokeshaw	Includes Pokeshaw
2	From Grande Anse to Pointe de Pokesudie	Ends at Pointe de Pokesudie on the Island. The eastern shore of Pokesudie is in the next zone.
3	From Pointe de Pokesudie up to and including Petit Pokemouche Bay	Includes Lamèque and Miscou Islands
4	Pokemouche Bay to Green Point	
5	Green Point to Pointe à Barreau	Just after Val Comeau
6	From Chemin de la Cédrière to Swinging Gully	Swinging Gully is between the Tabusintac and Neguac bays
7	From Swinging Gully to Rivière des Caches	Includes the saltwater area at its mouth
8	Pointe Morin to Pointe Escuminac	
9	From Saint Camille up to and including Baie de St Louis	
10	From the southern tip of the North Richibouctou dune up to and including Richibouctou Cape	A small part of St. Louis Bay could be considered part of the Richibouctou Bay watershed, but since this bay belongs to KNP, it is not identified in its territory.
11	From Cap Gras up to and including Saint-Thomas-de-Kent	
12	From Bar de Cocagne to Cocagne Cape	
13	From Caissie Cape to Cap Bimet	
14	From Barachois to Trois Ruisseaux	
15	From Petit Cap up to and including the area of Murray Beach Provincial Park	
16	From Murray Corner to Baie Verte	

APPENDIX 3 - MANAGEMENT OF CONTAMINATED FISHERIES REGULATIONS (OYSTERS) ENFORCEMENT AND COMPLIANCE POLICY FOR EASTERN NEW BRUNSWICK

1. GLOSSARY

FISHER: Any person (fisher, helper, relayer, leaseholder) who fishes for oysters in a contaminated area.

DECONTAMINATION PLAN: Survey of all the information required under this policy to guarantee to the Minister that the oysters will be decontaminated without being killed.

NATURAL RELAYING: The transfer of oysters from a contaminated area to an approved area for natural biological cleansing using the ambient environment as a treatment system

2. PARAMETERS

This document sets forth the policies and procedures governing authorization to fish for oysters in contaminated areas for purposes of purification. It explains the basic requirements to obtain a contaminated shellfish fishing licence while adhering to certain control measures. The area's Licensing Service Centres are responsible for issuing contaminated fishing licences for these areas.

When contaminated fishing licences are issued for the relaying of oysters, care must be taken to limit their number in order that adequate sanitary control may be exercised.

When the decontamination takes place in a depuration bed installed on land, the establishment must hold a federal registration certificate pursuant to the Fish Inspection Act and the decontamination must be effected in compliance with the Canadian Shellfish Sanitation Program and, if the oysters are exported to the United States, the National Shellfish Sanitation Program.

This document contains no policies or procedures for the protection or maintenance of resource levels or for controlling the number of fishers. Those matters are addressed in the licensing policies.

3. REFERENCE DOCUMENTS

The Management of Contaminated Fisheries Regulations, established pursuant to the Fisheries Act, the Fish Inspection Regulations, established pursuant to the Fish Inspection Act, and the Canadian Shellfish Sanitation Program are the reference documents used for this policy.

4. DESIGNATION OF CONTAMINATED FISHING AREAS

The Department of Fisheries and Oceans (DFO), in consultation with Environment Canada (EC) and the Canadian Food Inspection Agency (CFIA), designates certain areas where oyster fishing is permitted for purposes of controlled purification. The waters where oysters grow in these contaminated areas are analysed. Their median faecal coliform MPN must be less than 88/100 ml, and not more than 10 per cent of the samples may exceed an MPN level of 260/100 ml.

In addition, the areas concerned must not be close by:

i) discharges of municipal or hospital sewage or other sources of pollution. Should there be a failure of any sewage treatment system in the area, officers of the DFO Conservation and Protection Division must be notified immediately. Oyster fishing in this area will then be prohibited. The length of the closure is determined by DFO, after consultation with Environment Canada and the Canadian Food Inspection Agency (CFIA);

ii) sources of toxins causing PSP (paralytic shellfish poisoning) and/or ASP (amnesic shellfish poisoning). If historical data indicate the possibility of an upsurge of the phytoplankton responsible for these toxins, fishing for controlled purification purposes may not be permitted. Scientific opinions will be required;

iii) sources of chemical contaminants (heavy metals and pesticides). Most of these contaminants are not destroyed during decontamination by relaying.

5a. APPROVAL OF DEPURATION BEDS

The Department of Fisheries and Oceans, in consultation with Environment Canada and the Canadian Food Inspection Agency (CFIA), designates certain areas where oysters can be transferred for

controlled purification. The median or geometric mean faecal coliform Most Probable Number (MPN) of the water must not exceed 14 per 100 ml, and not more than 10 per cent of the samples must exceed a faecal coliform MPN of 43 per 100 ml, according to the results of a five-tube water test.

The water must also meet the following criteria:

- minimum oxygen content of 5 ppm;
- salinity at least equal to the salinity of the area where the bivalves were harvested;
- turbidity less than 20 units Jackson turbidity;
- temperature adequate to permit oysters to feed normally; relaying must not be carried out when water temperature is below 5°C.

In the absence of these conditions, if one still wishes to have the site in question approved for relaying, bacteriological analysis results must be submitted which demonstrate that, in the past, oysters in this area have been systematically purified.

These depuration beds must be at least 200 m from any open fishing area, so as to avoid cross-contamination and harmful effects on other oyster-related activities.

For interprovincial shipments for relaying purposes, the licence holder must obtain authorization from the Introductions and Transfers Committee and the district office of the Canadian Food Inspection Agency in the province controlling the receiving waters before shipment is made.

5b. GUIDELINES FOR IDENTIFYING DEPURATION BEDS

Depuration beds shall be identified by orange buoys at each corner of the site (lease for species to be decontaminated authorized by appropriate provincial agency or site approved by DFO) where oysters can be placed for purification. The lease number or licence number must be displayed on these buoys.

6. DURATION OF DEPURATION

Relayed oysters must be kept in approved relay beds for at least 30 consecutive days. After depuration, the bacteriological quality of the oysters must be such that no more than 230 faecal coliform are detected per 100g of meat.

7a. LICENCE TO FISH IN A CONTAMINATED AREA

Pursuant to section 4 of the Management of Contaminated Fisheries Regulations, the Minister may issue to any applicant who submits a decontamination plan acceptable to the Department and who pays the applicable fee a licence authorizing that person and any other person named in the licence to fish in the designated contaminated area. The licence holder must therefore apply for approval of a decontamination plan (Schedule A) and, upon approval of the plan, pay the fee of \$100 for the licence plus an extra fee of \$20 for each person named in the licence other than the licence holder.

All purified product must be marketed through registered processing establishments which comply with all provisions of federal and provincial regulations, or may be marketed through a distributor within the province where authorized by provincial regulations.

Any person whose name appears on a licence (\$20) may fish oysters only on the condition that the said person complies with the decontamination plan in which his/her name appears, AND ONLY IN THE PRESENCE OF THE LICENCE HOLDER.

7b. SPAT COLLECTION PERMITS FOR CONTAMINATED AREAS

No fee is charged for this permit, which is issued pursuant to section 4 of the Fisheries Act. Applications must be approved by Environment Canada before the permit is issued by a Licensing Service Centre.

8. DECONTAMINATION PLAN

Pursuant to section 4 of the Management of Contaminated Fisheries Regulations, persons wishing to obtain a licence to fish oysters for food purposes must submit a decontamination plan to the Minister.

In their decontamination plan, applicants must provide the following information:

- a written description of the contaminated area(s) where the oysters will be fished. This description must include grid references (using the Universal Transverse Mercator grid as established in the National Topographic System, scale of 1:50,000, published by the Department of Energy, Mines and Resources), a description on maps of the Shellfish Growing Area Classification Index prepared by Environment Canada which can be consulted at DFO offices, or a description by the provincial authority responsible for the lease
- a written description of the approved areas where the contaminated oysters are to be purified, including grid references (as above) or a descriptive lease number with the maps
- the name of the licence holder
- the names of all person who will be named in the licence
- the duration of the relaying activities
- a description of the fishing method
- the estimated quantity of oysters to be fished

9. RECORDS

Pursuant to section 61 of the Fisheries Act, the licence holder must keep records, which are to be provided to any DFO employee at the request of the Conservation and Protection Branch. These records must include the following information:

- the date when the contaminated oysters were fished;
- the source of the contaminated oysters;
- the quantity of oysters harvested in the contaminated area;
- the date the oysters were relayed to an approved bed;
- identification of the approved area;
- the quantity of oysters thus relayed;
- the date oysters were harvested in the approved area;
- the name of the purchaser, date of purchase and quantity purchased.

These records may also include the results of microbiological analyses or other tests performed on each lot of relayed oysters, before and after the depuration period. The licence holder must also submit proof that the weekly decontamination plan has been respected and that harvesting of the relayed oysters was not permitted within 30 days of the relaying.

THE LICENCE HOLDER MUST RETAIN THESE RECORDS FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF HARVESTING. The licence holder is legally bound to the preceding pursuant to section 61 of the Fisheries Act.

10. FISHING METHOD

The Department of Fisheries and Oceans approves the fishing method and ensures that it will not cause increased contamination. In addition, the Habitat Management Division (DFO) determines whether it is advisable to control the activities to ensure that the fishing method is not detrimental to the environment or to any other fishery.

11. NOTICE OF INTENTION TO FISH

Holders of a contaminated shellfish fishing licence shall notify the Licensing Service Centre of any change to their decontamination plan at least one week in advance. This notice may modify the areas or parts of areas to be harvested, the fishing period, fisher's name, etc. DFO reserves the right to limit at any time the number of areas harvested and the number of harvesters.

APPENDIX 4 - COCKTAIL OYSTER MARKETING POLICY

POLICY RESPECTING THE HARVEST AND MARKETING OF "COCKTAIL" OYSTERS BY LICENSED AQUACULTURISTS IN NEW BRUNSWICK, NOVA SCOTIA AND PRINCE EDWARD ISLAND.

INTRODUCTION

This policy was developed as a result of requests from aquaculturists¹ in New Brunswick and Nova Scotia to be permitted to harvest and market undersized "cocktail" oysters² from licensed shellfish leases. This policy was developed by the Department of Fisheries and Oceans (DFO) in consultation with the provinces involved. This policy takes into consideration health and safety concerns, enforcement requirements to ensure protection of commercial oyster fisheries and the need to harmonize implementation among the three provinces and the various areas within DFO's Maritimes Region. In New Brunswick, DFO and the province conducted a pilot project that permitted the harvest and marketing of cocktail oysters from selected oyster leases under strict guidelines during 1993 and 1994. This policy draws heavily on the experience gained in this pilot project.

POLICY

The policy applies in New Brunswick, Nova Scotia and Prince Edward Island unless otherwise indicated.

1. The harvest and marketing of cocktail oysters will be permitted from selected, licensed shellfish leases under variation orders issued by DFO. A variation order will permit the harvest and subsequent marketing of oysters of any size from a specific site during the periods specified in the order. All rules governing the program will be articulated in both an attachment to the variation order and the provincial (or federal) Aquaculture Lease Agreement of the proponent.
2. The marketing of cocktail oysters will be subject to the health and safety requirements of the Fish Inspection Act and Regulations.
3. All cocktail oysters must be processed in provincially licensed and registered plants when marketed in the province of origin. If being exported outside the province of origin, cocktail oysters must be processed in federally registered plants that have valid Quality Management Programs (QMP).
4. Licensees for the "Cocktail" Oyster Program will be selected based on the following criteria:
 - a) Only those aquaculturists not holding commercial oyster licences or licences issued under the Management of Contaminated Fisheries Regulations (e.g., public bed relay or harvesting permits) will be eligible. Submission of a written application to the program will signify a proponent's desire to terminate any commercial licences if and when he/she is accepted into the program. **Note:** This criterion also applies to any helpers who will be engaged in the program.
 - b) Aquaculturists engaged in this program will be permitted to hold oyster replanting licences under Section 29 of the Maritime Provinces Fishery Regulations only under strict guidelines administered by the DFO Area Office. These licences cannot be valid during the period that the harvesting and marketing of cocktail oysters is permitted.
 - c) Only those aquaculturists who comply with the terms and conditions set out in federal and provincial fisheries legislation and policy will be eligible. **Note:** If there are any inconsistencies between federal and provincial legislation or policy relating to this program, federal legislation or policy will prevail.
 - d) Only those aquaculturists who can establish that they are the holders of licensed and surveyed shellfish leases will be eligible. **Note:** This is necessary to ensure that the fishing of cocktail oysters is conducted on private leases and not on public oyster beds. Developmental leases recognized by provincial leasing authorities are eligible for this program. The local variation order requires that geographic co-ordinates (grid references or latitude and longitude) be available for all points of the lease to properly describe the site. These must be available from the leasing authority.

IMPLEMENTATION

1. a) Cocktail oysters being shipped to market must be contained in appropriately sized containers and tagged so they will be tamper-proof while en route to buyers. A record of product and amount must accompany all shipments and be maintained by the processor in a format that can be audited by the

authorities. The units or volume of all transactions (sales and purchases) must be in a uniform measure and recorded so that they can be audited against growers' sales records to the processors.

b) Under the program, the same uniform measure (units or volume) records of all shipments and sales to processors must be maintained by the aquaculturist in a format that can be audited by the authorities.

2. Any aquaculturist who fails to abide by the conditions of this policy or the terms and conditions of any federal or provincial licence or lease respecting the harvest and marketing of cocktail oysters will have their variation orders immediately revoked. This will result in the termination of the harvesting and marketing of cocktail oysters under this policy.

3. Any aquaculturist who accepts oysters less than 76 mm long onto their site, except in accordance with this policy, will have their variation orders immediately revoked.

4. Any aquaculturist who violates any provision of this policy or the conditions of any federal or provincial licence or lease may be subject to the loss or suspension of their provincial or federal shellfish licence or lease.

5. Any processor who fails to abide by the conditions of this policy or the terms and conditions of any federal or provincial licence or lease respecting the harvest and marketing of cocktail oysters will have their variation orders immediately revoked. This will result in the termination of the harvesting and marketing of cocktail oysters under this policy.

6. The licensing authorities will carry out an immediate review if a processor is suspected of violating any provision of this policy or the conditions of any federal or provincial licence. If it is determined that a violation has been committed, offenders may be subject to the loss or suspension of their provincial or federal shellfish licence or their participation in the Quality Management Program.

7. Processors who must "hold" oysters outside of their physical processing facility on open water shellfish leases must, as part of the program, identify the licensed and surveyed leases that will be used only for holding cocktail oyster product. Other species may be held on the same lease, but must be identified in the application for the program. Note: No other oysters originating from the public or leasehold commercial fishery can be placed or held on the leases identified as part of the program.

GENERAL PROCEDURES

1. Any oyster aquaculturists desiring to become involved in the "Cocktail" Oyster Program must request permission to harvest and market cocktail oysters from the DFO Regional Aquaculture Co-ordination Office in Halifax or Moncton by submitting a completed and signed application. In their applications, aquaculturists must be prepared to identify all the information requested as part of the application, including the federally or provincially registered plant that will be processing or exporting the oysters

2. DFO will investigate, review and vet the request to determine whether applicants meet the criteria for inclusion in the program.

3. After a thorough review of the application with the provinces, the DFO Regional Aquaculture Co-ordination Office will inform applicants, in writing, whether they meet the criteria established in this policy.

4. The provinces must recommend approval of applications for DFO to issue a variation order permitting cocktail oysters to be harvested from the specific lease and processed through the appropriate facility.

5. The following information must be provided with the application for a variation order:

a) the name of the aquaculturist; b) the location of the lease (must include either grid references or latitude and longitude for all points of the lease); c) the period requested to harvest cocktail oysters; d) the source of the seed that will be used by the aquaculturist as part of the program; e) the name of the processing facility that will be shipping the product to the buyers/market; f) a list of all staff (helpers) who will be engaged or employed by the applicant; g) copies of the tamper-proof containers and labels that will be used by the aquaculturist and buyer; h) an example of the record-keeping method and accounting procedure that will be used by both the aquaculturist and the processor to document the product from harvest site to market.

6. Current lists of participants must be maintained by DFO and made available to those fishery officers and inspection officers involved with the enforcement of this policy and program.

7. Oyster aquaculturists participating in the "Cocktail" Oyster Program must grow their own oysters from spat³ or seed³ that is either collected on site or at off site areas which are defined for spat collection in order to avoid user-group conflicts, if required. They can also be purchased from a duly registered seed and spat supplier⁴. Aquaculturists must be prepared to specify, with supporting documentation, how and where they intend to procure seed and spat for grow-out, and to maintain an inventory.

DEFINITIONS

1 Aquaculturists - holders of a shellfish lease in the provinces of New Brunswick, Nova Scotia or Prince Edward Island who grow their own oysters from spat or seed collected on site or off site, or purchased from a registered seed supplier or hatchery.

2 "Cocktail" oysters - oysters less than 76 mm (3 inches) long.

3 Seed or spat oysters - oysters less than 51 mm (2 inches) long. For seed oysters purchased as part of this program that are longer than 51 mm, aquaculturists will require permission from DFO before any sales transaction or the movement of the seed between vendor and purchaser.

4 Suppliers of seed for the program must be registered with DFO and provincial authorities as seed/spat vendors, and must clearly identify their seed-holding sites or leases involved in the program. Hatcheries supplying seed for the program must hold a certificate of registration issued by their province.

APPENDIX 5 – MOLLUSCAN SPAT COLLECTION OPERATIONAL POLICY

MOLLUSCAN SPAT COLLECTION OPERATIONAL POLICY

INTRODUCTION

The Gulf Region Molluscan Spat Collection Operational Policy has been designed to complement and be consistent with the National Policy on Access to Wild Aquatic Resources as it applies to Aquaculture. Molluscan shellfish growers will have predictable, equitable and timely access to molluscan spat.

OBJECTIVES

The objectives of this policy are:

- (1) to establish a framework and criteria to facilitate access to wild molluscan spat for aquaculture purposes, in support of the DFO policy on the development of a sustainable and economically viable aquaculture industry in Canada.
- (2) to provide molluscan shellfish growers and fishers with a clear and coherent statement of DFO policy regarding Gulf Region molluscan spat collection. The policy defines, among other things, terms and conditions, eligibility, and the application review and licensing process.

SCOPE

This policy applies exclusively to the direct access to wild molluscan spat for aquaculture purposes. It does not cover the purchase of molluscan spat from authorized growers or fishers, access to spat, juveniles and broodstock for scientific purposes or in the pre-commercial phase of aquaculture, or commercial hatchery spat production.

CONTEXT

Molluscan shellfish aquaculture in the Gulf Region is highly dependent on the collection of wild spat to sustain a reliable and cost-effective source of seedstock. Access to wild aquatic resources is essential to ensure the long-term stability of spat supply and the future sustainability of the molluscan shellfish aquaculture industry.

A policy is required to:

- Recognize that spat collection is a part of molluscan shellfish aquaculture, and that aquaculturists are legitimate users of land, water and wild aquatic resources.
- Provide a stable framework that is consistent for the collection of spat within the Gulf Region to grant equitable and timely access to eligible participants.
- Recognize the significance of other users in the area, such as First Nations and traditional fisheries.
- Provide additional management support for the movement and sale of spat within the Gulf Region (e.g. National Code on Introductions and Transfers of Aquatic Organisms).

LEGISLATIVE AUTHORITY

Molluscan spat collection is considered as a fishery under the Fisheries Act and requires the issuance of a spat collection licence for certain on-lease activities and for all off-lease operations.

No authorization is necessary for the collection of lease species spat on a suspended culture lease or for by catch of wild shellfish of lease species on lease.

Licences for off-lease spat collection in an approved area will be issued for suspended spat collection under section 4 and for bottom spat collection under section 7(1) of the Fisheries Act. Section 4 states that “*Nothing in this Act precludes the granting by the Minister of written permission to obtain fish for*

purposes of stocking or artificial breeding or for scientific purposes.” while section 7 (1) states that “Subject to subsection (2), the Minister may, in his absolute discretion, wherever the exclusive right of fishing does not already exist by law, issue or authorize to be issued leases and licences for fisheries or fishing, wherever situated or carried on.”

Licences for spat collection in areas closed by prohibition orders will be issued under section 4(1) of the Management of Contaminated Fisheries Regulations, which states: “*Subject to subsection (2), on application and payment by a person of the appropriate fee set out in the table to this subsection, the Minister may issue the person a licence authorizing the person and any other person named in the licence to fish in any area in respect of which an order is issued under subsection 3(1), for any species specified in that order.*”

IDENTIFICATION OF SPAT COLLECTION SITES, COLLECTOR (GEAR) TYPE AND NUMBERS

In their applications, the applicants are responsible for clearly identifying the sites being proposed for spat collection, collector (gear) type and numbers, as required on the application form, which is available at DFO Licensing Service Centres. DFO will work closely with the provinces, the aquaculture industry and other stakeholders as required to identify spat collection sites that will minimize potential conflicts with other users.

ELIGIBILITY

Individual or corporate lease holders, Aboriginal communities, fishers’ groups interested in sea ranching projects, scallop bonafide fishers and oyster, mussel and clam coastal fishers are eligible for spat collection licences. Out-of-province spat collection applications will be accepted if the applicant holds an aquaculture lease in the province where the spat collection is to occur.

Spat collection can be authorized in closed shellfish growing areas, provided the application is in compliance with Chapter 12 of the Canadian Shellfish Sanitation Program (CSSP) Manual of Operations. It is important to note that on Prince Edward Island, applications for mussel spat collection are only accepted under the following conditions: (1) closed shellfish growing areas or (2) mussel spat licences on off-bottom oyster leases approved prior to December 31, 2006.

LICENCE FEES

The fees for spat collection licences vary depending on whether the activity takes place in a closed area or an open area.

Licences issued under section 4 or 7(1) of the Fisheries Act, in an open area, will be at no cost to the applicant in accordance with the fee structure set in part I, section 5, column II of the Maritime Provinces Fishery Regulations.

Holders of licenses for spat collection in closed areas are required to pay licence fees to the Crown. As prescribed by the fee structure, the fee for spat collection licences issued under section 4(1) of the Management of Contaminated Fisheries Regulations will be \$100, plus \$20 for each person named in the licence other than the licence holder.

Leasing of aquaculture on PEI is carried out under a joint DFO/Province/Industry leasing authority known as the PEI Aquaculture Leasing Management Board (ALMB). In the province, the review of the shellfish spat collection applications is carried out by the PEI Aquaculture Lease Referral Committee. An administration fee of \$200 per application has been set by the PEI ALMB. In the 1980’s, an aquaculture zoning Policy for the waters of PEI was developed following extensive consultations. The zoning regime sets out which areas are open for bottom culture, surface culture and those which would be closed to aquaculture development.

AUTHORIZATION CATEGORIES

Category 1 – No authorization required

A spat collection licence application is not required when the activity targets a lease species and prior authorization for suspended culture has been obtained.

Category 2 – Collection licence

Authorization for collection of lease species spat on a bottom culture lease or off lease will be subject to the spat collection licence application review process. Spat collection licences will not be authorized on aquaculture leases to persons other than the lease holder unless prior authorization has been given in writing by the lease holder.

APPLICATION PROCEDURE

Completed spat collection licence applications should be submitted to a Licensing Service Centre in the Gulf Region using the DFO application form (Appendix I). A paper copy of the application form may be obtained by visiting one of our local offices or by downloading an electronic copy from our website: <http://www.glf.dfo-mpo.gc.ca/fam-gpa/rm-gr/lic-dp/form-formulaire-e.php>.

Applications will be evaluated according to the criteria identified below and on the basis of existing spat collection practices or an aquaculture management plan, if there is one in place for the proposed area.

Licence applications for spat collection in closed areas will require a decontamination plan. An example of a decontamination plan is provided in Appendix IV.

APPLICATION REVIEW PROCESS AND EVALUATION CONSIDERATIONS

Spat collection licence applications will be subject to a detailed review by DFO Area Office. In PEI, spat collection licence applications are reviewed by the PEI Aquaculture Leasing Referral Committee. Recommendations are then forwarded to the Chief, Resource Management for consideration. DFO then issues licences.

It is necessary to plan and apply a strategy in order to minimize conflicts between the aquaculture industry and other established users or traditional competitors for marine space (fishery, tourism, maritime transport, etc.). Spat collection applications will be evaluated by DFO according to the following considerations.

1.0 Site Selection

1.1 Water Depth

- Suitability of the depth of the site for the proposed activities.

1.2 Water quality

- Sites proposed for spat collection will also be assessed in accordance with the classification established by Environment Canada and with the operational requirements of the Canadian Shellfish Sanitation Program (CSSP). Chapter 12 of the CSSP Manual of Operations states: “Shellstock spat and seed may be collected, for grow-out, from bacteriologically contaminated areas providing that they are moved to approve growing areas for an acceptable period of time prior to their final harvest and sale for human consumption. This grow-out period must be a minimum of six months or longer.”

1.3 Proximity to Other Fisheries/Other Leases

- Buffer between leases and known commercially active public shellfish beds. The size of the buffer will depend on the level of activity.

1.4 Environmental Impact

- Migratory birds and fish habitat

2.0 User conflicts

2.1 Shipping and navigation

- The presence of existing moorings or floating docks
- Proximity to channels

- Shore access in shallow areas or highly developed upland areas.

Site markings will be given special consideration in the application examination and in the establishment of licence conditions to promote better molluscan shellfish grower line identification and navigation safety.

2.2 Tourism and Recreation

- Recreational water users, including swimmers and near-shore water crafts (windsurfers, kayaks, etc.)

2.3 Fisheries

- Recreational: smelt, clam, quahog
- Commercial: smelt, oyster, clam, quahog, eel, silverside, gaspereau, lobster, rock crab.

2.4 Aboriginal Rights

Commercial fisheries and subsistence fisheries for food, social and ceremonial purposes.

2.5 Rights of Riparian Owners

- Shoreline property owners including existing cottages or residential developments (take account of shoreline access and enjoyment rights).

LICENCE RENEWAL, CHANGE OF LICENCE HOLDER AND VALIDITY PERIOD

Current legislation provides that spat collection licences are non-renewable and not transferable. However, the Minister in “his absolute discretion” may for administrative efficiency prescribe in policy those conditions or requirements under which he will issue a licence to a new licence holder as a “replacement” for an existing licence being relinquished.

In the issuance of spat collection licences for a particular area and particularly in the case of mussel culture, preference will be given to the licence holder who had been active the previous year in the area in question.

Spat collection licences will be issued for a maximum period of one year. For oyster spat collection the season would be July 1 - June 30 but restrictions to the validity period may be imposed in certain off-lease spat collection areas because of conflict with other users of the area (e.g. fishing activities). For mussel spat collection the season would be May 1 - April 30.

INTRODUCTIONS AND TRANSFERS OF MOLLUSCAN SHELLFISH

Molluscan shellfish spat collection licence holders must be aware that the movement of spat between provinces must be in accordance with the National Code on Introductions and Transfers of Aquatic Organisms (September 2003). Spat transfers between provinces are not authorized unless the state of health of the animal has been verified and a duly authorized license to release or transfer fish has been issued under section 56 of the Fisheries (General) Regulations. Similar requirements may also be applicable between certain bodies of water, even they are located within the same province, to minimise the risk of propagation of diseases or invasive species.

More detailed information is available from Resource Management staff at the DFO Area Office or from the DFO website http://www.dfo-mpo.gc.ca/science/aquaculture/code/prelim_e.htm.

TRANSPORT CANADA - NAVIGABLE WATER PROTECTION PROGRAM (TC-NWPP)

Transport Canada, Navigable Water Protection Program (TC-NWPA) is implementing a national policy whereby shellfish spat collection will be treated as an aquaculture activity in the future and the installation and ongoing maintenance of spat collection sites will be subject to the Navigable Water Protection Act (NWPA). Proponents proposing the placement of spat collectors in the water should be referred to TC-NWPA for a review/approval of their proposal. This policy will come into effect in 2008.

LICENSING DECISIONS AND DECISION REVIEWS

Successful licence applicants will be notified and will then be able to obtain their licence. Applicants will also be notified in writing of the departmental decision where requests are denied. Persons who are not satisfied with a departmental decision may present additional information for consideration by Area Directors, Eastern New Brunswick and Gulf Nova Scotia. In PEI, persons who are not satisfied with the departmental decision would appeal to the Aquaculture Leasing Appeals Panel, who would make a recommendation to the Area Director.

POLICY AMENDMENT

The Policy will be subject to regular review. Consultations with stakeholders may be necessary, depending on the nature of the amendments to be made.

APPENDIX 6 - COMMERCIAL OYSTER FISHERY LICENSING POLICY FOR THE GULF REGION

- No new commercial oyster fishing licence may be issued.
- Replacement licences may be issued:
from coastal and core fishers to other coastal or core fishers and to certain new entrants (all licences must be replaced).
- To qualify as a new entrant and obtain a replacement oyster fishing licence, an individual must:
 1. have fished commercially for at least five weeks in each of the last two years;
 2. have been registered as a commercial fisherman in each of the last two years;
 3. be recognized in the local community as a commercial fisherman.
- When a replacement licence is issued, the conditions of the replacement licence shall be the same as the conditions of the licence replaced.

APPENDIX 7 - MANAGEMENT PLAN EVALUATION CRITERIA

The criteria in evaluating the management plan are:

1. actual landing data obtained for the commercial fishery
2. clientele satisfaction achieved
3. harvesting level maintained
4. industry feedback
5. prompt decision making
6. communications with the industry
7. intergovernmental relations
8. level of acceptance and compliance with management plan

APPENDIX 8 - CONSERVATION AND PROTECTION, ADDRESSES AND CONTACT INFORMATION

<u>Bureau de Secteur/Area Office</u>		<u>PÊCHES & OCÉANS/ FISHERIES & OCEANS</u>	
C.P. 3420 (3267 rue Principale) Succ. Bureau Chef Tracadie-Sheila, N.B. E1X 1G5		Ernest Ferguson - Area Manager/Gestionnaire de secteur 395-7711 John St-Coeur – Area Chief/Chef de secteur Conservation & Protection 395-7704	
<u>Bureaux /Offices Conservation & Protection</u>			
C.P. 3338 (3267 rue Principale) Succ. Bureau Chef TRACADIE-SHEILA, N.B. E1X 1G5 Tel: 395-7706 Fax: 395-7707 *sous détachement - Caraquet	704 rue Principale BERESFORD, N.B. E8K 2Y1 Tel: 542-7485 Fax: 542-7480 (Sup. 542-7485)	485 Route 420 SOUTH ESK, N.B. E1V 4L9 Tel: 773-3268 Fax: 773-7015 (Sup. 622-4163) *sous détachement Renous	
226 Avenue Hôtel de Ville SHIPPAGAN, N.B. E8S 3J4 Tel: 336-6474 Fax: 336-6429 (Sup. 336-6411)	172 Notre Dame KEDGWICK, N.B. E8B 2A9 Tel: 284-2312 Fax: 284-2626	5443 Route 117 BAIE-SAINT-ANNE, N.B. E9A 1E5 Tel: 228-4263 Fax: 228-6246	
C.P. 5621, 150 Boul. St-Pierre Est CARAQUET, N.B. E1W 1B7 Tel: 727-3038 Fax: 727-4616 (Sup.726-1984)	460 rue Chaleur CHARLO, NB E8E 2G4 Tel: 684-2202 Fax : 684-2103 *sous détachement – Beresford	23 MacNeil St. RENOUS, N.B. E9E 2C5 Tel: 622-5992 ou 622-6315 Fax: 622-0129 (Sup. 622-5992)	
1176 rue Principale NEGUAC, N.B. E9G 1P1 Tel: 776-3307 Fax: 776-1182 (Sup.776-3307)	750 rue Principale ST-LEONARD, N.B. E7E 2H7 Tel: 423-6303 Fax: 423-7807 *sous détachement – Kedgwick	74, chemin Ohio SHEDIAC, N.B. E4P 2J9 Tel: 533-5033 Fax: 533-5031 (Sup. 533-5030) *sous-détachement - Richibouctou	
	133 Main Street PLASTER ROCK, N.B. E7G 2H2 Tel: 356-2131 Fax: 356-2162 *sous détachement - Kedgwick	9603 rte 134 ALDOUANE, N.B. E4W 5J2 Tel: 523-4606 Fax: 523-8274 (Richibouctou)	

APPENDIX 9 - CONTACTS

NAME		ADDRESS	TELEPHONE/
Department of Fisheries and Oceans			
Ernest Ferguson	Area Director	Tracadie-Sheila, N.B.	506-395-7702 off. 506-395-7739 fax
	Habitat Coordinator		506-395-7700 off. 506-395-3809 fax
	Aquaculture Coordinator		506-395-7719 off. 506-395-3809 fax
Canadian Food Inspection Agency			
Almas Chiasson	District Supervisor	Shippagan, N.B.	506-336-6417 off. 506-336-6467 fax
Jean Gauvin	District Supervisor	Shédiac, N.B.	506-533-5100 off. 506-533-5104 fax
Cyril Landry	Inspection Manager, Coastal N.B.	St John , N.B.	506-636-4044 off. 506-636-4051 fax
Environment Canada			
Bernard Richard	Senior Microbiologist	Moncton, N.B.	506-851-7279 off. 506-851-6608 fax
Dave Curtis	A/Head, Marine Water Quality Monitoring	St. John's, NL	709-772-4359 off. 709- 685-9939 cell. 709- 772-5097 fax
New Brunswick Department of the Environment			
Tim LeBlanc	Manager, Water and Wastewater Management	Fredericton, N.B.	506-453-7945 off. 506-453-2390 fax
Susan Tao	Coordinator, Municipal Wastewater Management		506-457-7906 off. 506-453-2390 fax
Serge Thériault	Senior Engineer, Water Resources		506-453-2036 off. 506-453-2390 fax

APPENDIX 10 - CONSERVATION AND PROTECTION PLAN EVALUATION CRITERIA

The conservation and protection plan evaluation criteria quantify the activities of fishery officers in the following regards:

1. number of vessel inspections at wharf / landing site
2. number of vessel boardings at sea
3. number of fishing gear inspections at sea
4. number of fishing gear inspections at wharf / landing site
5. number of patrols of closed areas
6. number of monitorings dockside or at the water's edge
7. number of offences
8. number of warnings
9. number of investigations
10. number of surveillances
11. number of boat patrols / number of hours at sea
12. number of joint patrols
13. number of hours of intervention by fishery officers
14. costs in wages, overtime, operations and maintenance