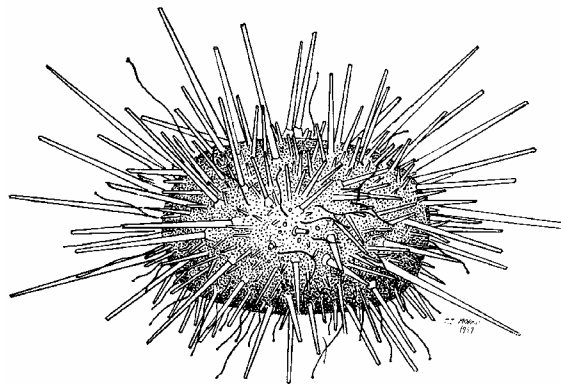


# PACIFIC REGION

## INTEGRATED FISHERIES MANAGEMENT PLAN

# GREEN SEA URCHIN BY DIVE

NOVEMBER 1, 2003 TO OCTOBER 31, 2006



green sea urchin: *Strongylocentrotus droebachiensis*



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

Canada

*This Integrated Fisheries Management Plan is intended for general purposes only. Where there is a discrepancy between the Plan and the Fisheries Act and Regulations, the Act and Regulations are the final authority. A description of Areas and Subareas referenced in this Plan can be found in the Pacific Fishery Management Area Regulations.*



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## 1. FISHERIES AND OCEANS CANADA CONTACTS

Observe, Record and Report (Enforcement Line)	(800) 465-4336
Commercial Shellfish Information	(604) 666-2828
Shellfish Toxin Update (24 Hrs.)	(604) 666-2828
Invertebrate Web Page	<a href="http://www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/index.htm">www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/index.htm</a>

### Fisheries Management

Regional Shellfish Co-ordinator	Russell Mylchreest	(604) 666-3869
North Coast, Areas 1 through 6 (north) 417 2nd Avenue West, Prince Rupert, B.C. V8J 1G8 Resource Management Biologist Resource Management First Nations Fisheries Resource Manager - Recreational Fisheries	General inquiries Fax Juanita Rogers Karen-Kimura Miller Mark Reagan	(250) 627-3499 (250) 627-3498 (250) 627-3007 (250) 627-3437 (250) 627-3409
Central Coast, Areas 6 (South) to 13 and 27 P.O. Box 2159 Unit 10 - 9250 Trustee Road, Port Hardy, B.C. V0N 2P0 Resource Management	General Inquiries Fax Guy Parker	(250) 902-0481 (250) 902-0674 (250) 714-8379
South Coast, Areas 14 to 26 3225 Stephenson Point Road, Nanaimo, B.C. V9T 1K3 Resource Management Biologist Resource Management Co-ordinator - Comox Resource Management Co-ordinator - Parksville Resource Management First Nations Fisheries Resource Management Recreational Fisheries	General Inquiries Fax Erin Wylie Byron Koke Randy Webb Frank Crabbe Terry Gjernes	(250) 756-7270 (250) 756-7162 (250) 756-7158 (250) 339-2809 (250) 954-2675 (250) 756-7296 (250) 756-7192
Lower Fraser Area, Areas 28 and 29 Unit 3, 100 Annacis Parkway, Delta, B.C. V3M 6A2 Resource Management Biologist Resource Management First Nations Fisheries Resource Management Recreational Fisheries	General Inquiries Fax Bridget Ennevor Debbie Sneddon Devona Adams	(604) 666-8266 (604) 666-7112 (604) 666-6390 (604) 666-8426 (604) 666-6512

### Science Branch

Pacific Biological Station Hammond Bay Road Nanaimo, B.C. V9R 5K6	Dr. Ian Perry Brenda Waddell	(250) 756-7137 (250) 756-7228
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## **Commercial Licensing**

Pacific Fishery Licence Unit (604) 666-0566  
480-555 West Hastings Street  
Vancouver, BC V6B 5G3

Pacific Fishery Licence Unit (250) 627-3413  
417 2nd Avenue West  
Prince Rupert, BC V8J 1G8

Pacific Fishery Licence Unit (250) 754-0400  
60 Front Street  
Nanaimo, BC V9R 5H7

## **Oceans' Directorate**

Dick Carson (604) 666-7971

## **Aquaculture**

Shellfish Aquaculture Officer Harpreet Gill (604) 666-2473

## **Environment Canada**

Growing Water Quality Classification and Surveys Walter Hajen (604) 666-2947

## **BC Ministry of Fisheries**

Seafood Planning and Development Al Castledine (250) 387-9574

## **Canadian Food Inspection Agency**

Fish Inspection Directorate  
2250 Boundary Road  
Burnaby, BC V5M 4L9  
Molluscan Shellfish Program Specialist Gordon Greig (604) 666-4427  
ext.260

## **Workers' Compensation Board**

Focus Sector Manager/Fishing, Courtenay Peter Gilmour (250) 334-8701  
Occupational Safety Officer, Terrace Shane Neifer (250) 615-6605  
Occupational Safety Officer, Campbell River David Clarabut (250) 286-3754

## 2. GREEN SEA URCHIN SECTORAL COMMITTEE AND RESEARCH SUBCOMMITTEE

### Fisheries and Oceans Canada

Guy Parker (Chair)	Resource Management – Central Coast	(250) 714-8379
Juanita Rogers	Resource Management – North Coast	(250) 627-3007
Byron Koke	Resource Management – South Coast	(250) 339-2809
Barry Kenester	Conservation and Protection	(250) 850-5715
Ian Perry	Stock Assessment	(250) 756-7137
Brenda Waddell	Stock Assessment	(250) 756-7228
Chris Pearce	Science - Aquaculture	(250) 756-3352

### West Coast Green Urchin Association (WCGUA)

Michael Callow	WCGUA – President	(250) 655-0626
David Kensall	WCGUA – Vice President	(250) 521-7275

### Green Sea Urchin Service Bureau

D&D Pacific Fisheries	(604) 886-4819
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### Green Sea Urchin Buyers

Hito Fisheries	(604) 253-5111
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### First Nations

Seats remain open to all coastal First Nations interested in assessment and management of the resource.

## 3. GLOSSARY

Area	Defined in Section 2 of the <i>Pacific Fishery Management Area Regulations</i> . A map of Pacific Fishery Management Areas is available on the Department's Internet site at:  <a href="http://www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap_e.htm">www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap_e.htm</a>
aquaculture	The process of spawning animals and rearing the progeny to marketable size, involving some level of intervention (e.g. feeder, predator protection) by the aquaculturist.
catch verification program	A program designed to monitor, record, and verify catches, also called the Validation Program.

Communal Licence	Issued to First Nations organizations pursuant to the <i>Aboriginal Communal Fishing Licences Regulations</i> , to carry on fishing and related activities.
communal commercial licence	Issued to First Nations organizations pursuant to the <i>Aboriginal Communal Fishing Licences Regulations</i> for participation in the general commercial fishery. Licences issued are equivalent to the capacity of licences that have been retired under the Treaty and Aboriginal Policy Directorate Licence Retirement/Allocation Transfer Program.
enhancement	Adding to (enhancing) the biomass of a species in the wild by spawning and growing juvenile animals, subsequently releasing them to their natural habitat for further growth. Usually requires little or no further intervention after release.
IQ	Individual quota. In the green sea urchin fishery, equivalent to 1/49th of the commercial total allowable catch (TAC).
invertebrate	An animal without a backbone.
landed or off-loaded	The transfer of green sea urchins from a vessel in water to land.
observer	An individual who has been designated as an observer by the Regional Director General for Pacific Region pursuant to Section 39 of the <i>Fishery (General) Regulations</i> .
WCGUA	West Coast Green Urchin Association
PSARC	Pacific Scientific Advice Review Committee.
Quota Area	A defined portion of Pacific fisheries waters. Areas and Subareas, as described in the <i>Pacific Fishery Management Area Regulations</i> , are referenced in describing Quota Areas. Each Quota Area has a name, e.g. RU01 Upper West Queen Charlotte Islands (QCI), and is assigned a maximum allowable catch in pounds (lb.).
sectoral committee	Provides a forum for the exchange of information and views, between the clients and Fisheries and Oceans Canada, on issues important to the management of all fisheries for green sea urchin.
service bureau	An agency contracted by fishers or their harvesters association to coordinate notification, catch validation, fishery monitoring, biological sampling and data submission requirements. The service bureau may train and recommend candidates for certification by Fisheries and Oceans

Canada as observers.

stakeholder	All people and groups with an interest in the fisheries resource, such as First Nations, recreational and commercial fishers, processors, and non-consumptive users.
stock assessment	Results of analyses of fisheries and research data used to evaluate the effects of fishing on a stock or population and to predict the reaction of populations to alternative management choices.
Subarea	As in Section 2 of the <i>Pacific Fishery Management Area Regulations</i>
TAC	Total allowable catch. The amount of catch that may be taken from a stock, determined by analytical procedures to achieve management objectives.
tranship	The transfer of green sea urchins from a vessel to another vessel.
validated	Green sea urchins that have been weighed by an observer and the weight entered into the green sea urchin Validation and Harvest Logbook, or an approved alternative log.

#### 4. INTRODUCTION

The 2003-2006 Pacific Region Green Sea Urchin Integrated Fisheries Management Plan (IFMP), encompasses the period of November 1, 2003 to October 31, 2006. The commercial fishery is scheduled to occur from November 1 to March 1 each year.

The 2003-2006 green sea urchin Commercial Harvest Plan is attached as Appendix 1 to this IFMP. Commercial fishers are advised to review the attachments for harvest information.

Additional information on green sea urchins may be accessed through the Department's shellfish webpage at:

[www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/default\\_e.htm](http://www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/default_e.htm)

Research Documents and Stock Status Reports for green sea urchins are available at the Pacific Scientific Advice Review Committee (PSARC) webpage:

[www-sci.pac.dfo-mpo.gc.ca/sci/psarc/default\\_e.htm](http://www-sci.pac.dfo-mpo.gc.ca/sci/psarc/default_e.htm)



## 5. OVERVIEW OF THE FISHERY

The green sea urchin is one of three sea urchin species that have been fished in B.C. waters. Red and green sea urchins are fished commercially under authority of a limited category “Z” licence, category “ZC” for reds, and category “ZA” for greens. Purple sea urchins were fished under scientific permit from 1990 to 1992.

The green sea urchin dive fishery began in 1987 and experienced steady increases in effort up to 1992. Landings peaked in 1992, when 49 vessels reported 1,042 tonnes for a landed value of \$4.4 million. Since 1992, landings have decreased as a result of a more conservative approach to establishing quotas. Total landings in 1998/99 were 156 tonnes with a landed value of approximately one million dollars. Landings since have remained relatively constant. Unlike red sea urchins, where roe is extracted at British Columbia processing plants, green sea urchins are shipped whole and live to Japan. The product quality and perishability has restricted the fishery primarily to accessible south coast areas.

The green sea urchin fishery is managed by a minimum size limit of 55 mm, precautionary quotas, and time and area openings. The minimum size limit is precautionary and allows green sea urchins several years of spawning before becoming available for the commercial fishery.

Licences were limited in 1991 due to concerns over increasing fishing effort. Currently there are 49 licences eligible for this fishery. Despite licence limitation, effort remained high and catch per unit effort (CPUE) continued to show a continued decline in most south coast areas until only recently. This decline in CPUE has necessitated a more conservative approach to establishing quotas, and resulted in an annual TAC. The TAC in the south coast was 449 tonnes for 1994, 173.4 tonnes in 1995, and 166.1 tonnes during the 1996 to 1999 fisheries. The most recent IFMP set the annual quota at 179 tonnes during the 2001 to 2003 fisheries.

Beginning in 1995, a program of individual quotas (IQ’s) was implemented in the green sea urchin fishery. Under the program, an industry funded catch validation and monitoring program was put in place to ensure monitoring of quotas and recovery of accurate catch data. During the first year of the program, south coast quotas were allocated equally among the licence holders, while the north coast remained as a competitive fishery. During the second year of the program, equal IQ’s were again applied to south coast areas. However, north coast areas were opened only under an exploratory protocol. The IQ program will be continued with equal IQ’s again in the south coast areas with a known catch history and an exploratory fishing protocol for other areas.

To encourage the development of this fishery in a scientifically based manner, Fisheries and Oceans Canada, in consultation with the West Coast Green Sea Urchin Association (WCGUA), have developed an exploratory fishing protocol. The protocol has been developed to allow expanded commercial harvest while collecting data to improve our understanding of the resource. Applications to harvest green sea urchins under this protocol may be made by any “ZA” licensed vessel for any areas with no assigned fishing quota.

Green sea urchins are of continuing importance to First Nations groups, who harvest them for food, social and ceremonial purposes.

A small recreational fishery occurs for green sea urchins in most coastal areas.

## **6. ANNUAL (POST-SEASON) REVIEW RESULTS**

Overall, the 2001-2003 fishing seasons were successful. Few major issues were documented and in general, compliance with the catch validation program was good. Concerns remain surrounding incidents of misreporting of harvest information on logbooks.

A formal review of the 2001-2003 fishing season can be found in the document "Green Sea Urchin Fishery Review 2003", available from any of the fishery managers listed in Section 1.

## **7. STOCK STATUS**

### **7.1. Prospects for the Fishery**

During the period of this IFMP, it is anticipated that the majority of commercial licence holders will harvest their IQ allocation, and that the coastwide TAC will be achieved. Poor weather, inclement sea conditions, and recent market competition from Russia are generally the main limiting factors to achieving the TAC. There is no indication of concern for green sea urchin stocks at this time. A recent PSARC review of the fishery in June 2003 indicated that stocks were increasing in size.

The green sea urchin fishery is managed conservatively, and apart from a few areas that have been closed or had quotas reduced because populations have declined, stocks generally appear healthy. A precautionary approach to management, which ensures the Department is meeting its conservation goals, will continue for the future. This, in turn, will ensure sustainable harvests in all areas. The long-term goal of the Department is to develop a biologically based management regime through a better understanding of the resource. This will be accomplished through a collaborative process involving the commercial industry, First Nations organizations, other stakeholders, and the Department.

Sea otter populations are expanding in B.C. and because sea otters are a major predator on green sea urchins, they are expected to have an impact on the fishery in the future. Currently the Department does not consider the impact of sea otters on green sea urchins in the management of this fishery.

### **7.2. Research**

Fisheries and Oceans Canada, WCGUA and First Nations joint stock assessment activities continue coast-wide through biomass transect surveys, experimental harvest sites, and selected study sites. The WCGUA has established a research fund and coordinates vessel and diver participation in surveys with First Nations communities and

the Department. Fisheries and Oceans Canada developed the survey protocol and conducts the data analysis of survey results. The main survey goals are to prove and/or adjust quotas accordingly, and to better understand the growth and recruitment parameters of green sea urchins.

Scientific research and joint industry, First Nations, and Fisheries and Oceans Canada stock assessment surveys are of vital importance to this fishery as it moves from a precautionary management regime towards a biologically based fishery.

## 8. MANAGEMENT ISSUES

- 8.1. An improvement in logbook reporting is required to ensure that harvest information is accurate and timely.
- 8.2. Basic biological information regarding green sea urchins is limited (i.e. age, growth, recruitment and migration), and is needed to support of the management objective for this species. **Action to date:** Continue collaborative research projects with the WCGUA, First Nations and other interested stakeholders. Pacific Biological Station is conducting a growth study which will include the refining of ageing technique as part of the study.
- 8.3. A better understanding of the influence of varying exploitation rates on the resilience of local populations is needed. **Action to date:** Maintain a time series of data on un-fished, moderately fished, and potentially over-fished populations for experimental areas. Research sites have been established.
- 8.4. Increased monitoring of the commercially harvested populations is required, through both surveys and fishery product monitoring to provide appropriate focus for assessment papers. **Action to date:** Monitoring of size frequency of the commercial catch.
- 8.5. Evaluation of the impacts of commercial green sea urchin fisheries on the ability of First Nations to harvest for food, social and ceremonial purposes is required.
- 8.6. Long term strategy for collection of basic biological information, assessment techniques, and management regimes is required.
- 8.7. IQ program does not fully address the distribution of fishing effort, quality-oriented harvest, continuous market supply, and maintaining competitive access to the Japanese market. **Action to date:** Make annual improvements to the IQ program. Reassess quota area boundaries every year, and make changes where necessary to redistribute effort.
- 8.8. Catch reporting structures for the First Nation fisheries are limited. **Action to date:** The Department is consulting with First Nations throughout coastal BC on a more comprehensive approach to gathering catch data by negotiating agreed-upon protocols outlined in the Fisheries Agreement and/or Communal Licences.
- 8.9. The impacts of sea otters on green sea urchin stock need to be evaluated for future consideration in the management of this fishery.

## **9. SPECIFIC MANAGEMENT OBJECTIVES**

### **9.1. Conservation/Sustainability**

- 9.1.1. A more comprehensive understanding of the biology of green sea urchins and the impacts of commercial harvest on green sea urchin populations is required in order to ensure conservation and sustainable harvests in this fishery. The goal of the Research Subcommittee of the Green Sea Urchin Sectoral Committee is to undertake biological investigations. These include biomass estimates through transect surveys in various locations of the BC coast, and experimental harvest and study areas where populations are manipulated to examine urchin growth, migration and recruitment.
- 9.1.2. A method to accurately determine the age of green sea urchins has yet to be discovered. Fisheries and Oceans Canada and the Research Subcommittee will continue to work toward a better understanding of the age of green sea urchins in BC. Green sea urchin aging in BC is on going in terms of data collection, verification and analysis. The Pacific Biological Station is currently conducting studies to refine ageing techniques.
- 9.1.3. Given that we know little about the age of green sea urchins, the Research Subcommittee will consider prioritizing the assessment of spatial and seasonal juvenile growth, survival and recruitment. This information could assist managers in determining the appropriate level of fishing pressure by time and area. Appropriate techniques for the assessment of juvenile recruitment are imperative for fisheries, such as sea urchins, where recruitment is inconsistent throughout the fishing areas. An area devoid of juvenile green sea urchins could indicate that the area is vulnerable to over-fishing.

### **9.2. International Considerations and Obligations**

#### **9.2.1. Information to Transport, Import and Land Shellfish in Canada**

Pursuant to the *Coastal Fisheries Protection Act*, foreign fishing vessels can only enter Canadian waters and offload fish where a licence is issued under *the Coastal Fisheries Protection Regulations*, or a treaty authorizes such activities. In the case of U.S. vessels, there is a treaty in place for roe herring, salmon, tuna, halibut and sablefish. However, only vessels from flag states listed in section 5(1)(a) of the *Coastal Fisheries Protection Regulations* are eligible to be issued licences to land fish in Canada. As the U.S. is not on this list, U.S. vessels are not eligible to receive licences to land other species (including shellfish) in Canadian ports.

Masters of Canadian fishing vessels receiving shellfish, i.e. trans-shipping shellfish, from a U.S. fishing vessel, in waters other than Canadian fisheries waters, require four licences:

- a) Licence to trans-ship fish in waters other than Canadian fisheries waters.
- b) Licence authorizing the vessel master of a Canadian fishing vessel to bring fish received from a U.S. Fishing Vessel into Canadian fisheries waters and land the fish at a Canadian port.
- c) Licence to transport fish in Canadian fisheries waters.
- d) Licence to import fish into Canada.

Contact the Pacific Fishery Licensing Unit in Vancouver, Tel: (604) 666-0566 or Fax: (604) 666-5855 for further information.

### **9.3. Domestic Considerations**

#### **9.3.1. Commercial Fishery**

The Department will continue to work collaboratively with Industry, First Nations organizations and other stakeholders to ensure conservation and sustainability of the green sea urchin resource and fishery. Management of the green sea urchin resource will progress from a precautionary regime to one based on biological information, through assessment and application of data collected from harvest logs, population surveys and research areas.

#### **9.3.2. First Nations Fishery**

Fisheries and Oceans Canada provides opportunities for First Nations access to aquatic resources for food, social and ceremonial purposes. The Department will continue to provide opportunities for First Nations to harvest fish for food, social and ceremonial purposes, in a manner consistent with the *Sparrow* decision. For more information see the Internet at:

[www.pac.dfo-mpo.gc.ca/ops/fm/AFS/Default.htm](http://www.pac.dfo-mpo.gc.ca/ops/fm/AFS/Default.htm)

Under the IQ program, a minimum of two percent of the estimated coast-wide TAC is reserved for First Nations food, social and ceremonial purposes. Additional allocation for green sea urchins will be considered for First Nations who demonstrate they are unable to meet the food, social and ceremonial needs of their members.

#### **9.3.3. Recreational Fishery**

The Department will continue to provide opportunities for a recreational fishery for green sea urchins.

#### **9.3.4. Aquaculture and Enhancement**

In 1995, recognizing both the potential for aquaculture to benefit Canadians and the need to ensure the sustainable use of aquatic resources, Cabinet endorsed the Federal Aquaculture Development Strategy (FADS). Building on FADS and more recent opportunities and challenges associated with aquaculture development, the Department recently released the "Aquaculture Policy Framework". The policy framework recognizes aquaculture as a legitimate use of land, water, and aquatic resources and the importance of providing aquaculturists

with predictable, equitable and timely access to the aquatic resource base, including access to biological materials such as broodstock and seedstock. Therefore, aquaculturists will be treated on an equal footing with other resource users.

The “Aquaculture Policy Framework” can be accessed at the following website:

[www.dfo-mpo.gc.ca/aquaculture/policy/pg001\\_e.htm](http://www.dfo-mpo.gc.ca/aquaculture/policy/pg001_e.htm)

Requests to access the wild green sea urchin resource must be addressed to Fisheries and Oceans Canada, and supported by a project proposal.

For more information on aquaculture or access to broodstock, please contact the Shellfish Aquaculture Officer listed in Section 1.

### **9.3.5. Species at Risk Act**

The *Species at Risk Act* (SARA) came into force on June 5, 2003. The purposes of the Act are: “to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened”.

Possible impacts of this legislation on the green sea urchin fishery will be discussed through the advisory process. For more information on SARA, please refer to the Environment Canada webpage:

[www.sararegistry.gc.ca](http://www.sararegistry.gc.ca)

The Department would like assistance in the reporting of any leatherback turtle sightings or entanglements. Leatherback turtles are listed as endangered in Schedule I of SARA. The Turtle Sightings Network toll-free telephone number is (866) 472-9663 or email [turtles@vanaqua.org](mailto:turtles@vanaqua.org).

#### **9.3.5.1. Sea Otter Recovery Strategy**

Based on surveys made in 2001 and 2002, sea otters range from Hesquiatic Harbour northwest to Cape Scott and eastward to Hope Island and on the central coast from the Goose Islands Group to the edge of Milbanke Sound. They also move seasonally within and beyond this continuous range. Although sea otters are no longer considered in imminent danger of being extirpated from BC, they remain listed as threatened in Schedule I of SARA.

The National Recovery Strategy for Sea Otters in BC is available on the internet:

[www-comm.pac.dfo-mpo.gc.ca/pages/consultations/sea-otters/default\\_e.htm](http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/sea-otters/default_e.htm).

#### 9.3.5.2. Abalone Recovery Strategy

Illegal harvest (all fishing closed in 1990) of northern abalone (“threatened”) is an ongoing concern, continuing to threaten any recovery. Fisheries and Oceans Canada urge fishers to assist in Abalone Coast Watch programs and to report suspicious harvesting activities to Observe Record Report (800) 465-4336. Further information about abalone recovery efforts is available on the Internet:

[www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/abalone/default\\_e.htm](http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/abalone/default_e.htm)

## 10. ENFORCEMENT MEASURES

### 10.1. Overview

In general, compliance with the regulations and Conditions of Licence in the green sea urchin commercial fishery is good, largely due to dockside validation, mandatory harvest and validation logs. The Department continues to remain concerned over issues surrounding misreporting of harvest information. Enforcement actions have resulted in charges in recent years, and continued misreporting may lead the Department to make management changes in the fishery to reduce the problem.

Enforcement staff will pursue opportunities to enforce the regulations and Conditions of Licence applicable to this fishery while engaged in enforcement activities directed to priority fisheries in the Pacific Region.

Fishery managers and shellfish assessment biologists have prepared impact statements with respect to non-compliance of regulations and Conditions of Licence for use in court cases. These have been useful in allowing the courts to clearly understand the implications of the offence and for determining the resultant penalties.

### 10.2. Main Program Activities

#### 10.2.1. In-season

Fishery officers and marine enforcement officers will conduct monitoring and compliance patrols at-sea using program vessels and Canadian Coast Guard (CCG) vessels. Vessel boarding will be conducted to ensure compliance to both vessel and individual licence requirements. Checks will be made to ensure non-retention of prohibited species and compliance with size restrictions. Patrols in both open and closed Areas will be conducted.

Transportation vehicles will be checked en route from off-loading sites to processors. Fishery officers will also conduct checks at processing facilities.

Fishery officers will conduct dockside monitoring checks for size limit, container tags and prompt completion of Validation & Harvest Logs as per the Conditions of Licence (*Fisheries [General] Regulations* Section 22).

Fishery officers will respond in support of the on-grounds monitor (OGM), the Dockside Validators and any at-sea observers that may be used. Fishery officers will also co-ordinate patrols with First Nations guardians and fishery managers when available.

### 10.3. Fishery Patrol Vessels

All at-sea patrols will be conducted using program vessels (mostly 7.3 metre and 9.2 metre rigid hull inflatable vessels) and CCG vessels. They are staffed and operated by fishery officers, First Nations guardians, and marine enforcement officers. At-sea patrols will be conducted on a planned and ad hoc priority basis. CCG patrol vessels, as well as Conservation and Protection (C&P) program vessels, in conjunction with fishery officers and marine enforcement officers, will conduct vessel boardings in the harvest areas. Patrols will be conducted in both open and closed areas as priorities allow.

### 10.4. Air Surveillance

Patrol coverage using charter aircraft is utilized by Fisheries and Oceans Canada to identify concentrations and distribution of fishing effort. In large geographical areas this allows for a better utilization of C&P resources. Air surveillance resources are generally utilized July to September and longer if available.

Flight reports, photographs, and other data collected from over flights are readily available to Departmental managers and fishery officers through an intranet-based flight information system. Digital images of vessels will be collected and added to a web-based licence system, providing fishery officers ready access to recent vessel photographs to assist in field identification.

### 10.5. Enforcement Issues and Strategies

In the following table: PFR: Pacific Fisheries Regulations, 1993, F(G)R: Fisheries (General) Regulations, S: Section.

Issue	Section	Strategy
Licensing Verification <ul style="list-style-type: none"> <li>• Vessel licensed.</li> <li>• Experimental licence.</li> <li>• No Fisher Registration Card (FRC).</li> <li>• Fail to produce FRC.</li> </ul>	PFR S.22 F(G)R S.52 F(G)R S.68(1) PFR S.25 F(G)R S.11	At-sea and dockside inspections will occur when opportunities exist. These inspections may include checks of all licensing documents on board the vessel to ensure compliance with the regulations.



<b>Issue</b>	<b>Section</b>	<b>Strategy</b>
Fishing during closed time/area.	PFR S.63	Patrols utilizing patrol vessels will be pursued when opportunities exist. Possibilities may exist to use the regional enforcement charter aircraft in co-ordination with other patrols scheduled for priority fisheries.
Size Limit	PFR S 70(1)	At sea and dockside inspections will be pursued when opportunities exist.
Fail to provide proper landing and hail information, lack of notification for change of area, cancellation of trip, or incorrect reporting of area fished.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist. Investigations will occur on an opportunistic basis after C&P have been notified by fisheries management that a violation has occurred. The investigation will be pursued when larger priorities permit. Possibilities may exist to use the regional enforcement charter aircraft in co-ordination with other patrols scheduled for priority fisheries, to track vessels in the fishery.
Fail to maintain a Validation & Harvest Logbook.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist. Investigations may also occur on an opportunistic basis after C&P have been notified by fisheries management that a violation has occurred. The investigation will be pursued when larger priorities permit.
Marking and tagging of pick bags, and any other type of enclosures containing harvested green sea urchins.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist.
Landings validated at time of offloading.	F(G)R S.22(7)	Dockside inspections and monitoring will be pursued when opportunities exist.

Fail to carry on-board observer when requested by Fisheries and Oceans Canada.	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist.
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## 11. FINANCIAL RESPONSIBILITIES

### 11.1. Commercial Industry and/or other Fishers

A Joint Project Agreement (JPA) between the Department and the WCGUA ensures delivery of in-season catch monitoring and biological sampling programs. The WCGUA helps fund research programs through fees paid to the association by members. Industry funding provides for a catch validation program, stock assessment surveys, and biological research surveys.

Several coastal First Nations contribute time and expertise through collaborative research surveys with the WCGUA and the Department by providing biologists, vessels and divers.

### 11.2. Fisheries and Oceans Canada

Two Stock Assessment and three Resource Management personnel are directly involved in this fishery. Contributions to the IFMP are provided by the Fisheries Management Directorate, the Science Branch, the Shellfish Data Unit, the Conservation and Protection Directorate, the Pacific Fishery Licence Unit, the Treaty and Aboriginal Policy Directorate, the Recreational Fisheries Division, the Oceans Directorate and numerous administrative personnel. Generally, all personnel are multi-tasked, i.e. fishery managers work on all dive fisheries. Therefore, costs incurred by the Department to manage this fishery are difficult to assess.

## 12. PERFORMANCE REVIEW

### 12.1. Management Plan Evaluation Criteria

12.1.1. Continue with biological research, density surveys and experimental studies.

12.1.2. Assess availability of resource for First Nations food, social and ceremonial purposes. Maintain lines of communication and continue consultation.

12.1.3. Assess redesign of Quota Areas. Did the reassignment of areas succeed in distributing effort?

12.1.4. Assess value of Quota Area maps. Were they useful to fishers? Did accuracy of catch and effort data improve?

## **12.2. Conservation and Protection Plan Evaluation Criteria**

- 12.2.1. Annual audits of Validation and Harvest Log entries.
- 12.2.2. Annual review of both the FEAT and DVS systems is used to measure compliance and complaints.
- 12.2.3. Successful apprehension and prosecution of individual(s) involved in breaches of the *Fisheries Act* and associated regulations.
- 12.2.4. Ongoing review of the information submitted by fishery officers on complaints from fishers and the public.
- 12.2.5. Demonstrate success (changes in compliance rates) as a result of “targeted” enforcement effort related to illegal activity.
- 12.2.6. Annual and on-going interactions with stakeholders, First Nations and the public.
- 12.2.7. Provide annual report of enforcement effort and problems.
- 12.2.8. In-season and post-season review with Resource Management and contract staff to assess whether the IFMP objectives were met.
- 12.2.9. In season meetings with First Nations to review enforcement concerns and impact of fisheries near local villages.

## **13. ATTACHMENTS**

- Appendix 1: 2003-2006 Green Sea Urchin Commercial Harvest Plan
- Appendix 2: 2003-2006 Green Sea Urchin First Nations Harvest Plan
- Appendix 3: 2003-2006 Green Sea Urchin Recreational Harvest Plan
- Appendix 4: Example of the 2003-2004 Green Sea Urchin Commercial Conditions of Licence
- Appendix 5: Maps of Green Sea Urchin Quota Areas

# Appendix 1: 2003-2006 Green Sea Urchin Commercial Harvest Plan

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## **1. MANAGEMENT CHANGES AND HIGHLIGHTS**

- 1.1. This Commercial Harvest Plan will be in effect during the period of November 1, 2003 to October 31, 2006. The commercial fishery is anticipated to open no earlier than November 1 and close no later than March 1 each year.
- 1.2. The coast-wide annual commercial total allowable catch (TAC) has been set at 186 tonnes (410,055 lbs). See Section 5.
- 1.3. Individual quotas (IQ) will equal 1/49<sup>th</sup> of the coast-wide commercial TAC or 3.796 tonnes (8368 lbs) per licence. See Section 5.
- 1.4. Relinquishment of Claim payment to the Receiver General of Canada for IQ overages is no longer required.
- 1.5. New Quota Area established in Pacific Fisheries Management Area 13.
- 1.6. Commercial harvest closure in Becher Bay (portion of Area 20).

## **2. LOCATION OF THE FISHERY**

The commercial green sea urchin fishery is licensed regionally but occurs mainly in the south coast regions. Maps of Pacific Fishery Management Areas (PFMA) can be found on the Internet at:

[www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap\\_e.htm](http://www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap_e.htm)

Experimental fishery and permanent area closures are listed in this commercial harvest plan. These closures restrict commercial fishing activity only, and have no impact on the location of First Nations or recreational harvest.

## **3. TIME FRAME OF THE FISHERY**

The commercial fishery is open no earlier than November 1 to close no later than May 31. Markets generally guide production, however the majority of the harvesting effort occurs in the winter months. Commercial harvest schedules are determined in consultation with the West Coast Green Urchin Association (WCGUA).

## **4. MANAGEMENT MEASURES FOR THE COMMERCIAL FISHERY**

### **4.1. Minimum Size Limit**

A minimum size limit of 55 mm test diameter is in effect coast-wide in the green sea urchin fishery. This size limit is precautionary and allows green sea urchins several years of spawning before becoming available for the commercial fishery.

#### **4.2. Limited Entry Licensing**

A limited entry licensing scheme was implemented in January 1991 to address concerns regarding uncontrolled growth observed in the fishery at that time. Green sea urchins are commercially harvested under the authority of a commercial licence (“ZA”) or a communal commercial licence (“FZA”). These communal commercial licences are monitored with the commercial fishery and have the same management constraints and Conditions of Licence as other commercial licences. For more information on the Licence Retirement/Allocation Transfer Program, see Appendix 2, Section 3 or contact a Resource Manager listed in Section 1 of the Integrated Fisheries Management Plan (IFMP).

Currently there are 49 licences eligible for this fishery.

#### **4.3. Individual Quota Program**

Following several years in a management regime that the commercial industry perceived to be causing processing and market gluts, poor quality landings and unsafe diving conditions, an IQ program was initiated. The coast-wide TAC was divided equally among licences and a third party service bureau was hired to monitor catch. In late 1995, the Minister of Fisheries and Oceans Canada sanctioned an IQ management regime for the green sea urchin, red sea urchin and sea cucumber fisheries.

Under the IQ program initiated in 1996 for red and green sea urchins and sea cucumbers, two percent of the coast-wide TAC is reserved for First Nations use for food, social and ceremonial purposes. This two percent is a minimum allocation and is removed from the coast-wide TAC prior to calculating the commercial TAC.

#### **4.4. Area Quotas**

The coast-wide commercial TAC is apportioned into Quota Area commercial quotas. Quota Areas are comprised of PFMA, Subareas, or a combination of portions of Subareas. The commercial quota for each Quota Area is calculated from the density estimates and range of quotas provided by the Department’s Stock Assessment Division. Where surveys and density estimates are not complete for an area, Quota Area commercial quotas are extrapolated from survey information from adjacent or nearby areas. Refer to Section 5 for Quota Area commercial quotas.

### **5. OPEN TIMES AND QUOTA AREAS**

The Department remains concerned over continued misreporting of harvest information. If fishers continue to misreport landing or harvest locations to the Department and/or dockside validators, the openings for this fishery may be adjusted in-season to limited rotational openings. These limited openings will restrict the fleet to fish small areas as a group in order to concentrate the fleet for monitoring purposes. At-sea observers may also be required if obtaining accurate harvest information remains problematic.

### 5.1. South Coast (Areas 11 through 29)

The South Coast commercial TAC will be set at 186 tonnes (410,055 lbs) apportioned between the Quota Areas shown in the table below. All weights referred to in the tables below are the weights that are determined during validation at the **first point of landing** (in pounds).

Quota Area	Statistical Areas	Commercial Quota (Tonnes)	Fishing Period
11	11	1.5	Nov 1 to March 1
12	12	102.0	Nov 1 to March 1
13A	13-1 to 13-22	26.0	Nov 1 to March 1
13B	13-27 to 13-35	30.0	Nov 1 to March 1
13C	13-23 to 13-26 and 13-36 to 13-43	Exploratory (see below)	Nov 1 to March 1
18	18	12.5	Nov 1 to March 1
19	19	11.0	Nov 1 to March 1
20	20	3.0	Nov 1 to March 1
<b>Total</b>		<b>186.0</b>	

Any Quota Area overruns may be deducted from the next year's quota for the Quota Area.

Management area 13C is part of an Exploratory Fishing Area. Quotas may be assigned to this area in-season following scientific surveys to determine standing biomass. Product harvested from within this area is not assigned against IQ. Harvest opportunities for the 2003-2004 season will be allocated to the WCGUA. The industry association will be responsible for selecting vessels authorized to harvest within 13C.

### 5.2. Other Areas

Areas of the coast not listed within a Quota Area may be opened for commercial fishing under an exploratory fishing protocol. Fishers are required to conduct stock assessment surveys in co-operation with Fisheries and Oceans Canada in areas for which quotas have not been assigned prior to an opening to determine if a harvest quota can be set. Arrangements for fishing under the exploratory fishing option, can be made by contacting the Stock Assessment Division, see Section 1 of the IFMP.

## 6. AREA CLOSURES

### 6.1. Notification of Area Closures

Additional closures may be announced in-season by Fishery Notice. Prior to fishing in an area, fishers are advised to consult the local Fisheries and Oceans Canada office or to contact a fishery manager listed in Section 1 of the IFMP.



## 6.2. Research Area Closures

Some areas have been designated as research or study areas and as such are closed to commercial fishing. Fishing is permitted in these areas only under a scientific licence. Studies undertaken in these areas are a co-operative effort between Fisheries and Oceans Canada, WCGUA, and local First Nations and include investigations into size limits and the effects of various harvest strategies on resident stocks. For further information on the research areas please contact the Stock Assessment Division, see Section 1 of the IFMP.

### 6.2.1. Area 12

6.2.1.1. Neill Lodge: Those waters of Subareas 12-18 and 12-19 inside of a line from Ledge Point on Vancouver Island to the light at Neill Rock thence to the light between Neill Ledge and Haddington Island thence in a straight line to the light at the ferry dock in Port McNeill, thence to Ledge Point.

6.2.1.2. Stubbs Island/Plumber Islands: Portion of Subareas 12-5 and 12-18. All waters within 0.25 nautical miles of Stubbs Island. Those waters of the Plumber Islands commencing at the most westerly point on Ksuiladas Island thence in a straight line to Stubbs Island thence due east for 1.4 nautical miles, thence in a straight line to the most northerly point on Ksuiladas Island, thence following the western shore of said island to the point of commencement.

### 6.2.2. Area 13

6.2.2.1. Kelsey Bay: The waters of Subarea 13-34 (Salmon Bay) and that portion of Subarea 13-33 lying southerly or inside of a line from the ferry landing at the Kelsey Bay Government Dock easterly to Petersen Islet Light.

### 6.2.3. Area 18

6.2.3.1. Java Islets Research Closure: Those waters of Subarea 18-5 within 0.25 nautical miles of Java Islets.

### 6.2.4. Area 26

6.2.4.1. Kyuquot Sound Marine Communities Study Area: A portion of 26-6 inside or northerly of a line from White Cliff Head to Racoon Point (Kyuquot Bay). A portion of 26-6 on the west side of Union Island commencing at position 50°0.4' N, 127°19.3' W. (Entrance to Crowther Channel.)

## 6.3. Permanent Area Closures

The following areas will be closed November 1, 2003 to October 31, 2006.

### 6.3.1. Area 1

6.3.1.1. Area 1: Subarea 1-6. (First Nations access for food, social and ceremonial purposes.)

6.3.2. Area 2

6.3.2.1. Burnaby Narrow: Subareas 2-13 (excluding Section Cove) and 2-16. (Park)

6.3.3. Area 5

6.3.3.1. Kitkatla Inlet and adjacent waters: Subarea 5-3 and that portion of Subarea 5-10 excluding the area of Beaver Passage and Schooner Passage inside of a line commencing at a fishing boundary sign at the northwest point of Spicer Island to the northwest point of McCauley Island, then following the shoreline of McCauley Island to Baird Point, then to Sentinel Islet, then to Boys Point, then to a boundary sign on the east side of Spicer Island. (First Nations access for food, social and ceremonial purposes.)

6.3.4. Area 12

6.3.4.1. Port Neville: Subarea 12-25. (Marine Reserve Area/Research Area).

6.3.5. Area 13

6.3.5.1. Discovery Passage: Subareas 13-3, 13-4, 13-5 and a portion of 13-6. Those waters of Discovery Passage bounded on the north by a straight line drawn true west from North Bluff on Quadra Island, across Seymour Narrows to a fishing boundary sign on Vancouver Island, and on the south by a line from the Cape Mudge light true west to Vancouver Island. (Marine Reserve and Research Closure.)

6.3.6. Area 14

6.3.6.1. Hornby Island: Those waters of Lambert Channel and the Strait of Georgia, Subarea 14-7, inside a line commencing at Shingle Spit on Hornby Island, thence 239° true for 0.5 nautical miles, thence 126° true for 3.5 nautical miles, thence 64° true for 4.9 nautical miles, thence 304° true for 2.9 nautical miles, thence 213° true for 0.5 nautical miles to Cape Gurney on Hornby Island. (Marine Reserve)

6.3.7. Area 15

6.3.7.1. All waters within 0.5 nautical miles of Vivian Island, located approximately 5.0 nautical miles west of Powell River in Subarea 15-2. (Marine Reserve)

6.3.7.2. All waters within 0.25 nautical miles of Rebecca Rock, located 2.5 nautical miles west of Powell River in Subarea 15-2. (Marine Reserve)

6.3.7.3. All waters within 0.25 nautical miles of Dinner Rock, located 2.5 nautical miles south of Lund in Subarea 15-2. (Marine Reserve)

6.3.7.4. All waters within 0.5 nautical miles of the unnamed reef off Emmonds Beach, located approximately 4.0 nautical miles south of Lund in Subarea 15-2. (Marine Reserve)

6.3.7.5. All waters within 1.0 nautical mile of Mitlenatch Island, located in the upper Strait of Georgia intersected by the Subareas 15-2, 13-1, 13-3 and 14-13. (Marine Reserve)

6.3.7.6. All waters within a 0.25 nautical mile radius of the southerly end of the Beach Gardens breakwater in Subarea 15-2. (Marine Reserve)

#### 6.3.8. Area 16

6.3.8.1. Skookumchuck Narrows Provincial Park: Those waters of Skookumchuck Narrows and Sechelt Rapids in Subarea 16-9 bounded on the west by a line from a point on the foreshore at the westerly limit of Secret Bay on Sechelt Peninsula thence 50° true to a point on the foreshore on the mainland; and the east by a line from Raland Point on Sechelt Peninsula, thence 50° true to a point on the foreshore on the mainland. (Park)

#### 6.3.9. Area 18

6.3.9.1. Subareas 18-7 (Sansum Narrows, Burgoyne Bay and Maple Bay) and 18-8 (Cowichan Bay). (Conservation)

#### 6.3.10. Area 19

6.3.10.1. Ogden Point: Those waters of Subarea 19-3 inside a line from the navigation light at the western end of the Ogden Point Causeway thence to Brotchie Ledge Light, thence to Holland Point on Vancouver Island. (Marine Reserve)

6.3.10.2. 0 Mile Point: Those waters of Subareas 19-4 and 19-5 within 0.4 nautical miles of Cadboro Pt. navigation light. (Marine Reserve)

6.3.10.3. Race Rocks: Those waters of Subareas 19-3 and 20-5 within 0.5 nautical miles of Great Race Rocks. (Marine Reserve)

#### 6.3.11. Area 20

6.3.11.1. Botanical Beach Provincial Park: That portion of Subarea 20-3 between the lowest low water on record and the highest high water on record from San Juan Point thence following the Vancouver Island shoreline easterly to the mouth of Tom Baird Creek. (Marine Reserve)

6.3.11.2. Pacific Rim National Park, Juan de Fuca: That portion of Subarea 20-1 between the lowest low water on record and the highest high water on record from

Bonilla Light thence following the shoreline of Vancouver Island easterly to Owen Point. (Park)

6.3.11.3. Becher Bay: Those waters of Subarea 20-5 north of a line running from Church Point to Beechy Head. (First Nations access for food, social and ceremonial purposes). This closure will be implemented as a one year pilot. This pilot will be re-evaluated during the period of this plan.

#### 6.3.12. Area 23

6.3.12.1. Pacific Rim National Park: Those waters lying within Park Boundaries as shown, since 1989, on Canadian Hydrographic Service Chart 3671. (Park)

6.3.12.2. Bamfield Marine Station Research Area Closure: Those waters of Pacific Fishery Management Subareas 23-4, 23-6 and 23-7 bounded by a line commencing at the light at Whittlestone Point and running directly to the southern tip of Haines Island; from the northwestern tip of Haines Island to the southern tip of Seppings Island; from the northwestern tip of Seppings Island to Kirby Point on Diana Island; from Kirby Point directly to the northwest tip of Fry Island; from the northwestern tip of Fry Island to the nearest adjacent point on Tzartus Island; from Foucault Bluff on Tzartus Island to the northwest tip of Nanat Island; from the eastern tip of Nanat Island to the nearest adjacent point on Vancouver Island and thence along the coastline of Vancouver Island to the point of commencement. (Research Area)

#### 6.3.13. Area 24

6.3.13.1. Barney Rocks: Those waters of Subarea 24-2 and 124-3 within 25 m of Barney Rocks. (First Nations access for food, social and ceremonial purposes.)

6.3.13.2. Pacific Rim National Park, Grice Bay & McBey Islets: The waters of Tofino Inlet within Pacific Rim National Park including McBey Islets and Dinner Island in Tsapee Narrows, Browning Passage in Subarea 24-9 and Grice Bay west and south of Indian Island in Subarea 24-11. (Park)

#### 6.3.14. Area 25

6.3.14.1. Friendly Cove and Santa Gertrudis Cove: That portion of Subareas 25-6 and 25-7 inside a line from a white triangular fishing boundary sign on Nootka Island near the northerly entrance to Santa Gertrudis Cove, thence true east 0.25 nautical miles, thence true south one nautical mile, thence westerly to Yuquot Point on Nootka Island, thence to the point of commencement. (First Nations access for food, social and ceremonial purposes.)

#### 6.3.15. Area 26

6.3.15.1. Checleset Bay Fishery Closure Area: Those portions of Areas 26 and 126 enclosed by a line drawn from a point on the Brooks Peninsula (at 127°49.58'

W long., 50°05.18'N lat.), thence due south to the 50° parallel, thence due east to Alert Point on Lookout Island, thence northeasterly to a point on Vancouver Island near McLean Island (at 127°25.03' W long., 50°02.1' N lat.), thence northwesterly along the shore of Vancouver Island to Malksope Point (at 127°28.95 W long., 50°05.53' N lat.), thence due west to a point mid-channel on the southeast end of Gay Passage (at 127°30.1' W long., 50°05.53' N lat.), thence mid-channel through Gay Passage to a point mid-channel on the northwest end of Gay Passage (at 127°31.8' W long., 50°06.7' N lat.), thence northwesterly to the shore of Vancouver Island, just west of Theodore Point (at 127°32.8' W long., 50°07.7' N lat.), thence westerly along the Vancouver Island shore to an unnamed point on the east side of Nasparti Inlet (at 127°38.6 W long., 50°08.75' N lat.), thence westerly across Nasparti Inlet to an unnamed point on Vancouver Island (at 127°37.8' W long., 50°08.7' N lat.), thence along the Vancouver Island shore to the point of commencement

#### 6.3.16. Area 28

6.3.16.1. Porteau Cove: That portion of Subarea 28-4, east of a line drawn from a white fishing boundary sign located on the south shore of Porteau Cove to a white fishing boundary sign located on the north shore of Porteau Cove. (Marine Reserve)

6.3.16.2. Whytecliff Park: That portion of Subarea 28-2 bounded by a line commencing from the most southerly point of Whytecliff Park; thence in a straight line to a point located 100 m east of the most southeasterly point of Whyte It.; thence following the southern shoreline of Whyte It. at a distance of 100 m to a point lying 100 m from the most southwesterly point of Whyte It.; thence in a straight line to a point lying 100 m west of White Cliff Point; thence following the shoreline at a distance of 100 m in a northerly direction to a point 100 m north of Lookout Point; thence following the shoreline at a distance of 100 m in an easterly direction to a point 100 m perpendicular to the most northerly point of Whytecliff Park; thence to the most northerly point of Whytecliff Park on the mainland. (Marine Reserve)

## 7. LICENSING

### 7.1. Licence Category

A category “ZA” or “FZA” (Communal Commercial) licence eligibility is required to commercially harvest green sea urchins by dive.

### 7.2. Licence Fees

Currently, the annual licence fee for a category “ZA” licence is \$430. Fees in subsequent years are subject to change.

### **7.3. Licence Application and Issuance**

Applications must be completed and submitted to a Pacific Fishery Licence Unit by October 31 of each fishery year with the required licence fee.

The licence eligibility holder must sign the application form. If the licence eligibility holder is a company or First Nation group, the Pacific Fishery Licence Unit must have on record the authorised signing authorities for the company or First Nation group.

Any Ministerial conditions placed on the licence eligibility must be met.

Any conditions of the previous year's licence such as submission and approval of any logbook or fish slip must be met.

Applications must designate a registered commercial fishing vessel eligible for one of the following licences: "A", "C", "FA", "FC", "FL", "FR", "FS", "FW", "G", "K", "L", "N", "R", "S", "T" and "W".

A vessel may be designated for a maximum of five active licences (i.e. those with quota remaining) at a time. Licence holders may apply to re-designate their licence to another vessel at one of the Pacific Fishery Licence Unit offices. Licence holders are reminded that the original licence documents must be returned and log approval obtained, from the Shellfish Data Unit, prior to completion of any re-designation request.

"ZA" and "FZA" licence eligibilities have a maximum vessel length (MVL). The MVL restriction has been temporarily waived while the IQ program is in effect. Fisheries and Oceans Canada reserves the right to reinstate vessel length restrictions if necessary.

Designated vessels must have a vessel survey on record with the Pacific Fishery Licence Unit, dated subsequent to May 1989.

### **7.4. Individual Quotas**

The coast wide commercial TAC of 186 tonnes will be divided equally among all 49 licence eligibility holders, such that the IQ will be 3,796 kg. (8,368 lbs) of green sea urchins.

### **7.5. Licence Documents**

Green sea urchin ("ZA" or "FZA") licence documents are valid from November 1 to October 31 of the following year.

Replacements for lost or destroyed licence documents may be obtained by completing a Declaration Concerning Licence Documents form. Please contact a Pacific Fishery Licence Unit for further details.

## **7.6. Vessel Re-designations**

Re-designation of “ZA” or “FZA” licenses is allowed as long as any licence condition,, such as the completion of logbooks, have been met and accepted by the Shellfish Data Unit.

A completed Application for Category “Z” Vessel Re-designation form must be completed by the licence eligibility holder and submitted to a Pacific Fishery Licence Unit.

Valid current year licence documents and validation tabs must be returned.

## **7.7. Licence Eligibility Nominations**

Category “ZA” licence eligibilities may be nominated from one person to another. Nomination forms are available at any Pacific Fishery Licence Unit.

Nominations are only accepted prior to licence issuance or after the quota for that licence has been reached for that year.

Valid current year licence documents must be returned.

Harvest log and fish slip requirements must be met, and accepted by the Shellfish Data Unit, prior to the nomination form being processed.

“FZA” licenses held by First Nations groups may not apply to nominate and transfer the noted licence eligibility.

## **7.8. Vessels**

All diving and fishing operations for green sea urchins must take place from the “ZA” or “FZA” licensed vessel. All product harvested under a “ZA” or “FZA” licence must be harvested from and retrieved by the vessel designated on the licence. Vessels used to hold or transport green sea urchins must conform to Canadian Food Inspection Agency inspection regulations for holding or transporting fish, and have appropriate licences.

## **7.9. Licence to Transport Green Sea Urchins**

Any registered vessel with a vessel-based licence (categories “A”, “C”, “F”, “G”, “K”, “L”, “N”, “R”, “S”, “T” and “W”), a category “D” (packing), or a herring seine licence (“HS”), may transport green sea urchins under Conditions of Licence which are included with all vessel-based licences. For further information contact the Pacific Fishery Licence Unit.

## **7.10. Processing**

“P” licences are issued under the *Pacific Fishery (General) Regulations*, and must comply with the *Fish Inspection Regulations*. As a result, effective June 1998, any processing beyond that permitted in Section 14 (FIR) must be done in a registered fish processing facility, and in full compliance with a Quality Management Program (QMP). If product processed at sea is to be eligible for export (leaving BC), the vessel must be a registered fish processing facility, i.e. registered with the Canadian Food Inspection

Agency and have an approved QMP. If the processed product is intended for sale within BC, the vessel must meet BC Ministry of Fisheries and BC Health requirements, prior to the issuance of a “P” licence.

## **8. CONTROL AND MONITORING OF COMMERCIAL FISHING ACTIVITIES**

To accompany the IQ program, an industry-funded monitoring and validation program was developed collaboratively between the WCGUA and Fisheries and Oceans Canada.

A Joint Project Agreement between the Department and the WCGUA to provide for in-season catch validation is consistent with the Department’s approach to co-management in the Region. This agreement provides for catch validation at designated landing ports, in-season collection and compilation of harvest log data, collection of biological samples, and a year-end summary report of the fishery.

Fishers are required to report harvest time and location information to a service bureau prior to fishing, following fishing, and prior to landing green sea urchins. In order to track daily harvests and ensure that area quotas are not exceeded, all catch must be weighed and validated at the first point of landing by a Fisheries and Oceans Canada certified observer.

The agency (service bureau) contracted by the WCGUA to provide notification, validation, biological sampling and data services for the 2003-2006 green sea urchin fishery is:

D&D Pacific Fisheries Ltd.  
Box 1445, Gibsons, B.C. V0N 1V0  
Phone: (604) 886-4819  
Fax: (604) 886-8288  
Hail-in Line: (800) 775-5055

The following sections supplement those in the Conditions of Licence (issued with each commercial licence), that outline the requirements for fishery control and monitoring. See example in Appendix 5.

### **8.1. Quantities Permitted**

Annual IQ for the period of this management plan has been set at 3.796 tonnes (8,368 lbs). IQ and Quota Area commercial quotas are subject to change during the period of this IFMP based on new stock assessment information obtained by the Department or required management actions.

Harvest of green sea urchins over the IQ after the permitted quota overage adjustments may be subject to prosecution and seizure of the overage.

### **8.2. Gear**

Hand picking by divers. Suction devices are not permitted.



### **8.3. Fishing Multiple Quota Areas**

Fishers are required to offload their catch at a designated landing port, or to a packer, prior to fishing in a new Quota Area.

### **8.4. Transportation Containers**

There are several requirements for:

- a) The type, size and marking of containers used to hold or transport sea urchins.
- b) The condition of containers for food inspection purposes.

#### **8.4.1. Marking of “Pick Bags”**

“Pick Bags,” or any other type of enclosures containing green sea urchins left unattended in the water must be tagged with bag tags displaying the vessel registration number (VRN#), and name of the vessel used to harvest the product. All floats attached to pick bags or other types of enclosures must be labelled with the VRN# of the vessel harvesting the product.

#### **8.4.2. Tagging of Green Sea Urchin Containers**

All green sea urchins delivered to packers, or to designated landing ports, shall be in containers which are tagged. The tags must clearly display the fishing vessel’s name and VRN#.

#### **8.4.3. Condition of Green Sea Urchin Containers**

Any containers used in the transport of “fish” (including urchins) for export, must meet the requirements of Schedule V of the *Fish Inspection Regulations*. This states that the contact surfaces of fish storage areas in vehicles and of containers used for transporting fish shall be smooth, free from cracks and crevices and made of non-corrodible metal. There is also a requirement for containers to be covered. Acceptable materials include plastic, aluminium and fibreglass, however, an exemption has been granted for the use of well-painted wooden totes to transport fish to processing plants (contact Gordon Greig at 604-666-4427, extension 277) for further information).

### **8.5. Landing Locations**

All green sea urchins must be landed at one of the designated landing ports listed in the Conditions of Licence. Specific landing ports have been established as part of the IQ validation program. Fisheries and Oceans Canada certified observers are available at these ports to oversee offloading and validation of green sea urchin catch.

### **8.6. Validation**

All green sea urchins harvested or removed from the sea bed floor must be validated at the point and time they are landed. See Appendix 4.

The vessel master must be in possession of a Fisheries and Oceans Canada approved catch Validation & Harvest Logbook assigned to the green sea urchin licence. The Validation & Harvest Logbook must be on board the licensed vessel while fishing for green sea urchins, or while green sea urchins are on board. Validation & Harvest

Logbooks that meet the Department's approval are available from the service bureau or from the WCUHA.

#### 8.6.1. Validation & Harvest Logbook Entries

At the first point of off-loading, all green sea urchins will be weighed with a government-certified scale and the weight entered on the Validation & Harvest Logbook. The vessel master is responsible for completing sections A and C of the Validation & Harvest Logbook. The vessel master shall also ensure that chart entries are completed showing all locations fished for that validation. All harvest information must be fully entered and complete before validation takes place. The Validation & Harvest Logbook will remain with the licensed vessel, with one copy accompanying the product to its destination and one copy handed over to the observer at the time of validation, along with the harvest charts. The observer shall compare harvest charts to Validation & Harvest Logbooks to ensure that harvest information is consistent between both. The original white copy of the Validation & Harvest Logbook handed to the observer, along with the harvest charts, must be received by the Fisheries and Oceans Canada Shellfish Data Unit within 28 days following the end of the month in which harvesting took place.

#### 8.6.2. Examination of Logbooks

The Validation & Harvest Logbook must be produced by the vessel master on request by a fishery officer, fishery guardian or an observer.

#### 8.6.3. Quota Confirmation

Prior to fishing, the vessel master must confirm the remaining vessel quota from the Validation & Harvest Logbook. Harvest of product in excess of the individual licence quota is subject to prosecution.

#### 8.6.4. Lost Product

In situations of lost product the following protocol will be implemented:

- a) The weight of product lost from the deck of the catcher vessel and/or packer vessel during transport will be applied to both the catcher vessel's IQ and the applicable area quota.
- b) The weight of product spoiled or wasted because of weather-related delays will also be applied to both the catcher vessel's IQ and the applicable area quota.
- c) The service bureau will use the estimated packer or ground weight and appropriate water loss calculation for the harvest site to determine an estimated dock weight.

#### 8.6.5. Conditions and Procedures for Quota Overage Transfer

Small quantities of green sea urchins, which exceed the licence's annual quota (up to 90.7 kg or 200 lbs), can be transferred to another green sea urchin licence provided certain conditions are fulfilled. If all of these conditions are not met, observers will not transfer the overage to another licence. In the following

explanation, the green sea urchin licence which has exceeded its quota is called Licence “A” and the licence to which quota is transferred is called Licence “B”.

#### 8.6.5.1. Transfer of Quota to a Second Licence on the Same Vessel

If two or more licences are assigned to the same vessel then a quota overage from one licence may be transferred to the green sea urchin licence which has quota remaining. Overage of the last green sea urchin licence quota on the same vessel may be transferred to another vessel’s green sea urchin licence in accordance with procedure described below.

#### 8.6.5.2. Maximum Allowable Transfer of Quotas Between Licences on Different Vessels

In the event of a quota overage on green sea urchin Licence “A”, a maximum of 90.7 kg (200 lbs) of green sea urchins may be transferred to another vessel’s green sea urchin licence (Licence “B”). Only one transfer of quota overage is allowed. The quota overage cannot be divided between a number of licences.

#### 8.6.5.3. Remaining Quota on Second Licence

The amount transferred cannot exceed the remaining quota of green sea urchin Licence “B”.

#### 8.6.5.4. Green Sea Urchin Licence Area

Both vessels involved in the transfer must be licensed to fish in the same licence area and have active licences for that licence year (the provision for landing at the same port has been removed).

#### 8.6.5.5. Documentation

The green sea urchin Validation & Harvest Logbook for each of the licences involved in the transfer must be present at the time of the validation. Both vessel masters must make their intention to transfer or receive quota overage clear to the observer prior to unloading. In the event of a packer landing, a note signed by both vessel masters should accompany the product to advise the observer that there is a mutual agreement to transfer.

### **8.7. Oral Reports**

The Conditions of Licence detail fishing notification requirements that must be followed by each licensed vessel in order for the service bureau and the Department to track fishing effort and landing on a daily basis to ensure that harvest area quotas are not exceeded. This becomes imperative when a harvest area quota is near completion and remaining quota is divided amongst hailed vessels. When vessels do not hail into a harvest area, there is a risk of exceeding the area quota. In order to maintain a

sustainable fishery, it is extremely important that effort and landings in a particular harvest area be reported and recorded accurately.

## **8.8. Harvest Logs and Chart Data**

It is a Condition of Licence and the responsibility of the licence holder to ensure that harvest and chart information is received by Fisheries and Oceans Canada Shellfish Data Unit and meets the conditions outlined in Section 10.1. below. Fishers who have validation services completed by D&D Pacific Fisheries Ltd. will receive these services as part of that contract. For fishers who wish to have validation completed by an observer other than the service bureau under contract to the WCGUA, it will remain the licence holder's responsibility to ensure the requirements are fully completed.

In addition to harvest information, fishers are required to allow dockside observers to measure a random sample of 25 urchins from every off-loading. Fishers not using the service bureau contracted by the WCGUA must make provisions for this information to be collected and provided to Fisheries and Oceans Canada. Those interested in obtaining validation services other than those contracted by the Association should contact Guy Parker at (250) 714-8379 to receive a copy of the Fisheries and Oceans Canada requirements for third party validation.

### **8.8.1. Harvest Data**

The vessel master is responsible for the provision and maintenance of an accurate record, a "log", of daily harvest operations. This log must be completed and a copy submitted in both hard (paper) copy and electronic form in an approved format as defined by Fisheries and Oceans Canada, Stock Assessment Division's Shellfish Data Unit.

The vessel master is responsible for the provision of a daily harvest chart record for each location fished by each diver. This harvest chart must have marked directly on it the VRN#, the licence tab number and the validation ID numbers. The harvest site must be clearly marked on the chart with dive or record numbers pertaining to each harvest catch record and with dates that fishing activity occurred at each site. The vessel master is also responsible for the electronic capture of harvest location data into the Shellfish Data Unit Geographic Information System (GIS).

Validation & Harvest Logbooks meeting Fisheries and Oceans Canada requirements are available from outside service bureaus. The service bureau will, for a fee, provide the Validation & Harvest Logbook coding and keypunch service, including the electronic capture of harvest chart information into GIS, thus complying with the requirements for submission of a hard (paper) copy and electronic copy including fishing location information, for harvest data.

The original white page copy of the log, the accompanying chart record and the electronic copies must be forwarded within 28 days following the end of the month in which fishing occurred. Fishers who have validation services completed

by D&D Pacific Fisheries Ltd. will receive this service as part of that contract. The information must be sent to:

Fisheries and Oceans Canada  
Shellfish Data Unit  
Pacific Biological Station  
Hammond Bay Road  
Nanaimo, B.C., V9T 6N7  
Phone: (250) 756-7022 or (250) 756-7306

For alternatives to harvest data provision through a service bureau, contact the Shellfish Data Unit at the above address to obtain the requirements and acceptable data formats for supplying harvest log, chart and electronic data in a format which meets the Conditions of Licence. Electronic data capture of harvest location information must be performed at the Shellfish Data Unit by a bonded third party service provider. The hard copy of the harvest logs and chart records, as well as the completed electronic copy must be forwarded within 28 days following the end of the month in which fishing occurred. This information must be sent to the above address.

Catch information must be recorded in the harvest log by midnight of the day of fishing. The logbook must be kept aboard the licensed vessel. Logbooks must be produced for examination on demand of a fishery officer, guardian or a fishery observer designated under the *Fisheries Act*.

#### 8.8.2. Submission and Release of Harvest Log Data

The licence holder of record reported with the Pacific Fishery Licence Unit is responsible to ensure that the vessel master has completed and submitted a copy of the harvest data. Fisheries and Oceans Canada can only release harvest data to the reported licence holder and only upon written request.

#### 8.8.3. Nil Report for Harvest Log – Licence Issued but Not Fished

In the event that a licence is issued but not fished, the licence holder is responsible for submitting a nil report for the season. The nil report must be submitted prior to the issuing of approval for licence renewal. One page from the harvest logbook identifying the vessel, licence tab number and the year with “nil” entered in the body of the log and signed by the licence holder constitutes a nil report.

**FISHERIES AND OCEANS CANADA WISHES TO REMIND FISHERS THAT HARVEST LOGS MUST BE COMPLETED ACCURATELY DURING FISHING OPERATIONS AND SUBMITTED TO FISHERIES AND OCEANS CANADA IN ACCORDANCE WITH THE TIMING SET OUT IN CONDITIONS OF LICENCE. FAILURE TO COMPLETE OR SUBMIT LOGS IN A TIMELY MANNER IS A VIOLATION OF THE CONDITION OF LICENCE.**

#### 8.8.4. Confidentiality of Harvest Data

Harvest data, including fishing location data supplied through lat./long. coordinates, loran or chart records, collected under the Validation & Harvest Logbooks for Shellfish Fisheries programs, are collected for use by Fisheries and Oceans Canada in the proper assessment, management and control of the fisheries. Upon receipt by Fisheries and Oceans Canada of harvest data and/or fishing location information supplied by the fisher in accordance with Conditions of Licence, Section 20(1)(b) of the *Access to Information Act* prevents the Department from disclosing to a third party, records containing financial, commercial, scientific or technical information that is confidential information. Further, Section 20(1)(c) of the *Act* prevents the Department from giving out information, the disclosure of which could reasonably be expected to result in material financial loss or could reasonably be expected to prejudice the competitive position of the fisher.

#### 8.9. Fish Slip Requirements

It is a condition of this licence that an accurate written report shall be furnished on a fish slip of all fish and shellfish caught under the authority of this licence. A report must be made even if the fish and shellfish landed are used for bait, personal consumption, or otherwise disposed. The written report shall be posted not later than seven days after the offloading and sent to:

Fisheries and Oceans Canada  
Catch Statistics Unit  
200-401 Burrard Street  
Vancouver, B.C. V6C 3S4

Fish slip books may be purchased at the above address, or at most Fisheries and Oceans Canada offices. Phone (604) 666-2716.

#### 8.10. Export of Green Sea Urchins

Licence conditions regarding Validation & Harvest Logbooks and fish slips must be complied with, even for green sea urchins exported from BC that have not gone through a federally registered processing plant.

### 9. WORKERS' COMPENSATION BOARD

#### 9.1. General

Jurisdiction over health and safety on commercial fishing vessels in Canada is the mandate of the provinces. In BC jurisdiction over health and safety issues on commercial fishing vessels defaults to the Workers' Compensation Board of BC (WCB). Health and safety issues on fishing vessels include the health and safety of the crew and design, construction and use of fishing equipment on the vessel. Matters of transportation and shipping fall to the federal government and are administered by Transport Canada, Marine Safety (TCMS). WCB and TCMS have entered into a Memorandum of

Understanding on fishing vessel safety that addresses, as much as possible, jurisdiction. The document also contemplates that each party will work co-operatively to ensure that vessels and their crew remain healthy and safe.

The green sea urchin fishery, and other dive fisheries, is legislated by the requirements for occupational divers, found in Part 24 of the Occupational Health and Safety Regulation (OHSR) and as commercial fishing ventures, also found in Part 24 of the OHSR. Many of the general sections of the Regulation also apply, for example: Part 8 – Personal Protective Equipment, addresses issues related to safety head gear, safety foot ware and personal floatation devices. Part 17 addresses issues on rigging, and Part 5 addresses issues of exposure to chemical and biological substances. The entire regulation can be acquired at any WCB office or by visiting the WCB Internet Site at:

[www.worksafebc.com](http://www.worksafebc.com)

## 9.2. Specific

Although the entire OHSR applies to the fishing industry in general and the green sea urchin fishery in specific, there are a few sections that are particularly important. These are:

- a) **OHSR S.24.13** requires that all divers be certified to CSA Z275.4-97 and have proof of certification available at all times while diving.
- b) **OHSR S.24.10** requires that all divers have a valid medical, from a WCB approved Doctor, at all times while diving and have this document available at all times while diving.
- c) **OHSR S.24.36** requires that all dive sites be crewed by, at a minimum, three persons, being two commercially certified divers and a knowledgeable divers tender.
- d) **OHSR S.24.33** requires a standby diver to present at all dive sites.
- e) **OHSR S.24.35** requires that in-water standby divers be in constant physical or visual contact with each other.
- f) **OHSR S.24.21** requires the use of approved dive tables such as DCIEM.
- g) **OHSR S.24.22** requires that dive profiles remain within the no-decompression limits unless procedures and equipment (including a chamber) are in place.
- h) **OHSR S.24.15 and 24.79** require that a crewmember has received certification in occupational first aid and oxygen administration, that an appropriate first aid kit is on the vessel and that the vessels is equipped with oxygen.
- i) **OHSR S.24.17** requires that the vessel master develops and implements safe diving and emergency procedures.
- j) **OHSR S.24.74** requires the vessel master to develop procedures and conduct drills for emergency situations including crewmember overboard, fire on board, flooding of the vessel, abandoning ship and calling for help.
- k) **OHSR S.24.97** requires that all crewmembers are supplied with immersion suits and that procedures are developed to recover a crewmember overboard, including re-boarding procedures.
- l) **OHSR S.8.26** requires that all workers who are exposed to the risk of drowning be supplied with and wear a life jacket or PFD with sufficient buoyancy to keep the workers head above water.

- m) **OHSR S.24.26** requires that all air supplied by compressors and used as respirable air be tested annually and that the air meet the requirements of CSA Z275.2-92.
- n) **OHSR S.24.27** requires that all injuries be recorded in the vessel's logbook and that these injuries be reported to the vessel's owner.
- o) **WCA Division 10** requires that accidents that resulted in the serious injury or death of a worker are immediately reported to the WCB and that the employer investigates these incidents and any other incident that had the potential to cause serious injury or death.

These are a few of the significant requirements for green sea urchin fishing vessels. The Workers Compensation Act also requires that a copy of the Act and the Regulation be available at the work site. There are numerous other requirements for fishing and diving operations and all should be reviewed by vessel masters and crew.

### **9.3. Contacts**

Peter Gilmour, Focus Sector Manager/Fishing, Courtenay	(250) 334-8701
Shane Neifer, Occupational Safety Officer, Terrace	(250) 615-6605
David Clarabut, Occupational Safety Officer, Campbell River	(250) 286-3754



## **Appendix 2: 2003-2006 Green Sea Urchin First Nations Harvest Plan**

### **1. OVERVIEW OF THE FISHERY**

Fisheries and Oceans Canada's policy on the management of First Nations fishing identifies harvests for food, social and ceremonial purposes as the first priority after conservation.

Green sea urchins are of continuing importance to First Nations groups, who harvest them for food, social and ceremonial purposes.

### **2. LOCATION OF THE FISHERY**

Communal Licences specify the locations permitted for use by First Nations for food, social and ceremonial harvests. However, harvesting generally takes place in areas fronting or adjacent to reserves.

### **3. TIME FRAME OF THE FISHERY**

First Nations fisheries for food, social and ceremonial purposes are open year-round in all areas.

### **4. CONTROL AND MONITORING OF FIRST NATIONS FISHING ACTIVITIES**

The Department negotiates approximately 74 agreements annually with 145 First Nations in BC and the Yukon. Several of these agreements include provisions for the harvest of green sea urchins for food, social and ceremonial purposes. The level of harvest is unknown at this time. Anecdotal information indicates that harvests are very small. First Nations access to fish for food, social and ceremonial purposes are managed through a Communal Licence. This fishery is regulated through the issuance of Communal Licences to First Nations and/or First Nations Organizations. These licences are issued under the authority of the *Aboriginal Communal Fishing Licences Regulations*.

Communal Licences and fisheries agreements may contain provisions for the designation of individuals by the First Nations, or First Nations organizations, to access the allocation provided under the communal licence, as well as provisions for monitoring and reporting by the group of the First Nations fishery in co-operation with the Department.

For more information on the Treaty and Aboriginal Policy Directorate, Licence Retirement/Allocation Transfer Program, see the Internet at:

[www.pac.dfo-mpo.gc.ca/ops/fm/afs/retire.htm](http://www.pac.dfo-mpo.gc.ca/ops/fm/afs/retire.htm)

## **5. MANAGEMENT MEASURES**

Under the individual quota (IQ) program initiated in 1996 for green sea urchins, two percent of the coast-wide total allowable catch (TAC) is reserved for First Nations use for food, social and ceremonial purposes. This two percent is removed from the coast-wide TAC prior to calculating the commercial TAC. Fisheries and Oceans Canada is confident that the precautionary approach to this fishery combined with the allocation of TAC will ensure First Nations access to green sea urchins for domestic needs in all areas. Additional allocations of green sea urchins, however, will be provided to First Nations who demonstrate that their domestic needs are currently not being met under this Integrated Fisheries Management Plan. For more information, see the Proposed Pacific Region Interim Operating Guidelines Regarding Access to Shellfish for First Nations Harvesting.

There is no size limit for the First Nations or recreational green sea urchin fishery.

## **6. LICENSING**

First Nations access to fish for food, social and ceremonial purposes is managed through a Communal Licence. Catch monitoring and reporting requirements are outlined in the fisheries agreement and/or Communal Licence. Communal Licences can be amended in-season for resource conservation purposes.

## **Appendix 3: 2003-2006 Green Sea Urchin Recreational Harvest Plan**

### **1. LOCATION OF THE FISHERY**

Recreational harvest of green sea urchins occurs coast-wide.

### **2. TIME FRAME OF THE FISHERY**

Recreational fisheries are open year-round in all areas, or as described in the British Columbia Tidal Waters Sport Fishing Guide for the recreational fishery.

### **3. CONTROL AND MONITORING OF RECREATIONAL FISHING ACTIVITIES**

The recreational harvest of shellfish is regulated via the *British Columbia Sport Fishing Regulations, 1996* made under the *Fisheries Act*. The regulations are summarized annually in the British Columbia Tidal Waters Sport Fishing Guide which lists closed times, bag limits, size limits (where applicable) and closed areas. If necessary, public notices are posted to document closures or changes from the guide. Closures may be implemented in order to conserve vulnerable stocks, or to protect the public from consumption of contaminated shellfish, or to meet First Nations food, social and ceremonial needs. For some species, areas have been closed to commercial harvest, or commercial harvest openings have been delayed to provide an opportunity for the recreational community.

### **4. LICENSING**

A BC Tidal Waters Sport Fishing Licence is required for the recreational harvest of all species of fish.

### **5. MANAGEMENT MEASURES FOR THE RECREATIONAL FISHERY**

Harvest guidelines are provided in the British Columbia Tidal Waters Sport Fishing Guide. You can view the guide on-line at:

[www-comm.pac.dfo-mpo.gc.ca/english/recreation/default.htm](http://www-comm.pac.dfo-mpo.gc.ca/english/recreation/default.htm)

Sea urchins can be harvested by handpicking, with a daily limit of 12 sea urchins and a possession limit of 24 sea urchins. The recreational limits cover all species of sea urchins.

There is no size limit for the recreational green sea urchin fishery.

## **Appendix 4:** Example of the 2003-2004 Green Sea Urchin Commercial Conditions of Licence

This example of conditions of licence is provided for your information only. These conditions of licence are generic and may not be the same as those provided when a licence is issued. The actual conditions of licence will be attached to the licence issued by a Pacific Fishery Licensing Office.

Licence Period: November 1, 2003 to May 31, 2004

### Authority

The Department of Fisheries and Oceans has authority to set licensing conditions under subsection 22(1) of the Fishery (General) Regulations for the proper management and control of fisheries and the conservation and protection of fish.

Persons fishing under authority of this licence may only do so in accordance with the Conditions stated below.

Also, it is the responsibility of individual fishers to be informed of, and comply with, the Fisheries Act and the Regulations made thereunder, in addition to these Conditions.

For information on management of the green sea urchin fishery obtain a copy of the 2003-2006 Integrated Fisheries Management Plan for Green Sea Urchin from a Pacific Fishery Licensing Unit Office. The Management Plan is intended for general information purposes only. Where there is a discrepancy between the Plan and the Regulations or Conditions, the Regulations and Conditions prevail.

## PART 1

### Application

This Part applies to fishing for green sea urchin.

### Definitions

“Area” and “Subarea” have the same meaning as in the Pacific Fishery Management Area Regulations.

“container” means a mesh pick bag, a mesh transport bag, a plastic or wooden tote, or a cage used for the gathering, handling or transportation of green sea urchin.

“Department” means the Department of Fisheries and Oceans.

“discarded” means not placing the green sea urchin in a container or removing a green sea urchin from a container and not validating that green sea urchin.

“harvested” means removing, by any means, green sea urchin from the substrate of the ocean floor.

“landed” or “landing” means the transfer of green sea urchin from a vessel in water to land.

“observer” means an individual who has been designated as an observer by the Regional Director General for Pacific Region pursuant to section 39 of the Fishery (General) Regulations.

“Quota Area” means those areas enumerated and described in Appendix 1 of the 2003-2006 Integrated Fisheries Management Plan for Green Sea Urchin.

“tranship” means the transfer of green sea urchin from a vessel to another vessel.

“validated” means green sea urchin that have been weighed by an observer and the weight entered into the Green Sea Urchin Validation & Harvest Log or an alternative log approved by the Department.

“vessel registration number” or “VRN” means the number assigned to a vessel by the Department at the time the vessel is registered as a fishing vessel.

1. Species of fish permitted to be taken:

Green Sea Urchin (*Strongylocentrotus droebachiensis*)

2. Licence Expiry Date:

This licence expires on May 31, 2004.

3. Quantities permitted to be taken:

The maximum quantity of green sea urchin authorized to be taken under this licence shall not exceed 3,795.7 kg (8,368 lb.) of green sea urchin harvested from within the area set out in this licence subject to all applicable regulations.

4. Waters in which fishing is permitted:

Area of fishing is as set out in this licence.

5. Fishing gear permitted to be used:

Hand picking by divers only. Suction devices are not permitted to be used.

6. Fishing multiple Quota Areas:

All green sea urchin caught in a Quota Area must be landed or transhipped prior to the commencement of fishing in a new Quota Area.

7. The type, size and condition of containers to hold or transport green sea urchin and the marking of such containers:

(1) All green sea urchin delivered to designated landing ports or transhipped to another vessel shall be placed in containers which are labelled. The label must be waterproof and contain the vessel name and vessel registration number.

(2) All harvested green sea urchin that are contained in “pick bags” or any other type of container and left unattended in the water must be labelled. The label must be waterproof and marked with the vessel name and the vessel registration number of the vessel used to harvest that product. Floats attached to containers left unattended in the water must also be marked with the vessel registration number.

8. Transhipment:

Green sea urchin may be transhipped from the licensed vessel to another vessel licensed for the transportation of fish provided the vessel master complies with the following conditions:

- (1) all green sea urchin are in containers and tagged as per section 7;
- (2) the number of containers is recorded in the log;
- (3) the “packer weight” (determined by subtracting the weight of the containers from the weight of the product) is recorded in the log; and
- (4) a copy of the log accompanies the transhipped green sea urchin.

9. Locations permitted for the landing of green sea urchin:

Green sea urchin must be landed at one of the following ports:

- (1) South Coast: Port Hardy, Port McNeill, Kelsey Bay, Telegraph Cove, Campbell River, Brown’s Bay, Sidney, Sooke, or Victoria.
- (2) North Coast: Prince Rupert or Port Edward.

This condition applies to both the licensed vessel and, if the vessel master chooses to tranship his catch to another vessel, to the vessel receiving the green sea urchin.

10. Validation:

(See Explanatory Note after section 14)

(1) All green sea urchin harvested or removed from the sea bed floor under the authority of this licence must be validated at the point and time the fish are landed.

(2) Prior to validation of green sea urchin no person shall:

- (a) smash the shells or slit the membranes of the green sea urchin to drain the waters; or
- (b) dump, throw overboard, or otherwise discard green sea urchin which have been harvested and retained in accordance with the Fisheries Act and the regulations made thereunder.

(3) All weights must be determined using a scale approved by Industry Canada.

(4) The vessel master of the licensed vessel or, if the catch is transhipped to another vessel, the vessel master of that vessel, shall provide the observer with a hard copy of the Green Sea Urchin Validation & Harvest Log upon completion of each validation.

(5) The vessel master of the licensed vessel or, if the catch is transhipped to another vessel, the vessel master of that vessel, shall provide to the observer at the point of landing, access to the vessel's fish holds, freezers and other fish storage areas at any time during the landing.

11. Oral Reports:

(1) The vessel master shall, under the circumstances set out in subsections 11(2) to 11(6), report the information set out therein by notifying in person an observer or by telephoning (800) 775-5505.

(2) 24 hours before a fishing trip:

vessel name, vessel master's name and vessel registration number;  
species to be fished;  
Subarea(s) to be fished;  
anticipated time of arrival at the fishing location; and  
anticipated time that fishing will begin.

(3) Upon failure to arrive at fishing location within 24 hours of time stated in subsection 11(2):

vessel name and vessel registration number; and  
details of change in fishing plans.

(4) 24 hours prior to moving to a new green sea urchin Quota Area:

vessel name, vessel master's name and vessel registration number;  
species to be fished;  
Subarea(s) to be fished;  
anticipated time of arrival at the fishing location; and  
anticipated time that fishing will begin.

(5) After a fishing trip:

vessel name, vessel master's name and vessel registration number;  
species fished;  
Subarea(s) that were fished; and  
time that fishing stopped.

(6) 24 hours prior to landing green sea urchin:

vessel name, vessel master's name and vessel registration number;  
species to be landed;  
name of the designated port and location therein where the catch shall be landed;  
anticipated time of landing;  
name of fish processor or buyer that is buying or transporting the catch; and  
if applicable, the method of transporting the catch to a fish processor.

## 12. Harvest Logs and Chart Data:

(See Explanatory Note after Section 14)

(1) The vessel master must maintain a log of all harvest operations and provide this information in both hard (paper) copy and electronic copy to the Department. The content and format of this log (paper and electronic) must meet the requirements as defined by the Shellfish Data Unit for the 2003/2004 licence year.

(2) The harvest and fishing location information recorded in the log shall be complete and accurate.

(3) The information for each day's harvest operations shall be recorded in the log no later than midnight of that day.

(4) The log must be kept on board the licensed vessel.

(5) The log must be produced for examination on demand of a fishery officer, a fishery guardian or an observer.

(6) The vessel master must provide a chart record of the locations fished to the Department.



- (a) The chart must be marked with:
  - (i) the vessel registration number,
  - (ii) the licence tab number, and
  - (iii) the validation I.D. numbers.

The validation I.D. number is the unique page number assigned to each validation page of the Green Sea Urchin Validation & Harvest Log. If an alternative log is used, the validation I.D. number is the unique page number assigned by the Shellfish Data Unit when the licence holder contacts the Unit to obtain the information necessary to fulfil the log requirements.

(b) Each harvest site must be clearly marked on the chart with dive number, validation I.D. number and the dates that fishing activity occurred at each site. The dive numbers on the chart record must correspond to the dive numbers in the log.

(c) The information for each day's harvest operations shall be recorded on the chart record no later than midnight of that day.

(7) The vessel master must make provisions to have chart information referred to in subsection 11(6) electronically captured into Geographic Information System (GIS) software and forwarded to the Pacific Biological Station, Nanaimo.

(8) The completed log pages (original copy), electronic copy of the log, and the chart record of locations fished, must be forwarded within 28 days following the end of each month in which fishing occurred to:

Fisheries and Oceans Canada  
Shellfish Data Unit  
Pacific Biological Station  
3190 Hammond Bay Road  
Nanaimo B.C. V9T 6N7

Tel: (250) 756-7022 or (250) 756-7306

(9) In the event that a licence holder does not fish the 2003/2004 fishing season, the licence holder is responsible for submitting a nil report. One page from the harvest logbook identifying the vessel, licence tab number and the year with 'nil' entered in the body of the log and signed by the licence holder constitutes a nil report.

### 13. Fish Slips:

An accurate written report shall be furnished on a fish slip of all fish caught and retained under the authority of this licence. A report must be made even if the fish are used for bait, personal consumption or disposed of otherwise. The report shall be mailed not later than seven days after the offloading and sent to:

Fisheries and Oceans Canada  
Regional Data Unit  
200-401 Burrard Street  
Vancouver B.C. V6C 3S4

Fish slip books may be purchased through most Departmental offices. Phone (604) 666-2716 for more information.

14. All green sea urchin divers shall be in possession of a Workers' Compensation Board Seafood Harvesting Diving Certificate.

Explanatory Note - Harvest Log, Chart Data and Validation: The Green Sea Urchin Validation & Harvest Log issued by the service bureau contracted by the West Coast Green Urchin Association is approved for both form and content by the Shellfish Data Unit. This service bureau will provide, for a fee, the logbook, and coding, keypunching, electronic chart data capture and validation services.

Fishers who do not use the logbook and coding, keypunching and electronic chart data capture services provided by this service bureau must contact the Shellfish Data Unit at (250) 756-7306 or (250) 756-7022 in order to obtain the information necessary to fulfil these requirements.

**Appendix 5: Maps of Green Sea Urchin Quota Areas**

Figure 1: Green Sea Urchin Quota Areas 18, 19 and 20.

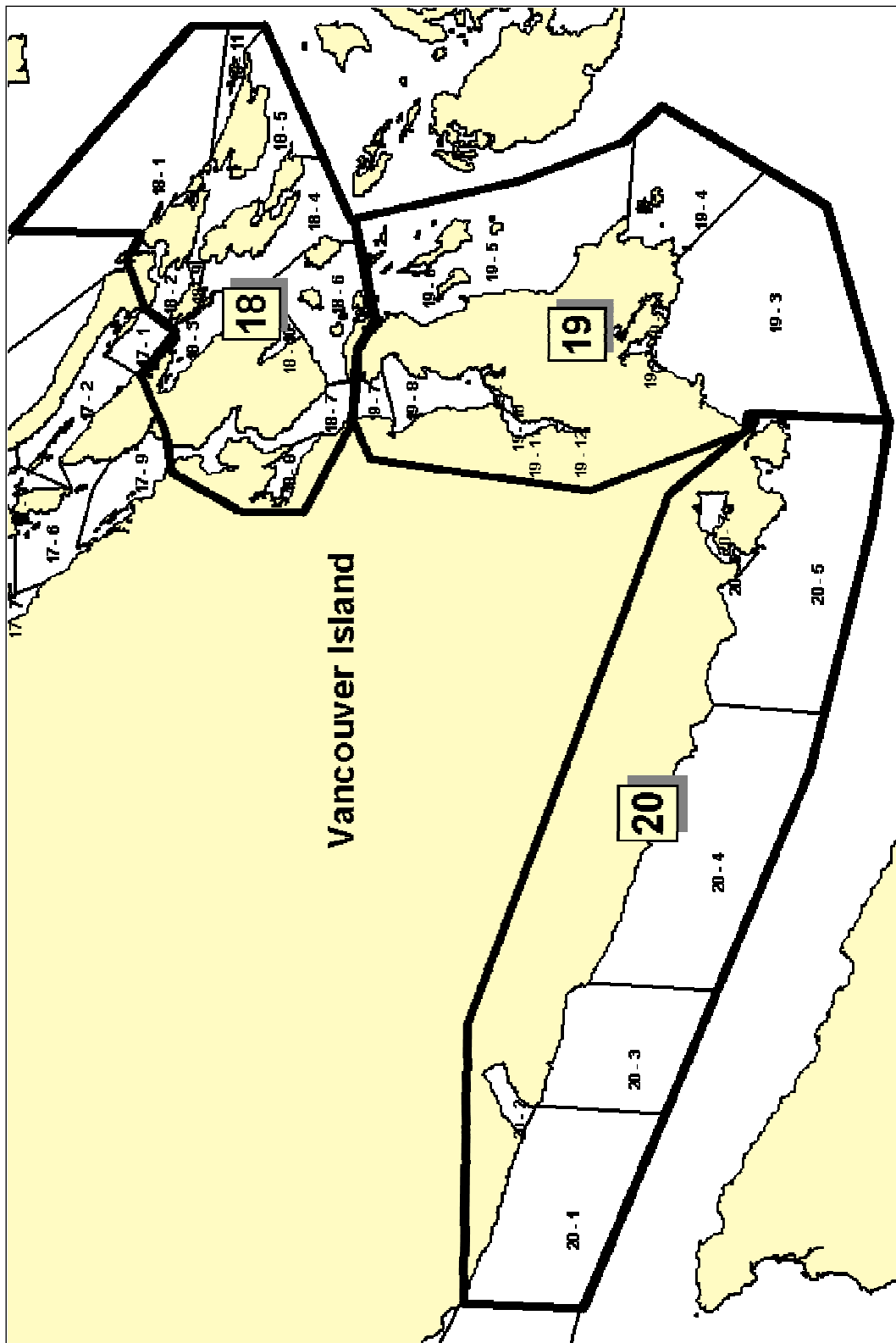


Figure 2: Green Sea Urchin Quota Areas 11, 12, 13A-13C.

