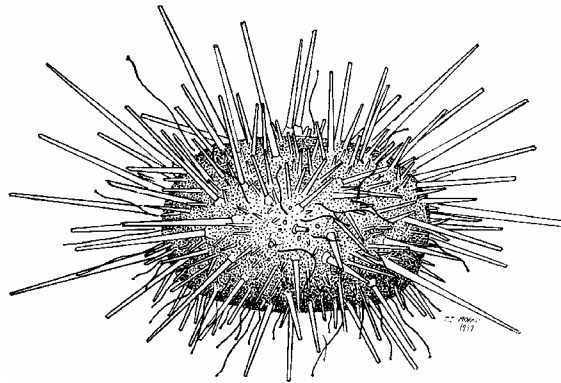


PACIFIC REGION

INTEGRATED FISHERIES MANAGEMENT PLAN

RED SEA URCHIN BY DIVE

AUGUST 1, 2003 TO JULY 31, 2004



Red Sea Urchin: *Strongylocentrotus franciscanus*



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 Hours)	(604) 666-2828
Invertebrate Web Page	www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/index.htm

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2. RED SEA URCHIN SECTORAL COMMITTEE AND RESEARCH SUBCOMMITTEE

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First Nations representatives

Seats remain open to all groups interested in assessment and management of the resource.

Recreational fishing and non-consumptive sector representatives

Seats are available for interested parties.

B.C. Ministry of Agriculture, Food and Fisheries

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3. GLOSSARY

Area	Defined in Section 2 of the <i>Pacific Fishery Management Area Regulations</i> , available through the Internet at: www.pac.dfo-mpo.gc.ca/ops/fm/toppages/actreg_e.htm
aquaculture	The process of spawning animals and rearing the progeny to marketable size, usually 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 Aboriginal Fisheries Strategy (AFS) Licence Retirement/Allocation Transfer Program.
enhancement	Adding to (“enhancing”) the biomass of a species in the wild by spawning and growing juvenile animals and subsequently releasing them to their natural habitat for further growth. Usually requires little or no further intervention after release.
IQ	Individual quota. A portion of the total allowable catch (TAC) is allocated annually to individual licences. In the red sea urchin fishery, each IQ is equivalent to 1/110th of the commercial TAC.
invertebrate	An animal without a backbone.
landed or off-loaded	The transfer of red sea urchins from the vessel licensed to harvest to either land or a vessel (“packer”) transporting product 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> .
PUHA	Pacific Urchin Harvesters’ Association
PSARC	Pacific Scientific Advice Review Committee
Quota Area	A defined portion of Pacific fisheries waters for the red sea urchin fishery. 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).
sectoral committee	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 red 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 with an interest in the fisheries resources, such as recreational and commercial harvesters, processors, 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	Defined in Section 2 of the <i>Pacific Fishery Management Area Regulations</i> , available through the Internet at: www.pac.dfo-mpo.gc.ca/ops/fm/toppages/actreg_e.htm
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 red sea urchins from one vessel to another.
validated	Red sea urchins that have been weighed by an observer and the weight entered into the Red Sea Urchin Validation & Harvest Logbook, or an approved alternative log.

4. INTRODUCTION

The 2003/2004 Pacific Region Red Sea Urchin Integrated Fisheries Management Plan (IFMP) encompasses the period of August 1, 2003 to July 31, 2004. The licence year has been altered by one month to ease the consultation process in the spring.

The 2003/2004 Red Sea Urchin Commercial Harvest Plan is attached as Appendix 1 to this IFMP. Commercial harvesters are advised to review Appendices 1 through 9 for harvest information.

Additional information on red sea urchins may be accessed through the Department's shellfish Internet Site at:

www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/index.htm

This information is also available in hard copy in the Pacific Scientific Advice Review Committee (PSARC) Fishery Update - Red Sea Urchin. Fishery updates are available from the PSARC Secretariat ([250] 756-7208), by e-mail at: psarc@pac.dfo-mpo.gc.ca, or from staff listed in Section 2 of this plan. Beginning in 2002, this information will be available through the red sea urchin web site.

Research Documents and Stock Status Reports for red sea urchins are available at the PSARC web site:

5. OVERVIEW OF THE FISHERY

The red 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. Fisheries and Oceans Canada is currently reviewing the potential for a purple sea urchin fishery.

Red sea urchins are harvested for their roe (gonad) which is extracted for commercial purposes at processing plants for shipment to fresh markets. Commercially harvested red sea urchins are removed from the ocean floor by divers using short aluminium rakes. Packer vessels and trucks deliver the product fresh to plants for processing. The gonad is extracted and processed in B.C., and marketed almost exclusively in Japan, where it is sold as “uni”. A smaller market for red sea urchins is developing in other Asian countries and in North America. The yield of roe from a whole animal ranges from five to fifteen percent of total body weight. Red sea urchins are of continuing importance to coastal First Nations, who harvest them for food, social and ceremonial purposes; harvesting is mainly opportunistic associated with extreme tides. The extent of recreational harvest of red sea urchins is undocumented but is considered minimal.

The commercial red sea urchin dive fishery began in the 1970s and has grown rapidly since 1982. While stock assessments are undertaken in many areas, the fishery continues to be managed under a precautionary regime that includes limited entry licensing, a minimum size limit, conservative harvest quotas, area licensing and an individual quota (IQ) program. There are one hundred and ten (110) licence eligibilities for this fishery. Red sea urchin individual licence quotas are set at 1/110 of the annual coast-wide commercial TAC and fishers are required to select one of two licence areas in which to fish. These management tools are described in more detail in the commercial harvest plan (Appendix 1).

A consultative process was initiated for the red sea urchin fishery in 1989 and is a major part of the planning for the commercial fishery. The primary consultative body for red sea urchins in B.C. is the Red Sea Urchin Sectoral Committee. This committee includes representatives from Fisheries and Oceans Canada, commercial licence holders, processors, First Nations, B.C. Ministry of Agriculture, Food and Fisheries and recreational fishers. Members of the Pacific Urchin Harvesters’ Association (PUHA) represent commercial fishers on this committee. The Sectoral Committee meets annually in the spring to review and provide advice to the Department regarding management issues pertaining to the fishery and on the proposed management plan.

6. ANNUAL (POST-SEASON) REVIEW RESULTS FOR FISHING SEASON 2002/2003

Overall, the 2002/2003 fishing season was successful. One hundred and nine (109) licences were fished on forty-six (46) vessels. One Communal Commercial Licence was not designated for the 2002/2003 season. Although weather and poor roe quality hampered harvesting in some areas, the TAC continues to be closely achieved. No major issues were documented and in general, compliance with the catch validation program was good.

The complete 2002/2003 Performance Review is available in the document entitled Invertebrate Post-season Review - Red Sea Urchin, 2002/2003. Contact resource managers or see the Internet at:

www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/Sea_Urchin/default.htm

7. STOCK STATUS

The Stock Status Report for red sea urchins is updated and published by PSARC with each red sea urchin assessment paper. Contact the Science Branch, or see the Internet at:

www.pac.dfo-mpo.gc.ca/sci/psarc/SSRs/ssrs_e.htm

7.1. Prospects for the Fishery

There is no indication of concern for red sea urchin stocks at this time. It is anticipated that the majority of commercial licence holders will harvest their IQ allocation and that the coast-wide TAC will be achieved. Poor weather and inclement sea conditions are generally the main limiting factors to achieving the TAC.

The red sea urchin fishery is managed conservatively and apart from a few areas that have been closed or 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 near future. This, in turn, will ensure sustainable harvests by all sectors. 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 and others with an interest in the resource.

7.2. Research

Joint Fisheries and Oceans Canada, PUHA and First Nations stock assessment activities continue coast-wide through biomass transect surveys, experimental harvest sites and selected study sites. PUHA established a research fund in 1995 and co-ordinates vessel and diver participation in surveys with First Nations communities. Fisheries and Oceans Canada develops the survey protocol and conducts the data analysis. The main survey goals are to better understand the growth and recruitment parameters of red sea urchins and to prove and/or adjust quotas accordingly.

Scientific research and the joint stock assessment activities are of vital importance to this fishery as it moves from a precautionary management regime towards a biologically based fishery.

PUHA continues to support and participate in growth and mortality studies. Biomass information from co-operative surveys in the north and south coasts, and bed areas provided by commercial fishers are being examined and will be presented in PSARC working papers.

A joint PUHA, sea urchin processor, and Fisheries and Oceans Canada plant sampling program was instituted during the 2000/2001 fishing season to accompany the change in commercial legal size limit from 100 mm to 90 mm. The sampling program provides valuable data about the size of red sea urchins being harvested and will help in determining appropriate area quotas.

See Section 10.1 for a list of surveys planned for 2003.

8. MANAGEMENT ISSUES

The following sections highlight the on going, or longer-term, management issues that are being addressed in this fishery. Specific management objectives designed to mitigate these issues are detailed in Section 10. There are few immediate, or annual, management issues that need addressing; however, when short-term issues arise they will be detailed in this section.

8.1. General Issues and those Related to the Collection of Biological Information

Basic biological information is limited (i.e. age, growth, recruitment and migration) and is needed in support of the management of this species. Fisheries and Oceans Canada continues to conduct collaborative research projects with PUHA, First Nations and others interested in the resource.

A better understanding of the influence of varying exploitation rates on the resilience of local populations is needed. Research sites have been established in Cumshewa Inlet (Subarea 2-3) and along West Price Island (Subarea 7-31) in order to maintain a time series of data on unfished, moderately fished and potentially overfished populations and experimental areas.

A long-term strategy for the collection of basic biological information, assessment techniques and management regimes is required. A PSARC document (*CSAS Research Document 99/094 Discussion on a Precautionary Approach for Management of the Red Sea Urchin Fishery in British Columbia*) was written in 1999 to initiate development of this strategy. Research documents may be found on the Internet at:

www.pac.dfo-mpo.gc.ca/sci/psarc/ResDocs/res_docs_e.htm

Sea otter populations are expanding in B.C., and because they are major predators on red sea urchins, they are expected to have an impact on all red sea urchin fisheries in the future. Currently the Department does not consider sea otters in the management of the red sea urchin resource. For further information, see the Draft Recovery Strategy for Sea Otters on the Internet at:

www-comm.pac.dfo-mpo.gc.ca/pages/consultations/sea-otters/default_e.htm

8.2. Issues Related to the Commercial Fishery

Monitoring of the commercially harvested populations is an ongoing requirement, through both surveys and product monitoring in order to provide appropriate focus for assessment papers. A processing plant based monitoring of size frequency of the commercial catch was initiated during the 2000/2001 fishing season. An analysis of this information was presented in the December 2001 PSARC session. The program was expanded during the 2001/2002 fishing season and will continue indefinitely.

The size limit was reduced for the 2000/2001 fishing season. Two quota options papers based on a reduced size limit have been published: *CSAS 1999/201 Quota options for the Red Sea Urchin fishery in British Columbia for Fishing Season 2000/2001*, and *CSAS 2001/141 Quota options for the Red Sea Urchin fishery in British Columbia for Fishing Season 2002/2003*. The options presented in the latter will be used for the 2003/2004 fishing season. Further analysis on the new approach to determining biomass and quotas is anticipated.

The 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. Fisheries and Oceans Canada works collaboratively with the commercial industry association to make annual improvements to the IQ program. Quota Area boundaries are reassessed every year, and changes are made where necessary to redistribute effort.

Quantification of commercial fishery-induced mortalities is needed to aid assessment (e.g. loss through testing of quality prior to harvest, breakage during harvest and through sorting on deck, dumping of undersize product, breakage during transport). There is still a need to develop some method to assess and quantify fishery-induced mortalities.

8.3. Issues Related to the First Nations Fishery

An understanding of the impacts of commercial red sea urchin fisheries on the ability of First Nations to harvest for food, social and ceremonial purposes is required. Collaborative studies have been initiated with the Haida Fisheries Program. Data is unavailable at this time.

Catch reporting structures for First Nation fisheries are limited. The Department is consulting with First Nations throughout coastal B.C. on a more comprehensive approach to gathering catch data by negotiating agreed-upon protocols outlined in the Fisheries Agreement and/or communal licences.

8.4. Issues Related to the Recreational Fishery

Catch reporting structures for recreational shellfish fisheries are limited. The Department is consulting with the Sport Fishing Advisory Board (SFAB) at the local, regional and provincial levels throughout B.C. on a more comprehensive approach to gathering catch data.

9. SPECIFIC MANAGEMENT OBJECTIVES

9.1. Conservation/Sustainability

9.1.1. Comprehensive Understanding of the Biology of Red Sea Urchins

A more comprehensive understanding of the biology of red sea urchins and the impacts of commercial harvest on red sea urchin populations is planned to ensure continued conservation and sustainable harvests in this fishery. The goal of the Research Subcommittee of the Sectoral Committee (consisting of PUHA, First Nations organizations and the Department) is to undertake biological investigations. These include biomass estimates through transect surveys in various locations of the B.C. Coast, and experimental harvest and study areas where populations are manipulated to examine urchin growth, migration and recruitment. For 2003/2004, PUHA plans to conduct the following collaborative studies:

- a) Broadbrush surveys: Dundas Island (Area 3) and Bamfield/Ucluelet (Area 23);
- b) Study sites: Tofino (Area 24), Louise Island (Area 2), Price Island (Area 7);
- c) Yaculta, Campbell River out planting site: re-survey, lab analysis of jaw samples.

9.1.2. Accurately Determine Age

A method to accurately determine the age of red sea urchins has yet to be discovered, although recent work by Thomas Ebert of San Diego State University shows that some red sea urchins may attain ages as much as one hundred (100) years. Fisheries and Oceans Canada and the Research Subcommittee will continue to work toward a better understanding of the age of red sea urchins in B.C. Red sea urchin ageing in B.C. is on going in terms of data collection, verification and analysis. No report is available at this time.

9.1.3. Assessment of Spatial and Seasonal Juvenile Growth, Survival and Recruitment

To improve on the knowledge of red sea urchin ages, 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 red sea urchins could indicate that the area is vulnerable to over-fishing. Some limited work is being done through hatchery reared seed releases at Yaculta and laboratory experiments, and on-going surveys at the three long term study sites which may reveal some interesting time series recruitment information. Surveys and data analyses are pending.

9.2. Domestic Considerations

9.2.1. Species at Risk Act (SARA)

The Species at Risk Act will be coming into force in June 2003. The purpose of this Act is “to prevent wildlife species from being extirpated or becoming extinct, to provide for the recovery of a 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”.

Any possible impacts of this legislation on the red urchin fishery will be discussed through the advisory process. For more information on SARA, please refer to the Environment Canada Internet site at:

www.speciesatrisk.gc.ca/

The Department would like assistance in the reporting of any Leatherback turtle sightings or entanglement. Leatherback turtles are listed as endangered in Schedule I of SARA. The Turtle Sightings Network toll-free phone number is 1-866-472-9663, or email turtles@vanaqua.org.

9.2.2. Abalone Recovery Strategy

Illegal harvest (all fishing closed in 1990) of northern abalone (“threatened”) is an ongoing concern, continuing to threaten any recovery. PUHA and Fisheries and Oceans Canada urge fishers to assist in Abalone Coast Watch programs and to report suspicious harvesting activities to OBSERVE-RECORD-REPORT 1-800-465-4336. PUHA continues to support abalone recovery initiatives and is working with Fisheries and Oceans Canada and community groups towards abalone research and recovery efforts. Further information about abalone recovery efforts is available on the Internet:

www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/Abalone/default.htm

9.2.3. Commercial Fishery

The IQ program for the red sea urchin fishery, implemented in 1996, will continue for the 2003/2004 fishery.

Fisheries and Oceans Canada will continue to work collaboratively with Industry, First Nations organizations and other stakeholders to ensure conservation and sustainability of the red sea urchin resource and fishery. Management of the red 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.

The Department will continue to work collaboratively with PUHA and the Red Sea Urchin Sectoral Committee ensure sustainable fisheries through partnership and co-management arrangements to share in decision making, responsibilities, costs and benefits.

9.2.4. First Nations Fishery

Fisheries and Oceans Canada provides opportunities for First Nations access to the fishery 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 decision of the Supreme Court of Canada in *Sparrow*, and other decisions. See the Internet for more information at:

www.pac.dfo-mpo.gc.ca/tapd/default.htm

Under the commercial IQ program, two percent of the coast-wide TAC for red sea urchins is reserved, for planning purposes, for First Nations fisheries for food, social and ceremonial purposes. Additional allocations of red sea urchins will be provided to First Nations who demonstrate that their food, social and ceremonial needs are not being met. Fisheries and Oceans Canada is confident that with the precautionary approach to this fishery, the reserved allocation of TAC, and the provision of additional allocations, where necessary, First Nations in all areas will have sufficient opportunities to harvest red sea urchins for food, social and ceremonial purposes.

9.2.5. Recreational Fishery

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

9.2.6. Aquaculture

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) in 1995. Building on FADS and more recent opportunities and challenges associated with aquaculture development, Fisheries and Oceans Canada 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 “DFO’s Aquaculture Policy Framework” can be accessed at the following Internet site:

www.dfo-mpo.gc.ca/aquaculture/policy/pg001_e.htm

Requests to access the wild red 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 A/Director, Sustainable Aquaculture (see the **Contacts** section of this IFMP).

10. ENFORCEMENT MEASURES

10.1. Overview

In general, compliance with the regulations and licence conditions in the red sea urchin commercial fishery is good, largely due to dockside validation, mandatory Validation & Harvest Logs and at-sea monitoring in the North Coast. Previous concerns regarding compliance with the minimum size limit have been addressed by the size limit reduction in 2000 from 100 mm to 90 mm test diameter.

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

Resource managers and shellfish assessment biologists have prepared impact statements for use in court cases. These have been useful in allowing the courts to clearly understand the implications of the offence and for increasing the resultant fines.

10.2. Main Program Activities

10.2.1. Priorities for 2003/2004

Resource managers will monitor the harvest under the reduced size limit, and address incident reports received from dockside validators.

Fishery officers and marine enforcement officers will conduct monitoring and compliance patrols at-sea using program vessels, Canadian Coast Guard (CCG) vessels and air surveillance from charter aircraft. 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. Both open and closed area patrols 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. 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 - vessel licensed - experimental licence - no FRC - fail to produce FRC	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.
Fish 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 has 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 Validation & Harvest	F(G)R S.22(7)	At sea and dockside inspections will occur when opportunities exist. Investigations

Issue	Section	Strategy
Logbook.		may also occur on an opportunistic basis after C&P has 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 red 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.

11. FINANCIAL RESPONSIBILITIES

11.1. Commercial Industry and/or other Harvesters

A joint project agreement between the Department and PUHA ensures delivery of in-season catch monitoring and biological sampling programs. PUHA funds the catch validation program, stock assessment surveys, biological research surveys and a biologist hired to co-ordinate research activities with the Department. PUHA also hires a contract patrol for eight months a year to monitor and guide the harvest in the North Coast. Association fees for the 2002/2003 fishing season were \$5,500.00 per licence and total PUHA contributions toward the management and assessment programs were approximately \$605,000.00.

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

11.2. Fisheries and Oceans Canada

One Stock Assessment and four 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 AFS, the Oceans Directorate and numerous administrative personnel. Generally, all personnel are multi-tasked, e.g. red sea urchin fishery managers work on all dive fisheries. Therefore, costs incurred by the Department to manage this fishery are difficult to assess.

12. PERFORMANCE REVIEW FOR FISHING SEASON 2003/2004

12.1. Management Plan Evaluation Criteria

- 12.1.1. What progress was made in the collection of biological information? Were all scheduled surveys completed?
- 12.1.2. What are the results of the 2003/2004 plant sampling program?
- 12.1.3. Were any concerns voiced about First Nations access to red sea urchins for food, social and ceremonial purposes? What actions were taken?
- 12.1.4. Are results of the collaborative program with the Haida Fisheries Program on food, social and ceremonial access to red sea urchins available?
- 12.1.5. Was the TAC achieved? How closely were area quotas met? Was distribution of effort properly addressed by the redesign of some quota areas?
- 12.1.6. Does the commercial industry continue to support the lower size limit?
- 12.1.7. What progress was made toward establishing catch reporting programs for First Nation and recreational fisheries?
- 12.1.8. What involvement did the Red Sea Urchin Sectoral Committee have in sea otter and abalone recovery strategies?

12.2. Enforcement Plan Evaluation Criteria

- 12.2.1. What are the results of enforcement activities directed toward this fishery? Provide annual report of enforcement effort and problems. For example, the following could be reported on:
 - a) Annual and on-going interactions with stakeholders, First Nations and the public.
 - b) Ongoing review of the information submitted by fishery officers on complaints from fishers and the public.
 - c) Compliance with size limit.
 - d) Compliance with IQs.
 - e) In-season and annual review of dockside validation incidence reports.
 - f) Annual audits of Validation & Harvest Log Entries.
 - g) Annual review of both the FEAT and DVS systems is used to measure compliance and complaints.
 - h) Successful apprehension and prosecution of individual(s) involved in breaches of the Fisheries Act and associated regulations.
 - i) Demonstrate success (changes in compliance rates) as a result of “targeted” enforcement effort related to illegal activity.

12.2.2. Summarize in-season and post-season review between Conservation and Protection, Fisheries Management and contract staff to assess whether the IFMP objectives were met.

12.2.3. Summarize in-season meetings with First Nations to review enforcement concerns and impact of fisheries near local villages.

13. REFERENCES

Campbell, A., J. Boutillier and J. Rogers. 1999. Discussion paper on a precautionary approach for management of the red sea urchin fishery in British Columbia. Can. Stock Assessment Secretariat Res. Doc. 99/094.

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Campbell, A., D. Tzotzos, W.C. Hajas and L.L. Barton. 2001. Quota Options for the Red Sea Urchin Fishery in British Columbia for Fishing Season 2002/2003. Can. Stock Assessment Secretariat Res. Doc. 2001/141.

Rogers, J. and L. Convey. 2000. PSARC Fishery Update - Red Sea Urchin.

Front cover drawing by Tim Morris, Biologist.

14. ATTACHMENTS

Appendix 1	2003/2004 Red Sea Urchin Commercial Fishery Harvest Plan
Appendix 2	2003/2004 Red Sea Urchin First Nations Harvest Plan
Appendix 3	2003/2004 Red Sea Urchin Recreational Harvest Plan
Appendix 4	Size Limits for Sea Urchins (Echinoderms)
Appendix 5	2003/2004 Red Sea Urchin Quota Area Descriptions
Appendix 6	Red Sea Urchin Validation & Harvest Log
Appendix 7	Red Sea Urchin Quota Transfer Form
Appendix 8	Pacific Fishery Management Area Maps and Quota Area Maps
Appendix 9	Example of 2003/2004 Red Sea Urchin Conditions of Licence

Appendix 1: Red Sea Urchin by Dive 2003/2004 Commercial Fishery Harvest Plan

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1. MANAGEMENT SUMMARY FOR 2003/2004

- 1.1. **Minimum Size Limit:** 90 mm test diameter, between the spines, measured through the greatest diameter of the red sea urchin test (shell). See Section 4.1.
- 1.2. **Area Licensing:** 93 licences in the North Coast and 17 in the South Coast. See Sections 2 and 5.4.
- 1.3. **Licence Stacking:** Maximum of five active licences per vessel. See Section 5.3.
- 1.4. **Total Allowable Catch:** 4,885.9 tonnes (10,771,530 lb.). See Sections 4.2 and 7.
- 1.5. **Individual Quota:** 44.4 tonnes (97,923 lb.) per licence. See Section 4.4. A maximum of 500 lb. of red sea urchins may be transferred to another vessel's red sea urchin licence. See Section 6.7.
- 1.6. **Quota Area Boundaries:** All Quota Area descriptions are shown in Appendix 5, and those with changes are marked with an asterisk (*).
- 1.7. **Quota Area Maps:** Maps of North and South Coast Quota Areas are provided in Appendix 8.
- 1.8. **Opening Schedules:** Fishery will not open before August 1. See Sections 3 and 7.

2. LOCATION OF THE FISHERY

The commercial red sea urchin fishery is licensed over two geographic areas (North Coast and South Coast of B.C.) and occurs in four geographic locations within those areas: west coast Vancouver Island (Areas 20 to 27, 111, 121 and 123 to 127), east coast Vancouver Island (Areas 11 to 19, 28 and 29), North Coast (Areas 3 to 10, 103 to 110) and Queen Charlotte Islands (Areas 1 and 2, 101, 102 and 142). Descriptions of Areas and Subareas can be found on the Internet at:

www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap_e.htm

Research and permanent area closures are listed in Section 8 of the 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 2003/2004 commercial fishery will open no earlier than August 1, 2003 to close no later than July 31, 2004. The proposed scheduled openings by Quota Area are shown in Section 7.

Markets generally guide production, however the majority of the harvesting effort occurs in the winter months.

Fishery timing, through scheduled openings, is critical in order to maintain optimal value for sea urchin roe and to maintain Canada's position in the Japanese market. Commercial harvest schedules are determined in consultation with the Pacific Urchin Harvesters' Association (PUHA) and sea urchin processors. The South Coast fishery takes place primarily during winter, the period of traditional peak market demand, avoiding summer months. The North Coast fishery is scheduled to provide a continuous year-round supply of high quality product.

4. MANAGEMENT MEASURES FOR THE COMMERCIAL FISHERY

The management tools of the red sea urchin fishery include: a minimum size limit to allow several spawning years prior to harvest, a precautionary fixed exploitation rate of two to three percent of estimated biomass, limited entry licensing, an IQ program in which total quota is divided equally amongst licences, area licensing and area quotas.

4.1. Minimum Size Limit

The use of a size limit in this fishery is considered precautionary and allows red sea urchins several years of spawning before becoming available for the commercial fishery.

The Department reduced the size limit for red sea urchins effective July 1, 2000 from 100 mm to 90 mm test diameter. The 90 mm size restriction will still meet conservation goals of allowing several years of spawning prior to becoming available for commercial harvest. For the 2003/2004 fishing season, the minimum size limit for red sea urchins is 90 mm test diameter, between the spines, measured through the greatest diameter of the red sea urchin test (shell). See Appendix 4.

Information from a plant sampling program conducted through 2000 and 2001 resulted in the presentation of quota options based on a 90 mm size limit: CSAS Research Document 2001/141 Quota options for the Red Sea Urchin Fishery in British Columbia for Fishing Season 2002/2003.

4.2. Precautionary Fixed Exploitation Rate

A modified surplus production model is used to estimate maximum sustainable yield (MSY) for red sea urchins. Total current biomass of red sea urchins is calculated biannually, based on density estimates for red sea urchins in the 90 to 140 mm test diameter range, new survey results, and changes to commercial bed area estimated from digitized harvest log charts provided by fishers. A natural mortality rate of 0.10 is assumed, and a correction factor of 0.20 provides for a conservative harvest rate of approximately two percent (Campbell et al 1999).

The following table shows the most recent stock assessment figures used to calculate the commercial TAC for 2003/2004. See the document entitled Quota Options for the Red Sea Urchin Fishery in British Columbia for Fishing Season 2002/2003 (CSAS Research Document 2001/141) for more detail.

The coast-wide TAC is calculated using an assumed natural rate of mortality rate (M) of ten percent and a conservative harvest rate of two to three percent. For planning purposes, the First Nations food, social and ceremonial harvest allocation is calculated at two percent of the estimated TAC. The commercial quota is then calculated by subtracting the First Nations allocation from the estimated TAC. The following table shows the range of quota options for each area, the allocation for First Nations and the TAC available for the commercial fishery under the reduced size limit.

Range of Quota Options for 2003/2004 Red Sea Urchin Total Allowable Catch (tonnes) at a natural mortality rate M=0.10 and test diameter of 90 to 140 mm.			
	Lower 90% CI, M=0.10	Mean, M=0.10	Upper 90% CI, M=0.10
North Coast Areas 1 to 10			
TAC based on 90 to 140 mm test diameter	2,631.5	4,098.9	5,566.4
Two percent of TAC for First Nations use	52.6	82.0	111.3
Range available for 2003/2004	2,578.8	4,016.9	5,455.0
South Coast Areas 11 to 29			
TAC based on 90 to 140 mm test diameter	245.0	580.5	916.0
Two percent of TAC for First Nations use	4.9	11.6	18.3
Range available for 2003/2004	240.1	568.9	897.7
Coast-wide			
TAC based on 90 to 140 mm test diameter	2,876.5	4,679.4	6,482.4
Two percent of TAC for First Nations use	57.5	93.6	129.6
Range available for 2003/2004	2,818.9	4,585.8	6,352.7

The commercial fishery quota for 2003/2004 was determined through consultation with the commercial industry association. Resource managers and PUHA reviewed the range of options available under the assessment paper and proposed quotas for each red sea urchin quota management area that resulted in the overall licence area totals shown in Section 7.

4.3. Limited Entry Licensing

A limited entry licensing scheme was implemented in January 1991. Red sea urchins are commercially harvested under the authority of a commercial licence (“ZC”) or a communal commercial licence (“FZC”). Currently six (6) of the one hundred and ten

(110) commercial licences are designated as “FZC” licences, and are issued to coastal First Nations for participation in the commercial fishery. These Communal Commercial Licences are monitored with the commercial fishery and have the same management constraints and licence conditions as other commercial licences. For more information on the Aboriginal Fishery Strategy (AFS) Allocation Transfer Program, see Appendix 2, Section 1 or contact a Resource Manager listed in Section 1 of the IFMP.

4.4. 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, PUHA voluntarily implemented an IQ program in 1994 and 1995. The coast-wide TAC was divided equally among licences and a third party service bureau was hired to monitor catch. For 1996, the Minister of Fisheries and Oceans Canada sanctioned an IQ management regime for the red sea urchin, green sea urchin and sea cucumber fisheries. Changes from the previously voluntary IQ system were minor and dealt with such things as quota transfer, area licensing and licence stacking.

Under the IQ program for the red sea urchin fishery, two percent of the coast-wide TAC for red sea urchins is reserved, for planning purposes, for First Nations fisheries for food, social and ceremonial purposes. Additional allocations of red sea urchins will be provided to First Nations who demonstrate that their food, social and ceremonial needs are not being met.

4.5. Area Licensing

The number of licences assigned to either the North Coast or the South Coast area is based on biomass estimates for the area and the annual IQ. Once a coast-wide and commercial licence area TAC is established, the number of licences in each licence area is adjusted to ensure equal individual quotas coast-wide. Based on the most recent stock assessment information, ninety-three (93) licences are assigned to the North Coast, and seventeen (17) to the South Coast.

PUHA provides Fisheries and Oceans Canada with advice regarding licence area selections. If PUHA is unable to provide the licence area selections, the Department will determine area designation through a process of voluntary placement and lottery out of the over-subscribed area.

4.6. Area Quotas

In conjunction with area licensing, the coast-wide commercial TAC is divided into Quota Areas. For management purposes, “Quota Areas” are comprised of Areas, Subareas, or a combination of portions of Subareas. The TAC for each Quota Area is calculated from the density estimates and range of quotas provided by the Department’s Stock Assessment Unit. Where surveys and density estimates are not complete for an area, they are extrapolated from survey information from adjacent or nearby areas.

5. LICENSING REQUIREMENTS FOR THE COMMERCIAL FISHERY

5.1. Licence Category

A category ZC or FZC (communal commercial) licence eligibility is required to commercially harvest red sea urchins by dive.

5.2. Application Fees

Currently the annual licence application fee for a category ZC licence eligibility is \$530.00.

5.3. Licence Application and Issuance

Applications must be completed and submitted to a Pacific Fishery Licence Unit by June 30 of each year with the required 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 completion and submission of logbooks must be met and accepted.

Applications must designate a registered commercial fishing vessel eligible for one of the following licences: A, C, FA, FC, FK, FL, FR, FS, FW, G, K, L, N, R, S, T and W. A vessel may be designated for a maximum of five (5) active licences (i.e. those with quota remaining) at a time.

Vessel length restrictions for vessels used to harvest red sea urchins under the IQ pilot have been waived by Fisheries and Oceans Canada such that ZC licences may be designated to a vessel of any length permitted to harvest Schedule II species. Fisheries and Oceans Canada reserves the right to reinstate vessel length restrictions at the lengths associated with each licence tab.

5.4. Area Licensing

Licence tab numbers will be assigned to either the South Coast area or the North Coast area. To ensure equal quotas, the coast-wide distribution of licences will be as follows:

- a) North Coast, Areas 1 to 10 and adjacent offshore areas: 93 licences
- b) South Coast, Areas 11 to 29 and adjacent offshore areas: 17 licences

PUHA will provide Fisheries and Oceans Canada with advice regarding licence area selections. If PUHA is unable to provide the licence area selections, the Department will determine area designation through a process of voluntary placement and lottery out of the over-subscribed area.

5.5. Individual Quotas

The holder of a licence eligibility for commercial harvest of red sea urchin is provided the opportunity to harvest up to 97,923 lb. of red sea urchins.

All diving and fishing operations must take place from the licensed vessel. All product must be brought directly onto the licensed vessel following harvest. Vessels used to hold or transport red sea urchins must conform to Canadian Food Inspection Agency inspection regulations for holding or transporting fish and have appropriate licences.

5.6. Licence Documents

Red sea urchin licence documents are valid from the date of issue to June 30 of each calendar 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.

5.7. Vessel Redesignations

Redesignation of red sea urchin licences is allowed as long as any condition of licence such as the completion of logbooks have been met and accepted by the Shellfish Data Unit.

A completed Application for Category Z Vessel Redesignation 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.

5.8. Licence Eligibility Nominations

Red sea urchin licence eligibilities may be nominated from one party to another. A Nomination for Category Z Licence Eligibility form must be completed by the licence eligibility holder.

The following requirements must be met:

- a) Any condition of licence such as the completion of logbooks have been submitted and approved by the Shellfish Data Unit.
- b) Valid current year licence documents and validation tabs must be returned.
- c) Communal commercial category FZC licence eligibilities may not be nominated as these are allocated annually to First Nation groups.

5.9. Licence to Transport Red 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 red sea urchins under special conditions of licence which are included with all vessel-based licences issued for 2003 and 2004. For further information contact the Pacific Fishery Licence Unit.

5.10. Processing

Category 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 B.C.), 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 B.C., the vessel must meet B.C. Ministry of Fisheries and B.C. Health requirements, prior to the issuance of a Processing licence.

6. CONTROL AND MONITORING OF COMMERCIAL FISHING ACTIVITIES

To accompany the IQ program, an industry-funded monitoring and validation program was developed collaboratively between PUHA, Fisheries and Oceans Canada and D&D Pacific Fisheries Ltd. Overall, the IQ program has resulted in a more orderly, safer fishery and has afforded the industry more flexibility in opening times and locations.

A Joint Project Agreement between the Department and PUHA 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, on-grounds monitoring of the North Coast fishery, 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 red sea urchins. 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.

PUHA funds a charter patrolman (On-Grounds Monitor, OGM) to attend the remote North Coast fishery for eight months a year. The OGM duties include: providing a communication link between the North Coast fishery manager, the service bureau and the red sea urchin fishing fleet, monitoring fishing effort, checking dive harvest information, observing product transfer to packers, and providing summaries of fishing activity and fishing ground observations, i.e. location, bed dimensions, product quality and harvester comments.

The agency (service bureau) contracted by the PUHA to provide notification, validation, biological sampling and data services for the 2003/2004 red sea urchin fishery is:

D&D Pacific Fisheries Ltd.
Box 1445, Gibsons, BC V0N 1V0
Tel: (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 Appendix 9 for an example.

6.1. Quantities permitted to be taken

IQ equal 1/110 of the coast-wide commercial TAC or 44.4 tonnes (97,923 lb.) per licence. Harvest of red sea urchins over the IQ after the permitted quota overage adjustments may be subject to prosecution and seizure of the overage.

6.2. Fishing multiple quota areas

All red sea urchin caught in a Quota Area must be landed or transhipped prior to the commencement of fishing in a new Quota Area. In this way, area quotas and individual quotas are closely monitored in order to avoid over-harvesting of either.

6.3. Containers used to hold or transport red sea urchins

There are several requirements for:

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

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 [604] 666-4427, ext.277) for further information).

6.4. Transshipment

All product harvested under a ZC licence must be harvested from and retrieved by the vessel designated on the licence. If that product is to be retrieved at a later time by the ZC licensed vessel, it must be appropriately tagged. If that product is going to be transferred to another vessel (i.e. for landing purposes), the vessel to which it is transferred must be appropriately licensed for packing purposes. At no time should unlicensed vessels be used to harvest, retrieve, store or tranship product.

6.5. Locations permitted for the landing of red sea urchin

Red sea urchins must be landed at one of the designated landing ports listed in the Conditions of 2003/2004 Red Sea Urchin 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 sea urchin catch.

6.6. Oral reports

Fishing notification requirements that are described in the Conditions of Licence must be followed by each licensed vessel in order for the service bureau and the Department to track effort and harvest on a daily basis.

When vessels do not hail into a harvest area, there is a risk of exceeding the 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.

Observer phone numbers are available from D&D Pacific Fisheries Ltd. If weather results in a change in arrival time the vessel master must immediately advise the observer via radio telephone of these changes.

6.7. Validation of catch

All red sea urchin harvested or removed from the sea bed floor must be validated at the point and time the fish are landed.

The vessel master must be in possession of a Fisheries and Oceans Canada approved catch Validation & Harvest Logbook assigned to the red sea urchin licence. The Validation & Harvest Logbook must be on board the licensed vessel while fishing for red sea urchins or while red sea urchins are on board. Validation & Harvest Logbooks that meet the Department's approval are available from the service bureau or from the Pacific Urchin Harvesters Association.

6.7.1. Validation & Harvest Log Entries

At the first point of off-loading, all red sea urchins will be weighed with a government-certified scale and the weight entered on the Validation & Harvest Log. The vessel master is responsible for completing sections A and C of the Validation & Harvest Log. 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 Log 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 Logs to ensure that harvest information is consistent between both. The original white copy of the Validation & Harvest Log handed to the observer, along with the harvest charts, must be received by the Fisheries and Oceans Shellfish Data Unit within 28 days following the end of the month in which harvesting took place.

6.7.2. Quota Confirmation

Prior to fishing, the vessel master must confirm the remaining vessel quota from the Validation & Harvest Logbook.

6.7.3. Quota Overages

Harvesters are reminded that any area quota overruns may be deducted from the next year's area quota.

Small quantities of red sea urchins which exceed the licence's annual quota (up to 500 lb.) can be transferred to another red 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 red sea urchin licence which has exceeded its quota is called Licence "A", and the licence to which quota is transferred is called Licence "B".

6.7.3.1. Transfer of quota to another 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 red sea urchin licence which has quota remaining. Overage of the last red sea urchin licence quota on the same vessel may be transferred to another vessel's red sea urchin licence in accordance with policy described below.

6.7.3.2. Maximum allowable transfer of quotas between licences on different vessels

In the event of a quota overage on red sea urchin Licence "A", a maximum of 500 lb. of red sea urchins may be transferred to another vessel's red sea urchin licence (Licence "B"). Harvest of red sea urchins over the IQ after the permitted quota overage adjustments may be subject to prosecution and seizure of the overage. Only one transfer of quota overage is allowed. The quota overage cannot be divided between a number of licences.

6.7.3.3. Remaining quota on second licence

The amount transferred cannot exceed the remaining quota of red sea urchin Licence "B".

6.7.3.4. Red 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).

6.7.3.5. Documentation

The Red Sea Urchin Validation & Harvest Log 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.

6.8. Catch and fishing 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 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 PUHA, it will remain the licence holder's responsibility to ensure the requirements outlined below are fully completed. Those interested in obtaining validation services other than those contracted by the Association should contact Juanita Rogers at (250) 627-3007 to receive a copy of the Fisheries and Oceans Canada requirements for third party validation.

6.8.1. 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 vessel registration number (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 Logs meeting Fisheries and Oceans Canada requirements are available from outside service bureaus. The service bureau will, for a fee, provide the Validation & Harvest Log 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 twenty-eight (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
3190 Hammond Bay Road
Nanaimo, BC, V9T 6N7

Tel: (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 charts records, as well as the completed electronic copy must be forwarded within twenty-eight (28) days following the month in which fishing occurred. This information must be sent to the above address.

6.8.2. 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.

6.8.3. 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 Condition of Licence.

6.8.4. Confidentiality of harvest data

Harvest data, including fishing location data supplied through latitude/longitude co-ordinates, 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.

6.9. Other

6.9.1. Lost product

During the 2000/2001 fishing season, incidents of product lost or wasted at sea necessitated implementation of the following protocol:

- 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 individual quota 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 individual quota and the applicable area quota.
- c) The Department, in consultation with 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.

6.9.2. Export of red sea urchins

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

7. OPEN TIMES AND QUOTA AREAS

Red sea urchin Quota Areas (RU Areas) within the North and South Coast licence areas will be fished in the following manner in 2003/2004. Please note Research and Permanent Area Closures as listed in Section 8.

7.1. North Coast (Areas 1 through 10)

It is the intent of Fisheries and Oceans Canada and PUHA to spread the commercial fishery over the period August 1, 2003 to July 31, 2004 in order to meet market demands and to prevent local stock depletion. PUHA has advised that harvesting on the North Coast mainland will begin on Aristazabal Island (Area 6), then work in a northerly direction until December, and southerly until January; a clean-up schedule may be drafted prior to the opening of the Queen Charlotte Islands in February 2004.

The North Coast commercial red sea urchin TAC for 2003/2004 will be 4,130.8 tonnes (9,106,839 lb.), apportioned between the Quota Areas shown in the table below. Under the terms of the Joint Project Agreement with PUHA, a charter patrolman, under contract to PUHA, will be on the grounds to monitor the fishery and assist in its management. All weights referred to in the tables below are the weights that are determined during validation at the **first point of landing** (in pounds).

- 7.1.1. PUHA, on behalf of licence holders, will co-ordinate area openings with Fisheries and Oceans Canada. The Department requires a minimum of forty-eight (48) hours notice from PUHA (exclusive of weekends and holidays) to open a new Quota Area.

- 7.1.2. A “Quota Area” is a defined portion of Pacific fisheries waters. Areas and Subareas, as described in the Pacific Fishery Management Area Regulations, are referenced in describing Quota Areas. Each Quota Area has a name (i.e. RU01 Upper West QCI), and is assigned a total allowable catch.
- 7.1.3. Quota Areas will be opened and fished in sequences. Each Quota Area within a sequence will be harvested to completion before the next sequence is opened.
- 7.1.4. Fishers are required to offload their catch at a designated landing port or to a packer prior to fishing in a new Quota Area.
- 7.1.5. If weather or roe quality halts all fishing in a Quota Area, Fisheries and Oceans Canada may consider a change to the opening schedule. Alterations to the opening schedule must be based on recommendation from PUHA.

Note: Most Quota Areas area comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
1 (Oct 1/03)	RU42 Lower West Aristazabal	Ptn. Subareas 6-13, 106-2	90.72	200,000
1	RU31b Harvey Islands	Ptn. Subarea 106-2	113.40	250,000
2	RU31a Moore Islands	Ptn. Subarea 106-2	113.40	250,000
3	RU32 Calamity Bay	Ptn. Subarea 6-9	90.72	200,000
4	RU30 Lower Banks Island *	Subarea 5-22, ptn. Subareas 105-2, 106-1	167.83	370,000
5	RU27b Mid Banks Island	Ptn. Subarea 5-20	34.02	75,000
5, 6, 7	RU28 Bonilla Island	Ptn. Subarea 5-20, Subarea 105-1, ptn. Subarea 105-2	84.82	187,000
6	RU29 Kingkown Inlet	Ptn. Subarea 5-20, Subarea 5-21	27.22	60,000
7	RU27a Upper Banks Island	Ptn. Subarea 5-20	58.97	130,000
8	RU26 Larsen Harbour	Ptn. Subareas 5-11, 5-20	54.43	120,000
9	RU15 Outside Stephens Island	Ptn. Subarea 4-2	45.36	100,000
10	RU14 Tree Knobs	Ptn. Subareas 4-1, 4-2, 4-13	136.08	300,000
11	RU13a Dundas Island North	Subareas 3-1, 3-2, 3-3, 3-7, 3-11	136.08	300,000
12	RU13b Dundas Island South	Ptn. Subareas 4-1, 4-5	58.97	130,000
12	RU13d Nares Islets	Ptn. Subarea 4-1	15.88	35,000
13	RU13c Melville Island	Ptn. Subareas 4-1, 4-5, 4-9, 4-13	45.36	100,000

Note: Most Quota Areas area comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
14	RU16 Inside Stephens Island	Ptn. Subareas 4-9, 4-13	27.22	60,000
14	RU17 Kelp Pass	Subarea 4-12	18.14	40,000
15	RU18 Oval Bay *	Ptn. Subareas 4-2, 4-3	68.04	150,000
16	RU19 Porcher Inlet	Subarea 5-9	11.34	25,000
16	RU20b Inside Freeman Pass *	Ptn. Subareas 5-11, 5-12	9.07	20,000
16	RU20a Outside Freemans Pass *	Ptn. Subarea 4-3	37.19	82,000
17	RU21 Willis Bay	Ptn. Subareas 5-10, 5-11 except closures	68.04	150,000
18	RU22a Hankin Rock	Ptn. Subarea 5-10	22.68	50,000
18	RU22b Beaver Pass *	Ptn. Subarea 5-10	27.22	60,000
19 (Dec 7/03)	RU23 Upper Principe Channel	Subarea 5-13	54.43	120,000
19	RU24a Mid Principe Channel *	Ptn. Subarea 5-17, Subarea 5-18	27.22	60,000
19	RU24b Lower Principe Channel *	Ptn. Subarea 5-17, Subarea 5-19	27.22	60,000
Closed	RU25 Petrel Channel *	Subareas 5-14, 5-15, 5-16. Closed.	0	0
20	RU33 Otter Pass	Ptn. Subarea 6-9	90.72	200,000
21	RU34a Langley Pass *	Ptn. Subarea 6-9	9.07	20,000
21	RU34b Develin Bay *	Ptn. Subarea 6-9	9.07	20,000
21	RU35 Oswald Bay *	Ptn. Subareas 6-9, 106-1	34.02	75,000
22	RU36b Estevan Group South	Ptn. Subarea 6-9	43.09	95,000
22	RU36a Estevan Group East	Ptn. Subareas 6-9, 6-10	61.24	135,000
23	RU38a Campania Island/Surf Inlet *	Ptn. Subareas 6-5, 6-10, Subarea 6-12	181.44	400,000
23	RU38b Whale Channel *	Ptn. Subarea 6-5, Subareas 6-6 to 6-8, 6-26 to 6-28	22.68	50,000
24	RU37 Rennison Island	Ptn. Subareas 6-9, 6-10, 6-11, 6-13	45.36	100,000
25	RU39 Upper West Aristazabal	Ptn. Subareas 6-13, 106-2	136.08	300,000
26	RU40 Woodcock Islands	Ptn. Subareas 6-13, 106-2	36.29	80,000
24, 25, 26	RU31a Moore Islands	Ptn. Subarea 106-2	0	0
27	RU41 Normansell Islands	Ptn. Subareas 6-13, 106-2	58.44	128,839
28	RU42 Lower West Aristazabal	Ptn. Subareas 6-13, 106-2	Remaining	

Note: Most Quota Areas are comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
27, 28	RU31b Harvey Islands	Ptn. Subarea 106-2	Remaining	
Closed	RU43 Upper Laredo	Subarea 6-14. Closed.	0	0
29	RU44 Lower Laredo	Subarea 6-15, ptn. Subarea 6-16	68.04	150,000
30	RU45 Laredo Inlet	Ptn. Subarea 6-16, Subarea 6-19	36.29	80,000
31	RU46a Laredo Sound	Ptn. Subareas 6-16, 6-17	99.79	220,000
32	RU46b Prior Pass	Ptn. Subareas 6-13, 6-17	49.90	110,000
33	RU48 Milbanke Sound	Subarea 7-3	81.65	180,000
34	RU49 Finlayson Channel	Subareas 7-4, 7-5, 7-6, ptn. Subarea 7-9	39.92	88,000
34	RU50 Mathieson Channel	Ptn. Subarea 7-9	59.87	132,000
35	RU47a Thompson Bay	Ptn. Subareas 7-1, 7-2, Subareas 7-19, 7-20, ptn. Subarea 7-21, Subarea 7-32	6.80	15,000
35	RU47b Day Point *	Ptn. Subareas 7-1, 7-2, 7-31 except closure	40.82	90,000
36	RU51 Seaforth Channel	Subarea 7-8, ptn. Subarea 7-9, Subareas 7-12, 7-15, ptn. Subarea 7-21	39.92	88,000
37	RU52 Tribal/McNaughton Group *	Ptn. Subareas 7-18, 7-23, 7-24	34.02	75,000
37	RU54 McNaughton Group *	Ptn. Subarea 7-17, Subarea 7-25		
38	RU53 Spider/Kildidt	Subareas 7-26, 7-27, 7-28	36.29	80,000
38	RU55 Hakai Pass	Subareas 8-1, 8-2	31.75	70,000
39	RU56a Nalau Pass	Ptn. Subarea 8-4	18.14	40,000
39	RU56b Fitz Hugh Sound	Subarea 8-3, ptn. Subarea 8-4, Subarea 8-16	32.66	72,000
40	RU57a Rivers Inlet	Subareas 9-1 to 9-4, 9-10 to 9-12	45.36	100,000
40	RU57b West Calvert Island - Grief Bay	Area 109, Subarea 10-1, ptn. Subarea 10-2	22.68	50,000
41	RU58 Smiths Inlet	Ptn. Subarea 10-2, Subareas 10-3, 10-4, 10-5, 10-7, 10-8, 10-12	136.08	300,000
42	RU08 Flamingo/Englefield	Subareas 2-35 to 2-62, ptn. Subarea 142-1, Subarea 142-2	59.87	132,000
(Feb 1/04) 42	RU07 Lower 2W	Subareas 2-31 to 2-34 except closure, ptn. Subarea 142-1	59.87	132,000
43	RU06 Lower 2E	Subareas 2-18, 2-19	68.04	150,000
44	RU05b Carpenter Bay *	Subarea 2-17	68.04	150,000
45	RU05a Skincuttle Inlet *	Subareas 2-14, 2-15	68.04	150,000

Note: Most Quota Areas area comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
46	RU04b Section Cove	Subareas 2-12, 2-13 except closure	45.36	100,000
Closed	RU04a Juan Perez Sound *	Closed for abalone research.	0	0
48	RU03b Skedans *	Subareas 2-8, 2-10 except closures	54.43	120,000
48	RU03a Laskeek Bay *	Subareas 2-2, 2-3 except closure	68.04	150,000
49	RU08 Flamingo/Englefield	Subareas 2-35 to 2-62, ptn. Subarea 142-1, Subarea 142-2	Remaining	
50	RU09 Van Inlet	Subarea 2-68	34.02	75,000
51	RU10 Rennel Sound	Subareas 2-69 to 2-84 except closure	34.02	75,000
52	RU11 Hippa Island	Subareas 2-85 to 2-87, ptn. Subarea 2-88	40.82	90,000
53	RU12 Port Louis	Ptn. Subarea 2-88, Subareas 2-89 to 2-100	27.22	60,000
54	RU01b Frederick Island *	Ptn. Subarea 1-1	34.02	75,000
55	RU01a Lepas Bay *	Ptn. Subarea 1-1	34.02	75,000
56	RU02a Langara Island *	Ptn. Subareas 1-2, 101-2, 101-3, 101-6, 101-7 except closures	122.47	270,000
56	RU02b Virago Sound *	Subareas 1-3, 1-7, ptn. Subareas 1-2, 101-7 except closures	34.02	75,000
TOTAL NORTH COAST QUOTA AREAS			4,130.8	9,106,839

Notes:

- a) Descriptions of the North Coast red sea urchin Quota Areas are provided in Appendix 5. Quota Areas with new boundaries are marked with an asterisk (*).
- b) Please note permanent area closures listed in this plan (Section 8).
- c) North Coast Quota Area Maps are provided in Appendix 8.

7.2. South Coast (Areas 11 through 29)

The South Coast TAC will be 755.1 tonnes (1,664,691 lb.), 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). Openings in the South Coast will proceed upon request.

Note: Most Quota Areas area comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
1 (TBA)	11 Allison Harbour *	Ptn. Area 11	36.29	80,000
2	12G Wells Pass *	Subareas 12-7, 12-38 to 12-42 except		

Note: Most Quota Areas are comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
		closure		
3	12E Blackfish Sound	Subareas 12-5, 12-6, 12-20, 12-26 except closures	15.42	34,000
4	12F Deserter Island *	Ptn. Subarea 12-13	38.56	85,000
5	12I Buckle Group *	Ptn. Subareas 11-2, 12-11, 12-12, 12-13	22.68	50,000
6	12B Christie/Browning Pass *	Subarea 12-10, ptn. Subarea 12-11	47.63	105,000
6	13G Stuart Island	Subareas 13-13 to 13-24, 13-26	13.15	29,000
7	12C Port Hardy	Subareas 12-15, 12-16	31.75	70,000
7	13D Campbell River East	Subareas 13-10, 13-12	13.61	30,000
7 (after 13D or 12C)	14 Comox	Subareas 14-5, 14-7 to 14-12 except closure	6.80	15,000
8 (Dec 1/03)	13F Kelsey Bay - East	Subareas 13-29 to 13-31, 13-35 to 13-40	22.68	50,000
8 (Dec 1/03)	13B Campbell River South	Subareas 13-1, 13-2, ptn. Subarea 14-13 except closure	45.36	100,000
8 (after 13B or 13F)	17 Nanaimo	Area 17 except closure, Subarea 29-5	6.80	15,000
9	12D Port McNeill	Subareas 12-4, 12-8, 12-17 to 12-19 except closures	51.71	114,000
9	13A Kelsey Bay - Proper	Subareas 13-32 to 13-34	22.68	50,000
9	13C Campbell River North	Subareas 13-6 to 13-9, 13-11, 13-27, 13-28 except closure	36.29	80,000
9	18a Sidney *	Subareas 18-3, 18-4, 18-6, ptn. Subarea 19-5, Subarea 19-6	18.14	40,000
9	18b Mayne/Saturna Island *	Subareas 18-1, 18-2, 18-5, 18-9, 18-11, 29-4	9.07	20,000
9	19 Victoria *	Subareas 19-3, 19-4, ptn. Subarea 19-5 except closures	26.76	59,000
10 (after WCVI)	12H Northern Johnstone Strait	Subareas 12-1 to 12-3, 12-21 to 12-24	36.81	81,158
11 (after 12H)	12A Bates Pass *	Ptn. Subarea 12-12	27.22	60,000
11 (after 12H)	12J Shadwell Pass *	Ptn. Subarea 12-12	12.49	27,533

Note: Most Quota Areas area comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
11 (after 12H)	13E Cordero Channel	Subareas 13-25, 13-41, 13-42	13.15	29,000
TOTAL INSIDE WATERS QUOTA AREAS			555.05	1,223,691

Notes:

- a) Complete descriptions of red sea urchin Quota Areas are provided in Appendix 5. Quota Areas with new boundaries are marked with an asterisk (*).
- b) Opening dates to be determined in-season based on advice from PUHA.
- c) Please note permanent area closures listed in this plan (Section 8).
- d) South Coast Quota Area Maps are provided in Appendix 8.

Note: Most Quota Areas area comprised of portions of Areas and Subareas. See Appendix 5 for complete details. An asterisk (*) indicates that the area description has changed.

Open	Name	Short Description	Quota (t)	Quota (lb.)
1 (Sep 15/03)	24C Tofino	Subareas 24-6, 124-3 except closures	55.79	123,000
2 (after 24C)	24B Wickaninnish	Subarea 24-8 except closures	45.36	100,000
3 (after 24B)	24A Sydney Inlet	Subarea 24-2 except closure	13.61	30,000
4 (after 24A)	23B Ucluelet	Subareas 23-11, 123-3, 123-5 except closures	38.10	84,000
5 (after 23B)	23A Bamfield	Subareas 23-5 to 23-7 except closures	29.03	64,000
6 (Dec 15/03)	20 Sooke *	Subareas 20-4 to 20-6 except closure	18.14	40,000
Closed	111 Cape Scott	Area 111, Subarea 12-14. Closed.	0.00	0
Closed	27A Quatsino Outside	Subareas 27-1 to 27-3. Closed.	0.00	0
Closed	27B Quatsino Inside	Subareas 27-7 to 27-11. Closed.	0.00	0
TOTAL WEST COAST VANCOUVER ISLAND QUOTA AREAS			200.03	441,000

Notes:

- a) Complete descriptions of red sea urchin Quota Areas are provided in Appendix 5. Quota Areas with new boundaries are marked with an asterisk (*).
- b) Opening dates to be determined in-season based on advice from PUHA.
- c) Please note permanent area closures listed in this plan (Section 8).
- d) South Coast Quota Area Maps are provided in Appendix 8.
- e) Moser Point research site is assigned a quota of 44,000 lb. (Quota Area 24B).

8. CLOSURES

8.1. Notification of 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 resource manager listed in Section 1 of the IFMP.

8.2. Research area closures

Some areas have been designated as research or study areas and 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, PUHA 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 Dr. Alan Campbell at (250) 756-7124.

8.3. Permanent closures

The following areas will be closed August 1, 2003 to July 31, 2004.

8.3.1. Area 1

8.3.1.1. Kiusta I.R.: That portion of Subarea 1-2 west of a line commencing at 54°10.55' north latitude and 133°00.95' west longitude, thence running true north to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and east of a line commencing at 54°11.1' north latitude and 133°01.75' west longitude, thence running true north to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and south of the 20 fathom contour between these two lines. (First Nations access for food, social and ceremonial purposes)

8.3.1.2. Dadens I.R.: That portion of Subarea 1-2 west of a line commencing at 54°11.2' north latitude and 132°58.9' west longitude, thence running true south to the north shore of Lucy Island; and south and east of lines commencing at 54°11.3' north latitude and 132°59.2' west longitude, thence running true west to the intersection of the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department), thence to the westernmost tip of Lucy Island. (First Nations access for food, social and ceremonial purposes)

8.3.1.3. Egeria Bay I.R.: That portion of Subarea 1-2 north of a line commencing at 54°12.95' north latitude and 132°59.1' west longitude, thence running true east to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and south of a line commencing at 54°13.2' north latitude and 132°59.15' west longitude, thence running true east to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and west of the 20

fathom contour between these two lines. (First Nations access for food, social and ceremonial purposes)

8.3.1.4. Dibrell Bay I.R.: That portion of Subarea 1-2 north of a line commencing at 54°13.81' north latitude and 132°58.3' west longitude, thence running true east to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and south of a line commencing at 54°14.05' north latitude and 132°58.25' west longitude, thence running true east to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and west of the 20 fathom contour between these two lines. (First Nations access for food, social and ceremonial purposes)

8.3.1.5. Rhodes Point I.R.: A portion of Subarea 1-2 west of a line commencing at 54°12.95' north latitude and 133°01.75' west longitude, running true south to the 10 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and south of a line commencing at 54°13.2' north latitude and 133°02.2' west longitude, thence running true west to the 10 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and north and east of the 10 fathom contour between these two lines, excluding Harvey Rock. (First Nations access for food, social and ceremonial purposes)

8.3.1.6. Langara Point I.R.: That portion of Subarea 101-2 north of a line commencing at 54°15.05' north latitude and 133°03.65' west longitude, thence running true west to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and south of a line commencing at 54°15.3' north latitude, 133°03.55' west longitude, thence running true west to the 20 fathom contour as shown on Chart #3868 (published by the Canadian Hydrographic Service of the Department); and east of the 20 fathom contour between these two lines. (First Nations access for food, social and ceremonial purposes)

8.3.1.7. Shag Rock: That portion of Subarea 1-3 inside a 0.25 nautical mile ribbon boundary off Indian Reserve #13 located due south of Shag Rock. The boundary begins 0.25 nautical miles north of Indian Reserve #13 and ends 0.25 nautical miles south of Indian Reserve #13. (First Nations access for food, social and ceremonial purposes)

8.3.1.8. Nankivell Point: That portion of Subarea 1-7 inside a 0.25 nautical mile ribbon boundary beginning at Nankivell Point and heading westerly along the shore for one nautical mile. (First Nations access for food, social and ceremonial purposes)

8.3.2. Area 2

8.3.2.1. Subareas 2-3 to 2-7 (Cumshewa Inlet/Skedans): This area is closed to undertake recruitment and mortality studies.

8.3.2.2. McCoy Cove (in Cumshewa Inlet): That portion of Subarea 2-3 lying inside a line from a boundary sign located true north of Haans Islet, thence easterly to the sector light located at the south-easterly entrance to McCoy Cove. (First Nations access for food, social and ceremonial purposes)

8.3.2.3. Skedans Bay: That portion of Subarea 2-7 shoreward of a line from Skedans Point to Vertical Point. (First Nations access for food, social and ceremonial purposes)

8.3.2.4. Tanu Island: That portion of Subarea 2-8 which is the easterly shore of Tanu Island north of Klue Point to the most north-easterly tip of Tanu Island. (First Nations access for food, social and ceremonial purposes)

8.3.2.5. Richardson Pass: That portion of Subarea 2-8 including the southerly shore of Richardson Island within Richardson Passage. (First Nations access for food, social and ceremonial purposes)

8.3.2.6. Juan Perez Sound: That portion of Subarea 2-11 east of a line running from Sedgwick Point on Lyell Island to Ramsay Point on Ramsay Island. (Abalone Recovery Strategy Research Area)

8.3.2.7. Windy Bay: That portion of Subarea 2-11 shoreward of a line between Fuller Point and Gogit Point on Lyell Island. (First Nations access for food, social and ceremonial purposes)

8.3.2.8. Hotsprings and House Islands: That portion of Subarea 2-11 lying inside the ten fathom edge surrounding Hot Springs Island and House Island. (First Nations access for food, social and ceremonial purposes)

8.3.2.9. Burnaby Narrows: Subarea 2-16 and a portion of Subarea 2-13 west of a line running 328° true through the northwest tip of Section Island (Section Cove). (Park)

8.3.2.10. Anthony Island: A portion of Subarea 2-31 shoreward of a 1 nautical mile ribbon boundary surrounding Anthony Island. (Heritage Site)

8.3.2.11. West Skidegate Channel and Buck Channel: Subareas 2-63, 2-64, 2-66 and 2-67. (First Nations access for food, social and ceremonial purposes)

8.3.2.12. Shields Bay: That portion of Subarea 2-77 south of a line from Dawson Head true north to the opposite shore. (First Nations access for food, social and ceremonial purposes)

8.3.3. Area 5

8.3.3.1. Kitkatla Inlet/Schooner Pass: Subarea 5-3 and a portion of Subarea 5-10 north of a line running from the north-western tip of McCauley Island to a boundary sign on the northwest tip of Spicer Island and north of a line running from Boys Point on Dolphin Island to a boundary sign located on the south-westernmost tip of Spicer Island. (First Nations access for food, social and ceremonial purposes)

8.3.3.2. Kitkatla Village: That portion of Subarea 5-10 north and east of a line running from the northern tip of the entrance to Dolphin Lagoon on Dolphin Island west to a point on the Prager Islands located at 53°46.85' north latitude, 130°29.8' west longitude, thence northerly to a point on the Shakes Islands located at 53°47.5' north latitude, 130°29.0' west longitude; thence true north to the boundary line. (First Nations access for food, social and ceremonial purposes)

8.3.4. Area 7

8.3.4.1. Subarea 7-31 (West Price Island). This area is closed to undertake recruitment and mortality studies.

8.3.5. Area 12

8.3.5.1. Numas Islands: In Area 12, those waters in the vicinity of the Numas Islands that lie inside a line that begins at 50°47.9' north latitude, 127°07.6' west longitude, then to 50°46.6' north latitude, 127°02.4' west longitude, then to 50°44.3' north latitude, 127°04.0' west longitude, then to 50°45.7' north latitude, 127°09.3' west longitude, then to the beginning point. (Interim Restricted Fishing Area for Rockfish Conservation; Red Sea Urchin Commercial Fishery Closure)

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

8.3.6. Area 13

8.3.6.1. Area 13 Study Area: 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)

8.3.7. Area 14

8.3.7.1. Hornby Island: Portions of Subareas 14-5,-6,-7,-9 and -12 described as those waters of Lambert Channel and the Strait of Georgia, 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 6.7 nautical

miles, thence 304° true for 2.3 nautical miles, thence 213° true for 0.5 nautical miles to Cape Gurney on Hornby Island. (Marine Reserve)

8.3.8. Area 15

8.3.8.1. All waters within a 0.25 nautical mile radius of the southerly end of the Beach Gardens breakwater in Subarea 15-1. (Marine Reserve)

8.3.8.2. 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)

8.3.8.3. 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)

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

8.3.8.5. 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)

8.3.8.6. 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)

8.3.9. Area 16

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

8.3.10. Area 17

8.3.10.1. Subareas 17-4 to 17-9 (Stewart Channel). (First Nations access for food, social and ceremonial purposes)

8.3.11. Area 18

8.3.11.1. Subareas 18-7 (Sansum Narrows, Burgoyne Bay and Maple Bay), 18-8 (Cowichan Bay) and 18-10 (Fulford Harbour). (Navigational Closure)

8.3.12. Area 19

8.3.12.1. Ogden Point: Those waters of Subarea 19-3 inside a line commencing at 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)

8.3.12.2. 10 Mile Point: Those waters of Subareas 19-4 and 19-5 within 0.4 nautical miles of Cadboro Point navigation light. (Marine Reserve)

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

8.3.13. Area 20

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

8.3.13.2. 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)

8.3.13.3. 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)

8.3.13.4. Becher Bay: Those waters of Subarea 20-5 north of a line running from Church Point to Heechy Head. (First Nations access for food, social and ceremonial purposes)

8.3.14. Area 23

8.3.14.1. Pacific Rim National Park, Broken Group Islands: Those waters of the Broken Group Islands in Barkley Sound within Park boundaries as shown, since 1989, on Canadian Hydrographic Service Chart #3671. (Park)

8.3.14.2. Bamfield Marine Station Research Area Closure: Those waters of 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 north-western tip of Haines Island to the southern tip of Seppings Island; from the north-western tip of Seppings Island to Kirby Point on Diana Island; from Kirby Point directly to the northwest tip of Fry Island; from the north-western 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)

8.3.15. Area 24

8.3.15.1. Area 24: Moser Point Study Area: That portion of Subarea 24-8 in the vicinity of Moser Point on Vargas Island described as: “inside of, or northerly of, a line from the most south-westerly point of Echachis Island, thence north-westerly to Wilf Rock; thence north-westerly 312° true east for 0.45 nautical miles to an unnamed island in the La Croix Group designated on Chart #3649 (as published by the Canadian Hydrographic Service of the Department) as having a height of land of 20 feet, thence due north to the shore of Vargas Island; thence following along the shore of Vargas Island in a north-easterly direction to the unnamed point immediately south of the Yarksis Indian Reserve; thence south-easterly across Father Charles Channel to the northernmost point on Wickaninnish Island; thence along the western shoreline of Wickaninnish Island to the southernmost point; thence in a straight line to the north-western point of Echachis Island; thence southerly along the western shoreline of Echachis Island to the point of commencement.” (Research Area)

8.3.15.2. 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)

8.3.15.3. Hotsprings Cove: Those waters of Subarea 24-2 and 124-3 enclosed by a line commencing at a point on the Vancouver Island shoreline 2.5 km northwest of Barney Rocks, thence to a point 500 m true south (offshore), thence to Barney Rocks, thence to Sharp Point and returning along the shoreline to the point of commencement. This closure includes Hotsprings Cove, Mate Islands, Barney Rocks and the bays west of Mate Islands. (First Nations access for food, social and ceremonial purposes)

8.3.15.4. Ahous Point: The area within 1 nautical mile radius of Ahous Point on Vargas Island at 49°09.59.2' north latitude, 126°01.21.5' west longitude. (First Nations access for food, social and ceremonial purposes)

8.3.15.5. Siwash Cove: The area within .5 nautical mile radius of the prominent point of land at 49°15.43.6' north latitude, 126°11.18.5' west longitude, immediately to the southeast of Siwash Cove on Flores Island. (First Nations access for food, social and ceremonial purposes)

8.3.15.6. Chetarpe: All waters within .5 (1/2) nautical miles of the prominent point on Vancouver Island near Chetarpe at position 49°14.64'N and 126°0.85'W.” (First Nations access for food, social and ceremonial purposes)

8.3.15.7. Hayden Pass: The waters known as Hayden Pass between Obstruction Island and Flores Island (First Nations access for food, social and ceremonial purposes)

8.3.16. Area 25

8.3.16.1. 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)

8.3.17. Area 26

8.3.17.1. Kyuquot Bay: A portion of Subarea 26-6 inside or northerly of a line from White Cliff Head to Racoon Point and identified on the Kyuquot map attached to this plan. (Kyuquot Sound Marine Communities Study Area)

8.3.17.2. Entrance to Crowther Channel: A portion of Subarea 26-6 on the west side of Union Island commencing at position 50°0.4' north latitude, 127°19.3' west longitude and identified on the map attached to this plan. (Kyuquot Sound Marine Communities Study Area)

8.3.17.3. Checleset Bay Fishery Closure Area: Those portions of Areas 26 and 126 enclosed by a line drawn from a point on the Brooks Peninsula (50°05.18' north latitude, 127°49.58' west longitude), thence due south to the 50° parallel, thence due east to Alert Point on Lookout Island, thence north-easterly to a point on Vancouver Island near McLean Island (50°02.1' north latitude, 127°25.03' west longitude), thence north-westerly along the shore of Vancouver Island to Malksope Point (50°05.53' north latitude, 127°28.95 west longitude), thence due west to a point midchannel on the southeast end of Gay Passage (50°05.53' north latitude, 127°30.1' west longitude), thence midchannel through Gay Passage to a point midchannel on the northwest end of Gay Passage (50°06.7' north latitude, 127°31.8' west longitude), thence north-westerly to the shore of Vancouver Island, just west of Theodore Point (at 127°32.8' west longitude, 50°07.7' north latitude), thence westerly along the Vancouver Island shore to an unnamed point on the east side of Nasparti Inlet (50°08.75' north latitude, 127°38.6' west longitude), thence westerly across Nasparti Inlet to an unnamed point on Vancouver Island (50°08.7' north latitude, 127°37.8' west longitude), thence along the Vancouver Island shore to the point of commencement. (Sea Otter Reserve)

8.3.18. Area 28

8.3.18.1. 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)

8.3.18.2. 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 south-easterly 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 south-westerly point of Whyte It.; thence in a straight line to a point lying 100 m west of Whytecliff 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)

9. WORKERS' COMPENSATION BOARD

9.1. General

Jurisdiction over health and safety on commercial fishing vessels in Canada falls to the mandate of the provinces. In British Columbia jurisdiction over health and safety issues on commercial fishing vessels falls to the mandate of the Workers' Compensation Board of B.C. (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 red sea urchin fishery, and other dive fisheries, are legislated by the requirements as 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 footwear 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

9.2. Specific

Although the entire OHSR applies to the fishing industry in general, there are a few sections that are particularly important to the red sea urchin fishery. 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 form, 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 red sea urchin fishing vessels. The Workers Compensation Act also requires that a copy of the Act and the Regulation be available at the worksite. 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: 2003/2004 Red Sea Urchin by Dive First Nations Harvest Plan

1. OVERVIEW OF THE FISHERY

The Department seeks to provide for the effective management and regulation of the Aboriginal fishery through negotiation of mutually acceptable and time-limited Agreements which outline provisions pertaining to the fisheries and co-management activities. The agreements include provisions by which First Nations manage fishing by their members for food, social and ceremonial purposes, in addition to outlining First Nation involvement in a range of co-management activities and economic development opportunities which may include, but not be limited to, habitat enhancement, catch monitoring and enforcement, fish management and community research. The First Nations harvest of red sea urchins for food, social and ceremonial purposes is regulated through the *Aboriginal Communal Fishing Licences Regulations* made under the *Fisheries Act*. Communal licences are issued annually to First Nations under the authority of these regulations and include a mechanism for designating individuals and vessels to fish under the authority of that licence, outline the harvest area, any harvest or gear limitations, as well as the harvest reporting requirements. Communal licences can be amended in-season for resource conservation purposes. Even where an agreement cannot be concluded, Fisheries and Oceans Canada issues communal fishing licences to First Nations organizations.

Aboriginal involvement in the fishery is a shared goal between the Department and Aboriginal people. It is a means to stimulate Aboriginal economic development opportunities and develop fisheries expertise in Aboriginal communities, while serving as the basis for more co-operation between Aboriginal communities and the commercial fishery sectors. Aboriginal participation in the commercial fisheries is being accommodated through the Allocation Transfer Program. The Fisheries and Oceans Canada Transfer Program (ATP) retires existing commercial licence eligibilities from fishers on a voluntary basis and re-issues these to eligible Aboriginal organizations as communal commercial licences (category “FZC” licences). The program has retired 6 commercial red sea urchin licences to date, which represents 5.5% of the commercial fleet.

For more information on the Aboriginal Fisheries Strategy (AFS) ATP, contact a Resource Manager listed in Section 1 of the IFMP.

2. LOCATION OF THE FISHERY

Aboriginal communal licences specify the locations permitted for use by First Nations for food, social and ceremonial harvests. Harvesting generally takes place in areas fronting or adjacent to reserves.

3. TIME FRAME OF THE FISHERY

First Nations' fisheries occur year-round in all areas.

4. MANAGEMENT MEASURES FOR THE FIRST NATIONS FISHERY

Under the Individual Quota (IQ) program for the red sea urchin fishery, implemented in 1996, two percent of the coast-wide total allowable catch (TAC) for red sea urchins is reserved, for planning purposes, for First Nations fisheries for food, social and ceremonial purposes. Additional allocations of red sea urchins will be provided to First Nations who demonstrate that their food, social and ceremonial needs are not being met. Fisheries and Oceans Canada is confident that with the precautionary approach to this fishery, the reserved allocation of TAC, and the provision of additional allocations, where necessary, First Nations in all areas will have sufficient opportunities to harvest red sea urchins for food, social and ceremonial purposes.

Section 4.2 of the Commercial Harvest Plan (Appendix 1) shows the most recent stock assessment figures used to calculate the commercial TAC for 2003/2004. See the document entitled *Quota options for the Red Sea Urchin fishery in British Columbia for Fishing Season 2002/2003 (CSAS Research Document 2001/141)* for more detail.

There is no size limit for the First Nations red sea urchin fishery.

5. LICENSING

First Nations access to fish for food, social and ceremonial purposes is managed through a communal licence which can permit the harvest of red sea urchins. For additional information on communal licences, see the Internet at:

www.pac.dfo-mpo.gc.ca/tapd/

6. CONTROL AND MONITORING OF FIRST NATIONS FISHING ACTIVITIES

The Department's policy on the management of First Nations fishing identifies First Nations harvests for food, social and ceremonial purposes as the first priority after conservation. The Department negotiates approximately 74 agreements annually with 145 First Nations in B.C. and the Yukon. Several of these agreements include provisions for the harvest of red 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 is 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 Nation, 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.

Appendix 3: 2003/2004 Red Sea Urchin by Dive Recreational Harvest Plan

1. LOCATION OF THE FISHERY

Recreational harvest of red 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. MANAGEMENT MEASURES FOR THE RECREATIONAL FISHERY

Harvest guidelines are provided in the British Columbia Tidal Waters Sport Fishing Guide. See the guide on the Internet at:

www.pac.dfo-mpo.gc.ca/ops/fm/Sport/index.htm

Sea urchins can be harvested by handpicking, with a daily limit of 12 sea urchins and a possession limit of 24 sea urchins. There is no size limit for the recreational red sea urchin fishery.

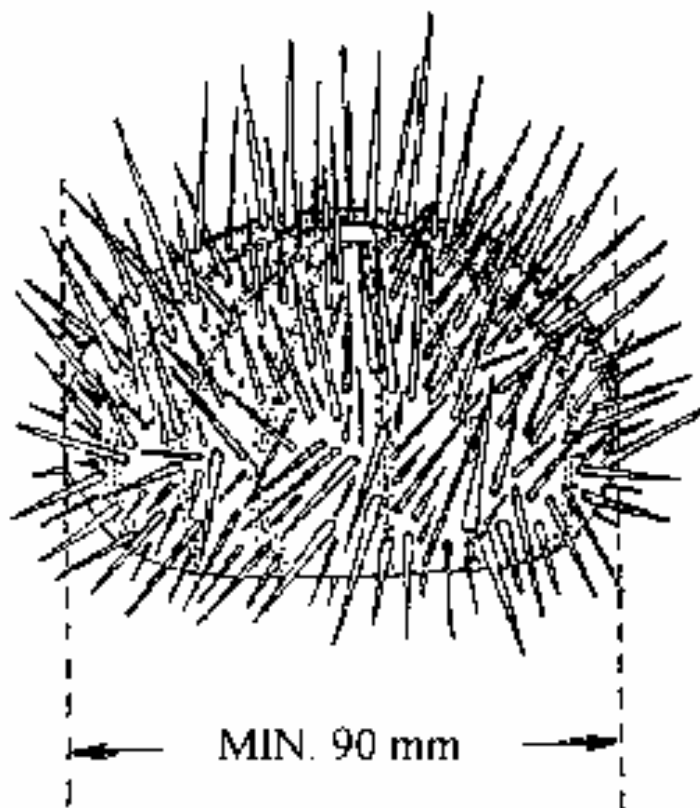
4. LICENSING

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

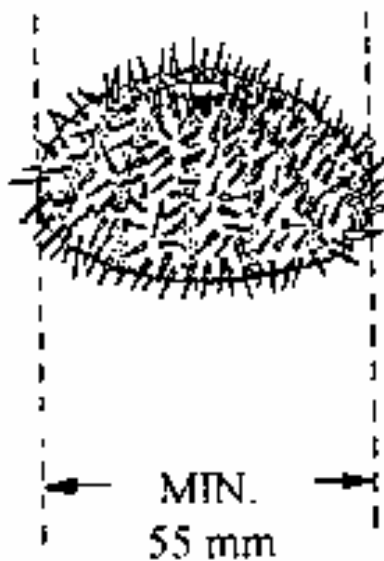
5. CONTROL AND MONITORING OF RECREATIONAL FISHING ACTIVITIES

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.

Appendix 4: Size Limits for Sea Urchins (Echinoderms)



RED SEA URCHIN



GREEN SEA URCHIN

Appendix 5: 2003/2004 Red Sea Urchin Quota Area Descriptions

An asterisk (*) indicates a change in Quota Area boundaries for 2003/2004.

Descriptions of closures that fall within these Quota Areas are shown in Appendix 1, Section 8.

Harvesters are reminded that these area descriptions and the maps in Appendix 8 are to be used for reference only. The final authority of these descriptions of Areas, Subareas and portions thereof is as set out in the *Pacific Fishery Management Area Regulations*.

QUEEN CHARLOTTE ISLANDS

RU01a Lepas Bay *

That portion of Subarea 1-1 north of a line running due west from White Point.

RU01b Frederick Island *

That portion of Subarea 1-1 south of a line running due west from White Point.

RU02a Langara Island *

Those portions of Subareas 1-2, 101-2, 101-3, 101-6, 101-7 west of a line running due north from Gunia Point on Graham Island. Note Area 1 closures listed in management plan.

RU02b Virago Sound *

1. Subareas 1-3, 1-7;
2. Those portions of Subareas 1-2, 101-6 and 101-7 east of a line running due north from Gunia Point on Graham Island. Note Area 1 closures listed in management plan.

RU03a Laskeek Bay *

Subareas 2-2, 2-3.

RU03b Skedans *

Subareas 2-8, 2-10. Note Tanu Island and Richardson Pass closures listed in management plan.

RU04a Juan Perez Sound *

Closed for abalone research.

RU04b Section Cove

Subareas 2-12, 2-13. Note Burnaby Narrows closure listed in management plan.

RU05a Skincuttle Inlet *

Subareas 2-14, 2-15.

RU05b Carpenter Bay *

Subarea 2-17.

RU06 Lower 2E

Subareas 2-18, 2-19.

RU07 Lower 2W

1. Subareas 2-31, 2-32, 2-33, 2-34. Note Anthony Island closure listed in management plan;
2. That portion of Subarea 142-1 south of a parallel passing through 52°09' north latitude.

RU08 Flamingo/Englefield

1. Subareas 2-35 to 2-62;
2. That portion of Subarea 142-1 north of a parallel passing through 52°09' north latitude;
3. Subarea 142-2.

RU09 Van Inlet

Subarea 2-68.

RU10 Rennel Sound

Subareas 2-69 to 2-84. Note Shields Bay closure listed in management plan.

RU11 Hippa Island

1. Subareas 2-85 to 2-87;
2. That portion of Subarea 2-88 south of a line running true west from Selveston Point.

RU12 Port Louis

1. That portion of Subarea 2-88 north of a line running true west from Selveston Point;
2. Subareas 2-89 to 2-100.

NORTH AND CENTRAL COAST**RU13a Dundas Island North**

Subareas 3-1, 3-2, 3-3, 3-7, 3-11.

RU13b Dundas Island South

1. That portion of Subarea 4-1 north of a line running 222° true from Farwest Point on Dunira Island (using Canadian Hydrographic chart # 3959), excluding the Nares Islets Quota Area described as: that portion of Subarea 4-1 northeast of a line running from Gore-Langton Point on Dundas Island to a point on Baron Island at 52°28.37' north latitude, 130°50.31' west longitude;
2. That portion of Subarea 4-5 west of the meridian passing through 130°37.0' west longitude and north of a line from the northernmost point of Dunira Island, thence true east to the meridian passing through 130°37.0' west longitude.

RU13c Melville Island

1. That portion of Subarea 4-1 south of a line running 222° true from Farwest Point on Dunira Island (using Canadian Hydrographic chart # 3959) and north of the parallel passing through 54°20.30' north latitude;
2. That portion of Subarea 4-5 south of a line from the northernmost point of Dunira Island,

thence true east to the meridian passing through 130°37.0' west longitude, and west of the meridian passing through 130°37.0' west longitude;

3. Those portions of Subareas 4-9 and 4-13 north of the parallel passing through 54°20.30' north latitude.

RU13d Nares Islets

That portion of Subarea 4-1 northeast of a line running from Gore-Langton Point on Dundas Island to a point on Baron Island at 52°28.37' north latitude, 130°50.31' west longitude.

RU14 Tree Knobs

1. That portion of Subarea 4-1 south of a parallel passing through 54°20.30' north latitude;
2. That portion of Subarea 4-2 north of the parallel passing through 54°13.5' north latitude;
3. That portion of Subarea 4-13 north of the parallel passing through 54°13.5' north latitude and south of a parallel passing through 54°20.30' north latitude.

RU15 Outside Stephens Island

That portion of Subarea 4-2 south of the parallel passing through 54°13.5' north latitude and north of a line running true west from the southern tip of Stephens Island to the surf line.

RU16 Inside Stephens Island

1. That portion of Subarea 4-9 south of the parallel passing through 54°20.30' north latitude;
2. That portion of Subarea 4-13 south of the parallel passing through 54°13.50' north latitude.

RU17 Kelp Pass

Subarea 4-12.

RU18 Oval Bay *

1. That portion of Subarea 4-2 south of a line running true west from the southern tip of Stephens Island to the surf line;
2. That portion of Subarea 4-3 north of a line running due west from Fan Point.

RU19 Porcher Inlet

Subarea 5-9.

RU20a Outside Freemans Pass *

That portion of Subarea 4-3 south of a line running due west from Fan Point.

RU20b Inside Freeman Pass *

Those portions of Subareas 5-11 and 5-12 west of a line running true north from a point located at 53°49.5' north latitude and 130°38.7' west longitude (the northern tip of Joachim Spit) to the Porcher Peninsula shoreline, and north of the parallel passing through 53°48.0' north latitude. (Refer to Chart #3761 published by the Canadian Hydrographic Service of the Department)

RU21 Willis Bay

1. That portion of Subarea 5-10 south and west of a line running from the northern tip of the entrance to Dolphin Lagoon located at 53°46.7' north latitude, 130°28.1' west longitude on

Dolphin Island, thence west to a point on the Prager Islands located at 53°46.85' north latitude, 130°29.8' west longitude, thence northerly to a point on the Shakes Islands located at 53°47.5' north latitude, 130°29.0' west longitude, thence true north to the Subarea 5-10 boundary line; west of the line running from Boys Point on Dolphin Island due south to the parallel passing through 53°42.7' north latitude; and north of the parallel passing through 53°42.7' north latitude. (Refer to Chart #3947 published by the Canadian Hydrographic Service of the Department);

2. That portion of Subarea 5-11 south of the parallel passing through 53°48.0' north latitude and north of the parallel passing through 53°42.7' north latitude.

Note Kitkatla closures listed in management plan.

RU22a Hankin Rock

That portion of Subarea 5-10 south of the parallel passing through 53°42.7' north latitude. (Refer to Chart #3927 published by the Canadian Hydrographic Service of the Department)

RU22b Beaver Pass *

That portion of Subarea 5-10 south of a line running from the north-western tip of McCauley Island to a boundary sign on the northwest tip of Spicer Island; south of a line running from a boundary sign located on the south-westernmost tip of Spicer Island to Boys Point on Dolphin Island, then due south to the parallel passing through 53°42.7' north latitude; and north of the parallel passing through 53°42.7' north latitude. (Refer to Chart #3927 published by the Canadian Hydrographic Service of the Department). Note Kitkatla closures listed in management plan.

RU23 Upper Principe Channel

Subarea 5-13.

RU24a Mid Principe Channel *

1. That portion of Subarea 5-17 north of a line running due east from Oar Point;
2. Subarea 5-18.

RU24b Lower Principe Channel *

1. That portion of Subarea 5-17 south of a line running due east from Oar Point;
2. Subarea 5-19.

RU25 Petrel Channel *

Subareas 5-14, 5-15, 5-16. Closed for three years.

RU26 Larsen Harbour

1. That portion of Subarea 5-11 south of a line running true west from Baird Point on McCauley Island;
2. That portion of Subarea 5-20 north of the parallel passing through 53°35' north latitude. (Refer to Chart #3927 published by the Canadian Hydrographic Service of the Department)

RU27a Upper Banks Island

That portion of Subarea 5-20 south of the parallel passing through 53°35' north latitude, east of a line running 140° true from 53°35' north latitude and 130°38.8' west longitude, north of a parallel running east and west through Cliff Point, except that portion of Subarea 5-20 adjacent to the western shore of the Antle Islands described as: east of a line running from the boundary marker at Laverock Point (53°30.97' north latitude, 130°29.13' west longitude), then to a point west of the Antle Islands at 53°28' north latitude, 130°28' west longitude, then to a point on Banks Island at 53°27.82' north latitude, 130°24.4' west longitude. (Refer to Chart #3927 published by the Canadian Hydrographic Service of the Department)

RU27b Mid Banks Island

That portion of Subarea 5-20 east of a line running 140° true from 53°35' north latitude, 130°38.8' west longitude, south of a parallel running east and west through Cliff Point, except that portion of Subarea 5-20 adjacent to the western shore of the Antle Islands described as: east of a line running from the boundary marker at Laverock Point (53°30.97' north latitude, 130°29.13' west longitude), then to a point west of the Antle Islands at 53°28' north latitude, 130°28' west longitude, then to a point on Banks Island at 53°27.82' north latitude, 130°24.4' west longitude. (Refer to Chart #3927 published by the Canadian Hydrographic Service of the Department)

RU28 Bonilla Island

1. That portion of Subarea 5-20 south of the parallel passing through 53°35' north latitude; west of line running 140° true from 53°35' north latitude, 130°38.8' west longitude; north of a line running from Kelp Point on Banks Island true west to the surf line (Refer to Chart #3927 published by the Canadian Hydrographic Service of the Department);
2. Subarea 105-1;
3. That portion of Subarea 105-2 north of a line running from Kelp Point on Banks Island true west to the surf line. (Refer to Chart #3741 published by the Canadian Hydrographic Service of the Department)

RU29 Kingkown Inlet

1. That portion of Subarea 5-20 east of a line running from the boundary marker at Laverock Point (53°30.97' north latitude, 130°29.13' west longitude), then to a point west of the Antle Islands at 53°28' north latitude, 130°28' west longitude, then to a point on Banks Island at 53°27.82' north latitude, 130°24.4' west longitude (Refer to Chart #3927 published by the Canadian Hydrographic Service of the Department);
2. Subarea 5-21.

RU30 Lower Banks Island *

1. Subareas 5-22;
2. That portion of Subarea 105-2 south of a line running from Kelp Point on Banks Island true west to the surf line (Refer to Chart #3741 published by the Canadian Hydrographic Service of the Department);
3. That portion of Subarea 106-1 north of a parallel passing through Finnerty Point on Nichol Island.

RU31a Moore Islands

That portion of Subarea 106-2 west of a line running 144° true from the northern boundary of Subarea 106-2 at 129°30.12' west longitude, and north of a parallel passing through 52°36.40' north latitude. (Refer to Chart #3726 published by the Canadian Hydrographic Service of the Department)

RU31b Harvey Islands

That portion of Subarea 106-2 west of a line running 144° true from the northern boundary of Subarea 106-2 at 129°30.12' west longitude, and south of a parallel passing through 52°36.40' north latitude. (Refer to Chart #3726 published by the Canadian Hydrographic Service of the Department)

RU32 Calamity Bay

That portion of Subarea 6-9 north of the parallel passing through 53°08.0' north latitude and west of the meridian passing through 129°49.78' west longitude. (Refer to Chart #3741 published by the Canadian Hydrographic Service of the Department)

RU33 Otter Pass

That portion of Subarea 6-9 north of a parallel passing through Flynn Point on Trutch Island, excluding the Calamity Bay Quota Area described as: that portion of Subarea 6-9 north of the parallel passing through 53°08.0' north latitude and west of the meridian passing through 129°49.78' west longitude. (Refer to Chart #3741 and 3724 published by the Canadian Hydrographic Service of the Department)

RU34a Langley Pass *

That portion of Subarea 6-9 west of a meridian running through 129°38.420' west longitude; south of a parallel passing through Flynn Point on Trutch Island; and north of a parallel passing through Finnerty Point on Nichol Island. (Refer to Chart #3795 published by the Canadian Hydrographic Service of the Department)

RU34b Develin Bay *

That portion of Subarea 6-9 east of a meridian running through 129°38.420' west longitude and south of a parallel passing through Flynn Point on Trutch Island. (Refer to Chart #3795 published by the Canadian Hydrographic Service of the Department)

RU35 Oswald Bay *

1. That portion Subarea 6-9 south of a parallel passing through Finnerty Point on Nichol Island, and northwest of a line running from a point on Dewdney Island at 52°57.10' north latitude, 129°38.00' west longitude south-westerly to the subarea boundary. (Refer to Chart #3724 published by the Canadian Hydrographic Service of the Department)
2. That portion of Subarea 106-1 south of a parallel passing through Finnerty Point on Nichol Island.

RU36a Estevan Group East

Those portions of Subareas 6-9 and 6-10 west of a line running 132° true from Humphreys Point on Lotbiniere Island southerly to the parallel running true west from McPhee Point on Princess

Royal Island, north of the parallel running true west from McPhee Point on Princess Royal Island, and east of a line running 130° true from Goodacre Point. (Refer to Chart #3724 published by the Canadian Hydrographic Service of the Department)

RU36b Estevan Group South

That portion of Subarea 6-9 west of a line running 130° true from Goodacre Point, north of a parallel running true west from McPhee Point on Princess Royal Island, and east of a line running from a point on Dewdney Island at 52°57.10' north latitude, 129°38.00' west longitude south-westerly to the subarea boundary. (Refer to Chart #3724 published by the Canadian Hydrographic Service of the Department)

RU37 Rennison Island

1. Those portions of Subareas 6-9 and 6-10 south of a line running true west from McPhee Point on Princess Royal Island;
2. That portion of Subarea 6-11 north of a line running from McPhee Point on Princess Royal Island to Ulric Point on Aristazabal Island;
3. That portion of Subarea 6-13 north of line running from Ulric Point on Aristazabal Island to the southern tip of Rennison Island, then true west to the surf line. (Refer to Chart #3724 published by the Canadian Hydrographic Service of the Department)

RU38a Campania Island/Surf Inlet *

1. That portion of Subarea 6-5 south of a line running from McCreight Point to Blackrock Point;
2. That portion of Subarea 6-10 south of a line running from McCreight Point to Blackrock Point; east of a line running 132° true from Humphreys Point on Lotbiniere Island southerly to the parallel running true west from McPhee Point on Princess Royal Island; and north of the parallel running true west from McPhee Point on Princess Royal Island.
3. Subarea 6-12.

RU38b Whale Channel *

1. That portion of Subarea 6-5 north of a line running from McCreight Point to Blackrock Point;
2. Subareas 6-6 to 6-8, 6-26 to 6-28.

RU39 Upper West Aristazabal

1. That portion of Subarea 6-13 south of a line running from Ulric Point on Aristazabal Island to the southern tip of Rennison Island, thence true west to the surf line and north of the parallel passing through 52°40.0' north latitude (Refer to Chart #3724 published by the Canadian Hydrographic Service of the Department);
2. That portion of Subarea 106-2 east of a line running 144° true from the northern boundary of Subarea 106-2 at 129°30.12' west longitude, south of a line running from Ulric Point on Aristazabal Island to the southern tip of Rennison Island, thence true west, and north of the parallel passing through 52°40.0' north latitude.

RU40 Woodcock Islands

1. That portion of Subarea 6-13 south of the parallel passing through 52°40.0' north latitude, and north of the parallel passing through 52°35.6' north latitude (through Howse Island);
2. That portion of Subarea 106-2 east of a line running 144° true from the northern boundary of

Subarea 106-2 at 129°30.12' west longitude, south of the parallel passing through 52°40.0' north latitude, and north of the parallel passing through 52°35.6' north latitude (through Howse Island).

RU41 Normansell Islands

1. That portion of Subarea 6-13 south of the parallel passing through 52°35.6' north latitude (through Howse Island); and north of the parallel passing through 52°32.0' north latitude (Refer to Chart #3726 published by the Canadian Hydrographic Service of the Department);
2. That portion of Subarea 106-2 east of a line running 144° true from the northern boundary of Subarea 106-2 at 129°30.12' west longitude; south of the parallel passing through 52°35.6' north latitude (through Howse Island), and north of the parallel passing through 52°32.0' north latitude.

RU42 Lower West Aristazabal

1. That portion of Subarea 6-13 south of the parallel passing through 52°32.0' north latitude, and north of the parallel passing through 52°27.590' north latitude (Refer to Chart #3726 published by the Canadian Hydrographic Service of the Department);
2. That portion of Subarea 106-2 east of a line running 144° true from the northern boundary of Subarea 106-2 at 129°30.12' west longitude; south of the parallel passing through 52°32.0' north latitude; and north of the parallel passing through 52°27.590' north latitude.

RU43 Upper Laredo

Subarea 6-14. Closed.

RU44 Lower Laredo

1. Subarea 6-15;
2. That portion of Subarea 6-16 north of a line running true west from Wilby Point on Swindle Island, and west of a line running from Wilby Point on Swindle Island to Dallain Point on Princess Royal Island. (Refer to Chart #3737 published by the Canadian Hydrographic Service of the Department)

RU45 Laredo Inlet

1. That portion of Subarea 6-16 east of a line running from Wilby Point on Swindle Island to Dallain Point on Princess Royal Island (Refer to Chart #3737 published by the Canadian Hydrographic Service of the Department);
2. Subarea 6-19.

RU46a Laredo Sound

1. That portion of Subarea 6-16 south of a line running true west from Wilby Point on Swindle Island;
2. That portion of Subarea 6-17 east of a meridian passing through 128°56.0' west longitude.

RU46b Prior Pass

1. That portion of Subarea 6-13 south of a parallel running through 52°27.590' north latitude (Refer to Chart #3726 published by the Canadian Hydrographic Service of the Department);
2. That portion of Subarea 6-17 west of a meridian passing through 128°56.0' west longitude.

RU47a Thompson Bay

1. Those portions of Subareas 7-1 and 7-2 east of a meridian passing through 128°40.0' west longitude;
2. Subareas 7-19, 7-20;
3. That portion of Subarea 7-21 south of a line running through the tidal rapids in Gale Passage at 52°12.5' north latitude;
4. Subarea 7-32.

RU47b Day Point *

1. Those portions of Subareas 7-1 and 7-2 west of a meridian passing through 128°40.0' west longitude;
2. That portion of Subarea 7-31 south of a parallel passing through 52°16.3' north latitude.

Note Price Island closure listed in management plan.

RU48 Milbanke Sound

Subarea 7-3.

RU49 Finlayson Channel

1. Subareas 7-4, 7-5, 7-6;
2. That portion of Subarea 7-9 north of a parallel passing through Jermaine Point on Dowager Island.

RU50 Mathieson Channel

That portion of Subarea 7-9 north of a line from Cross Point on Lady Douglas Island to Rankin Point on Cecilia Island; north of a line from Rankin Point on Cecilia Island to Knarled Point on the Don Peninsula; and south of a parallel passing through Jermaine Point on Dowager Island.

RU51 Seaforth Channel

1. Subareas 7-8;
2. That portion of Subarea 7-9 south of a line from Cross Point on Lady Douglas Island to Rankin Point on Cecilia Island, then to Knarled Point on the Don Peninsula;
3. Subareas 7-12, 7-15;
4. That portion of Subarea 7-21 north of a line running through the tidal rapids in Gale Passage at 52°12.5' north latitude.

RU52 Tribal/McNaughton Group *

1. That portion of Subarea 7-18 east of the meridian passing through 128°23.7' west longitude;
2. Those portions of Subareas 7-23 and 7-24 south of a parallel passing through 52°10.0' north latitude near Poole Islet in Raymond Channel and Quinoot Point in Joassa Channel. (Refer to Chart #3787 published by the Canadian Hydrographic Service of the Department)

RU53 Spider/Kildidt

Subareas 7-26, 7-27, 7-28.

RU54 McNaughton Group *

1. That portion of Subarea 7-17 southwest of a line running from Beak Point on Hunter Island to German Point on Campbell Island (Refer to Chart #3787 published by the Canadian Hydrographic Service of the Department);
2. Subarea 7-25.

RU55 Hakai Pass

Subareas 8-1, 8-2.

RU56a Nalau Pass

That portion of Subarea 8-4 west of a line running from Daedalus Point on Nalau Island to Hergest Point on Hunter Island.

RU56b Fitz Hugh Sound

1. Subarea 8-3;
2. That portion of Subarea 8-4 east of a line running from Daedalus Point on Nalau Island to Hergest Point on Hunter Island;
3. Subarea 8-16.

RU57a Rivers Inlet

Subareas 9-1 to 9-4, 9-10 to 9-12.

RU57b West Calvert Island - Grief Bay

1. Area 109;
2. Subarea 10-1;
3. That portion of Subarea 10-2 north of a line running true west from the Dugout Rocks light.

RU58 Smiths Inlet

1. That portion of Subarea 10-2 south of a line running true west from the Dugout Rocks light;
2. Subareas 10-3, 10-4, 10-5, 10-7, 10-8, 10-12.

INSIDE WATERS

11 Allison Harbour *

Area 11, except that portion of Subarea 11-2 inside a line starting at Davey Rock then running to 50°59.655' north latitude, 127°31.874' west longitude, then to 50°49.445' north latitude, 127°48.347' west longitude and returning to Davey Rock.

12A Bates Pass *

That portion of Subarea 12-12 south of a line running from Pivot Point on Hope Island to a point on Vansittart Island at 50°54.633' north latitude, 127°48.651' west longitude, and south of a line running from Magicienne Point on Vansittart Island through Shade Island to Nigei Island.

12B Christie/Browning Pass *

1. Subarea 12-10;
2. That portion of Subarea 12-11 southwest of a line running from 50°49.445' north latitude,

127°48.347' west longitude to Davey Rock.

12C Port Hardy

Subareas 12-15, 12-16.

12D Port McNeill

Subareas 12-4, 12-8, 12-17 to 12-19. Note Stubbs/Pearce and Cormorant closures listed in management plan.

12E Blackfish Sound

Subareas 12-5, 12-6, 12-20, 12-26. Note Numas Island and Stubbs/Pearce Study Area closures listed in management plan.

12F Deserter Island *

That portion of Subarea 12-13 east of a line running from Davey Rock to 50°59.655' north latitude, 127°37.874' west longitude.

12G Wells Pass *

Subareas 12-7, 12-38 to 12-42. Note Numas Island closure listed in management plan.

12H Northern Johnstone Strait

Subareas 12-1 to 12-3, 12-21 to 12-24.

12I Buckle Group *

Those portions of Subareas 11-2, 12-11, 12-12, 12-13 inside a line starting at Davey Rock then running to 50°59.655' north latitude, 127°31.874' west longitude, then to 50°49.445' north latitude, 127°48.347' west longitude and returning to Davey Rock.

12J Shadwell Pass *

That portion of Subarea 12-12 north of a line running from Pivot Point on Hope Island to a point on Vansittart Island at 50°54.633' north latitude, 127°48.651' west longitude; north of a line running from Magicienne Point on Vansittart Island through Shade Island to Nigei Island; and southwest of a line running from 50°49.445' north latitude, 127°48.347' west longitude to Davey Rock.

13A Kelsey Bay - Proper

Subareas 13-32 to 13-34.

13B Campbell River South

1. Subareas 13-1, 13-2;
2. That portion of Subarea 14-13 to Oyster River.

13C Campbell River North

Subareas 13-6 to 13-9, 13-11, 13-27, 13-28. Note Area 13 Study Area closure listed in management plan.

13D Campbell River East

Subareas 13-10, 13-12.

13E Cordero Channel

Subareas 13-25, 13-41, 13-42.

13F Kelsey Bay - East

Subareas 13-29 to 13-31, 13-35 to 13-40.

13G Stuart Island

Subareas 13-13 to 13-24, 13-26.

14 Comox

Subareas 14-5, 14-7 to 14-12. Note Hornby Island closure listed in management plan.

17 Nanaimo

Area 17, Subarea 29-5. Note Stewart Channel closure listed in management plan.

18a Sidney *

1. Subareas 18-3, 18-4, 18-6;
2. That portion of Subarea 19-5 north of a line running due east from Cordova Spit;
3. Subarea 19-6.

18b Mayne/Saturna Island *

Subareas 18-1, 18-2, 18-5, 18-9, 18-11, 29-4.

19 Victoria *

1. Subareas 19-3, 19-4;
2. That portion of Subarea 19-5 south of a line running due east from Cordova Spit;

Note Ogden Point, 10 Mile Point and Race Rocks closures listed in management plan.

WEST COAST VANCOUVER ISLAND**20 Sooke ***

Subareas 20-4 to 20-6.

23A Bamfield

Subareas 23-5 to 23-7. Note Broken Group Islands and Bamfield closures listed in management plan.

23B Ucluelet

Subareas 23-11, 123-3, 123-5. Note Broken Group Islands and Bamfield closures listed in management plan.

24A Sydney Inlet

Subarea 24-2. Note Hotsprings Cove closure listed in management plan.

24B Wickaninnish

Subarea 24-8. Note Moser Point closure listed in management plan.

24C Tofino

Subareas 24-6, 124-3.

27A Quatsino Outside

Subareas 27-1 to 27-3. Closed for 3 years.

27B Quatsino Inside

Subareas 27-7 to 27-11. Closed for 3 years.

111 Cape Scott

Area 111, Subarea 12-14. Closed.

Appendix 6: Red Sea Urchin Validation & Harvest Log

HAIL VERIFICATION #	RED SEA URCHIN VALIDATION & HARVEST LOGBOOK	VALIDATION ID #:
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SECTION 'A' - TO BE COMPLETED BY VESSEL SKIPPER

S E C T I O N ' A	SKIPPER NAME	VESSEL NAME	CFV #	ZC TAB #	SPLIT LOAD ?	# OF LOADS	VALIDATION ID #s OF OTHER LOADS	
					YES			
				NO				
QUOTA AREA	DAYS FISHED	No. of TRANSPORT CONTAINERS BAGS CAGES TOTES OTHER			PACKER NAME (if applicable)		GROSS PACKER WT. (lb.)	BUYER NAME

SECTION 'B' - TO BE COMPLETED BY PORT OBSERVER

PLEASE PRINT - USE PEN

S E C T I O N ' B	OBSERVER NAME	No. of TRANSPORT CONTAINERS BAGS CAGES TOTES OTHER				GROSS WT. (lb.)	CONTAINER WT. (lb.)	PREVIOUS R.Q. (lb.)
								NET DOCK WT. (lb.)
	OVERAGE lb.	TRANSFER TO / FROM ZC #:		OTHER VALIDATION ID #	RELINQUISHMENT lb.		NEW R.Q. (lb.)	
	LANDING PORT	START TIME	Ensure harvest information (Section 'C') is complete				SITUATION REPORT #	
LANDING DATE yyyy / mm / dd		OFFLOAD SEQUENCE		CHECK LIST :		TRANS. CONT. COUNT <input type="checkbox"/> Y <input type="checkbox"/> N		
				MATH CHECK <input type="checkbox"/> Y <input type="checkbox"/> N		FISH HOLD CHECK <input type="checkbox"/> Y <input type="checkbox"/> N		
				BAG ID TAGS <input type="checkbox"/> Y <input type="checkbox"/> N		TRANS. CONT. LABELS <input type="checkbox"/> Y <input type="checkbox"/> N		
							No. OF TRANSPORT CONTAINERS	
							SOUTH COAST R.Q. (lb.)	
				EAST VAN. ISL.		WEST VAN. ISL.		

COMMENTS :

SECTION 'C' - TO BE COMPLETED BY VESSEL SKIPPER

PLEASE PRINT - USE PEN

HARVEST INFORMATION - COMPLETE A SEPARATE LINE FOR EACH DIVE						USE ANOTHER PAGE IF MORE SPACE IS REQUIRED				
DIVE No.	DIVE SITE	HARVEST DATE (yyyy / mm / dd)	STAT. AREA	SUB AREA	HARVEST LOCATION (NAME OF NEAREST LANDMARK)	DIVER NAME (FIRST & LAST NAME)	DIVE TIME (minutes)	DEPTH (ft) min. max.		No. OF PICKBAGS
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

ENSURE YOUR HARVEST CHART IS COMPLETED

www.d-pacificfisheries.com

WHITE COPY - Observer

YELLOW COPY - Buyer via trucking

PINK COPY - Vessel via packer

GOLD COPY - Remains in Logbook

Appendix 7: Red Sea Urchin Quota Transfer Form

Landing Date (yyyy,mm,dd): _____

Landing Port: _____

TRANSFER FROM LICENCE (A); Vessel Masters Name: _____ Validation ID #: _____

Vessel: _____ CFV #: _____ ZC Tab # _____

Overage amount to be transferred to licence (B): _____ lbs.

NOTE: In Section 'B' (observers section) of licence 'A's Validation/Harvest log, enter the; overage amount; the ZC Tab # of licence 'B' and Validation ID # of licence 'B' (in comment section).

OVERAGE lb.	TRANSFER TO ZC #	RELINQUISHMENT lb.	SITUATION REPORT #

Small quantities of red sea urchins which exceed the licence's annual quota (up to 500 lb) can be transferred to another red sea urchin licence provided certain conditions are fulfilled. If all of these conditions are not met, DFO Certified observers will not transfer the overage to another licence. In the following explanation, the red sea urchin licence which has exceeded its quota is called Licence "A" and the licence to which quota is transferred is called Licence "B". The amount transferred cannot exceed the remaining quota of red sea urchin Licence "B". Any overage not transferred must be relinquished.

SAME VESSEL TRANSFER (SVT) 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 of any amount from one licence may be transferred to the red sea urchin licence which has quota remaining more than the overage to be transferred. Overage of the last red sea urchin licence quota on the same vessel may be transferred to another vessel's red sea urchin licence in accordance with policy described below.

DIFFERENT VESSEL TRANSFER (DVT) maximum allowable transfer of quota between licences on different vessels :

In the event of a quota overage on red sea urchin Licence "A", a maximum of 500 lb of red sea urchin may be transferred to another vessel's red sea urchin licence (Licence "B"). If the overage is more than 500 lb., the option to transfer quota will be lost and the entire overage will be relinquished. Only one transfer of quota overage is allowed. The quota overage cannot be divided between a number of licences.

Remaining quota on licence 'B' :

The amount transferred cannot exceed the remaining quota of red sea urchin Licence "B".

TO LICENCE (B); Vessel Masters Name: _____ Validation ID #: _____

Vessel: _____ CFV #: _____ ZC Tab # _____

NOTE: In Section 'B' (observers section) of licence 'B's Validation/Harvest log, enter the; overage amount; the ZC Tab # of licence 'A' and Validation ID # of licence 'A' (in comment section).

OVERAGE lb.	TRANSFER FROM ZC #	RELINQUISHMENT lb.	SITUATION REPORT #

Observer signature

Captain (A) signature

Captain (B) signature (if different)

Appendix 9: Example of Conditions of 2003/2004 Red Sea Urchin 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.

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 red sea urchin fishery obtain a copy of the 2003/2004 Red Sea Urchin - Integrated Fisheries Management Plan 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 red 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 red sea urchin.

"Department" means the Department of Fisheries and Oceans.

"discarded" means not placing the red sea urchin in a container or removing a red sea urchin from a container and not validating that red sea urchin.

"harvested" means removing, by any means, red sea urchin from the substrate of the ocean floor.

"landed" or "landing" means the transfer of red 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 5 of the 2003/2004 Red Sea Urchin - Integrated Management Plan.

"tranship" means the transfer of red sea urchin from a vessel to another vessel.

"validated" means red sea urchin have been weighed by an observer and the weight entered into the Red Sea Urchin Validation & Harvest Log (see sections 10 and 12) 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:

Red Sea Urchin (*Strongylocentrotus franciscanus*)

2. Licence Expiry Date:

This licence expires on July 31, 2004.

3. Quantities permitted to be taken:

(1) The maximum quantity of red sea urchin authorized to be taken under this licence shall not exceed 44,418.4 kg (97,923 lb.) of red 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 red 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 marking of containers to hold or transport red sea urchin and the marking of such containers:

(1) All red sea urchin delivered to designated landing ports or packers shall be placed in containers which are labelled. The label must be waterproof and marked with the vessel name and vessel registration number.

(2) All harvested red 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 vessel registration number of the vessel used to harvest that product. Floats attached to containers left unattended in the water must be marked with the vessel registration number.

8. Transshipment:

Red sea urchin may be transhipped from the licensed vessel to a packer vessel provided the vessel master complies with the following conditions:

- (1) all red sea urchin are in containers and tagged as per section 7;
- (2) the number of containers are 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;
- (4) a copy of the log accompanies the product to the designated port; and
- (5) the product is landed at a designated port and validated by an observer.

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

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

- (1) North Coast: Queen Charlotte City, Masset, Prince Rupert, Port Edward, Klemtu, Bella Bella, or Port Hardy.
- (2) South Coast: Port Hardy, Coal Harbour, Port McNeill, Kelsey Bay, Campbell River, Nanaimo, Sidney, Sooke, Victoria, Ucluelet or Tofino.

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 red sea urchin.

10. Validation:

(See Explanatory Note after section 14)

- (1) All red 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 red sea urchins no person shall:
 - (a) smash the shells or slit the membranes of the red sea urchin to drain the waters; or
 - (b) dump, throw overboard, or otherwise discard red 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 of the packer if one is used, shall provide the observer with a hard copy of the Validation & Harvest Logbook upon completion of each validation.
- (5) The vessel master of the licensed vessel or of the packer if one is used, 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) At least 24 hours before a fishing trip:

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

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

- (a) vessel name and vessel registration number; and
- (b) details of change in fishing plans.

(4) At least 24 hours prior to moving to a new red sea urchin quota area:

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

(5) After a fishing trip:

- (a) vessel name, vessel master's name and vessel registration number;
- (b) species fished;
- (c) Subarea(s) fished; and
- (d) time that fishing stopped.

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

- (a) vessel name, vessel master's name and vessel registration number;
- (b) species to be landed;
- (c) name of the designated port and location therein where the catch shall be landed;
- (d) anticipated time of landing;
- (e) name of fish processor or buyer that is buying or transporting the catch; and
- (f) 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, 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 Red 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 12(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
Hammond Bay Road
Nanaimo BC 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
Suite 200 - 401 Burrard Street
Vancouver B.C. V6C 3S4

Fish slip books may be purchased at the Regional Data Unit address or at most Departmental offices. Phone (604) 666-2716 for more information.

14. Workers' Compensation Board Requirements

All red 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 Red Sea Urchin Validation & Harvest Log issued by the service bureau contracted by the Pacific Urchin Harvesters' 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.