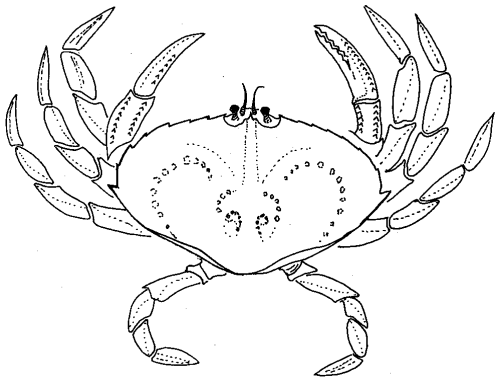
Fisheries and Oceans Canada | Pêches et Océans Canada

PACIFIC REGION INTEGRATED FISHERIES MANAGEMENT PLAN

CRAB BY TRAP

APRIL 1, 2026 TO MARCH 31, 2027



Dungeness crab: ***Metacarcinus magister***

Canada

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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.

FOREWORD

The purpose of this Integrated Fisheries Management Plan (IFMP) is to identify the main objectives and requirements for the Crab by Trap fishery in the Pacific Region, as well as the management measures that will be used to achieve these objectives. This document also serves to communicate the basic information on the fishery and its management to Fisheries and Oceans Canada (DFO) staff, legislated co-management boards, and other stakeholders. This IFMP provides a common understanding of the basic "rules" for the sustainable management of the fisheries resource.

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

Where DFO is responsible for implementing obligations under land claims agreements, the IFMP will be implemented in a manner consistent with these obligations. In the event that an IFMP is inconsistent with obligations under land claims agreements, the provisions of the land claims agreements will prevail to the extent of the inconsistency.

1 OVERVIEW

1.1 Introduction

This Integrated Fisheries Management Plan (IFMP) for Crab by Trap covers the period April 1, 2026 to March 31, 2027.

This IFMP provides a broad context to the management and interrelationships of all fishing sectors of the Dungeness crab (*Metacarcinus magister,* formerly *Cancer magister*), Red Rock crab (*Cancer productus*), Red King crab (*Paralithodes camtschaticus)* and Golden King crab *(Lithodes aequispinus*) trap fishery in the Pacific Region (British Columbia, Canada). However, at this time, this plan primarily focuses on Dungeness crab as over 99% of all crab harvesting by all sectors is this species.

The main body of the IFMP covers the general aspects of the fisheries including the background, science, management, objectives and allocation. Many aspects are similar among the seven crab management areas and those are detailed in the main body of the IFMP. Section 1 provides an overview of the commercial, recreational and First Nations fisheries. Section 2 presents a biological synopsis stock assessment, and the sustainable fisheries framework. Section 3 presents Indigenous Knowledge. Section 4 provides a socio-economic profile. Section 5 describes the emerging management issues that may impact management measures in the fishery. Section 6 describes objectives for the fishery reflecting stock status presented in Section 2 and to address the issues identified in Section 5. Section 7 discusses access and allocation. Section 8 directs to the Appendices for the fishery management procedures that will be employed during the year to meet the objectives. Section 9 describes shared stewardship arrangements to achieve objectives. Section 10 provides enforcement information. Section 11 provides a running summary of key issues that have occurred in previous crab fishing seasons. Sections 12, 13,14 and 15 provide references, internet sites, a glossary to define terms and contact information for DFO, Service Provider, and Sectoral Committee members.

The appendices detail the difference between the harvester sectors and variances in the seven crab management areas. The First Nations Harvest Plan is attached to this IFMP as Appendix 1. Appendix 2 is the Recreational Harvest Plan. Appendix 3 is the Commercial Harvest Plan for Crab by Trap. Appendix 4 discusses vessel safety. Appendix 5 provides an example of the crab trap commercial harvest log. Appendix 6 contains diagrams on where to determine crab soft-shell and correct rot cord. Appendix 7 contains consumption advisories. Appendix 8 contains the guidelines for the Area A soft shell monitoring program and a map and descriptions of the soft-shell management areas. Appendix 9 contains the commercial fishery monitoring and catch reporting standards for electronic monitoring, catch reporting, biological sampling, Area A hails, combination tags and plastic trap tag requirements.

1.2 History

Each year Fisheries and Oceans Canada (DFO) provides opportunities to First Nations for food, social and ceremonial (FSC) purposes (or domestic purposes for First Nations with modern treaties), and the commercial and recreational fisheries to harvest Dungeness Crab. Fish and marine resources are central to the culture, society, well-being, and economy of First Nations and provide a critical connection to language, traditional knowledge, and health of communities. DFO

remains committed to respecting First Nations' right to fish for FSC purposes, or domestic purposes under Treaty, which has priority after conservation over other users of the resource. Dungeness crab is an important crab species of British Columbia and is harvested coastwide for First Nation, recreational and commercial purposes. Many First Nations have a long history of harvesting Dungeness crab, with evidence of this significant relationship recorded in oral histories, archeological studies, and traditional knowledge. The inception of the commercial fishery occurred before the turn of the 19th century with the first recorded landings in 1885 (Butler, 1984).

Size restrictions have been the primary management tool for Dungeness crab since 1906, when a 6 inch (153 mm) size limit was initiated. This limit was changed to 6.5 inches (165 mm) in 1914. The 165 mm minimum size limit (measured across the maximum width of the carapace, commonly called "spine to spine") was designed to protect sexually mature male crabs for at least one year prior to harvest.

Females were protected from the commercial fishery by a regulation from 1926 to 1957 that prohibited the retention of ovigerous females. This regulation was revoked in 1957 as it was considered largely redundant with the size limit; however, it was reintroduced as a condition of licence in the commercial fishery prohibiting the retention of all females in 1991. Since 2007, recreational harvesters have been required to release all female crab. Prior to this, the release of females was voluntary.

Licensing of the commercial crab fishing fleet began in 1966 with the licensing of other commercial fisheries. All three of the initial salmon licence categories issued, A, B, and N, were authorized to harvest crab. Subsequent licence categories C (General), G (Geoduck), K (Sablefish), L (Halibut), S (Shrimp Trawl), and T (Groundfish Trawl) also included the authority to harvest crab using traps. This gave a potential fleet of over 6000 vessels.

An "R" category licence for crab was initiated by the Department in 1990 in response to high levels of fishing effort on crab. The licence eligibility criterion was 15,000 lbs. cumulative crab landings from 1987 to 1989. There are now 216 crab licence eligibilities for this fishery.

The fishery is currently managed under a precautionary regime whereby the productive potential of crab is protected. This regime includes a minimum harvestable size limit, limited commercial licensing, area licensing, trap limits, soak limits, sex restrictions, soft-shell restrictions, closure areas, closed periods and gear restrictions.

1.3 Type of Fishery and Participants

1.3.1 First Nations

The right to fish for food, social and ceremonial (FSC) purposes is protected under section 35 (1) of the *Constitution Act*. To manage FSC harvest in a manner consistent with this right, First Nations' harvest for FSC purposes may occur where authorized by an Indigenous communal licence, harvest document, or domestic harvest under treaty fishery agreements. First Nations will typically designate harvesters from their communities under their communal licence. More detailed information on First Nations harvest can be found in Section 1.5 and Appendix 1, the First Nations Harvest Plan.

1.3.2 Recreational

Recreational fishing may occur to provide food for personal use, as a leisure activity, or as a combination of the two. The recreational fishery includes harvest by local B.C. residents, residents within Canada and non-residential anglers outside of Canada. A British Columbia Tidal Waters Sport Fishing Licence is required for the recreational harvest of crab. Tidal Waters Sport Fishing Licences can be obtained via the internet at: https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/application-eng.html. More detailed information on recreational harvest can be found in Appendix 2, the Recreational Harvest Plan.

1.3.3 Commercial

The commercial fishery is a limited entry fishery with 216 licence eligibilities distributed throughout the Pacific coast in seven management areas. 34 of these licences have been designated as communal commercial licences for First Nations participation in the commercial fishery. All licences in the commercial fishery are single-licensed vessels and vessel size ranges from 4.42 m to 20.47 m. More detailed information on commercial harvest can be found in Appendix 3, the Commercial Harvest Plan.

1.3.4 Aquaculture

The Department currently licenses aquaculture activities for two hatchery facilities for Dungeness Crab culture in B.C. However, these facilities are not actively culturing the species, nor has any crab aquaculture ever occurred.

DFO is the lead federal department for sustainable management of fisheries and aquaculture. Under the *Fisheries Act, Pacific Aquaculture Regulations*, *Aquaculture Activities Regulations* and *Fishery (General) Regulations*, DFO regulates finfish, shellfish and freshwater and/or land-based aquaculture operations in B.C. Cultivation of fish within the province requires a federal aquaculture licence issued under the *Pacific Aquaculture Regulations*, and, where applicable, a federal *Canadian Navigable Waters Act* permit and a provincial Crown Lands tenure. Other government agency approvals may also be necessary.

Applications currently under review by the Department are available on the DFO website at: https://www.pac.dfo-mpo.gc.ca/aquaculture/licence-permis/index-eng.html#applications.

To view the *Pacific Aquaculture Regulations*: https://www.pac.dfo-mpo.gc.ca/aquaculture/regs-eng.html

As part of the aquaculture regulatory framework in British Columbia, DFO has developed Integrated Management of Aquaculture Plans (IMAPs). IMAPs are modelled after Integrated Fisheries Management Plans, which are used to govern wild harvest fisheries. Consultations with First Nations, interested parties, and stakeholders were and continue to be important to the IMAP process, allowing for the integration of advice, as well as environmental and social interests, into the management objectives for each aquaculture sector.

For further information refer to the following web link: http://www.dfo-mpo.gc.ca/aquaculture/aquaculture-eng.html.

1.4 Location of Fishery

Maps of the seven commercial crab management areas in the Pacific Region can be found in Appendix 3. Maps of the commercial Area A soft-shell management areas can be found in Appendix 8. To improve First Nations food, social, ceremonial (FSC) and domestic access and to reduce conflicts in all crab management areas, Recreational and Commercial harvesters are recommended to keep gear away from areas immediately fronting First Nation communities and Indigenous Reserves.

1.4.1 First Nations

First Nations harvest for FSC and domestic purposes occur throughout B.C. waters, and are managed through the issuance of Aboriginal communal licences and/or harvest documents, or under modern treaties. These licences are issued under the authority of the *Aboriginal Communal Fishing Licences Regulations*. These communal licences and harvest documents identify the location where fishing occurs. Harvest areas are generally located within First Nation traditional territories. Harvest may also take place alongside recreational harvesters in areas that are closed to commercial harvest to improve First Nations and recreational access to crab (see Appendix 3 Section 5). More detailed information on First Nations harvest can be found in Appendix 1, the First Nations Harvest Plan.

1.4.2 Recreational

Recreational crab fishing occurs predominately in nearshore areas in close proximity to B.C. coastal communities. Traditionally, it is a vessel-based fishery, which takes place in waters shallower than 100ft. Shore and Pier based fishing for recreational crab does take place in many locations, some of which are designated for improving First Nations and recreational access. More detailed information on recreational harvest can be found in Appendix 2, the Recreational Harvest Plan.

1.4.3 Commercial

Commercial fishing for Dungeness crab and Red Rock crab occurs throughout B.C. waters. Golden King crab and Red King crab fishing occasionally occurs in Area B where it is permitted under special arrangement with the North Coast DFO Crab Manager and amended Crab Conditions of Licence. Non-retention of graceful crab (*Metacarcinus gracilis*, formally *Cancer gracilis*) has been in effect coastwide since 2004 due to lack of stock assessment data. There are no other species of crab permitted for commercial harvesting. More detailed information on commercial harvest can be found in Appendix 3, the Commercial Harvest Plan.

1.5 Fishery Characteristics

1.5.1 First Nations

First Nations' fishing for food, social and ceremonial (FSC) or domestic purposes is the first priority after conservation and is open coast-wide throughout the year. First Nations fishing effort for FSC or domestic purpose has not been limited by catch quantity, except for those Nations where the Council or fisheries program has established their own catch limits for community

members, or where allocated under treaty. Gear marking is required, and the main target species are Dungeness and Red Rock crab. First Nations are subject to the same size limit as the recreational and commercial fisheries: a minimum of 165mm for Dungeness crab, and 115mm for Red Rock crab. In support of sustainable fishing, many First Nations have developed their own best management practices and include additional conditions that are not currently part of their communal licence requirements such as non-retention of females, rot cord on gear, and inclusion of trap escape rings. DFO has been consulting with First Nations since 2017 on conservation related licence conditions for communal licences with the intention of standardizing conservation management measures across all fisheries. More detailed information can be found in Appendix 1, the First Nations Harvest Plan.

Social, Cultural and Economic Significance

Fish and marine resources are central to the culture, society, and well-being of First Nations and provide a critical connection to language, traditional knowledge, economies and health of communities. Many Indigenous communities are located adjacent to key fishing sites, oceans and aquatic resources, and consider the management of these resources to be important to their communities. DFO has heard through engagement that Indigenous groups are seeking to pursue a variety of broad interests, such as greater access to economic opportunities from aquatic resources as a potential driver for economic development, more stability in food, social and ceremonial (FSC) and treaty domestic fisheries, a greater role in aquatic resource and oceans management decisions, and a greater role in stewardship, including stock assessment, oceans and habitat management, conservation and protection, and recovery strategy development and implementation. The interests of individuals communities are further sought based on specific, localized needs and interests.

Commitment to Reconciliation

DFO is committed to the recognition and implementation of Indigenous and treaty rights related to fisheries, oceans, aquatic habitat, and marine waterways in a manner consistent with section 35 of the *Constitution Act, 1982*, the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP), the *United Nations Declaration on the Rights of Indigenous Peoples Act* (UNDA), the UNDA Action Plan 2023-2028, and the federal Principles Respecting the Government of Canada's Relationship with Indigenous Peoples. DFO-CCG Reconciliation Strategy provides a guidance document to better understand why and how reconciliation informs the work of the Department.

DFO recognizes the right of Indigenous peoples to participate in decision-making in matters that affect their rights through their own representative institutions and the need to consult and cooperate in good faith with the aim of securing their free, prior, and informed consent.

For further information on Canada's reconciliation commitments:

- *United Nations Declaration on the Rights of Indigenous Peoples Act*: https://laws-lois.justice.gc.ca/eng/acts/u-2.2/
- Implementing the *United Nations Declaration on the Rights of Indigenous Peoples Act*: https://www.justice.gc.ca/eng/declaration/index.html

- The UNDA Action Plan 2023-2028: https://justice.gc.ca/eng/declaration/ap-pa/index.htmlv
- *Principles Respecting the Government of Canada's Relationship with Indigenous peoples*: https://www.justice.gc.ca/eng/csj-sjc/principles-principes.html
- Fisheries and Oceans Canada and Canadian Coast Guard Reconciliation strategy: https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/reconciliation-eng.html
- Reconciliation, partnerships and Indigenous fisheries in British Columbia and Yukon: https://www.pac.dfo-mpo.gc.ca/reconciliation/reconciliation-pacific-pacifique-eng.html
- Information on the Government of Canada's work to advance reconciliation: https://www.rcaanc-cirnac.gc.ca/eng/1400782178444/1529183710887
- Canada's Collaborative Modern Treaty Implementation Policy: https://www.rcaanc-cirnac.gc.ca/eng/1672771319009/1672771475448

FSC and Treaty Domestic Fisheries

DFO remains committed to respecting First Nations' Aboriginal right to fish for food, social and ceremonial (FSC) purposes, or domestic purposes under Treaty which has priority – after conservation – over other uses of the resource. Section 35(1) of the *Constitution Act* recognizes and affirms the existing Aboriginal and Treaty rights of the Aboriginal peoples in Canada. However, it does not specify the nature or content of the rights. In 1990, the Supreme Court of Canada issued a landmark ruling in the Sparrow decision, which found that the Musqueam First Nation has an Aboriginal right to fish for FSC purposes. The Supreme Court found that where an Aboriginal group has a right to fish for FSC purposes, it takes priority after conservation over other uses of the resource. The Supreme Court has also indicated the duty to consult with Aboriginal peoples when their fishing rights might be affected. The Aboriginal Fisheries Strategy (AFS) was implemented in 1992 to address several objectives related to First Nations and their access to the resource: https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/afs-srapa-eng.html.

These include:

- Improving relations with First Nations
- Providing a framework for the management of the First Nations fishery in a manner that was consistent with the Supreme Court of Canada's 1990 *Sparrow* decision
- Greater involvement of First Nations in the management of fisheries
- Increased participation in commercial fisheries (Allocation Transfer Program (ATP))

In addition to consultation, planning and implementation of fisheries, and the development of capacity to undertake fisheries management, stock assessment, enhancement and habitat protection programs, AFS continues to be one of the principal mechanisms, in addition to Treaties and reconciliation agreements, to support the development of relationships with First Nations.

Treaties and Reconciliation Agreements

a) Treaties and Self Government Agreements

There are currently four modern treaties with eight First Nations in British Columbia, which all have fisheries chapters: Nisga'a Final Agreement, Tsawwassen First Nation Final Agreement (TFA), Maa-nulth First Nations Final Agreement (MNA), and Tla'amin (Sliammon) ʔaʔǰɯnxʷegəs ("Tla'amin Treaty") . Through these treaties, Nations work with DFO to manage treaty fisheries on an annual basis. There are also historic treaties in British Columbia (Douglas Treaties and Treaty 8). The Douglas Treaty right to 'fish as formerly' was affirmed by Canadian courts through *Claxton v. Saanichton Bay Marina (1989)*.

Eleven of the Fourteen Yukon First Nations have Final and Self-Government Agreements derived from the Umbrella Final Agreement (Champagne and Aishihik First Nations, First Nation of Na-cho Nyäk Dun, Teslin Tlingit Council, Vuntut Gwitchin First Nation, Little Salmon/Carmacks First Nation, Selkirk First Nation, Tr'ondëk Hwëch'in, Ta'an Kwäch'än Council, Kluane First Nation, Kwanlin Dün First Nation, Carcross/Tagish First Nation). There are also two Transboundary treaties: the Gwich'in and Inuvialuit of the Northwest Territories have land claim agreements that identify their land and rights in Yukon. Many of these treaties have fisheries provisions. A detailed list of final agreements relating to Comprehensive Land Claims and Self Government is provided at: https://www.rcaanc-cirnac.gc.ca/eng/1100100030583/1529420498350

Kitselas and Kitsumkalum First Nations have both ratified their Treaties in 2025, with Provincial and Federal ratification processes anticipated to follow. The Effective Date of the Treaties is currently anticipated to take place in 2028. The ratification versions of the Treaties and associated appendices can be publicly accessed via: https://engage.gov.bc.ca/govtogetherbc/engagement/kitselas-and-kitsumkalum-treaty-negotiations/

Fisheries chapters in modern treaties articulate a treaty fishing right for domestic purposes that is protected under Section 35 of the *Constitution Act*, 1982. In addition, some modern treaties contain provisions that enable those Treaty First Nations to make laws relating to certain internal aspects of their fisheries. Negotiated through a side agreement, some modern treaty First Nations have commercial access through a Harvest Agreement outside of the constitutionally protected treaty.

b) Reconciliation Agreements

In addition to negotiating treaties, the Government of Canada and Indigenous peoples can also negotiate Recognition of Indigenous Rights and Self-Determination agreements, to explore new ways of working together to advance the recognition of Indigenous rights and self-determination. These agreements are led by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). DFO can also negotiate Fisheries Resources Reconciliation Agreements directly with First Nations to enhance collaborative governance between First Nations and DFO on management of fisheries, marine and aquatic matters.

Reconciliation agreements work within the legislative framework of the *Fisheries Act*. The Act provides the Minister of Fisheries, Oceans and the Canadian Coast Guard with the legislative authority for the proper management and control of the fisheries, the conservation and protection of fish, and regulation of the fishery.

Since 2019, the Government of Canada has entered into reconciliation agreements that include substantive commitments the Parties have agreed to implementing and that govern the relationship between the Parties for its term of the agreement.

As DFO and First Nations develop and implement new fisheries and collaborative governance arrangements, DFO works with these Nations to engage neighbouring First Nations and stakeholders (e.g. commercial and recreational sectors).

See the BC Treaty Commission at https://www.bctreaty.ca/, and CIRNAC for more information on current treaty tables and RIRSD tables at https://www.cirnac-rcaanc.gc.ca/eng/1100100030285/1529354158736#chp2

For more information on fisheries reconciliation agreements, see**:** Long-term fisheries arrangements in British Columbia and Yukon | Pacific Region | Fisheries and Oceans Canada

Right-based fisheries

Five Nations Community-Based Economic Fishery

Five Nuu-chah-nulth First Nations located on the west coast of Vancouver Island - Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht (the five Nations) – have aboriginal rights to fish for any species, with the exception of Geoduck, within their court-defined Fishing Territories and to sell that fish.

The *2023/24 Five Nations Multi-species Fishery Management Plan* (FMP) outlined the fishing opportunities for the five Nations to exercise their rights to harvest and sell salmon, groundfish, crab, prawn, gooseneck barnacles, and sea cucumber. The FMP was extended to March 31, 2025 while the Government of Canada and the five Nations completed negotiations for an *Incremental Reconciliation Agreement for Fishery Resources* (IRAFR).

The IRAFR finalized in 2024 is a two-year agreement providing the framework for an effective and collaborative approach to governance, management and planning of the five Nations' fisheries resources. The agreement recognizes that the five Nations, through their respective ha'wiih (hereditary leadership) and elected leadership, have a role in the management of fisheries in their territories. In response to the Nations' interests, DFO and the five Nations authorized an extension of the Nations' fishing area from 9 nautical miles offshore to 69 nautical miles, effective July 17, 2024.

The IRAFR also provides funding to the five Nations for implementation, capacity building, and to acquire commercial fishing access. It sets out mechanisms for a Community-Based Economic Fishery plan, including shared goals and objectives to support the development of healthy, self-reliant and sustainable fisheries for the five Nations that will contribute to the local and Canadian economy.

The extended 2023/24 FMP is available here: https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41253413.pdf

Indigenous Community Based Fisheries

As outlined in the DFO-Coast Guard Reconciliation Strategy (https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/reconciliation-eng.html), the Department is committed to reconciliation with First Nations through strengthened Indigenous-Crown relationships, recognizing self-determination and reducing socio-economic gaps. In support of these objectives, DFO and several First Nations have finalized, or are negotiating, reconciliation agreements that include provisions for Community Based Fisheries.

Community Based Fisheries (CBFs), including Community Based Economic Fisheries (CBEFs), are collaboratively-managed (by DFO and First Nations) sale fisheries that are designed to enable enhanced community participation by supporting First Nations to fish existing commercial fishing access with management flexibilities that are not available in the general commercial fishery. CBFs will have a defined area and will be characterized by fishery management measures that are consistent with community objectives of enhanced participation and self-determination in fisheries, and will be designed and implemented to ensure conservation, sustainable use and orderly fishery management.

As DFO and First Nations develop and implement new fisheries and collaborative governance arrangements, DFO works with these Nations to engage neighbouring First Nations and stakeholders (e.g., commercial and recreational sectors).

1.5.2 Recreational

The recreational fishery is an open entry fishery open all year in most areas. It typically targets Dungeness crab, although Red Rock crabs are retained. The majority of recreational crab fishing takes place during daylight hours, in conjunction with other recreational fishing activities.

Management measures in the recreational fishery include female non-retention, size limits for Red Rock and Dungeness crab, specific buoy and trap regulations, and area specific daily and possession limits. There are also additional regulations within select areas. As of 2023, recreational crab traps are required to have standardized buoys, cylindrical in shape (includes bullet shaped) with a minimum length and diameter. The standardization of buoy requirements for crab fishing will assist with better recognition of fishing gear in catch monitoring programs and will help distinguish between crab and prawn/shrimp traps. To enhance sustainable fishing, best management practices have also been developed for recreational harvesters. More detailed information on recreational harvest can be found in Appendix 2, the Recreational Harvest Plan.

1.5.3 Commercial

The commercial crab fishery is a limited entry, competitive fishery for legal male crab. It is divided into seven crab management areas having specific management rules. Some of these regulations include size, sex, and shell hardness restrictions, seasonal closures, trap limits, gear marking and gear size requirements, daily fishing time restrictions and weekly haul limits. The catch is 99% Dungeness crab, and this fishery has fishery monitoring and catch reporting requirements to address conservation, harvest allocation and theft issues. Annually DFO describes the program standards for fishery monitoring and catch reporting in the commercial crab fishery to be met by licence holders as per conditions of licence. For more information refer to Appendix 9. All active harvesters hire a third-party service provider to meet biosampling, electronic monitoring, gear

identification, and harvest logbook requirements. To enhance sustainable fishing, best management practices have also been developed for commercial harvesters. More detailed information on commercial harvest can be found in Appendix 3, the Commercial Harvest Plan.

1.6 Governance

The Minister of Fisheries, Oceans and the Canadian Coast Guard has ultimate and final responsibility for the management of fisheries in Canadian waters, and for the conduct of Canadian vessels operating in international waters. Ministerial functions are assisted and administered by the Department at the national level in Ottawa, and by the regional structure in the following regions: Newfoundland-Labrador, Arctic, Ontario and Prairie, Gulf, Maritimes, Quebec, and Pacific.

The Crab by Trap fisheries are governed by the *Fisheries Act* (R.S., 1985, c. F-14) and regulations made thereunder, including the *Fishery (General) Regulations* (e.g., conditions of licence), the *Pacific Fishery Regulations* (e.g., open times), the *British Columbia Sport Fishing Regulations*, the *Aboriginal Communal Fishing Licences Regulations* and the *Pacific Aquaculture Regulations*. Areas and Subareas are described in the *Pacific Fishery Management Area Regulations*.

Marine Protected Areas may be established under the *Oceans Act* (1996, c. 31). National marine conservation areas may be established under the *Canada National Marine Conservations Areas Act* (2002, c. 18).

Species listed as extirpated, endangered, threatened or special concern are governed by the *Species At Risk Act* (2002, c. 29) (SARA) which has implications for the management of fisheries that impact listed species. In addition to existing prohibitions under the *Fisheries Act*, it is illegal under the SARA to kill, harm, harass, capture, take, possess, collect, buy, sell or trade any listed endangered or threatened animal or any part or derivative of an individual.

The documents listed above are available on the internet at:

https://www.dfo-mpo.gc.ca/acts-lois/index-eng.htm

More information on the SARA is available at:

https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html

1.7 Sustainable Fisheries Framework

The Sustainable Fisheries Framework (SFF) is a toolbox of policies to ensure that Canadian fisheries support conservation and sustainable use of resources.

These policies include:

- *Fishery Decision-Making Framework Incorporating the Precautionary Approach*
    - Guidelines for Implementing the Fish Stocks Provisions in the *Fisheries Act*
    - Guidelines for writing rebuilding plans per the Fish Stocks Provisions and A Fishery-Decision-making Framework Incorporating the Precautionary Approach
- *Fishery Monitoring Policy*
    - Introduction to the procedural steps for implementing the Fishery Monitoring Policy

- *Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas*
    - Ecological Risk Assessment Framework (ERAF) for Coldwater Corals and Sponge Dominated Communities
- *Policy on Managing Bycatch*
- *Policy on New Fisheries for Forage Species*
- *Canada's Policy for Conservation of Pacific Salmon* (Wild Salmon Policy)

For more information on the Sustainable Fisheries Framework and its policies, visit: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/overview-cadre-eng.htm

Sustainability Surveys for Fisheries: DFO annually tracks the performance of key fish stocks that it manages through the Sustainability Survey for Fisheries. Results of previous Sustainability Surveys are available at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/survey-sondage/index-en.html

***Sustainable Fisheries Framework work plans*:** Each year, DFO develops a work plan and reports on priorities and targets regarding the sustainable management of Canada's marine resources. These work plans are available at: https://www.dfo-mpo.gc.ca/about-notre-sujet/publications/work-plan-travail/index-eng.html

Precautionary Approach Framework

The Sustainable Fisheries Framework policy suite includes a decision-making framework incorporating a precautionary approach to commercial, recreational, and food, social, and ceremonial fishing: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precaution-eng.htm

The precautionary approach in fisheries management requires caution when scientific knowledge is uncertain. The absence of adequate scientific information should not result in postponed action or failure to take action to avoid the risk of serious harm to the resource.

Applying the precautionary approach to fisheries management decisions entails establishing harvest strategies that:

- identify three stock status zones – Healthy, Cautious, and Critical – delineated by an upper stock reference point and a limit reference point;
- set the removal rate at which fish may be harvested within each stock status zone; and
- adjust the removal rate according to fish stock status (i.e. spawning stock biomass or another index/metric relevant to population productivity), based on pre-agreed decision rules.

The framework requires that a harvest strategy be incorporated into respective fisheries management plans to keep the removal rate moderate when the stock status is in the Healthy Zone, to promote rebuilding when stock status is low, and to ensure a low risk of serious or irreversible harm to the stock.

A key component of the *Precautionary Approach Framework* requires that when a stock has declined to the Critical Zone, a rebuilding plan must be in place with the aim of having a high probability of the stock growing out of the Critical Zone within a reasonable timeframe: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precautionary-precaution-eng.htm

Fisheries Act: Fish Stock Provisions

Amendments to the *Fisheries Act* (Bill C-68) were passed into legislation in 2019 and include new authorities to amend the *Fishery (General) Regulations* and requirements to maintain major fish stocks at sustainable levels, and to develop and implement rebuilding plans for stocks that have declined to their critical zone. Amendments are available at: https://www.parl.ca/LegisInfo/en/bill/42-1/C-68

An associated regulatory amendment to prescribe the first batch of major fish stocks and describe requirements for rebuilding plans was registered and came into force on April 3, 2022, and published in Canada Gazette, Part II. Available at: https://www.gazette.gc.ca/rp-pr/p2/2022/2022-04-13/html/sor-dors73-eng.html

Major fish stocks are defined in Schedule IX, and requirements for rebuilding plans are described in Part XIV (Fish Stocks Provisions) of the *Fishery (General) Regulations*. Available at: https://laws-lois.justice.gc.ca/eng/regulations/SOR-93-53/index.html.

Fishery Monitoring and Catch Reporting

DFO released the national *Fishery Monitoring Policy* in 2019, which replaces the regional *Strategic Framework for Fisheries Monitoring and Catch Reporting* in the Pacific Fisheries (2012). The national policy seeks to provide dependable, timely and accessible fishery information through application of a common set of steps used to establish fishery monitoring requirements across fisheries. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/fishery-monitoring-surveillance-des-peches-eng.htm

From 2023 to 2028, Pacific Region is pursuing a project-based approach to implementation of the national Fishery Monitoring Policy, with a focus on the recreational fishery.

Further guidance on implementation of the national Fishery Monitoring policy is available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/fmp-implementation-psp-mise-en-oeuvre-eng.htm

For more information on the 2012 Pacific *Strategic Framework for Fisheries Monitoring and Catch Reporting,* please visit: https://www.pac.dfo-mpo.gc.ca/fm-gp/docs/framework-monitoring-cadre-surveillance-eng.html

Policy for Managing the Impacts of Fishing on Sensitive Benthic Areas

To avoid serious or irreversible harm to sensitive benthic habitat, species and communities and to otherwise address impacts to benthic habitat, communities and species, this policy outlines a five step process. Available at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/benthi-eng.htm

Ecological Risk Assessment Framework & Cold-Water Coral and Sponge Conservation Strategy

The *Ecological Risk Assessment Framework for Coldwater Corals and Sponge Dominated Communities* (or ERAF) outlines a process for identifying the level of ecological risk of fishing activity and its impacts on sensitive benthic areas in the marine environment. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/risk-ecolo-risque-eng.htm

DFO's *Pacific Region Cold-water Coral and Sponge Conservation Strategy* aims to promote the conservation, health and integrity of Canada's Pacific Ocean cold-water coral and sponge species. For more information, visit: https://www.dfo-mpo.gc.ca/oceans/ceccsr-cerceef/conservation-eng.html

Policy on Managing Bycatch

The *Policy on Managing Bycatch* supports sustainable fisheries management by minimizing the risk of fisheries causing serious or irreversible harm to bycatch species, and by accounting for total catch, including retained and non-retained bycatch. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/bycatch-policy-prise-access-eng.htm

The *Guidance on Implementation of the Policy on Managing Bycatch* supports policy implementation: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/bycatch-guide-prise-access-eng.htm

Policy on New Fisheries for Forage Species

While other new fisheries may be started under the *New and Emerging Fisheries Policy*, this policy outlines the special considerations for new fisheries on forage species, which must not threaten the conservation of other species that depend on the forage species for food. Available at: https://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/forage-eng.htm

1.8 Consultation

DFO has a broad mandate, with the authority to regulate and enforce activities, develop policy, provide services and manage programs. To help ensure the Department's policies and programs are aligned with its vision and effectively address the interests and preferences of Canadians, DFO supports consultations that are transparent, accessible and accountable. DFO Pacific Region undertakes consultations in order to meet the duty to consult with First Nations, improve departmental decision-making processes, promote understanding of fisheries, oceans and marine transport issues, and strengthen relationships.

For more information on the consultative process for crab, please visit: https://www.pac.dfo-mpo.gc.ca/consultation/shell-crust/csc/index-eng.html

1.8.1 Indigenous People of British Columbia

The Department consults with Indigenous Nations on the annual Pacific Crab IFMP and the management of Pacific Crab more broadly to ensure that the duty to consult is fulfilled and that the proposed plans are informed by the best available information, including Indigenous

Knowledge and understanding of fisheries practices. Consultation occurs through a variety of means including through bi-lateral discussions, group advisory processes and other processes that may be available or requested. Consultation, as provided for under Final Agreements (currently the Tla'amin (Sliammon) ʔaʔǰɯnxʷegəs ("Tla'amin Treaty"), Tsawwassen First Nation Final Agreement, Maa-nulth First Nations Final Agreement and Nisga'a Final Agreement) are also undertaken.

1.8.2 Crab Sectoral Committee (CSC)

The Crab Sectoral Committee (CSC) is the primary multi-stakeholder body providing input and advice to DFO's decision making processes for Pacific crab fisheries. The CSC was established by DFO to promote a more streamlined, representative, cross-sectoral advisory process related to crab harvest planning, management, and post-season review. The Sectoral Committee meets annually in October. The frequency of the Sectoral Committee meetings is currently under review and seeking input for 2026-2027.

The goal of the CSC is to support the development of fishing plans that are coordinated and integrated, to identify potential conflicts, and to make recommendations for resolving disputes. The committee operates on a consensus basis where possible. Membership in the CSC is comprised of representatives from Indigenous communities, the area crab industry advisory boards, the Sport Fishing Advisory Board (SFAB), the Province of B.C., commercial licence eligibility holders, processors and DFO. See Section 15 for committee members and contact information.

Through the West Coast Commercial Fisheries Modernization initiative, DFO is engaging with commercial fishery interests to explore socio-economic issues that have been raised about commercial fisheries licensing and management in Pacific region, and possible solutions to those issues. As part of this work, DFO will be reviewing the terms of reference for commercial fisheries advisory boards to ensure the membership of these boards reflects the participants of each fishery, to the extent possible. This review will commence for Crab in 2026.

The current committee terms of reference are available from the Department's consultation Internet site at:

https://www.pac.dfo-mpo.gc.ca/consultation/shell-crust/csc/index-eng.html

Additional consultations may also occur bilaterally with First Nations, Recreational, or Commercial representatives or other stakeholder groups at any point throughout the year as required.

1.8.3 Area Crab Industry Committees and Regional Crab Industry Committee

The seven crab management areas have area-based meetings that occur in the fall and occasionally once more per year. Each Area has one elected crab representative that sits on the Regional Crab Industry Committee and the CSC, and some areas have identified a second alternate representative. In addition to the elected representatives, there are Indigenous advisors, one recreational and other representatives, if necessary, selected to represent other significant interests in the fishery (e.g., parks, aquaculture, crew).

Beginning in 2010, the Regional Crab Industry Committee has met annually (or more frequently as required) to address commercial harvesting issues and discuss conflicts with other fisheries. A report on topics discussed is provided to Crab Sectoral participants at the CSC.

1.9 Approval Process

The Regional Director General for the Pacific Region approves this plan.

2 STOCK ASSESSMENT AND SCIENCE

2.1 Biological Synopsis for Dungeness Crab

Dungeness crab are distributed along the west coast of North America from Mexico to Alaska and occur from the low intertidal to depths of 230 m (Jensen 1995). During spring months, adult males and females generally move inshore into shallower water and then back into deeper water in late summer or early winter, all the while remaining segregated from one another (Rasmuson, 2013). Females are relatively inactive during the winter; they do not feed and remain buried in the bottom sediment for much of the time (Scheding et al., 1999). Adult Dungeness crabs inhabit substrates comprised of sand, mud or silt, and eelgrass beds (Cleaver, 1949). When incubating their eggs, females prefer sandy substrate. Sub-adults require littoral habitats as important foraging areas. Megalopae larvae often settle out in favourable inshore intertidal and subtidal habitats, which are often estuaries with freshwater input (McConnaughey et al., 1992). Zoea larvae can be found in offshore areas in the water column (Rasmuson, 2013).

Mating is generally synchronous within a region in B.C., normally occurring in the spring and summer between April and September but can vary between regions depending on female soft-shell timing (Butler, 1961; D. Curtis, personal communication, March 2020). Adult males usually moult during the spring, while adult females usually moult during the summer (Butler, 1960; Waddell et al., 2016). Moult timing differs between males and females, because males can only breed newly moulted (soft) females and will carry them around in a mating embrace when they are about to moult, and even several days after to ensure no other males mate with her. Females store the sperm so they can fertilize the eggs at a later date (Jensen et al., 1996). In October and November the eggs are fully developed and are fertilized as they are extruded (Rasmuson, 2013). Females can produce 200,000 to two million eggs depending on her size (Hankin et al., 1989). The eggs adhere to the abdomen and are protected and aerated by the female throughout the winter. The eggs hatch late winter/early spring depending on the area and water temperature (Wild, 1983). Dungeness crab larvae emerge first into the water as prezoeae, but moult quickly (within one hour) to the first zoea stage. The spined zoeae are distributed by ocean currents for up to four months and move offshore and alongshore during late winter and the winter-to-spring transition period. Upwelling occurs around April/May and, after five zoea stages, megalopae appear in large near-shore concentrations between May and September (e.g., Shanks et al., 2010). Megalopae look like little crabs, are strong swimmers, and seek out favourable habitat to settle on where they metamorphose into the first post-larval instar.

Dungeness crab grow by moulting, a process whereby the old shell is shed. The new shell underneath absorbs water and swells to a new size 15-30% larger, and then hardens over a period of several months (Dunham et al., 2011). Juvenile crabs moult many times throughout the year. It

takes about two years—and more than 10 moults—for a juvenile crab to reach sexual maturity (120 mm carapace width) after which males moult annually (Butler, 1961). Males do not effectively breed much below about 140 mm carapace width (Butler, 1960). It takes 12 to 16 moults and 3 to 4 years from time of settlement for a crab to reach legal size after which crabs usually moult only once more (Butler, 1961). Larger males frequently skip-moult. Females grow more slowly than males because most of their energy is devoted to egg-production rather than growth and often skip-moult once they become sexually mature (100 mm carapace width) (Butler, 1961). Dungeness crabs live about six to nine years. Males generally do not grow larger than 215 mm, and females 165 mm carapace width (Dunham et al., 2011).

2.2 Ecosystem Interactions for Dungeness Crab

Dungeness crab occupy ecological niches in both marine and estuarine waters and are ecologically important as both prey and predator at all life stages. The planktonic zoea and megalopae larval stages are preyed upon by many fish, including Coho and Chinook salmon, whales, and other predators (e.g., Botsford et al., 1982). Juvenile crabs are consumed by demersal fish, such as flatfish like the starry flounder, English sole, and rock sole (Armstrong et al., 1995). Adults are consumed by octopi, lingcod, cabezon, wolf-eels, rockfish, halibut, dogfish, sculpin, sturgeon, crabs, and sea otters (Reilly, 1983).

Dungeness crab zoea larvae are believed to feed offshore in the water column on zooplankton and phytoplankton (Rasmuson, 2013). Juvenile crabs actively forage in littoral habitats where they consume bivalves (clams and mussels), small fish, molluscs, shrimp, and other crabs (Rasmuson, 2013). Adult crabs are often found in sandy/silty substrates in bays and estuaries where they prey on bivalves, crustaceans, worms, and fish (Rasmuson, 2013). Dungeness crabs often remain buried during the day and become more active at night (McGaw, 2005).

Climate change affects Dungeness crab populations in several ways. One such consequence of climate change is warmer ocean temperatures which may influence egg development and mortality (*D. Curtis, personal communication, December 2019*). Eggs generally develop faster in warmer water, but experience higher mortality. Warm currents, such as those produced from El Niño events, bring non-native predators like mackerel to B.C., which feed on zooplankton that includes crab larvae. A warmer ocean is also likely to alter the timing of moulting periods. Ocean acidification, through the burning of fossil fuels, also poses a significant threat to crustaceans. Ocean acidification occurs through seawater absorption of atmospheric carbon dioxide and results in a significant reduction in Dungeness crab larval survival, delays development in early life stages, and may impede the ability of crustaceans to produce calcareous structures (*Bednarsek et al., 2020*). Ocean acidification may also have negative impacts on crab foraging behaviour (Durant et al., 2023).

Warmer ocean temperatures can lead to an increased frequency of algal blooms. Domoic acid contamination in Dungeness and Red Rock crab has been detected in British Columbia.Domoic acid is a neurotoxin caused by a marine diatom (*Pseudo-nitzchia*) and can cause seizures, coma, and death if consumed by humans or animals. For more information, see https://inspection.canada.ca/food-safety-for-consumers/fact-sheets/specific-products-and-risks/fish-and-seafood/toxins-in-shellfish/eng/1332275144981/1332275222849.

2.3 Stock Assessment & Research

Dungeness crab stock assessment is done by DFO, Service Providers hired by Industry, the Area A Crab Association, and several First Nation groups. Commercial style traps with closed escape ports are set on ground lines or attached to single floats at depths ranging between 5 and 100 m. Biological data collected from crabs caught in traps include: sex, shell condition, injuries, mating marks, and size. The catch per unit effort (CPUE) can be determined when standardized fishing gear are used.

DFO conducts Dungeness Crab stock assessment surveys in Areas I and J on the Fraser River delta during spring and fall months before and after the commercial fishery takes place to improve understanding about stock composition and abundance, moult timing, injury rates, and diseases. Such survey work has been conducted regularly since the early 1990s. This unique long-term data time series, from one of B.C.'s most important Dungeness crab fishing grounds, provides valuable insights into crab population dynamics. Historically, DFO also conducted research surveys during the 1990s out of Tofino and on an ad hoc basis in other remote locations. In other areas of the coast the commercial biosampling program is the primary method used to collect crab data.

Service providers hired by the commercial fleet collect fishery dependent biological sampling data from Areas I and J and fisheries dependent and independent data from Areas A, B, E, G, and H. Currently there are two service providers for the crab fishery: Ecotrust Canada for all Area A programs and Pacific Coast Fishery Services for all other Crab Management Areas (B through J inclusive). They collect biological data from commercial vessels, with a minimum of 50 crabs or 10 traps; a minimum of 200 crabs per month must be sampled from all vessel visits (by CMA). They also collect biological data from fishery independent sampling at index sites each month of the fishing season in CMAs B,E,G, and H. A manual for surveying Dungeness Crab in B.C. can be found at https://waves-vagues.dfo-mpo.gc.ca/Library/345188.pdf. Biological data can be requested from the Shellfish Data Unit at PACSDU@dfo-mpo.gc.ca.

Biological data is also collected by harvesters in Area A during years of an established soft-shell sampling program. Upon approved request, harvesters, in cooperation with the Department and their service provider, collect data between February 15 and August 1st to determine the timing of the male moult and the corresponding soft shell period. This sampling program maximizes harvesting opportunity while protecting vulnerable soft crab. The Area A Association, DFO Stock Assessment, and Fisheries Management staff have been involved with developing this program and interpreting the information collected. More recently, the Area A sampling program has utilized designated observers to verify crab shell hardness. Analysis of this information helps to ensure that no major detrimental biological fishery changes are occurring.

Several First Nations conduct their own crab stock assessment surveys in their traditional territories in conjunction with FSC and domestic fishing. Current studies include addressing conservation concerns, understanding impacts of commercial and recreational fishing, and determining the timing of soft-shell periods.

The Department remains interested in co-developing research priorities and interests with First Nations, Recreational, and Commercial representatives.

For more information section please contact DFO Science and Fisheries Management Staff (see Section 15 for contact information).

2.4 Stock Scenarios

Individual Dungeness crab populations are sustained by larvae originating over a large geographical area. A stock/recruitment relationship is difficult to demonstrate considering the wide range of potential donors to the larval pool. Crab populations and recruitment are generally controlled by marine environmental conditions and therefore naturally experience year-to-year fluctuations, but are generally cyclical over time with periods of higher abundance followed by periods of lower abundance (e.g., Botsford and Hobbs, 1995).

2.5 Precautionary Approach Framework

The Sustainable Fisheries Framework policy suite includes a decision-making framework incorporating a precautionary approach to commercial, recreational, and food, social, and ceremonial fishing: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precaution-eng.htm

The precautionary approach in fisheries management requires caution when scientific knowledge is uncertain. The absence of adequate scientific information should not result in postponed action or failure to take action to avoid the risk of serious harm to fish stocks or their ecosystem.

Applying the precautionary approach to fisheries management decisions entails establishing harvest strategies that:

- identify three stock status zones – Healthy, Cautious, and Critical – delineated by an upper stock reference point and a limit reference point;
- set the removal rate at which fish may be harvested within each stock status zone; and
- adjust the removal rate according to fish stock status (i.e. spawning stock biomass or another index/metric relevant to population productivity), based on pre-agreed decision rules.

The framework requires that a harvest strategy be incorporated into respective fisheries management plans to keep the removal rate moderate when the stock status is in the Healthy Zone, to promote rebuilding when stock status is low, and to ensure a low risk of serious or irreversible harm to the stock.

A key component of the Precautionary Approach Framework requires that when a stock has declined to the Critical Zone, a rebuilding plan must be in place with the aim of having a high probability of the stock growing out of the Critical Zone within a reasonable timeframe: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precautionary-precaution-eng.htm

A Canadian Science Advisory Secretariat (CSAS) process was completed in 2023 to develop a framework for estimating reference points using biological data collected in CMAs I and J, and the results of this process are now available (DFO, 2023). Reference points were estimated using DFO research survey data. Female Catch per Unit Effort (CPUE) data was used in order to represent the reproductive potential of the stock. A 2025 CSAS process recommended the stock structure of Dungeness Crab be coastwide, based on available information on genetics, harvest, movement, and life history. Future work will therefore estimate reference points at this coastwide scale. The existence of a coastwide stock and reference points does not preclude the continued use of finer scale management units.

3 INDIGENOUS KNOWLEDGE

There is no universal definition of Indigenous Knowledge. It is intricately tied to Indigenous worldviews and ways of life, and its composition is determined by Indigenous Peoples. The term "Indigenous Knowledge" is a generally accepted and is consistent with the United Nation's Declaration on the Rights of Indigenous Peoples as well as language in federal legislation. Other synonymous terms include Indigenous Knowledge Systems, Traditional Knowledge, Inuit Qaujimajatuqangit, Métis Traditional Knowledge, Traditional Ecological Knowledge, and Aboriginal Traditional Knowledge.

In 2019, the *Fisheries Act* was amended to include provisions for where the Minister may or shall consider Indigenous Knowledge that has been provided in making decisions pertaining to fisheries, fish and fish habitat. Section 61 of the Act ensures this knowledge is protected and can only be shared with consent. There are also provisions under the *Species At Risk Act* (s.10.2, s.15.2, s.16, s.18.1) that support inclusion of Indigenous Knowledge to inform the assessment and protection of species at risk. Likewise, the *Oceans Act* (s.42) allows the Minister to consider Indigenous Knowledge in oceans related decisions.

In June of 2023, the Department of Justice released the *United Nations Declaration on the Rights of Indigenous People's Act* Action Plan outlining the Government of Canada's five-year plan to begin implementing the Act. DFO was identified to lead 11 of the measures in the Action Plan, including Measure 40 pertaining specifically to inclusion of Indigenous Knowledge in the management of fisheries, fish habitat, conservation, marine safety and protection of the marine environment. DFO is committed to implementing this measure in collaboration with Indigenous Peoples.

The Government of Canada and the scientific community acknowledge the need to ensure Indigenous Knowledge, worldviews, values, and priorities are considered and holistically integrated into scoping, assessment, and monitoring components of decision-making.

Work is underway at a national level to develop a comprehensive approach to support the respectful consideration, integration, and safeguarding of Indigenous Knowledge within departmental programs, policies and decision-making processes. However, DFO recognizes that meaningful and respectful inclusion of Indigenous Knowledge in decision making processes will not follow a one-size-fits-all approach. Given the diversity of knowledge and relationships, regional work will involve an iterative process in collaboration with First Nations, Inuit and Métis peoples, Indigenous organizations, and knowledge holders, to ensure appropriate inclusion and protection of the knowledge provided. Many outstanding questions remain on how to move forward in a way that respects, meaningfully incorporates, and protects the knowledge that may be shared with DFO, to mutual benefit. For example, how to engage knowledge holders, and how to ensure that the knowledge can be shared and considered in a mutually acceptable manner by both knowledge holders and the broader community of First Nations, stakeholders, managers, and policy makers involved in the fisheries. DFO is committed to finding a way forward that respects the knowledge and the knowledge holders, and upholds the Principles respecting the Government of Canada's relationship with Indigenous Peoples, which are available online at: https://www.justice.gc.ca/eng/csj-sjc/principles-principes.html.

Some areas where DFO staff are working with knowledge-holders to incorporate Indigenous Knowledge, include (but are not limited to):

- Regulatory authorizations for projects that impact fish and fish habitat
- Aquaculture and fisheries management
- Scientific research, monitoring, and assessment
- Marine safety and ecosystems protection
- Marine conservation measures (e.g., marine protected areas)
- Training and professional development

For more information on the updates to the *Fisheries Act*: https://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/reconciliation-eng.html

See Sections 2.5, 34.1, and 61.2 in the *Fisheries Act* (2019): https://laws-lois.justice.gc.ca/eng/acts/f-14/.

Section 61.2 protections for Indigenous Knowledge have also been included in the *Access to Information Act*, Schedule 2: https://laws-lois.justice.gc.ca/eng/acts/a-1/page-15.html#h-1230

See the full *UN Declaration Act* Action Plan (2023): *United Nations Declaration on the Rights of Indigenous Peoples Act* Action Plan (justice.gc.ca)

4 ECONOMICS OF THE FISHERY

The intent of this section is to provide a socio-economic context of the crab by trap fisheries in B.C. An overview of commercial, recreational, and Indigenous sectors of the fishery is provided.

4.1 Commercial

British Columbia's commercial crab fishery is one of the most important fisheries. Crab wholesale value fell by 23% between 2023 and 2024, reaching approximately $178 million in 2024. It accounted for 51% of the wholesale value of the province's wild shellfish products in 2024[1] and supports a sizeable share of the province's wild shellfish processing employment. While a few species of crab are caught along British Columbia's coast, most of the crabs caught (99.9%) are Dungeness crabs.

Between 2012 and 2015, the trend in this fishery was generally one of increasing volume and prices, resulting in increasing landed values on a year-over-year basis. This was likely caused by high demand from China which created optimism in the industry and perpetuated strong participation and low diversification into other fisheries by licence holders. In 2016, landings declined from its 2015 peak before beginning their upward trend in subsequent years. Landings peaked in value and weight in 2021, rising to $182 million in total value. In 2022, a landing weight decline of 14% and price decline of 22% caused a decline in total value by 33%. This considerable fall

[1] Internal figures calculated using Annual Fishery Production Schedule (AFPS) data from British Columbia Provincial Government.

returns total value to comparable levels to the 2019/2020 period. This downward trend has continued into 2023 and 2024 for total landed weight, which fell by an additional 19% from 2022 to 2023 while total value decreased by 4% within the same time period. In 2024, a landing weight decline of 38% led to a decline in total value by 28%.

Catch and landed value for the last 11 years is shown in Figure 1, with landed value adjusted for inflation reported in 2024 constant Canadian dollars. The 2024 coast-wide commercial landed value was $84.5 million, 35% decline from the previous five year average (2019 – 2023). Between the years of 2011-2016, landed values have been partially buoyed by increases in the average prices, which hit several highs before plateauing in the latter half of the decade. Combined with this rise in prices, landed value climbed substantially due to a 168% increase in landed kilograms from 2014-2021, reaching a decade high 10.3 million kilograms in 2021. Over this period, harvest growth was concentrated in the Area A fishery. Since 2021, landings have declined, falling to 7.2 million kilograms in 2023, and further declining to 4.5 million kilograms in 2024.

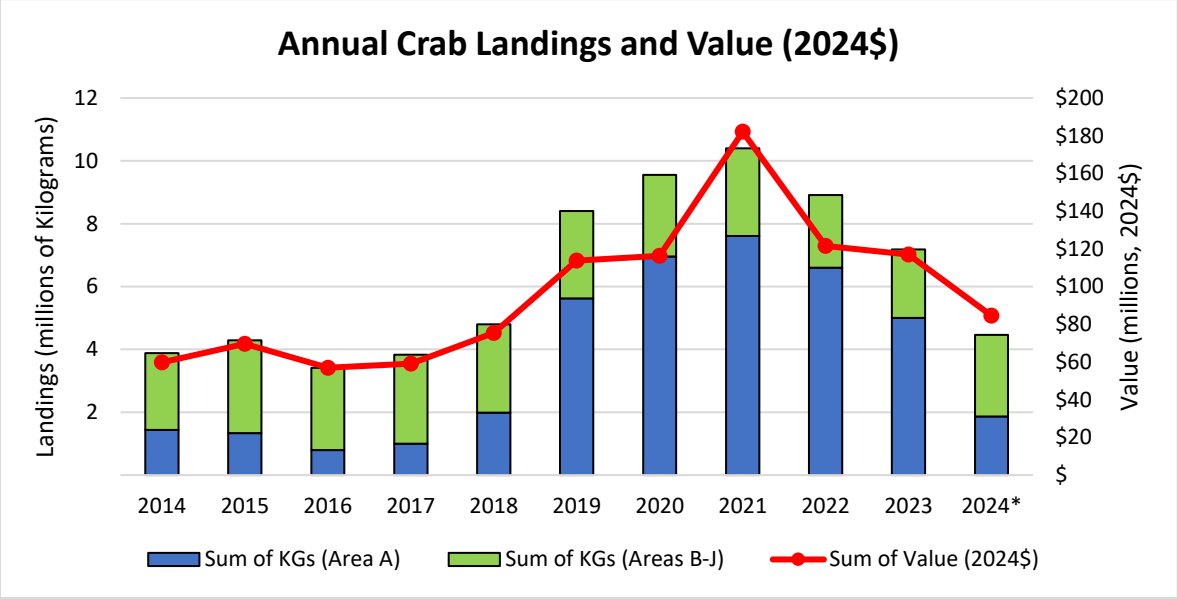

Figure 1: Source: Harvester logbook and sales slip data for years 2014-2024.
Note: Total landed value is an estimate calculated from harvester logbook and sales slip data. *2024 is considered preliminary and should be treated as such.

In terms of geographical distribution of crab landings, Area A has historically dominated crab landings in B.C. For example, in 2007 and 2008, approximately 61% of the total coast-wide crab landings were attributable to this area on average. However, between 2009 and 2018, only 34% of the average total coast-wide crab landings were attributable to this area. Between 2019-2024, Area A has represented approximately 69% of total harvest by weight.

Participation levels in the crab fishery are high. In 2023, roughly 98% of licences were active on 211 vessels. In 2024, participation slightly declined with 209 active crab vessels. Diversification within

the crab fishery is also very low, with nearly 93% of crab vessels participating only in the crab fishery in 2023[2].

Viability and Market Trends

Figures 2 and 3 present the trends of monthly average landings by area and coast-wide average monthly price between 2014 and 2018, and between 2019 and 2024, respectively. Although individual years varied, landings in weight and value typically peak in summer, particularly June & July. The trend continued in the more recent period, albeit with a shift in harvest patterns. More landings are occurring in the early fall, allowing harvesters to sell their catch when prices are higher. Overall landings have also substantially increased in recent years. Between 2019 and 2024, the average landings per year were 8.2 million kilograms, representing a 102% increase in landings from 2014-2018.

Typically, the average price is higher in the early part of the year, peaking in April and May, with a reduction taking place in summer as large quantities of crab hit the market. Price often recovers in late summer (August-September) and dips again in late fall and rises again in winter. However, in recent years there has been less fluctuation over the late summer, with prices remaining fairly low through the fall and slowly rising in the winter months. Overall, there has been a slight decrease in crab prices in recent years, coinciding with the increase in harvest landings. The average price between 2019 and 2024 was $17.5/KG, representing a 3% increase from the average price between 2014 and 2018 ($17.0/KG).

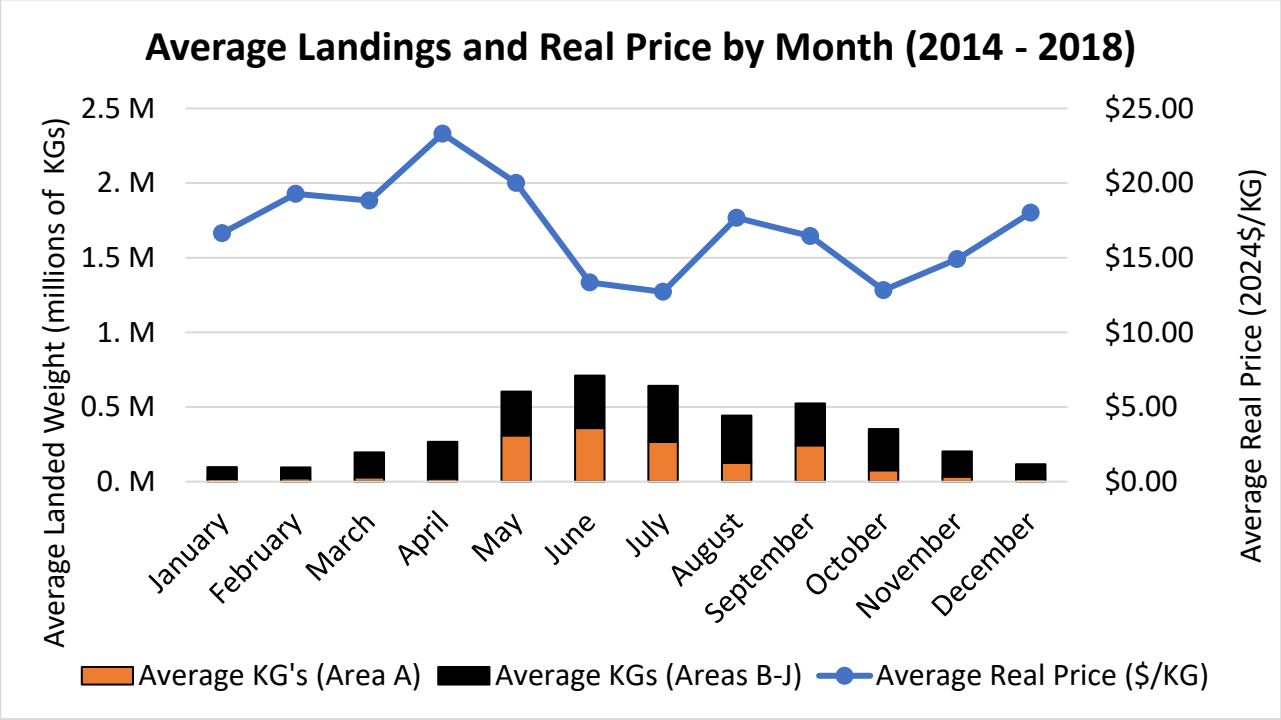

Figure 2. Average Landings and Real Price, 2014 – 2018

[2] Source: Diversification Tables DFO (Year 2023).

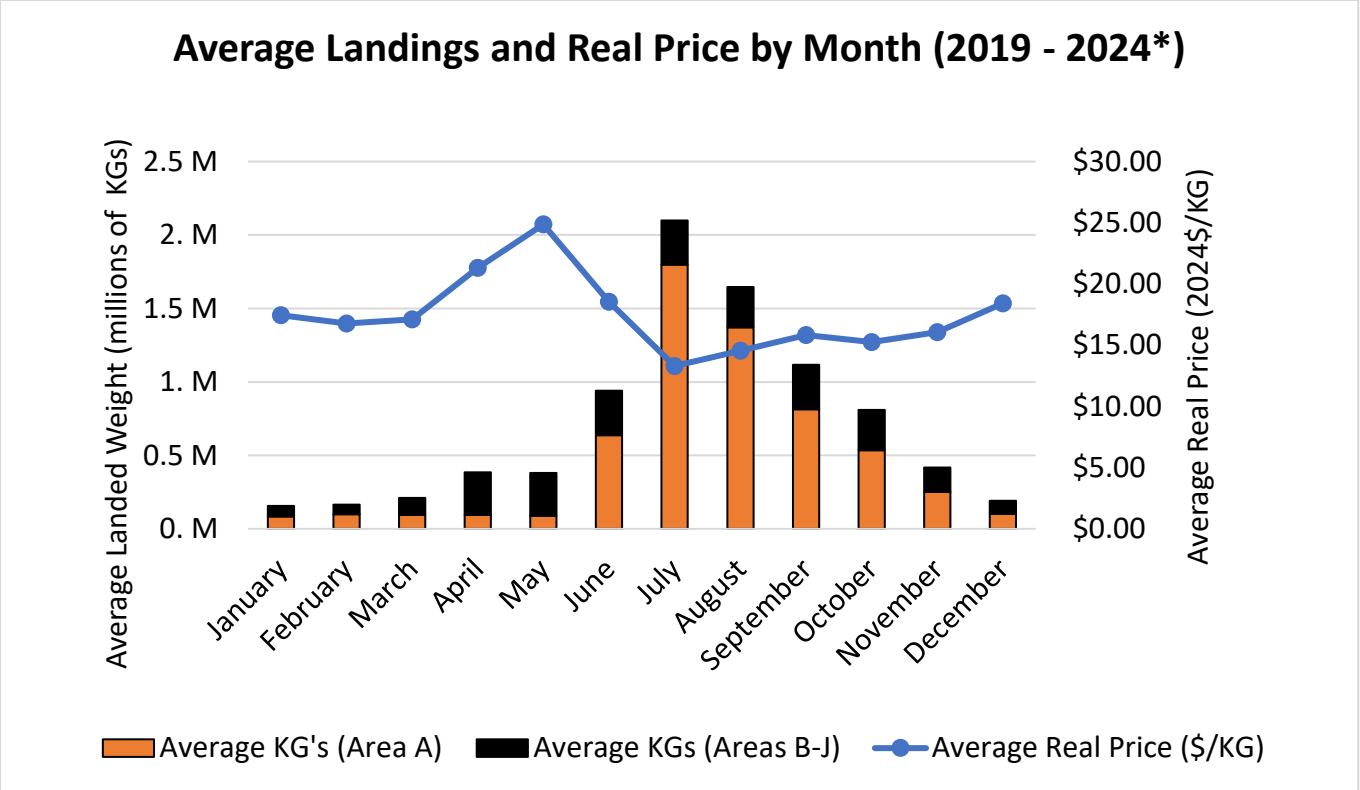

Figure 3. Average Landings and Real Price, 2019 – 2024. Source: Harvester logbook and sales slip data, years 2014-2024. *2024 values are preliminary.

The B.C. Fish Processing Employment[3] reports that wild shellfish processing employment contributed 443 jobs in 2019. A 2010 study of the economics of B.C.'s crab fishery reports that 43% of wild shellfish processing employment is related to crab (although a more recent estimate is not available). Based on estimates presented in GS Gislason and Associates (2017), this processing labour would result in approximately $2.6 million in wages in 2024[4].

In addition to supporting commercial fisheries and seafood processing employment, the crab fishery in British Columbia significantly contributes to provincial exports. In 2024, the value of crab exports was $195 million, which represented 15% of all of B.C. seafood exports in that year[5]. Total export quantity declined from 2021 to 2022, recovered to 2021 levels in 2023, but then dropped sharply by 34% in 2024.

Figure 4 illustrates the export volume and average price of all crab exports from B.C. from 2011-2024. Starting in 2011, the average real price of crab exports climbed steadily from around

[3] British Columbia Fish Processing Employment (2019-20), (23/Aug/2022), p. 7.

[4] GS Gislason & Associates (2017) estimates that the wages associated with crab processing is around $0.45 per kilogram in 2016. Applying this to the landed kilograms estimate for 2024 landings yields about $2.6M in processing wages. https://waves-vagues.dfo-mpo.gc.ca/Library/40652816.pdf

[5] Statistics Canada (EXIM) Data.

$14.14 per kilogram to $29.94 per kilogram in 2016 (the highest price recorded during this period). From 2017 to 2021, the quantity of crab exports increased steadily. This increase in supply saw the price steadily decrease from 2018-2020. The decrease in price of crabs in 2020 was likely further driven lower due to the impacts of the COVID-19 pandemic. The export price rebounded to $23.16 per kilogram in 2021 before falling back to approximately $21 per kilogram in 2022. It remained stable in 2023 then increased by 14% in 2024, reaching $24.07 per kilogram .

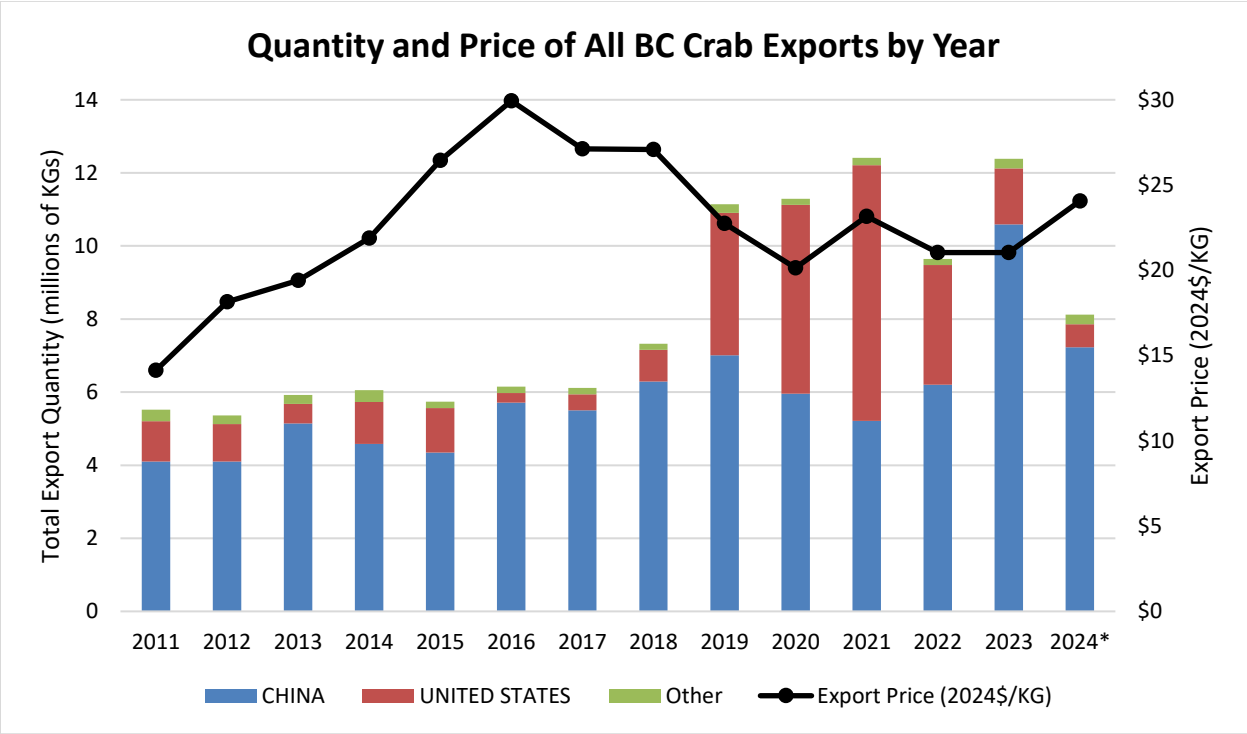

Figure 4: Quantity and Price of All B.C. Crab Exports by Year. Source: Statistics Canada (EXIM) data, 2011 - 2024. *2024 values are preliminary.

Figure 5 shows the distribution of 2024 crab exports by quantity from B.C. to its top export markets. Historically, the top international markets for B.C. crab exports have been China and the United States (US). Both these countries account for around 97% of B.C.'s crab exports as of 2024. Other countries that import B.C. crab include: Hong Kong, Singapore, Taiwan, Vietnam, and the United Kingdom.

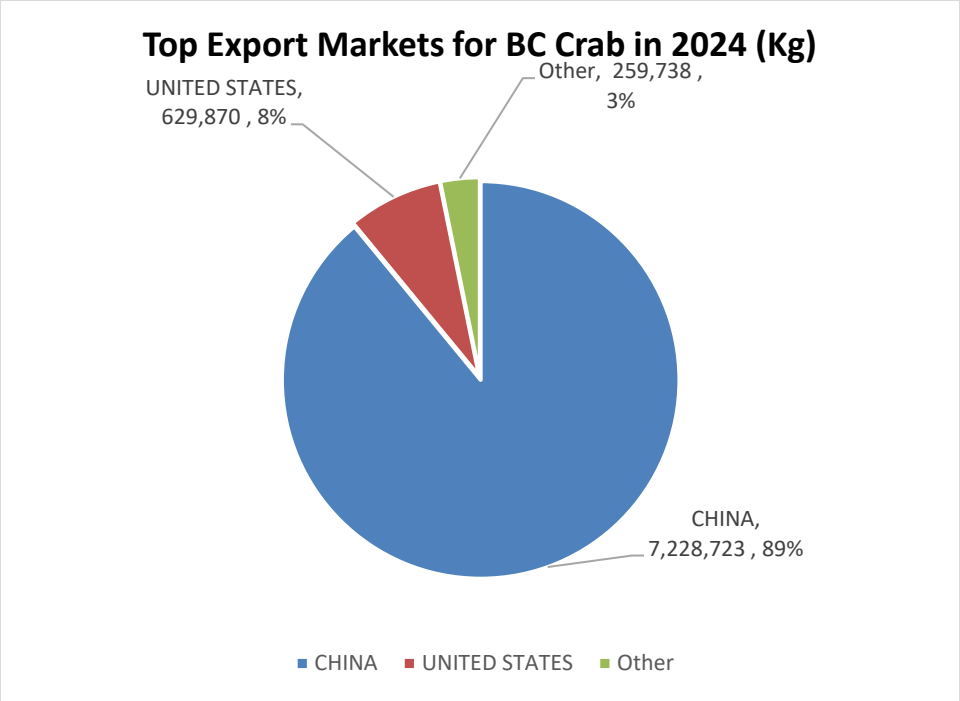

Figure 5: Top Export Markets for B.C. Crab by Weight (KG) in 2024. Source: Statistics Canada (EXIM Data), 2024
Note: 2024 values are preliminary.

Despite having a trading partner directly to the south, exports of B.C. crab to the Chinese market have been growing over the past decade, likely due to demand from China's growing middle class during this time frame. As such, the implicit price that exporters were able to fetch for B.C. crab was more than 50% greater when exporting to China compared to the U.S. from 2018-2020[5]. Export prices to the US increased substantially in 2021, coinciding with a convergence in export values between these two countries (Figure 6). Since 2021, export prices to both the U.S. and Chinese markets decreased, before rising again in 2024. However the price of exports to China remained 34% higher than the US on average between 2023 and 2024.

Figure 6 below shows the export market trends for crab by value. In 2016, 94% of B.C.'s crab exports were sold to China (by total value in dollars). In 2020 and 2021, B.C.'s exports shifted towards the U.S. By 2020, 27% of exports were to the United States and 70% to China. The two countries' share of B.C.'s crab exports briefly equalized in 2021 at 49% each. However, since 2021, this share has shifted back to China. US purchases fell to a 22% share in 2022, and have continued to decrease to a share of only 5% in 2024.

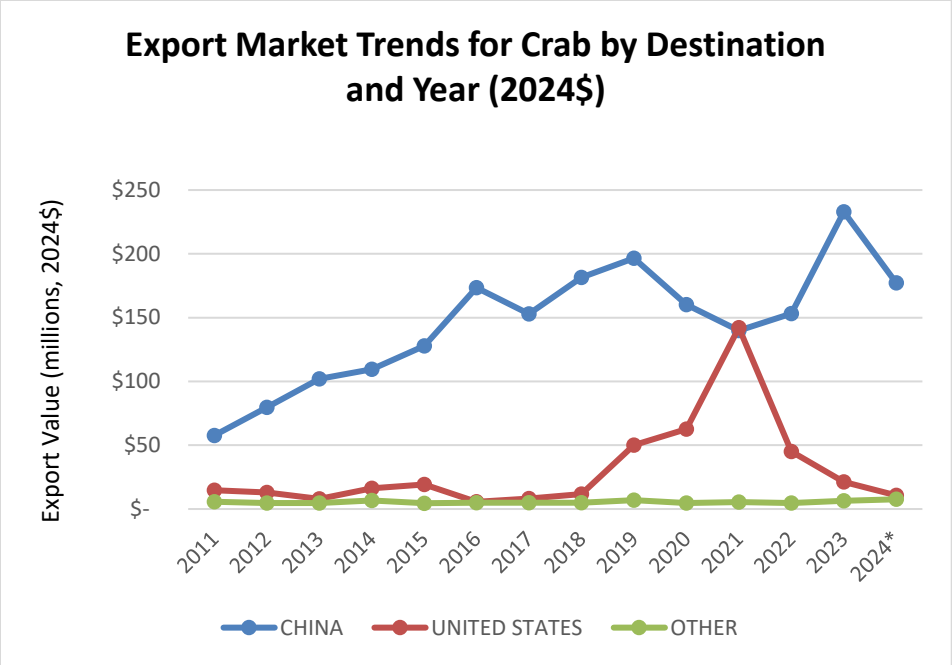

Figure 6: Export Market Trends for Crab by Destination and Year. Source: Statistics Canada (EXIM) data, 2011 - 2024. *2024 values are preliminary.

4.2 Recreational

Recreational fishing may occur to provide food for personal use, as a leisure activity, or both. These activities provide a range of social, cultural, and health benefits to the participants as well as contribute directly and indirectly to economic activity. B.C.'s tidal water recreational fishery has typically been one of the top three largest recreational fisheries in Canada in terms of revenues generated[6].

The recreational fishing community in B.C. includes local residents, multi-species charter operators and lodges, and visiting (international) recreational fishers and boaters. Of the active recreational fishers in B.C.'s tidal waters, the majority (85%) are Canadian residents, with the remainder being visitors to Canada (15%) (non-residents)[7]. Expenditures by visiting recreational fishers contributes additional value to the provincial economy, beyond the expenditures directly attributable to their fishing experience. For example, visiting fishers may also spend money on shopping, cultural events and attractions (such as museums and the theatre), and sightseeing during

[6]National Survey of Recreational Fishing in Canada. Fisheries & Oceans Canada, multiple years.

[7] Percentages based on active fisher estimates from 2022 and 2023 as collected in the Internet Socio-economic Analysis (iSEA) Survey of Tidal Water Recreational Fishing in B.C. Fisheries and Oceans Canada, Pacific Region, 2022; 2023.

their stay in British Columbia[8]. In a 2010 DFO survey of recreational fishing, 47% of non-Canadian fishers reported that they would not have chosen British Columbia as their travel destination had there not been tidal water fishing opportunities[9].

Figures 7 and 8 show that the distribution of B.C. recreational licence sales and fishing activity (fishing days) between resident and non-resident fishers has varied over time. Non-resident licence sales were halted during the 2020/21 fishing season and substantially limited during the 2021/22 fishing season due the COVID-19 Pandemic. A substantial drop in recreational fishing activity and expenditures also occurred during this period, which is likely due to the restrictions on international and domestic travel. While non-resident licence sales and fishing activity have shown recovery since the pandemic, overall fishing days and total expenditures have remained below pre-pandemic levels.

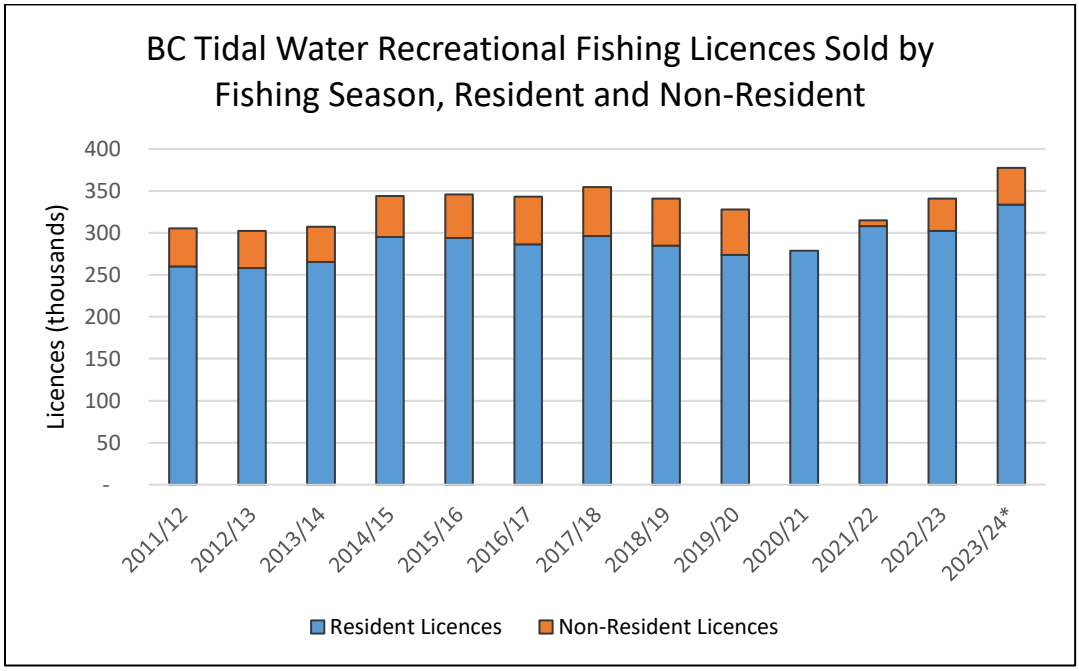

Figure 7: B.C. Tidal Water Recreational Fishing Licences Sold By Fishing Season, Resident and Non-Resident. Source: DFO Internal Recreational Licensing data. Note: *Data for 2023/24 is preliminary and should be treated as such.

[8] British Columbia's Fisheries and Aquaculture Sector (2012).

[9] Survey of Recreational Fishing in Canada, Fisheries and Oceans Canada, 2010.

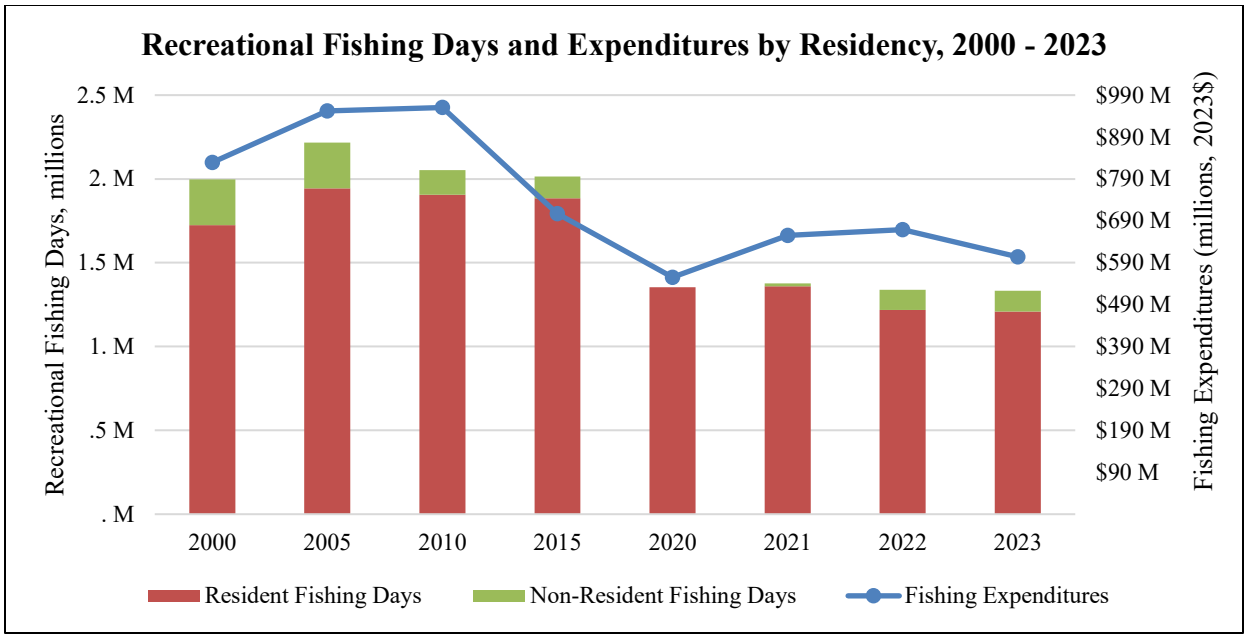

Figure 8: Recreational Fishing Expenditures and Days by Residency. Sources: National Survey of Recreational Fishing in Canada, 2000 – 2015; iSEA Survey of Tidal Water Recreational Fishing in B.C. 2020 – 2023.

In 2023, approximately 210,000 fishers actively participated in B.C.'s tidal water recreational fishery, spending more than $604 million to support their fishing activities. 28% of the active recreational fishing population (58 thousand fishers) targeted crab species specifically. Around 8% of all recreational fishing expenditures in 2023 ($47 million) are attributable to crab species[10]. These recreational crab expenditures translate into more than $25 million in provincial GDP, supporting around 250 jobs, and providing around $16 million in household income to families across B.C[11].

Figure 9 shows that recreational crab fishing is fairly concentrated, with 90% of crab fishing days and 83% of crab expenditures occurring in the southern regions of the province (Strait of Georgia, Barkley Sound, Johnston Strait, WCVI). Only 10% of crab fishing days and 17% of crab expenditures occur in Haida Gwaii, the Central Coast and the North Coast. The Strait of Georgia is a particularly popular destination for recreational crab fishing. In 2023, 71% of days, and 56% of expenditures spent fishing for crab occurred in this single region.

[10] Internet Socioeconomic Analysis (iSEA) Survey of Tidal Water Recreational Fishing in B.C., 2023.

[11] Estimates of GDP, jobs, and income are calculated through applying recreational expenditures to sport fishing multipliers developed in the British Columbia's Fisheries and Aquaculture Sector, 2022 Edition.

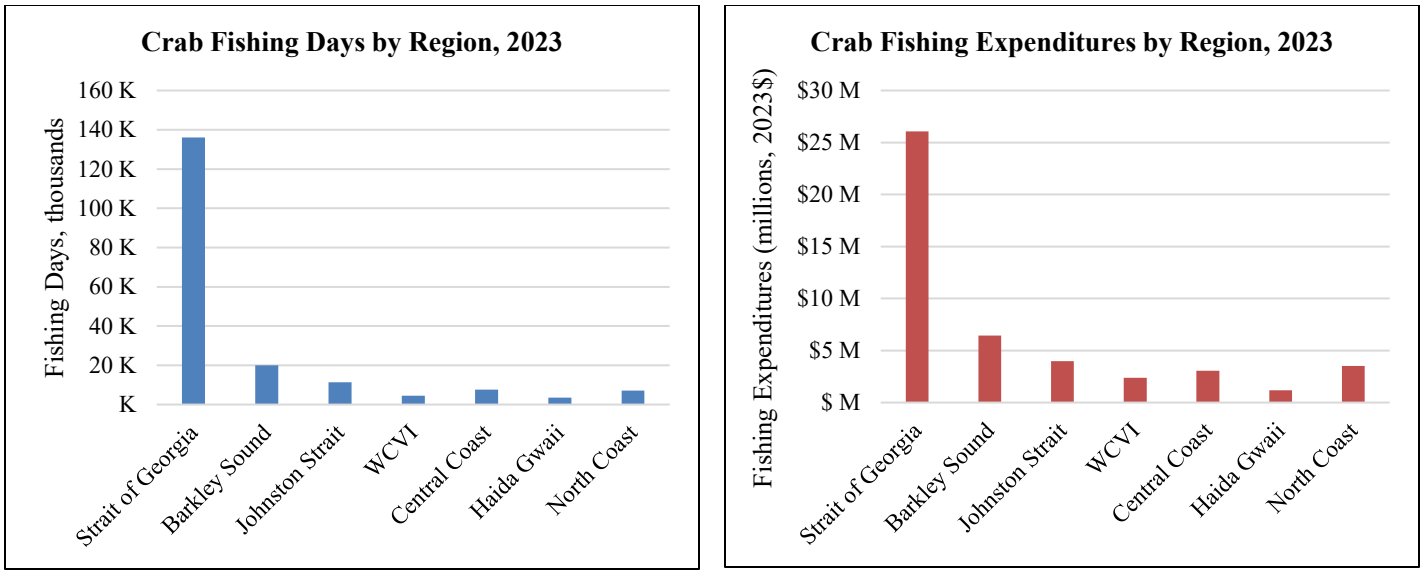

Figure 9: Crab Recreational Fishing Days and Expenditures by Region. Source: iSEA Survey of Tidal Water Recreational Fishing in B.C., 2023.

4.3 First Nations

Indigenous communities are interested in fisheries related economic opportunities. There are currently 28 communal commercial crab by trap licence eligibilities to provide economic opportunity to communities through participation in the commercial fishery[12]. The share of communal commercial crab licence eligibilities has been growing in recent years (Figure 10), due to a shift towards increasing commercial fishing opportunities for First Nations. In the past, the Allocation Transfer Program (ATP) and the Pacific Integrated Commercial Fisheries Initiative (PICFI) had retired existing commercial licence eligibilities from fish harvesters on a voluntary basis and reissued them to eligible Indigenous recipients and community-owned Commercial Fishing Enterprises (CFEs) as Communal Commercial licences.

[12] Fisheries and Oceans Canada Internal Commercial Licensing Data.

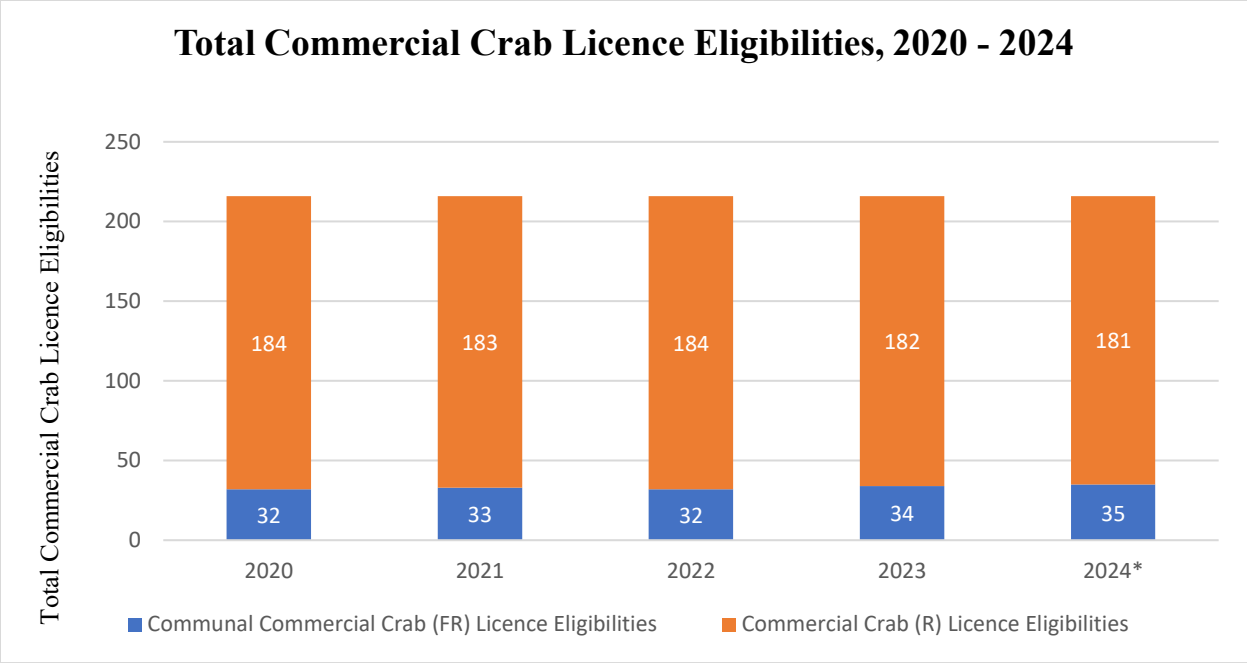

Figure 10. Distribution of commercial crab licence eligibilities, 2020 to 2024. Source: Fisheries and Oceans Canada Internal Commercial Licensing Data. *Data for 2024 is preliminary and should be treated as such.

For more information on the Aboriginal Fisheries Strategy (AFS) ATP, contact the resource manager listed in Section 15 or online:

https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/afs-srapa-eng.html

More information on the PICFI is available on the Internet at:

http://www.pac.dfo-mpo.gc.ca/fm-gp/picfi-ipcip/index-eng.html

4.1.1 Indigenous Fisheries Programs

Pacific Integrated Commercial Fisheries Initiative (PICFI)

The Pacific Integrated Commercial Fisheries Initiative (PICFI) was announced in 2007 and is aimed at achieving environmentally sustainable and economically viable commercial fisheries, where conservation is the first priority and Indigenous aspirations are supported. The Government of Canada committed $175 million over five years to implement the initiative. PICFI builds on fisheries reform work begun in response to the 2004 reports of the First Nations Panel on Fisheries and the Joint Task Group on Post-treaty Fisheries, as well as subsequent discussions in a wide variety of forums that have confirmed the need for PICFI. In 2017, it was announced that the Integrated Commercial Fisheries Initiative will receive permanent funding to expand Pacific and Atlantic programs. PICFI currently receives an ongoing $22.05M annually. Commercial Fisheries Enterprises (CFE) receive a notional funding of up to $375K under the Business Development Source (BDS) funding envelope and a notional funding of up to $130K under Operational Support. Beginning 2018/2019, a $600K Aquaculture Development Source (ADS) funding envelope was launched to support aquaculture projects under PICFI.

More information on PICFI is available at: http://www.pac.dfo-mpo.gc.ca/fm-gp/picfi-ipcip/index-eng.html

Allocation Transfer Program (ATP)

The Allocation Transfer Program (ATP) was created in 1994 under the Aboriginal Fisheries Strategy (AFS). Its purpose is to support fisheries-based economic development for First Nations groups in coastal communities by providing opportunities to get more involved in the commercial fishing industry. The program can provide eligible Indigenous groups access to commercial fisheries through a voluntary relinquishment process, where commercial licence holders are offered the opportunity to permanently relinquish licences in exchange for payment. The equivalent commercial fishing capacity is then re-issued to Indigenous groups, so the ATP does not add to the existing effort on the resource. As of 2011, no further federal funding has been budgeted for ATP in the Pacific Region. With the renewal of the PICFI, DFO is focused on supporting Indigenous Commercial Fishing Enterprises (CFEs). ATP will continue as a source of distribution of communal commercial licences. The ATP is considered fully allocated with the exception of some licences that are generally low value, low interest, and/or not economically viable. The Department works on allocation plans to allocate available licences on a temporary or ongoing basis. Once a plan has been approved, eligible groups are informed of the opportunities through a call out process.

More information on ATP is available at: http://www.pac.dfo-mpo.gc.ca/abor-autoc/atp-ptaa-eng.html

5 MANAGEMENT ISSUES

The following section identifies existing and emerging issues which may impact the management measures in place for the crab by trap fishery.

5.1 Conservation and Sustainability

Improved understanding of the biology related to crab recruitment, growth, moulting, and migration is required to better understand and manage the impacts of crab fishing. Biological sampling by the commercial fisheries sector will continue in all crab areas. For more information, please refer to the Biosampling annex in Appendix 9.

It is generally assumed that higher juvenile survival in nursery areas (i.e., estuaries) contributes to a more productive fishery. The abundance, growth, and distribution of post-settlement juvenile Dungeness crabs in nursery areas is affected by the type and quality of available habitat (Lewis et al. 2021, McMillan et al. 1995). Juvenile Dungeness crab habitat preferences suggest that they would be particularly sensitive to changes increasing water temperatures and to decreasing habitat complexity in nursery areas. Water temperatures exceeding 18 C cause decreased growth rates and increased mortality of newly settled juveniles, with almost 100% mortality over time at 22 C (Sulkin et al. 1996, Rooper et al., 2002). For this reason, juvenile Dungeness crabs tend to more heavily utilize the cooler and more saline lower reaches of estuaries, particularly if there is sufficient habitat complexity to provide cover from predators. For example, morality rates of for tethered juvenile Dungeness crabs in eelgrass (Zostera marina) were 30-70% lower than in open mud flats (Fernandez et al. 1993).

There is a concern that undersized, female and soft-shell crab are being removed through either illegal harvests or incidental mortality due to intensive fishing. Due to increased injury and mortality, the capture and handling of undersized, female, and soft-shell crab raises conservation and sustainability concerns. Illegal crab trap gear continues to be a concern. Crab traps having undersized, missing, or closed escape rings contribute to higher undersized, female, and soft-shell mortalities. If lost, these traps can continue to fish until the rot cord or the structure deteriorates or becomes buried in the substrate. Fishing in excess of trap allocations also threatens the sustainability of the resource and creates access issues for other harvesters.

Managers are concerned that discrepancies in the application of conservation management measures between different user groups (Commercial, Recreational, and First Nations Food, Social, and Ceremonial) may result in localized impacts to stock productivity. In 2018 the Department sought input from all users on specific conservation issues and possible initiatives to support a more effectively managed fishery for conservation and sustainability. The Department continues to consult and engage with all groups on conservation management measures in the crab fishery.

5.2 Sea Otters

For more than a decade there have been reports of sea otters impacting crab and other invertebrate populations along the west coast of Vancouver Island. Several studies have attempted to quantify the impact of sea otters on Dungeness crab fisheries, with contradictory findings. A comparison of otter populations and Dungeness crab catches in California showed no significant negative impact, and in found that the biggest increases in landings over time occurred in areas where sea otters were present. The same study reviewed 83,000 observations of sea otter foraging in California and found Dungeness crab made up less than 2% of the total diet (Boustany et al. 2021). However, Grimes et al. (2020) identified juvenile Dungeness crabs of certain size classes were vulnerable to localized, intense predation by sea otters, particularly over unvegetated habitats, causing a significant reduction in both the size and abundance of juvenile crabs. Predictive modelling of the effects of sea otter recovery in British Columbia suggests there could be a significant negative impact on the Dungeness crab fishery, although the authors also note out that adult Dungeness crab habitat extends much deeper than otters are able to forage (Gregr et al. 2020). Taken together, there is a clear need for more research on the interaction between these two species, particularly as it relates to crab size and spatial distribution, relative to otter foraging capabilities and prey preferences.

In 2009, Sea Otters were down listed from threatened to a species of special concern. For more information on their status and management please visit the Species at Risk public registry https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html.

5.3 Aquatic Invasive Species

Green crab may pose a serious threat to estuarine and marine ecosystems on the West Coast of North America as they are voracious predators feeding on a variety of intertidal animals, including oysters, mussels, clams and juvenile crabs. Green crabs are such efficient predators that they out-compete native crab species for food. For more information go to: http://www.dfo-mpo.gc.ca/species-especes/ais-eae/index-eng.html. To see the most current confirmed sightings

map, you can visit the UBC European Green Crab Monitoring Network at http://www.sogdata-centre.ca/biota/aquatic-invasive-species.

5.4 Social, Cultural, and Economic Issues

5.4.1 First Nations

The Department continues to receive requests from First Nations to improve food, social, and ceremonial (FSC) access and domestic access using management measures such as commercial closures and areas closed to both commercial and recreational harvest, also known as FSC-exclusive harvest areas. However, some First Nations have limited catch and effort information on FSC and domestic fishing, which makes assessing these requests challenging. Some information on FSC and domestic harvesting is provided to the Department through various catch monitoring programs.

The Department is concerned about unreported and unauthorized fishing and selling activities, which contradict conditions set out in FSC licences, and is concerned about the impact this may have on the resource, particularly in Areas I and J.

In 2017 the Department requested input from First Nations about the implementation of a number of conservation management measures across all fisheries, including mandatory escape rings, release of females, marking of holding cages, rot cord and the banning of night setting and hauling in the southern Strait of Georgia and Fraser River areas. Some First Nations are concerned about the implementation of regulatory changes that may impact their priority FSC fishing opportunities, such as trap limits and rules around commercial fishing gear. Many First Nations have included conservation management measures in their FSC licence conditions and adopted these measures as best management practices within their community. DFO will continue to engage bilaterally with First Nations on conservation management measures for crab.

In 2015, the Department implemented four seasonal voluntary commercial exclusion zones to improve First Nation and recreational access to crab and reduce local conflict. The zones are located in Crab Management Area G at Lang Bay-Brew Bay, Savary Island, and Hernando Island, and in Crab Management Area H at Silva Bay. The zones were implemented with the intention that commercial harvesters would voluntarily forego harvesting from June 15 to September 15 as part of their best management practices. In 2023 DFO reviewed commercial activity within the voluntary commercial exclusion zones following repeated complaints to local fishery officers. Electronic monitoring data showed that there was commercial activity in all three Area G zones during the voluntary time frame. Discussions on how to move forward with these zones will continue in 2026. More information on commercial best management practices can be found in Section 2.14 of Appendix 3: Commercial Harvest Plan.

First Nations have also raised concerns about ongoing coastwide issues of gear theft and vandalism, as well as instances of gear conflict. Harvesters that observe illegal activity are encouraged to call the Observe, Record, Report hotline at 1-800-465-4336.

5.4.2 Recreational

The Department has received a number of requests from the Sport Fishing Advisory Board (SFAB) to close areas to commercial harvest where crab resources are highly utilized by all

groups. However, limited catch and effort information on recreational crab harvest remains an issue when assessing these requests and the Department is exploring other options. Some information on recreational crab harvesting is acquired through iREC, (a mandatory on-line reporting program for all licenced recreational harvesters). However, estimates from iREC are provided at a large scale and can be highly variable. In less remote areas, some crab information is gathered during dockside creel surveys; however, these surveys are more commonly designed to gather salmon, halibut, and rockfish information and, due to lack of funds, focus less on shellfish harvesting activities. From 2009 to 2012 buoy count surveys were conducted in key areas of the south coast. However, it was proven difficult to use the buoy count survey data in estimating catch due to variability between seasons, weekends versus weekdays, and weather.

Floating line continues to be a navigational risk and a hazard to marine mammals. Household plastic jugs, bottles, and Styrofoam can be hard to see, difficult to print on, and can also deteriorate and sink. Absence of buoys marked with a phone number makes it difficult for the Conservation and Protection (C&P) staff to contact the owner or for harvesters to return lost gear. During the 2021/22 season, DFO and the SFAB discussed buoy requirements to address the types of floats used by recreational harvesters. Mandatory buoy requirements were introduced in 2023/24.

In the past, recreational boaters have raised safety concerns with commercial harvesters fishing among anchored pleasure boats.

In 2015 the SFAB requested that the Department review and consider the implementation of a larger legal crab size limit for the commercial fleet.

For more information related to recreational harvest, see Appendix 2: Recreational Harvest Plan.

5.4.3 Commercial

Commercial harvesters have been significantly impacted by the Chinese tariffs implemented in 2025. Reports indicate that declines in product value and export volumes have placed substantial financial strain on harvesters, coastal communities, and others who rely on this fishery.

The Department and commercial harvesters remain concerned about unauthorized fishing activities, particularly in Areas I and J. This includes the selling of illegal crab that is either undersized, female and/or having a soft-shell. These activities affect the sustainability of the resource and impact market access and prices.

Illegal sales that involve crab harvested from dioxin closure areas (particularly Howe Sound), also remain a concern as the selling and consumption of contaminated crab is both an economic and public health issue. A request to review the crab closure in Wainwright Basin due to dioxin concerns has been received. Crabs from the basin have been collected and a request to review the results has been made to Health Canada.

The commercial sector is concerned about the implementation of regulatory changes without extensive consultation and/or scientific study. This includes the implementation of additional measures to support conservation concerns such as hanging bait bans and soft-shell closures, and measures such as increasing the legal commercial size limit of crab or commercial fishery closures to improve First Nation and Recreational access.

The B.C. Crab Fishermen’s Association remains concerned with the socioeconomic impacts to the fishing industry of allocation decisions given the limited number of available licences and

limits to effort set through trap caps. The Fishermen's Association maintains the Government of Canada offset losses of access through a fair process. The Department and many harvesters also remain concerned about increased vessels in fully subscribed fishing areas. To address the Five Nations allocation increase, Fisheries and Oceans Canada (DFO) ran two Voluntary Licence Relinquishment (VLR) processes to mitigate impacts to the regular commercial fishery. Through this VLR, the Department was able to offset the reduction in commercial fishery access. Additionally, the area reselection process which occurs every three years allows commercial harvesters to move from areas of high effort and competition to lesser utilized areas.

The Department continues to conduct educational outreach to improve harvester compliance with commercial crab fishery monitoring programs. The Department is focusing on reducing data gaps, improving radio frequency identification (RFID) chip scanning, and improving logbook accuracy. Improved compliance with all of these components of the monitoring programs is needed for the proper assessment, management, and control of the crab fishery. If compliance is not improved, the Department may implement alternative measures, such as video monitoring for all licence areas or reduced fishing opportunities.

5.4.4 International

Historically, when crab destined for the United States dominated the export market, concerns were raised that legal Canadian crab, considered undersized by US domestic fishing regulations, could affect US market demand for Canadian crab. This issue may re-emerge with the recent increases in the US share of the Canadian crab export market.

5.5 Compliance

The Department's Conservation and Protection (C&P) program is concerned about the following enforcement issues:

- Fishing in closed areas
- Retention of softshell, undersize and female crab
- The increasing use of commercial vessels and gear outside of the commercial fishing season;
- Illegal crab sales and monitoring of non-daylight fishing activities;
- Buoys not marked sufficiently to determine ownership and ensure gear is visible on the surface to identify where the gear is located.
- Gear soaking beyond 18 days
- Vessels hauling other harvester's gear
- The effectiveness of electronic monitoring (EM) in all commercial licence areas, (see Appendix 9) to monitor fishing in closed areas, trap allocations, and trap haul restrictions.

EM effectiveness has been compromised by data gaps, trap retrieval without scanning radio frequency identification (RFID) chips, and utilization of RFID chips in excess of number authorized per licence.

- For other enforcement issues please refer to the Compliance Plan in Section 10.

6 OBJECTIVES

Sections 6.1 to 6.3 outline the "longer term" objectives for this and other invertebrate fisheries in the Pacific Region. Section 6.4 describes the species-specific "shorter-term" objectives for the crab by trap fisheries

6.1 National Objectives

DFO aims to:

- Meet conservation objectives and ensure healthy and productive fisheries and ecosystems;
- Manage fisheries to provide opportunities for economic prosperity;
- Provide stability, transparency and predictability in fisheries management and improved governance.

6.2 Pacific Region Objectives

In 1994, the Biological Objective Working Group of the Pacific Scientific Advice Review Committee (PSARC) identified three biological objectives for management of Pacific Region fish and invertebrate stocks (Rice et al. 1995).

- Ensure that subpopulations over as broad a geographical and ecological range as possible do not become biologically threatened (in the Committee on the Status of Endangered Wildlife in Canada [COSEWIC] sense of "Threatened");
- Operationally, the above objective requires at least that management allow enough spawners to survive, after accounting for all sources of mortality (including all fisheries and natural mortality), to ensure production of enough progeny that they will, themselves, be able to replace themselves when mature;
- Fisheries may have collateral effects on other species, mediated by the ecological relationships of the target species. Fisheries should be managed in ways that do not violate the above objectives for ecologically related species, as well as target species.

The objectives remain relevant today, particularly in light of national objectives for sustainable fisheries.

6.3 Crab by Trap Objectives

6.3.1 Conservation and Sustainability Objectives

6.3.1.1 To maintain crab productivity in areas and times where high levels of handling result in mortality of female, undersized and soft-shell crab.

Natural fluctuations in Dungeness crab populations do not allow for a steady state equilibrium harvest. Consequently, fisheries are not currently managed to a total allowable catch (TAC). Conservation objectives have been met partially through maintenance of the reproductive potential of crab stocks using the fundamental goals of protecting female crab and only harvesting male crab after they have had the opportunity to breed. The Department will continue to evaluate and consider the effectiveness of management rules such as seasonal closures, haul restrictions, and hanging bait bans that have been implemented in some crab management areas and excluded from other areas.

6.3.1.2 To maintain sustainability of the fishery through trap allocations.

Increased effort by the commercial fishery is a concern that is partially addressed through trap limits and vessel length restrictions. The intensive nature of the fishery may have significant negative impacts on stock productivity due to mortality associated with handling and releasing of female, undersize, and soft-shell crab. Increased effort in the commercial fishery led to questions around the sustainability and viability of commercial crab fishing. Trap limits came into effect May 1, 2000 to help address this problem. The objectives of trap limits are to reduce trap inventories, to reduce the abandonment, loss, and neglect of traps, to reduce congestion of the grounds, and to reduce overall effort. The Department will continue to consider trap reductions and haul restrictions in areas where effort and hauling frequency has increased.

The Department will continue to evaluate and consider further refinements to vessel and area trap allocations. Please refer to the commercial harvest plan in Appendix 3 for the most recent and proposed changes to commercial harvesting.

6.3.1.3 To obtain accurate catch records

Lack of compliance with catch log submission or inaccurate and fraudulent catch reporting creates problems with the analysis of catch data from the commercial crab fishery.

Fish slips and harvest log program standards will be maintained. The Department will also accept data submitted to the Department, (providing data delivery formats are maintained) from e-log technologies developed with their service provider. The national standard for e-logs has been finalized, and service providers are currently developing e-logs for the Pacific crab fishery.

The National Electronic Logbook (ELOG) Program aims to modernize the reporting of harvesters' catch information and to support industry innovation. Electronic logbooks help improve the timeliness and accuracy of catch and effort reporting, enhancing DFO's management of fisheries resources. DFO continues to make progress towards onboarding for the commercial Dungeness Crab fishery to the National ELOG Program. When the Department is ready to onboard the commercial Dungeness Crab fishery, Pacific region harvesters and stakeholders will be notified via the Integrated Fishery Management Plan (IFMP) process, advisory board and sectoral meetings, and fishery notices. Pacific region commercial fisheries will continue to use the current regional

reporting regime consistent with requirements in their conditions of licence (CoL). Please refer to your CoL for more information. More information about the program is available online: https://www.dfo-mpo.gc.ca/fisheries-peches/sdc-cps/nir-nei/elog-index-jbe-eng.html.

6.3.1.4 To maintain fishery monitoring and catch reporting

The commercial crab fisheries occur in accordance to Fishery monitoring and catch reporting program standards (see Appendix 9 for rationale and standards).

6.3.2 Social, Cultural and Economic Objectives

DFO's objective is to continue to work collaboratively with the Crab Sectoral Committee to ensure sustainable fisheries and to collect input from all fishing sectors and First Nations in the annual development of the IFMP.

6.3.2.1 Indigenous Objectives

DFO's objective is to continue to provide opportunities for Indigenous communities to harvest fish for food, social and ceremonial purposes and domestic purposes, in a manner consistent with the decision of the Supreme Court of Canada in *R. vs. Sparrow* and subsequent court decisions. For more information, see the internet at: http://www.pac.dfo-mpo.gc.ca/abor-autoc/index-eng.html

Collaborative management strategies are also being developed through the Aboriginal Aquatic Resource Oceans Management Program, (AAROM), see internet at: https://www.dfo-mpo.gc.ca/fisheries-peches/aboriginal-autochtones/aarom-pagrao/index-eng.html

More information on the Treaties can be found at: https://www.bctreaty.ca/

Indigenous involvement in the commercial fishery is a shared goal between DFO and Indigenous communities. Participation in the commercial fisheries has been partially addressed through the Allocation Transfer Program (ATP) and Pacific Integrated Commercial Fisheries Initiative (PICFI) programs based on based on their participation in these programs. The ATP is in the process of being phased out. PICFI CFEs are distributed communal commercial fisheries licences and quotas to increase Indigenous participation in commercial fisheries and support capacity building to operate their Indigenous community commercial fishing enterprises (CFEs).

Options to resolve FSC and domestic crab harvest access requests will continue to be developed including recommendations for potential management change approval.

The Department will continue to develop catch monitoring programs and standards in collaboration with Indigenous organizations.

The Department will continue:

- To discuss conservation, management and collaboration, reasonable FSC and domestic needs, and options to meet shared interests.
- To encourage Indigenous representatives to share any issues or needs pertaining to FSC and domestic Crab fishing in their communal areas.

The Department has worked to create an environment within the advisory process in which Indigenous representatives are welcome to express their concerns and opinions at the table and to

establish working mechanisms in conjunction with the other fishing sectors to reduce conflict and mitigate issues. The Department will continue to collaborate with Indigenous communities and other fishing sectors on efforts to improve the advisory process. Direct bilateral consultation between DFO and individual communities is also available upon request.

6.3.2.2 Recreational Objectives

DFO's objective is to affirm the social and economic importance of the recreational fishery, provide sustainable recreational harvesting opportunities as part of integrated management plans consistent with DFO's policies, to create an environment within the advisory process in which recreational fishing representatives are welcome to express their concerns and opinions at the table and to establish working mechanisms in conjunction with the other fishing sectors to reduce conflict and mitigate issues.

The document "Recreational Fisheries in Canada, An Operational Policy Framework" is available at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/op-pc-eng.htm

To improve recreational fishery monitoring and to potentially assess crab access requests, some information on recreational crab harvesting is gathered during dockside creel surveys. Recreational estimates are also acquired by a national survey of recreational fishing conducted every five years.

6.3.2.3 Commercial Objectives

DFO's objective is to continue to work collaboratively with the commercial industry on sustainable resource use and long-term economic viability of the crab seafood industry recognizing that commercial fisheries play a vital role in Canada's economy. This will include adapting to changing resource and market conditions and extracting optimal value from world markets.

Vessel safety is an objective shared between DFO, Transport Canada, Transportation Safety Board, and WorkSafe BC (Appendix 4). All parties acknowledge the role of vessel masters and crew in being responsible for their own decisions regarding fishing vessel operations. DFO's objective, in conjunction with other responsible agencies, is to adopt an affirmative action profile in respect of vessel safety considerations.

To reduce commercial effort and competition, which may have an impact on the resource, the Department will continue to consider licence and vessel trap stacking options. This opportunity will continue to be available to licence areas B, E-Sooke, E-Tofino, E-Tofino outside option, G, H, and J.

For the period of this plan, management change requests from commercial representatives will continue to be reviewed and consulted upon in order to improve commercial access to legal hard-shelled crab and to optimize the economic value of the fishery while maintaining sustainable resource use and reasonable First Nation FSC and recreational harvesting access.

6.4 Compliance Objectives

For the period of this plan, the Department's crab enforcement priorities will continue to be illegal sales investigations.

DFO's crab enforcement objectives, in conjunction with the monitoring and enforcement priorities in the Pacific Region, include:

1.) Enforcement of Licence Conditions, Regulations, and Orders

2.) Fairness and civility on grounds

3.) Timeliness of access to information for court

4.) Enforce / monitor US boundary and area closures

5.) Monitoring / enforcement of health and safety (i.e. Area contamination closures)

6.) Support outside agency investigation (CRA, RCMP, HRDC, etc.)

6.5 Other Species Concerns

6.5.1 *Species at Risk Act*

The *Species at Risk Act* (SARA) came into force in 2003 "to prevent wildlife species from being extirpated or becoming extinct, and 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."

SARA contains several prohibitions to protect species listed on Schedule 1 of SARA. Under sections 32 and 33 of SARA, it is an offence to: 1) kill, harm, harass, capture or take an individual of a wildlife species listed as extirpated, endangered or threatened under SARA; 2) possess, collect, buy, sell or trade an individual (or any part or derivative of such an individual) of a wildlife species listed as extirpated, endangered or threatened under SARA; and 3) damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered or threatened species, or that is listed as an extirpated species if a recovery strategy has recommended its reintroduction into the wild in Canada. These prohibitions apply unless a person is authorized, by a permit, licence or other similar document issued in accordance with SARA, to engage in an activity affecting the listed species or the residences of its individuals. Species listed as special concern are not included in these prohibitions. Section 58(1) contains provisions to prohibit the destruction of any part of the critical habitat of listed endangered or threatened species or of any listed extirpated species if a recovery strategy has recommended the reintroduction of the species in the wild in Canada. Critical habitat is the habitat necessary for the survival or recovery of a listed wildlife species and is identified in the recovery strategy or an action plan for the species.

For information on aquatic species listed under SARA or assessed as at risk by the Committee on the Status of Endangered Wildlife in Canada, please visit the Species at Risk Public Registry at https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html.

A species identification guide can be found here: https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/identify-identifier-eng.html

6.5.2 Shark Codes of Conduct

Out of the fourteen shark species in Canadian Pacific waters, three species are listed under SARA. The Basking Shark (*Cetorhinus maximus*) is listed as Endangered, and the Bluntnose

Sixgill Shark (*Hexanchus griseus)* and Tope Shark (*Galeorhinus galeus*) are listed as species of Special Concern. In Canadian waters, the primary threats to shark species have been identified as bycatch and entanglement. In order to address conservation concerns with shark species, it is important that measures are taken to reduce the mortality of sharks resulting from these primary threats. As such, commercial fishing licences have been amended to include a Condition of Licence for Basking Sharks that specify mitigation measures in accordance with SARA permit requirements. Additionally, a 'Code of Conduct for Shark Encounters' and 'Code of Conduct for Basking Shark Encounters' have been developed to reduce the mortality of Basking Shark, Bluntnose Sixgill, Tope Shark, and other Canadian Pacific shark species resulting from entanglement and bycatch in commercial and recreational fisheries, and aquaculture. These guidelines include boat handling procedures during visual encounters with Basking Sharks, and best practices for handling Canadian Pacific shark species during entanglement encounters.

These documents have been posted online and can be found at the following URL links.

Code of conduct for sharks: https://www.dfo-mpo.gc.ca/species-especes/publications/sharks/coc/coc-sharks/index-eng.html

Code of conduct for Basking Sharks: https://www.dfo-mpo.gc.ca/species-especes/publications/sharks/coc/coc-basking/index-eng.html

6.5.3 Marine Mammals

In order to address conservation concerns with marine mammals, it is important that measures are taken to reduce the harm to and mortality of marine mammals resulting from primary threats they face, including those that may be associated with fishing activity, as well as to improve data collection and quality of any interactions. As such, commercial fishing licenses have been amended to include a Condition of License for Marine Mammals that specify mitigation measures and reporting requirements. This includes mandatory reporting of all interactions with marine mammals, prohibition to disturb marine mammals and requirement for minimum approach distances to marine mammals as set out under the *Marine Mammal Regulations*.

MARINE MAMMAL, TURTLE AND BASKING SHARK INCIDENT AND SIGHTING REPORTS

Incident Reporting

DFO is responsible for assisting marine mammals and sea turtles in distress. If your vessel strikes a whale, or if you observe an entangled, sick, injured, distressed, or dead marine mammal in B.C. waters, please contact the B.C. Marine Mammal Response Network Incident Reporting Hotline immediately:

1-800-465-4336 OR VHF CHANNEL 16

What to report:

- Your name and contact information
- Date and time of incident
- Location: Latitude/Longitude coordinates, land-marks
- Species
- Animal alive/dead (animal condition)
- Nature of injury and supporting details (if possible)
- Pictures/Video taken

Best practices to reduce entanglement and reporting an incident: https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/docs/entanglements-empetrements-pub-eng.html

SIGHTING REPORTING

Fisheries and Oceans Canada appreciates your assistance in tracking the sightings of live cetaceans (whales, dolphins and porpoises), sea turtles and basking sharks. While there are many whale species found in Pacific Canadian waters, sightings of basking shark and leatherback sea turtles are infrequent. The collection of sighting data is useful to scientists in determining population size and species distribution and aids in recovery efforts under the *Species at Risk Act* (SARA).

To report whale or turtle sightings contact the Ocean Wise Sighting Network:
Toll free: 1.866.I.SAW.ONE (1-866-472-9663)
Email: sightings@ocean.org
Website: https://ocean.org/action/send-a-sighting-save-a-whale/
App: WhaleReport

To report basking shark sightings, contact the Basking Shark Sightings Network:
Toll free: 1-877-50-SHARK (1-877-507-4275)
Email: Sharks@dfo-mpo.gc.ca
Website: www.pac.dfo-mpo.gc.ca/SharkSightings

A species identification guide for sharks is available at https://waves-vagues.dfo-mpo.gc.ca/Library/40757067.pdf

Guides to distinguish between pinnipeds, emphasizing differences between Steller and California Sea Lions can be found here: https://oceanorg.blob.core.windows.net/oceanorg/2023/10/Pinniped_IDGuide-email-2022.pdf

and between Sea and River Otters: https://oceanorg.blob.core.windows.net/oceanorg/2023/10/Otters_IDGuide-ffp-2022.pdf

6.5.4 Southern Resident Killer Whale

The Government of Canada is taking important steps to protect and recover the Southern Resident Killer Whale population, in keeping with direction provided in *Species at Risk Act* (SARA) recovery documents. In May 2018, the Minister of Fisheries, Oceans and the Canadian Coast Guard and Minister of Environment and Climate Change determined the Southern Resident Killer Whale population faces imminent threats to its survival and recovery. Given the status of the population and ongoing threats to Southern Resident Killer Whale recovery, DFO implemented a number of measures since 2018, including measures aimed at increasing prey availability and accessibility for Southern Resident Killer Whales - particularly Chinook salmon—and reducing threats related to physical and acoustic disturbance with a focus in key foraging areas within Southern Resident Killer Whale critical habitat. These measures include fishing closures, Interim Sanctuary Zones (i.e. no go zones), Speed Restricted Zones (vessel slowdown areas), vessel avoidance distances, and a number of voluntary measures in the presence of killer whales.

Since 2018, Indigenous groups, Indigenous Multi-Nation Group, the Indigenous and Multi-Stakeholder Advisory Group (IMAG), Technical Working Groups (TWGs), stakeholders, and the public have provided recommendations and feedback to Ministers and Departments on a range of measures (including measures related to increasing prey availability, sanctuaries, vessel disturbance [both noise and physical disturbance], and contaminants) to support Southern Resident Killer Whale recovery.

The Government of Canada is working with Indigenous groups and stakeholders to inform potential changes to vessel measures for 2026 and 2027. The Government of Canada intends for actions for the 2026 season be implemented to coincide with the return of Southern Resident Killer Whales in typically greater numbers to Canadian Pacific waters. These restrictions do not apply to individuals or vessels being used to fish for food, social or ceremonial purposes, or for domestic purposes pursuant to a treaty, under a license issued under the Aboriginal Communal Fishing License Regulations. For up-to-date information regarding the Southern Resident Killer Whale management measures, please visit: https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html

Additionally, the Government of Canada is asking vessel operators to respect the following voluntary measures:

- Stop fishing (do not set or haul gear) within 1,000 metres of killer whales and let them pass;
- Reduce speed to less than 7 knots when within 1000m of the nearest killer whale
- When safe to do so, turn off echo sounders and fish finders
- Place engine in neutral idle and allow animals to pass if your vessel is not in compliance with the approach distance regulations
- For more information on the best ways to help whales while on the water, when on both sides of the border, please visit: bewhalewise.org

For information regarding the Southern Resident Killer Whale management measures to support recovery, please contact the Marine Mammal Team (DFO.SRKW-ERS.MPO@dfo-mpo.gc.ca) or visit: https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html

6.5.5 U.S. *Marine Mammal Protection Act* Fish and Fish Product Import Provisions

In 2016, the U.S. published new regulations (80 FR 54390) pursuant to the *Marine Mammal Protection Act* (MMPA) which focus on the reduction of marine mammal bycatch in foreign commercial fishing operations.

Under these regulations, harvesting nations intending to continue to export fish and fish products to the U.S. after January 1, 2026, had to apply to the U.S. National Oceanic and Atmospheric Administration (NOAA) for a comparability finding for each of its commercial fisheries listed in the 2020 U.S. List of Foreign Fisheries. Harvesting nations must demonstrate: 1) the prohibition of intentional mortality or serious injury of marine mammals in the course of commercial fishing operations; and 2) the implementation of a regulatory program comparable in effectiveness to the U.S., including mandatory reporting of marine mammal bycatch, monitoring programs and management/mitigation measures where appropriate.

Depending on information provided, foreign commercial fisheries that export fish and fish products to the United States can be classified as either "export" or "exempt" based on the frequency and likelihood of incidental mortality and serious injury of marine mammals. On October 8, 2020, the 2020 U.S. List of Foreign Fisheries was published on the NOAA public registry. For the Pacific Region, all Crab-by-trap and Prawn/Shrimp-by-trap fisheries are classified as *Export.* All other Invertebrate fisheries (hand implement, diving, and trawl) are classified as *Exempt.*

Fisheries that fail to demonstrate such comparability measures to the US by December 31, 2025, will be prohibited from entering the US market starting January 1, 2026. On September 2, 2025, NOAA published in the U.S. Federal Register the results of comparability findings under the U.S. MMPA. All Canadian fisheries were found compliant and can continue to export fish and fish products to the U.S. after the MMPA import provisions come into effect on January 1, 2026.

DFO will continue to share information about the U.S. *Marine Mammal Protection Act* Fish and Fish Product Import Provisions and the process for ensuring continued access to US markets. Further information can be found on the NOAA website, or by contacting the Regional Fisheries Coordinator or the DFO Marine Mammal Unit (MMU) (DFO.PacificMarineMammal-PacificMarineMammal.MPO@DFO-MPO.GC.CA).

6.5.6 Marine Mammal Regulations

The *Marine Mammal Regulations* provide direction on conservation and protection of marine mammals, provide guidance for recovery of listed species under the *Species at Risk Act*, and set out provisions related to reducing human disturbance of marine mammals (e.g. viewing of marine mammals) and mandatory reporting requirements in the case there is accidental contact with a marine mammal and a vessel or fishing gear. These regulations were amended in 2018 and specify mandatory requirements to prevent disturbance of marine mammals.

As per section 7(2) of the *Marine Mammal Regulations*, disturbance is defined as a number of human actions including:

- Feeding, swimming or interacting with a marine mammal.
- Moving a marine mammal (or enticing/causing it to move).
- Separating a marine mammal from its group or going between it and a calf.
- Trapping a marine mammal or a group either between a vessel and the shore, or between a vessel and other vessels.
- Tagging or marking a marine mammal.

Boats are required to maintain a minimum approach distance of 100 m for whales, dolphins or porpoises, 200m when whales, dolphins or porpoises are in a resting position or with a calf, and 200m from all Killer Whales in Pacific Canadian waters except when in southern B.C. coastal waters which has an increased approach distance of 400m in support of Southern Resident Killer Whale recovery.

Please visit the Southern Resident Killer Whale management measures website for more information on the management measures and potential amendments to the approach distances to Southern Resident Killer Whales under the Marine Mammal Regulations for 2026/2027: https://www.pac.dfo-mpo.gc.ca/fm-gp/mammals-mammiferes/whales-baleines/srkw-measures-mesures-ers-eng.html

Any operator of a vessel or fishing gear involved in accidental contact with a marine mammal must notify DFO of the incident, as per section 39 of the *Marine Mammal Regulations.* Incident reporting includes:

- Reporting an injured, stranded, entangled or dead marine mammal to the B.C. Marine Mammal Response Network (Observe, Record, Report) 1-800-465-4336.
- Reporting as bycatch in a log book.
- Reporting accidental contact through the marine mammal interaction form.
- Depredation reporting to DFO by email at Mammals.Marine@dfo-mpo.gc.ca, by calling 1-800-465-4336 or Reporting accidental contact through the marine mammal interaction form.

Please note, incidents involving abuse or harassment of a marine mammal should be reported as a fisheries violation, while injured, stranded, entangled or dead marine mammals should be reported to the B.C. Marine Mammal Response Network to enable a response if appropriate.

For more information on safe boating behavior around whales please visit: Watching Marine Mammals and Be Whale Wise, or by contacting the DFO Marine Mammal Unit (MMU) (Mammals.Marine@dfo-mpo.gc.ca).

6.6 Oceans and Habitat Considerations

For the most up-to-date information, see website links, advisory board updates, and Fishery Notices.

6.6.1 Canada's Marine and Coastal Areas Conservation Mandate

To protect biodiversity and meet its marine conservation targets, Canada is establishing marine protected areas and other effective area-based conservation measures (OECMs), in consultation

with First Nations, other levels of government, industry, non-governmental organizations, and the public.

More information is available online for:
Canada's marine conservation targets: https://www.dfo-mpo.gc.ca/oceans/conservation/index-eng.html
Canada's marine protected and conserved areas:
https://www.dfo-mpo.gc.ca/oceans/conservation/areas-zones/index-eng.html
Marine refuges and fisheries management measures that qualify as OECMs: https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/index-eng.html

Marine Protected and Conserved Areas

Canada uses a variety of legislative tools for marine conservation, depending on the lead federal department or agency and their coastal mandates. As goals, objectives, and management plans are finalized for these initiatives, DFO's management of fisheries will be adapted as appropriate, in consultation with interested parties through initiative-specific consultations and annual Integrated Fisheries Management processes. The implementation of spatial marine conservation initiatives is informed by considerations under the *Oceans Act, Fisheries Act* and the *Sustainable Fisheries Framework* policy suite, and mandate commitments to the Blue Economy Strategy and reconciliation with First Nations.

For more information on Canada's marine conservation tools: https://www.dfo-mpo.gc.ca/oceans/conservation/plan/index-eng.html

For more information on relevant legislation, please see the following:
Marine refuges and other measures under the *Fisheries Act*: https://laws.justice.gc.ca/eng/acts/f-14/page-1.html
Marine Protected Areas - *Oceans Act*: https://laws-lois.justice.gc.ca/eng/acts/O-2.4/
National Wildlife Areas - *Canada Wildlife Act*: https://laws.justice.gc.ca/eng/acts/w-9/page-1.html
National Marine Conservation Areas (Reserves) - *National Marine Conservation Areas Act*: https://laws.justice.gc.ca/eng/annualstatutes/2002_18/page-1.html

An overview map of federal marine conservation initiatives in the Pacific Region is provided in Figure 1, followed by a table outlining relevant details by initiative – both established and in progress. Many initiatives are types of marine protected areas (MPAs) or marine refuges (OECMs). See site-specific regulations and management plans for any restrictions on activities, or Fishery Notices where applicable.

Figure 1. Pacific Fisheries Management Areas and Federal Marine Conservation Initiatives and Closure

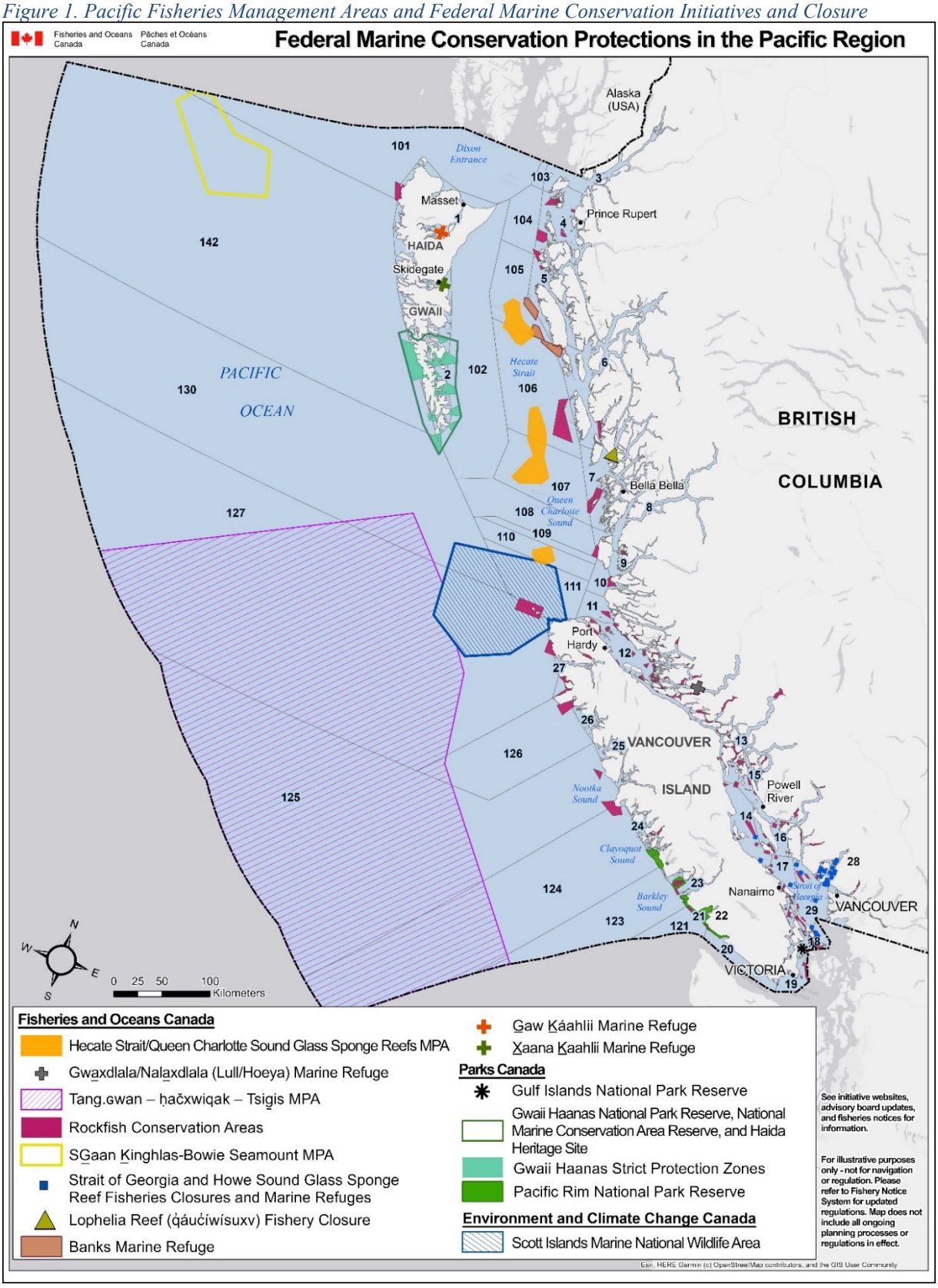

Table 1. Overview of Federal Marine Conservation Initiatives in DFO Pacific Region (see Figure 1 map)

Name	Type	Lead	Weblinks	Contact	Fishery Considerations
Fisheries and Oceans Canada, *Oceans Act* and *Fisheries Act*					
Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Area	MPA	DFO	https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/hecate-charlotte/index-eng.html	DFO.OceansPacific-Oceans-Pacifique.MPO@dfo-mpo.gc.ca	See MPA website and regulations for more details: https://laws-lois.justice.gc.ca/eng/regulations/SOR-2017-15/index.html In the MPA there are 3 different management zone types: Core Protection Zones, Vertical Adaptive Management Zones and Adaptive Management Zones **The entire MPA is closed to commercial bottom-contact fishing activities. Core Protection Zones (CPZ) are closed to anchoring and all fishing activities**. Commercial fishing in a Vertical Adaptive Management Zone (VAMZ) is permitted if the fishing is carried out by means of midwater trawl, midwater hook and line, troll, seine or gillnet and the gear does not enter a CPZ. Recreational fishing in a VAMZ is permitted if the fishing is carried out by means of midwater hook and line and the gear does not enter a CPZ.
SG̲áan K̲ínghlas-Bowie Seamount Marine Protected Area	MPA	DFO & Council of Haida Nation	https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/sgaan-kinghlas-bowie/index-eng.html	DFO.OceansPacific-Oceans-Pacifique.MPO@dfo-mpo.gc.ca	See MPA website and regulations for more details: https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-124/ The MPA is closed to all commercial fishing activities. The MPA is also closed to recreational and FSC bottom-contact fishing activities.
Tang.gwan – ḥačxwiqak – Tsig̲is Marine Protected Area **Offshore Pacific Seamounts and Vents Closure †**	MPA	DFO	https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/tht/index-eng.html	DFO.OceansPacific-Oceans-Pacifique.MPO@dfo-mpo.gc.ca	See MPA regulations for more details: Canada Gazette, Part 2, Volume 158, Number 13: Tang.gwan {|mdash|} ḥačxwiqak {|mdash|} Tsig̲is Marine Protected Area Regulations. The MPA has 3 different management zones: General zone, Dellwood zone and Union Zone. Bottom-contact gear is prohibited in the entire MPA. Commercial and recreational fishing using pelagic hook and line gear is allowed in all three of the MPA's zones, provided

					the gear does not go below a depth of 100 m from the sea surface in the Union or Dellwood Zones, or 500 m from the sea surface in the General Zone. Midwater trawl is allowed in the General Zone, provided the gear does not go below a depth of 500 m from the sea surface and is prohibited in the Union and Dellwood Zones. Fishery Notices for these closures can be found in FN0096 (2025). † Offshore Pacific Seamounts and Vents Closure Variation Orders have been replaced by the Variation Orders for this MPA.
Banks Marine Refuge	Marine Refuge	DFO & Gitxaała Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/banks-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0102 and FN0101 (2025). In addition to all RCA closures remaining in effect, as of February 14, 2025, commercial prawn and crab by trap fisheries are closed around western portions of Banks Island, and as of March 4, 2025, recreational prawn and crab by trap fisheries are closed around western portions of Banks Island.
G̲aw K̲áahlii Marine Refuge	Marine Refuge	DFO & Council of Haida Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/masset-inlet-embouchure-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0100 and FN0099 (2025). As of February 14, 2025, all commercial fisheries are indefinitely closed in portions of G̲aw K̲áahlii (Masset Inlet). As of March 4, 2025, all recreational fisheries, except shore-based angling, are closed in portions of G̲aw K̲áahlii (Masset Inlet).
Gwa̲xdlala/Nala̲xdlala (Lull/Hoeya) Marine Refuge	Marine Refuge	DFO & Mamalilikulla First Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/lull-hoeya-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0118 (2023). The Gwa̲xdlala/Nala̲xdlala (Lull/Hoeya) marine refuge is closed to all fisheries (commercial, recreational and FSC fishing activities).

Homayno (Heydon/ Loughborough)*	*Proposed* Marine Refuge	DFO & Wei Wai Kum First Nation	TBD	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	DFO has sought input on potential fisheries closures and a proposed marine refuge at sites within Homayno (portions of Heydon and Loughborough Inlet). In the event of establishment of a marine refuge, specific details of the closures and restrictions will be communicated by Fishery Notices. The fisheries proposed for potential closure in portions of the marine refuge at Homayno (Heydon/Loughborough) are: commercial prawn by trap, crab by trap, salmon, and groundfish and recreational salmon, finfish and invertebrate fisheries.
Strait of Georgia and Howe Sound Glass Sponge Reef (GSR) Marine Refuges*	Marine Refuge	DFO	https://www.dfo-mpo.gc.ca/oceans/eccsr-cerceef/closures-fermetures-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions on a site-by-site basis can be found in Fishery Notices FN0205 (2019), FN0571 (2015), and FN0039* (2022). All commercial, recreational and Indigenous food, social and ceremonial (FSC) bottom-contact fishing activities are prohibited and include: • prawn and crab by trap • shrimp by trawl • groundfish by midwater and bottom trawl • groundfish by hook and line • use of downrigger gear in recreational salmon trolling (in select sites via Condition of Licence). (Restrictions vary by site).
Rockfish Conservation Areas (RCAs)	RCA	DFO	https://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acs/index-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	There are 162 Rockfish Conservation Areas (RCAs) in British Columbia, covering roughly 4,350km^2 of Canadian Pacific waters. These areas are closed to a range of recreational and commercial fisheries to protect inshore rockfish and their habitat. See website for details on individual RCAs by area.
GSR-RCA Project: Proposed sites in Howe Sound and Jervis Inlet	*Proposed Marine Refuges*	DFO	TBD	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	DFO is proposing six sites as marine refuges. Input is being sought on proposed fisheries closures at these sites. If the proposed marine refuges are established, closures

					may be in place in early 2026. Details of any closures will be communicated through Fishery Notices and updates to license conditions, where applicable. Proposed closures include commercial and recreational fisheries currently restricted in Rockfish Conservation Areas (RCAs), as well as bottom-contact fisheries. An information package has been shared and meetings established with potentially affected fisheries.
Xaana Kaahlii Marine Refuge	Marine Refuge	DFO & Council of Haida Nation	https://www.dfo-mpo.gc.ca/oceans/oecm-amcepz/refuges/skidegate-inlet-embouchure-eng.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions can be found in Fishery Notices FN0100 and FN0099 (2025). As of February 14, 2025, all commercial fisheries are indefinitely closed in portions of Xaana Kaahlii (Skidegate Inlet). As of March 4, 2025, all recreational fisheries, except shore-based angling, are closed in portions of Xaana Kaahlii (Skidegate Inlet).
Lophelia Reef (ǧáuc̓íwísuxv)	Fishery Closure	DFO, Kitasoo Xai'xais and Heiltsuk First Nations	https://www.canada.ca/en/fisheries-oceans/news/2024/03/fisheries-and-oceans-canada-closes-the-first-and-only-known-live-coral-reef-in-pacific-canada-to-all-commercial-and-recreational-bottom-contact-fis.html	DFO.PACFMMCT-OCMGPPAC.MPO@dfo-mpo.gc.ca	Specific details of the closures and restrictions of this site can be found in Fishery Notice FN0085 (2024). The Lophelia Reef is closed to all bottom-contact commercial and recreational fisheries (including mid-water trawl).
Parks Canada, *National Marine Conservation Areas Act*					
Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site	NMCAR	Parks Canada	https://www.pc.gc.ca/en/pn-np/bc/gwaiihaanas	gwaiihaanas@pc.gc.ca	Refer to Fishery Notice FN0536 (2019), released June 13, 2019 for a detailed description of the Strict Protection Zones. There is "no extraction or harvesting by anyone of the resources of the lands and non-tidal waters of the Archipelago for or in support of commercial enterprise" (s3.3). Contact the Gwaii Haanas administration office: 1-877-559-8818

Proposed Central Coast National Marine Conservation Area Reserve*	*Proposed NMCAR*	Parks Canada	https://parks.canada.ca/amnc-nmca/cnamnc-cnnmca/cotecentrale-centralcoast	nmca-pacific-amnc@pc.gc.ca	Proposed site is currently in the establishment agreement negotiation phase. Successful negotiation of an establishment agreement will include determining an outer boundary for the site within which the Federal Marine Protected Area Protection Standard will apply, which includes a prohibition on bottom trawl gear. Associated steps will be taken following establishment agreement completion to advance application of the Standard. Permitted activities are determined during the management planning process which begins after formal establishment. Management planning will also be informed by the expertise of an advisory committee comprised of representatives from a range of marine sectors and interests, including the commercial fishing sector. No fisheries closures associated with the proposed Central Coast NMCAR are anticipated for the 2026 IFMP / fishing season.
Gulf Islands National Park Reserve	National Park marine area	Parks Canada	https://parks.canada.ca/pn-np/bc/gulf	gulfinfo@pc.gc.ca	Park regulations can be found at: *Canada National Parks Act*
Pacific Rim National Park Reserve	National Park marine area	Parks Canada	https://www.pc.gc.ca/en/pn-np/bc/pacificrim	Pacrim.info@pc.gc.ca	Park regulations can be found at: *Canada National Parks Act*
Environment and Climate Change Canada, *Canada Wildlife Act*					
Proposed marine National Wildlife Area at Nearshore Haida Gwaii	*Proposed Marine National Wildlife Area*	ECCC & Council of Haida Nation	TBD	RNFMilieu-MarinSCFPAC-CWS-PACMarineNWA@ec.gc.ca	The marine NWA was identified in the Network Action Plan (2023) as the proposed tool for the Nearshore Haida Gwaii Site. Partners are currently in the feasibility assessment stage and reinitiating stakeholder engagement. In October 2025, Partners will be initiating the Nearshore Haida Gwaii Advisory Committee (NHGAC) and also engaging, as appropriate, through bilateral discussions. The role of the NHGAC is to provide a forum for Partners to receive advice and input on the feasibility assessment phase of the proposed marine NWA. The NHGAC will include representatives from a range of sectors, such

					as the commercial fisheries sector; and the Haida Gwaii Integrated Advisory Committee. The NHGAC is not a decision-making body. Discussion of any protection measures and/or permitted activities will occur during the Regulatory Strategy phase. No fisheries closures associated with the proposed marine NWA at Nearshore Haida Gwaii are anticipated for the 2026 IFMP / fishing season.
Scott Islands Marine National Wildlife Area*	Marine National Wildlife Area	ECCC	https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/locations/scott-islands-marine.html	Enviroinfo@ec.gc.ca or rnfissinwa@ec.gc.ca	The Scott Islands Protected Marine Area regulations can be found at: https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-119/index.html

**** Indicates ongoing planning process. See initiative websites, advisory board updates, and Fishery Notices for information.***

Marine Spatial Planning in Canada

Marine Spatial Planning (MSP) is an internationally recognized and collaborative process for managing ocean spaces to achieve ecological, economic, cultural, and social objectives. In Canada, MSP does not replace regulatory responsibilities of existing authorities, rather through this collaborative process, MSP develops a shared vision, principles, and knowledge base, as well as decision support tools, to make appropriate and evidence-based decisions about ocean use and management.

Key deliverables for MSP in the Pacific region included the Canada Marine Planning Atlas (Pacific), the Marine Spatial Planning Framework for the Southern B.C. Planning Area, and the Marine Protected Area (MPA) Network Action Plan for the Northern Shelf Bioregion . The Southern B.C. MSP Framework (the Framework) was developed with collaboration from the Province of British Columbia, other Federal departments, and Indigenous groups. The Northern Shelf Bioregion MPA Network Action Plan was endorsed by a trilateral partnership of First Nations, the Province of British Columbia, and the Government of Canada in February 2023.

For more information on marine spatial planning in Canada: https://www.dfo-mpo.gc.ca/oceans/management-gestion/msp-psm/index-eng.html

The Canada Marine Planning Atlas for Pacific Region is available online at: Canada Marine Planning Atlas (dfo-mpo.gc.ca)

The Southern B.C. Marine Spatial Planning framework is available online at: Southern British Columbia Marine Spatial Planning Framework

The MPA Network Action Plan for the Northern Shelf Bioregion is available online at: https://mpanetwork.ca/nap/

6.7 Ghost Gear Initiative

Abandoned, lost, or otherwise discarded fishing gear (ALDFG, or "ghost gear") is a leading cause of marine plastic litter and a global issue. A recent study estimated that nearly 2% of all fishing gear becomes ghost gear (Richardson et al, 2022). Since fishing gear is designed to capture fish, this means that when gear is lost it has significant negative impacts on all marine animals and coastal and marine environments. An estimated 5 - 30% decline in some fish stocks is due to damage to important marine habitats from ghost gear (NOAA Marine Debris Program, 2015). This means that when marine animals are caught in ghost gear, it is a threat not just to marine mammals and species at risk, but also to the health of commercial fish stocks and aquatic habitats. Data from Fisheries and Oceans Canada's Lost Gear Reporting System between July 2020 and December 2023 shows that of the 85,610 animals identified in retrieved ghost gear in Canadian waters, 84% were of commercial value.

Canada has been at the forefront of addressing this issue, signing on to the Global Ghost Gear Initiative in 2018, establishing a Ghost Gear Program in 2019, mandating lost gear reporting in 2020, and sharing lost gear reporting data with the Global Ghost Gear Initiative's Data Portal in 2022 and again in 2024.

As part of the Canadian strategy on ghost gear going forward, Fisheries and Oceans Canada will perform a regulatory review and assessment process to address impediments to gear retrieval and to strengthen preventative measures. An area-by-area review of gear types to quantify risks to our ecosystems will also be performed as part of an analysis of fisheries management practices to help modernize, strengthen and implement best practices.

To learn more about the DFO Ghost Gear Program, go to: Canada.ca/ghostgear

6.1 Conditions of Licence to Report Lost and Retrieved Gear

All commercial harvesters must report their lost and subsequently retrieved fishing gear. While the Department is taking a stewardship approach to ghost gear, and working with harvesters to reduce the effects of ghost fishing, the inclusion of the reporting requirement in conditions of licence means that not reporting lost and/or retrieved gear is now a chargeable offence.

Lost gear can be reported through the online Fishing Gear Reporting System, available at: https://www.dfo-mpo.gc.ca/fisheries-peches/commercial-commerciale/reporting-declaration-eng.html

To learn more about the DFO Ghost Gear Fund, go to: https://www.dfo-mpo.gc.ca/fisheries-peches/management-gestion/ghostgear-equipementfantome/program-programme/projects-projets-eng.html

7 ACCESS AND ALLOCATION

The Minister can, for reasons of conservation or for any other valid reasons, modify access, allocations, and sharing arrangements as outlined in this IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

7.1 First Nations Access

First Nations FSC fisheries have a minimum harvestable size limit and gear restrictions. DFO began implementing non-retention of female crab in 2022 in some conditions of licence, and will continue to engage bilaterally on conservation management measures for female crab. Participants are requested to release females with the least possible harm.

The Department will continue to provide FSC and domestic opportunities for First Nations to harvest crab, in a manner consistent with the decision of the Supreme Court of Canada in *Sparrow*, and other decisions.

DFO has been receiving requests from First Nations to improve access to shellfish for FSC and domestic purposes. First Nations interested in bilateral discussion with DFO regarding FSC and domestic access issues should contact the resource manager for their area (See Section 15 for contact information).

Please refer to Appendix 1 for the First Nation Harvest Plan.

7.2 Recreational Access

The Recreational fishery has gear restrictions, a minimum harvestable size limit, and non-retention of females. See Appendix 2 for the Recreational Harvest Plan.

The Department will continue to explore ways of improving recreational access. If any changes are approved after the IFMP is finalized they may be implemented in season.

Requests for improved recreational access are directed to DFO through the Sport Fishing Advisory Board (SFAB) process and the representatives to the Crab Sectoral Committee. The SFAB usually meets twice a year (in the late spring and mid-winter) to discuss and advise DFO on recreational fishing plans, recreational fishery regulations, and any areas of concern to the recreational fishing community. Information on the SFAB is available at:

http://www.pac.dfo-mpo.gc.ca/consultation/smon/sfab-ccps/index-eng.html

7.3 Commercial Access

The commercial fishery has a minimum harvestable size limit, limited commercial licensing, area licensing, area and vessel trap limits, soak limits, sex restrictions, soft-shell restrictions, gear restrictions, and permanent and seasonal closure areas. See Appendix 3 for the Commercial Harvest Plan.

7.4 Experimental, Scientific, Educational or Public Display

DFO supports and facilitates scientific investigations related to crab. Scientific licence requests received from scientific, educational, and public display institutions, including biological collecting firms, are considered. Existing policies with respect to scientific licences and the *Larocque* court decision apply.

Co-operative scientific assessment programs of mutual interest and agreement between DFO and industry may be established with a commercial harvesters association named as the scientific licence holder. Industry representatives will undertake vessel selection and provide advice to DFO on aspects of the assessment program.

8 MANAGEMENT MEASURES FOR THE DURATION OF THE PLAN

See the First Nations, Recreational, and Commercial Harvest Plans, Appendices 1 to 3, for detail on Fishing Seasons and Areas, Control and Monitoring of Removals, Decision Rules, and Licensing.

9 SHARED STEWARDSHIP ARRANGEMENTS

9.1 Commercial

Vessel owners/licence eligibility holders are required to make arrangements with an industry-funded service provider for the delivery of in-season information to DFO as required by conditions of licence regarding electronic monitoring, biological sampling, and catch reporting. The approved service providers are Ecotrust Canada for all Area A programs and Pacific Coast Fishery Services for all other Crab Management Areas (B through J inclusive). Please refer to Section 15 for contact information.

9.2 Fisheries and Oceans Canada

Contributions to the IFMP are provided by Fisheries Management in the areas and regional headquarters, Science Branch, the Shellfish Data Unit, Conservation and Protection, the Treaty and Indigenous Policy Directorate, the Pacific Fishery Licence Unit, the Recreational Fisheries Division, the Oceans Directorate and numerous administrative personnel.

10 COMPLIANCE PLAN

10.1 Overview

At the start of each fiscal year an operational work plan is developed. Factors to be considered in the development of operational priorities include:

- Direction from regional or national headquarters;
- Whether the impacts of illegal harvest of a particular fishery have impact to human health (e.g., Canadian Shellfish Sanitation Program, Crab Dioxin Closures);

- Whether the fishery contains a stock of concern (identified with input from managers of respective disciplines such as Resource Management, Fish And Fish Habitat Protection Program, etc.);
- Past and known compliance issues within the fisheries;
- Timing: Do C&P have staff available and is it a year-round activity or periodic (e.g. habitat versus early timed Fraser Chinook); and
- Funding availability, Reconciliation priorities, and access for First Nations.

Enforcement activities can be conducted either on an opportunistic basis or through dedicated enforcement patrols depending on the operational priority assigned to this fishery.

The level of enforcement effort expended in ensuring compliance in the crab fishery will depend on the level of the priority set for this fishery in the seasonal priority setting as identified above. The commercial crab fishery is Region-wide and enforcement effort may vary depending on fishing pressure identified in particular areas. In-season consultation with the fishery managers may identify areas of concern that can elevate the priority level for enforcement staff. Where enforcement activities are undertaken, the scope and deployment of resources will encompass those areas outlined in the sections below (see Sections 10.2 to 10.3).

10.2 Main Program Activities

10.2.1 Priorities

Where enforcement is conducted in the crab fishery, the priorities for the term of this plan will be to:

- investigate landings of undersize, female and soft-shell crab,
- investigate illegal sale, purchase, barter and trade of crab not harvested under a licence,
- survey closed areas for illegal activity,
- check compliance with conditions of licence such as gear requirements, trap allocations, harvest log and trap soak limits,
- work with fishery managers to investigate fraudulent reporting of crab landings in fish slips and harvest logs, and
- investigate irregularities reported by observers and service providers.

10.2.2 Dockside Monitoring

Fishery officers will conduct dockside monitoring checks for size limit, soft-shell crab, female crab, and prompt completion of harvest logs as per the Conditions of Licence (*Fisheries [General] Regulations* Section 22).

10.2.3 Vehicle Inspections

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

10.2.4 Fishery Patrol Vessels

Fishery officers will conduct monitoring and compliance patrols at-sea using program vessels and Canadian Coast Guard (CCG) vessels. Vessel boarding will be conducted to ensure compliance with both vessel and individual licence requirements. Both open and closed area patrols will be conducted.

Fishery officers will respond in support of the service providers and any at-sea observers that may be used. Fishery officers may also co-ordinate patrols with First Nations guardians and fishery managers when available.

10.2.5 Air Surveillance

DFO contracts a surveillance plane with a Fishery Officer onboard to conduct compliance patrols by air to cover a vast area in a short period of time. The plane works in collaboration with the local C&P detachments to relay observations, conduct investigations and deploy resources where needed.

10.2.6 Crab Traceability

DFO will be consulting with recreational, First Nation, and industry groups to develop a program that will track crab from the point of landing until the final destination.

10.3 Enforcement Issues and Strategies

Below is a list of common enforcement issues and strategies. Most commercial regulations are outlined the in the Conditions of Licence, which are attached to the licence. Failing to comply with the conditions of licence is a violation of s.43.4(1) of the *Fisheries Act,* which depending of the severity of the violation, can be dealt with by the way of issuance of a Federal Contraventions Violation Ticket or a required court appearance. These conditions must be on board when the vessel is engaged in commercial fishing. With modern day technology and electronic licences, the conditions of licence must be downloaded to a device or printed on paper and will remain on the vessel while engaged in commercial fishing. They must be produced to a Fishery Officer or Fishery Guardian when requested.

In the following table: PFR: *Pacific Fisheries Regulations,* FFA: *Federal Fisheries Act 1993*. F(G)R: *Fisheries (General) Regulations* Section:

Licensing Verification - Vessel licensed - Experimental licence - No Harvesters Registration Card (FRC). - Fail to produce FRC.	PFR S.22 F(G)R S.52 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 FGR 43.4(1)	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. 66	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. 43.4(1) (4)	At sea and dockside inspections will occur when opportunities exist. Investigations may occur on an opportunistic basis after C&P has been notified by fisheries management that a violation has occurred. 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 have an operational Electronic Monitoring System	F(G)R S. 43.4(1)	At sea and dockside inspections will occur to measure compliance with this provision. Investigations may also occur after C&P has been notified by Fisheries Management that a violation has occurred as result of service provider findings.

Fail to maintain "Validation and Harvest Logbook"	F(G)R S. 43.4(1)	At sea and dockside inspections will occur when opportunities exist. Investigations may also occur after C&P has been notified by Fisheries Management that a violation has occurred.
Exceed allowable trap limits	F(G)R S. 43.4(1)	At sea inspections to determine compliance with this provision. Investigations may also occur after C&P has been notified by Fisheries Management that a violation has occurred as result of service provider findings.
Fail to use appropriate biodegradable escape mechanisms.	F(G)R S. 43.4(1)	At sea and dockside inspections will occur when opportunities exist.
Fail to use appropriate escape rings.	F(G)R S. 43.4(1)	At sea and dockside inspections will occur when opportunities exist.
Fail to report crab exports.	F(G)R S. 43.4(1)	Dockside and transporting inspections will occur when opportunities exist.

10.3.1 2024-25 Compliance Summary

Enforcement action took place during the season relating to the Conditions of Licence. It was focused on compliance with trap construction, buoy marking, the harvesting of soft-shell and undersize crab, logbook records, and fishing in areas closed to harvest. Canadian and United States enforcement staff conducted patrols along the international boundaries to ensure compliance with that boundary.

Enforcement action was also conducted on the recreational crab fishery. Violations consisted mainly of undersize, over limits, retention of females, lack of biodegradable escapement mechanisms and unmarked gear.

Problems that remain a concern in all areas of crab fishing are the amount of unmarked, sunken traps with no biodegradable escapement mechanisms that are routinely recovered by dragging. As well, buoys are often unreadable due to names being washed off or covered by organic material.

There needs to be increased compliance with accurate and timely completion and submission of harvest logs, as well as completing the annual Fishing Activity Location Reports (Hails).

There appears to be an increasing concern with respect to Canadian product entering the United States that is not compliant with United States size restrictions. While this issue is not an enforcement concern in Canada it may have long term implications that may affect market share for United States destined product.

Enforcement staff will continue to 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.

Fishery managers, resource management biologists, and shellfish assessment biologists have prepared impact statements for use in court cases. These have been useful in allowing the courts to understand the implications of the offence and for increasing the resultant fines clearly. Recently, impact statements pertaining to crab have included a section that suggests the Judge direct fines to a special purpose account, held by the Department, to fund research, education, equipment, and investigations pertaining to crab biology and management of the fishery.

11 POST-SEASON REVIEW

To obtain Crab Multi-sectoral meeting records please contact your local fishery manager (See Section 15).

Currently, annual commercial service provider performance evaluations and subsequent reviews of Electronic Monitoring, Biosampling, and Harvest Log programs will be conducted to improve regulations and compliance. Annual catch landings will be shared with the Crab Sectoral Committee, as well as a review of DFO stated objectives and in-season management changes. The Department continues to work on improving the format of the Multi-sectoral meeting as well as what information is shared and welcomes feedback from participants.

11.1 Conservation and Sustainability

Concerns with increased mortality from handling soft-shell crab and, from the industry perspective, with the marketing of inferior product, led to the non-retention of soft-shell crab. In 2001, a soft-shell crab was defined as a crab having a durometer measurement of 65 units or less. Shortly after implementation, commercial harvesters, crab buyers, and DFO staff re-assessed shell condition, meat content, injuries and mortalities on hundreds of crab during several offloads to come up with a legal definition of 70 units for licence conditions. Feedback has indicated that this value is better and more representative of a hard crab available to the fishery. For biological sampling, soft-crabs are defined as being springy soft, crackly soft, plastic soft, or moulting and durometers are not used.

To address some of these concerns, electronic monitoring (EM) or 100 percent at-sea observer coverage was required on all commercial crab vessels commencing April 1, 2006. To date, all vessels have selected the electronic monitoring option over the more costly observer monitoring approach. However, in cases where EM hardware requirements are not being met, observers have been deployed as an interim measure to fulfill monitoring requirements and enable further fishing activity. Since the spring of 2013 the electronic monitoring service provider for all areas has

monitored commercial vessel trap hauling activity through recording vessel positions every 10 seconds and provided daily vessel position and activity data to the Department.

Several commercial management changes were made in 2008 to reduce handling mortality. These included a ban on hanging bait and the use of bait cups in some areas, reduced trap limits and seasonally reduced trap limits. In 2009 there was a requirement for an additional escape ring and larger escape rings. In 2010, additional haul restrictions during portions of the year in certain areas of the commercial fishery were introduced. Introduced in 2012, at least two escape rings of 105 mm or greater in diameter are now required on all crab traps fished. For 2013, biological sampling targets were amended in all areas to better assess population characteristics and soft-shell timing.

Maximum trap allowances occur for all commercial areas and for all commercial vessels. The final number of traps permitted to be fished per vessel is dependent on the number of vessels that have chosen to fish within each crab management area. For more information, please refer to Section 2.5 of the Commercial Harvest Plan (Appendix 3). In 2013, a new cap was established for both Sooke Harbour and Sooke Basin and in 2016, a new cap was established for Area E Sooke vessels fishing the outside common areas of Area E. In 2017, a new cap was established for Area E Tofino vessels fishing the outside common areas of Area E. In future, additional trap limits for select areas or portions may also be implemented.

For more details, please refer to Appendix 3: The Commercial Harvest Plan, Section 1: Commercial Changes and Highlights.

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Yonis, Ramzi. 2010. The Economics of British Columbia's Crab Fishery: Socio Economic Profile, Viability, and Market Trends. Statistical and Economic Analysis Series. Publication. No.1-4 iv + 20 p.

13 INTERNET SITES

Fisheries & Oceans Canada Pacific Region Crab page, and links to the Crab by trap fishing plan:

https://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/shellfish-mollusques/crab-crabe/index-eng.html

Crab Fisheries Consultation Webpage:

https://www.pac.dfo-mpo.gc.ca/consultation/shell-crust/csc/index-eng.html

Pacific Region Area and Subarea maps:

http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/areas-secteurs/index-eng.htm

Pacific Region, Fisheries Management, Commercial Openings and Closures notices:

www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm

Pacific Region, Recreational Fisheries information web site:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html

Centre for Scientific Advice - Pacific (formerly, Pacific Scientific Advice and Review Committee (PSARC)) research documents, proceedings and Invertebrate stock status reports, including crab:

https://publications.gc.ca/site/eng/home.html

Pacific Region, Science, Infectious diseases of shellfish:

http://www.dfo-mpo.gc.ca/science/aah-saa/diseases-maladies/index-eng.html

14 GLOSSARY

AAROM	Aboriginal Aquatic Resources and Oceans Management (AAROM) program - DFO's AAROM funds aggregations of First Nation groups to build the capacity required to coordinate fishery planning and program initiatives and is focused on developing affiliations between First Nations to work together at a broad watershed or ecosystem level where there are common interests and where decisions and solutions can be based on integrated knowledge of several Indigenous communities.
AFS	Aboriginal Fisheries Strategy - DFO's AFS was implemented in 1992 to address several objectives related to First Nations and their access to the resource and continues to be the principal mechanism that supports the development of relationships with First Nations including consultation, planning and implementation of fisheries, and development of capacity to undertake fisheries management, stock assessment, enhancement and habitat protection programs.
abundance	Number of individuals in a stock or a population.
aquaculture	As defined by the United Nations Food and Agriculture Organization (FAO), aquaculture is the culture of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants. Aquaculture implies some form of intervention in the rearing process to increase production, such as regular stocking, feeding, protection from predators, etc. It also implies individual or corporate ownership of the cultivated stock.
Area and Subarea	Defined in Section 2 of the *Pacific Fishery Management Area Regulations*. A map of Pacific Fishery Management Areas is available on the DFO internet site at: www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap_e.htm

ATP	Allocation Transfer Program - DFO's ATP facilitates the voluntary relinquishment of commercial licence eligibilities and the designation of the equivalent commercial fishing capacity to eligible Indigenous groups as communal commercial licence eligibilities.
By-catch	The unintentional catch of one species when the target is another.
C&P	Fisheries & Oceans Canada, Conservation and Protection Branch.
carapace	The exoskeleton that covers the head and thorax, upon which fishing size limits are based.
communal commercial licence	Issued to First Nation organizations pursuant to the *Aboriginal Communal Fishing Licences Regulations* for participation in the commercial fishery.
communal licence	Issued to First Nation's organizations pursuant to the *Aboriginal Communal Fishing Licences Regulations* to carry on fishing and related activities for food, social and ceremonial (FSC) purposes.
COSEWIC	The Committee on the Status of Endangered Wildlife in Canada.
crustaceans	A biologically related group of the class Crustacea that includes crabs, lobsters and shrimps.
Centre for Scientific Advice - Pacific (CSAP)	Centre for Scientific Advice - Pacific (formerly, Pacific Scientific Advice Review Committee), chaired by DFO and including other federal and provincial government agency representatives and external participants.
Canadian Science Advisory Secretariat (CSAS)	Canadian Science Advisory Secretariat - coordinates the peer review of scientific issues for Fisheries & Oceans Canada. The different Regions of Canada conduct their resource assessment reviews independently, tailored to regional characteristics and stakeholder needs. CSAS facilitates these regional processes, fostering national standards of excellence, and exchange and innovation in methodology, interpretation, and insight.
DFO	Fisheries & Oceans Canada. On behalf of the Government of Canada, DFO is responsible for developing and implementing policies and programs in support of Canada's scientific, ecological, social and economic interests in oceans and fresh waters.

electronic monitoring	Equipment to digitally record: individual trap hauls; fishing activity; and fishing location, date, and time while the vessel is fishing. A licensed vessel is considered to be fishing while it has traps in the water.
Food, Social and Ceremonial (FSC)	A fishery conducted by First Nations for food, social and ceremonial purposes.
ghost fishing	A situation where fishing gear continues to cause mortalities after it has been lost, abandoned, or discarded. This commonly occurs in trap fisheries when the trap is lost and animals in the trap die and thereby bait the trap with their bodies attracting more animals.
Harvest document	Issued to a First Nation pursuant to the *Aboriginal Communal Fishing Licences Regulations* in respect of a First Nation's fishing right defined under treaty to carry on fishing and related activities for food, social and ceremonial (FSC) purposes.
iARC	Internet Annual Recreational Catch reporting program
IFMP	Integrated Fishery Management Plan
Indigenous Knowledge	There is no universal definition of Indigenous Knowledge, and the composition of Indigenous Knowledge is for Indigenous Peoples to determine. Indigenous Knowledge is intricately tied to Indigenous worldviews and ways of life, and is a complex and dynamic product of the unique histories, cultures, languages, and governance systems of the Indigenous peoples of the specific area. The term Indigenous Knowledge may not be universally used. Other terms such as Indigenous Knowledge Systems, Traditional Knowledge, Traditional Ecological Knowledge, or Aboriginal Traditional Knowledge, all convey similar concepts. When working with Inuit, the term Inuit Qaujimajatuqangit (IQ) is more likely to be used than Indigenous knowledge. Similarly, when working with Métis knowledge holders, the term Métis Traditional Knowledge is more likely to be used than Indigenous Knowledge. Indigenous Peoples define Indigenous Knowledge for their communities. The term Indigenous Knowledge is used throughout this document in line with the terminology in the *Fisheries Act* and the *UN Declaration on the Rights of Indigenous Peoples (UNDRIP)*.
inshore	Coastal waters landward of the "surfline".
invertebrate	An animal without a backbone.

landed or off-loaded	The transfer of crab from a vessel in water to land.
landed value	Value of the product when landed by a licensed fishing vessel.
landings	Quantity of a species caught and landed.
Observer	An individual who has been designated as an Observer by the Regional Director General for the Pacific Region of Fisheries & Oceans Canada pursuant to Section 39 of the *Fishery (General) Regulations.*
offshore	Coastal waters seaward of the "surfline".
pelagic	Belonging to the upper layers of the open sea.
PICFI	Pacific Integrated Commercial Fisheries Initiative - DFO's PICFI is an initiative aimed at achieving environmentally sustainable and economically viable commercial fisheries, where conservation is the first priority and First Nations' aspirations to be more involved are supported.
population	Group of individuals of the same species, forming a breeding unit, and sharing a habitat.
Precautionary Approach (PA)	In resource management, the PA is, in general, about being cautious when scientific information is uncertain, unreliable or inadequate and not using the absence of adequate scientific information as a reason to postpone or fail to take action to avoid serious harm to the resource. Information on the adoption of a PA framework for fisheries management in Canada is available at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/sff-cpd/precaution-eng.htm
PSARC	See CSAP.
recruitment event	A large survival of crab from a single spawning or year class or group of year classes that enter a population.
sampling program	A program in which representative samples of animals are collected for the calculation of parameter estimates that describe such things as weight, length or age within the general population.
service provider	An agency contracted by vessel owners or their harvesters association to co-ordinate notification, fishery monitoring, biological sampling, and data submission requirements. The service provider may train

	and recommend candidates for certification by Fisheries and Oceans Canada as observers.
SFAB	Sport Fishing Advisory Board, which provides advice to DFO on matters of recreational (sport) fishing.
single trap gear	Crab fishing gear where each trap is equipped with a buoy line and buoy and is not connected by line to other traps.
shellfish	Any species of invertebrate that may be harvested in commercial, recreational or First Nations fisheries.
soft-shell management areas	Sixteen smaller management units within Crab Management Area A from which biological data are collected. These areas open and close independently of one another.
Species at Risk Act (*SARA*)	A federal Act to prevent wildlife species from being extirpated or becoming extinct and to provide for their recovery. It provides the legal protection of wildlife species and the conservation of their biological diversity.
stakeholders	Individuals or groups with an interest in a particular fishery or activity.
stock	Describes a population of individuals of one species found in a particular area, and is used as a unit for fisheries management.
stock assessments	Results of analyses of fisheries and research data used to evaluate the effects of fishing on a stock or population and to predict the reactions of populations to alternative management choices.
Subarea	A subdivision of an Area, as described in the Pacific Fishery Management Area Regulations. (See maps at Area or Subarea internet link above).
substrate	The ground (often the ocean bottom) and its composition, in or on which animals live.
tonne (t)	Metric tonne, which is 1000 kg or 2204.6 lbs.

15 CONTACTS

15.1 Crab by Trap Sectoral Committee

The Sectoral Committee terms of reference and members are available on the Department's consultation Internet site at:http://www.pac.dfo-mpo.gc.ca/consultation/shell-crust/index-eng.html

Commercial Crab Area Representatives:

Area A – Haida Gwaii/Hecate Strait
Area A Crab Association
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Area G -Johnstone Strait
Hai Vu
Email: haivu@hotmail.com

Area H -Strait of Georgia/Gulf
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Area I -Fraser River
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Area J -Boundary Bay
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B.C. Crab Fishermen's Association	778-908-1178	megan@weheartbccrab.ca info@weheartbccrab.ca

First Nations Representatives

One or more advisors selected to represent each First Nation is available upon request

Recreational Fishing Representatives

Sport Fishing Advisory Board	Deryk Krefting:	deryk@pacificnetandtwine.com
	Ted Brookman:	teddystackle@shaw.ca
	Martin Paish:	martinpaish1@gmail.com

Commercial Crab Service Providers:

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Suite 425-309 2nd Avenue West
Prince Rupert, B.C. V8J 3T1
Phone: 250-624-4191

Pacific Coast Fishery Services Inc.
Willem Buitendyk
270 Suneagle Dr.
Saltspring Island B.C., V8K 1E5
Phone: 250-931-7686

Area A Hail phone: 778-884-1284 willem@pcfish.ca
kbond@ecotrust.ca

15.2 Crab by Trap Contacts

Observe, Record and Report (Radio Room) **1-800-465-4336**
Fisheries Information and Shellfish Contamination Closure Update (24 Hours) (866)-431-3474
(Greater Vancouver) 604-666-2828

Invertebrate Internet Page:
http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/shellfish-mollusques/index-eng.htm

DFO Fisheries Management

Regional Shellfish Co-ordinator	Lisa Mijacika	604-666-3869	Lisa.Mijacika@dfo-mpo.gc.ca
A/ Regional Manager, Crab	Karen Martz	236-203-0212	Karen.Martz@dfo-mpo.gc.ca
Regional Fisheries Management Officer	Daniel Mah		
Regional Recreational Fisheries Coordinator	Greg Hornby	604-666-3271	Greg.Hornby@dfo-mpo.gc.ca

North Coast Area

417 2nd Avenue West, Prince Rupert, B.C. V8J 1G8	General Inquiries Fax	250-627-3499 250-627-3427	
Shellfish Section Head	Coral Cargill	250-627-3021	Coral.Cargill@dfo-mpo.gc.ca
Crab Area Manager – Area A and B	Sara Dansereau	250-627-3455	Sara.Dansereau@dfo-mpo.gc.ca
Aboriginal Affairs Advisor	Melanie Anthony	250-643-0345	Melanie.anthony@dfo-mpo.gc.ca

South Coast Area

3225 Stephenson Point Road, Nanaimo, B.C. V9T 1K3	General Inquiries Fax	250-756-7270 250-756-7162	
Resource Manager – Shellfish, Nanaimo	Mike Kattilakoski	250-714-4788	Mike.Kattilakoski@dfo-mpo.gc.ca

Resource Manager – Shellfish, Nanaimo	Brittany Myhal	250-739-9217	Brittany.Myhal@dfo-mpo.gc.ca
Resource Manager – First Nations Fisheries (North East VI)	Kent Spencer	250-286-5885	Kent.Spencer@dfo-mpo.gc.ca
Resource Manager – First Nations Fisheries (South East VI)	Jorn Meier	250-616-4885	Jorn.Meier@dfo-mpo.gc.ca
Resource Manager – First Nations Fisheries (West Coast VI)	Kevin Conley	250-756-7196	Kevin.Conley@dfo-mpo.gc.ca

Fraser and Interior Area

Unit 3, 100 Annacis Parkway, Delta, B.C. V3M 6A2	General Inquiries Fax	604-666-8266 604-666-7112	
Section Head, Resource Management	Lita Gomez	778-361-0547	Lita.Gomez@dfo-mpo.gc.ca
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Aboriginal Affairs Advisor	Sheldon Evers	604-314-2257	Sheldon.Evers@dfo-mpo.gc.ca

DFO Conservation and Protection

North Coast Area

Masset 1590 Old Beach Rd, Masset, BC, V0T1M0	250-626-3316
Queen Charlotte City 137 Bay St., Queen Charlotte City V0T1S0	250-559-4413
Prince Rupert 417 2nd Avenue West, Prince Rupert, BC, V8J1G8	250-627-3499
Terrace 5235-A Keith Ave, Terrace, BC, V8G1L2	250-615-5350
Bella Coola McKenzie Hwy 20, PO Box 130, Bella Coola, BC, V0T1C0	250-799-5345

South Coast Area

Campbell River 315-940 Alder St., Campbell River, BC,V9W 2P8	250-287-9564
Duncan 5245 Trans Canada Hwy, Duncan, BC, V0R2C0	250-746-6221
Nanaimo 3225 Stephenson Point Rd, Nanaimo, BC, V9T1K3	250-756-7270
Victoria 4520 Commerce Circle, Victoria, BC, V8Z4M2	250-363-3252

Fraser and Interior Area

Langley 5550 268th St., Langley, BC, V4W 3X4	604-607-4150
Steveston 12551 No. 1 Rd., Steveston, BC, V7E 1T7	604-664-9250

DFO Science

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Crustacean Biologist	Brendan Aulthouse		Brendan.Aulthouse@dfo-mpo.gc.ca
Program Head, Shellfish Data Unit	Rob Flemming	250-756-7022	PACSDU@dfo-mpo.gc.ca Phone: 250-756-7022

DFO Licensing

Pacific Fishery Licence Unit 200-401 Burrard St, Vancouver, B.C. V6C 3S4	Phone: 1-877-535-7307 Fax: 604-666-5855

Canadian Food Inspection Agency

Vancouver Island, Central, and North Coasts	Timothy Delange	250-248-4772 ext. 221
B.C. Mainland, Interior		604-666-2245

B.C. Ministry of Agriculture 250-356-5362

WorkSafe BC

Manager of Interest for Marine and Fishing	Pat Olsen	250-334-8777
Occupational Safety Officer, Courtenay	Mark Lunny	250-334-8732
Occupational Safety Officer, Courtenay	Cody King	250-334-8733
Occupational Safety Officer, Courtenay	Gregory Matthews	250-334-8734
Occupational Safety Officer, Courtenay	Paul Matthews	250-334-8741

Occupational Safety Officer, Victoria	Jessie Kunce	250-881-3461
Occupational Safety Officer, Richmond	Bruce Logan	604-244-6477
Focus Sector Manager for Fishing, Richmond	Mark Peebles toll free	604-279-7563 1-888-621-7233 (ext.7563)
Projects related to commercial fishing contact:	Ellen Hanson toll free	604-233-4008 1-888-621-7233 (ext. 4008)

Sighting Networks

Whale Report Alert System (WRAS) For Mariners and Sea Turtle Sighting Network
Toll free: 1.866.I.SAW.ONE (1-866-472-9663)
Email: sightings@ocean.org
Internet: Whales - Ocean Wise
App : WhaleReport

Basking Shark Sighting Network
Toll free: 1-877-50-SHARK (1-877-507-4275)
Email: Sharks@dfo-mpo.gc.ca,
Internet: www.pac.dfo-mpo.gc.ca/SharkSightings

Report All Poachers and Polluters (RAPP): 1 877 952-7277 (RAPP)
or Report online: http://www.env.gov.bc.ca/cos/rapp/form.htm

Available 24 hours a day, seven days a week, RAPP allows the public to report known or suspected poachers and polluters – anonymously and without risk of confronting the offender.

APPENDIX 1: CRAB BY TRAP FIRST NATIONS HARVEST PLAN

TABLE OF CONTENTS

1 OVERVIEW OF THE FISHERY

The Department's policy on the management of First Nations' fishing identifies First Nations harvests for food, social and ceremonial (FSC) purposes as the first priority after conservation. The Department seeks to provide for the effective management and regulation of the First Nation 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 FSC purposes. The agreements also outline 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.

First Nations' harvest for FSC or domestic purposes may occur where authorized by an Aboriginal communal licence and/or harvest document, or under modern treaty. Communal licences and harvest documents can be amended in-season for resource conservation purposes.

For First Nations social, cultural, and economic issues, please refer to Section 5.4 of the main Crab by Trap Integrated Fisheries Management Plan (IFMP).

For an update on the Pacific North Coast Integrated Management Area, Marine Protected Areas, National Marine Conservation Areas, (i.e. Gwaii Haanas), and National Marine Wildlife Areas, please refer to Section 6.7 of the Crab IFMP.

2 LICENSING

First Nations harvest for FSC and domestic purposes occur throughout B.C. waters, and are managed through the issuance of Aboriginal communal licences and/or harvest documents, or under modern treaties. These licences are issued under the authority of the *Aboriginal Communal Fishing Licences Regulations*.

3 MANAGEMENT MEASURES FOR THE FIRST NATIONS FSC FISHERY

3.1 Size Limits

First Nation harvesters shall not harvest any Dungeness Crab that measures less than 165 mm or any Red Rock Crab that measures less than 115 mm.

Crabs are measured in a straight line through the greatest breadth of the carapace. Undersized crabs must be returned to the water immediately, in a manner that causes the least harm possible.

3.2 Conservation Management Measures

Fisheries and Oceans Canada (DFO) is continually evaluating existing and emergent management measures to ensure the long-term sustainability of the crab fishery in the Pacific Region. Since 2017, DFO has been consulting on conservation measures for the FSC and domestic fishery including: conservation of female crab, use of escape rings and rot cord on gear, marking of gear (including holding cages), and restricting night setting and hauling in the Strait of Georgia and Vancouver Area. It is the intention to standardize conservation management measures across all

fisheries. As of 2024, all Coastal First Nations have implemented licence conditions for rot cord and some measures such as non-retention of female crab and use of escape rings have been adopted by First Nations as a best management practice. In 2026, DFO will continue to engage with First Nations on conservation management measures for crab.

3.3 Gear

All traps used to harvest crabs must be equipped with a biological escape mechanism to allow crab to escape and prevent ghost fishing in the event that a trap is lost. Biological escape mechanisms (rot cord) for hinged lid traps are further described in Appendix 6.

Rot cord specifications may be different on different communal licence conditions and First Nations harvest plan documents. It is our intention to standardize conservation management measures across all fisheries and make changes to align all fisheries as an important component of crab management.

All traps are required to have escape holes. All traps fished in all areas must have two escape rings of 105 mm or larger in diameter to allow the escape of female and undersized male crabs.

The Department will continue to engage with First Nations to ensure gear use is meeting conservation objectives. This will include consultation around restricting night time setting and hauling in PFMAs 14, 16 through 19, 28 and 29, use of rot cord, and requirements around the marking of gear including holding cages.

3.4 Roberts Bank Terminal 2 Project

The Roberts Bank Terminal 2 Project underwent an environmental assessment and was approved by the federal government on April 20, 2023. The Project includes expansion of the Roberts Bank/Deltaport Navigational Closure and is now under regulatory review by DFO as it will require a *Species at Risk Act* compliant *Fisheries Act* authorization before it can begin construction. Additional information can be found on the Port Metro Vancouver website: www.robertsbankterminal2.com. A pilot study within the existing navigational closure at Roberts Bank is being developed to assess alternative gear methods as an opportunity to protect Indigenous rights and interests, promote conservation and management of the fishery, and maintain navigational safety. In collaboration with Tsawwassen First Nation (TFN), Musqueam Indian Band (MIB), and DFO, the Vancouver Fraser Port Authority will investigate the use of alternative technologies and methods for harvesting crab for Food, Social and Ceremonial and domestic purposes in the Navigational Closure Area.

4 MANAGEMENT AND MONITORING OF FIRST NATIONS FISHING ACTIVITIES

The Department negotiates Aboriginal Fisheries Strategy (AFS) agreements annually with over 70 Aboriginal Organizations that represent 164 of the 200 First Nations in British Columbia and the Yukon. Several of these agreements include provisions for the harvest of crab for FSC purposes. The amount harvested by some First Nations is reported to DFO; however, coast-wide it remains largely unknown. First Nations access to fish for FSC and domestic purposes is managed and 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. As a condition of the communal licences, First Nations are required to provide shellfish harvest quantities by species to the Fisheries and Oceans Canada Resource Manager as per reporting requirements. First Nations will typically designate harvesters from their communities under their communal licence.

The Department has observed an increase in the number of commercial vessels using commercial gear to harvest FSC and domestic crab and is concerned about the impact this may have on the resource due to a lack of catch reporting, which impairs the ability for the Department to manage the fishery effectively. The Department will continue to have discussions with First Nations on this topic, (particularly in Areas I and J) to develop a management approach to address the issue.

4.1 Maa-nulth Domestic Fishing

The Maa-nulth First Nations fishery for domestic (FSC) purposes under the Maa-nulth First Nations Final Agreement (Treaty) came into effect on April 1, 2011. The Maa-nulth First Nations is comprised of five individual First Nations; Huu-ay-aht First Nations, Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations, Toquaht Nation, Uchucklesaht Tribe and the Yuułuʔiłʔatḥ First Nation on the west coast of Vancouver Island. More information on the Maa-nulth Treaty can be found at:

https://www.rcaanc-cirnac.gc.ca/eng/1100100030588/1542730442128#Ts

4.2 Tla’amin Domestic Fishing

The Tla’amin fishery for domestic (FSC) purposes under the Tla’amin (Sliammon) ʔaʔǰɩnxʷegəs (“Tla’amin Treaty”) came into effect on April 5, 2016. The Tla’amin Nation is located near the City of Powell River, 130 km northwest of Vancouver. More information on the Tla’amin (Sliammon) ʔaʔǰɩnxʷegəs (“Tla’amin Treaty”) can be found at:

https://www.rcaanc-cirnac.gc.ca/eng/1397152724601/1542999321074

4.3 Tsawwassen Domestic Fishing

The Tsawwassen fishery for domestic (FSC) purposes under the Tsawwassen Final Agreement (Treaty) came into effect on April 3, 2009. The Tsawwassen First Nation is located in the lower mainland near the city of Vancouver, and their territory spans portions the Strait of Georgia near the mouth of the Fraser River as well as portions of the lower Fraser River and Boundary Bay. More information on the Tsawwassen Treaty can be found at:

https://www.rcaanc-cirnac.gc.ca/eng/1100100022706/1617737111330

4.4 Nisga'a Domestic Fishing

The Harvest agreement for domestic (FSC) purposes under the Nisga'a Final Agreement (Treaty) came into effect on May 11, 2000. The Nisga'a territory is located within the Nass River valley on the northwest coast of British Columbia. More information on the Treaty and the Nisga'a annual fishing plan can be found at:

https://www.rcaanc-cirnac.gc.ca/eng/1100100030588/1542730442128

4.5 Five Nations Right-Based Sale Fishery

Five Nuu-chah-nulth First Nations located on the west coast of Vancouver Island - Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht (the Five Nations) – have aboriginal rights to fish for any species, with the exception of Geoduck, within their court-defined Fishing Territories and to sell that fish.

Since 2019, DFO has released an annual Five Nations Multi-Species Fishery Management Plan (FMP). The FMP provides for a right-based multi-species sale fishery that DFO considers to accommodate the Five Nations' Aboriginal commercial fishing rights. The FMP outlines the Five Nations' fishing opportunities for salmon, groundfish, crab, prawn, Sea Cucumber and Gooseneck Barnacle and the fishery management regime.

The 2023/24 FMP is the fifth Multi-Species FMP developed by DFO since the 2018 B.C. Supreme Court Order and integrates changes following the 2021 B.C. Court of Appeal decision. DFO may make further changes in-season and amend the FMP as needed. The 2023/24 FMP has been extended to March 31, 2025 while the Government of Canada and the Five Nations complete negotiations for an Incremental Reconciliation Agreement for Fishery Resources. In response to the Nations' interests, DFO and the Five Nations (Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht and Tla-o-qui-aht First Nations) have authorized an extension of the Nations' fishing area from 9 nautical miles offshore to 69 nautical miles, effective July 17, 2024 and for the rest of the 2024/25 season.DFO and the Five Nations will continue to work together to identify opportunities to harvest additional species and expand the multi-species sale fishery in future years. These opportunities will be developed, where possible, based on other access that DFO provides the Five Nations outside the FMP.

A PDF version of the 2023/24 FMP is available here: https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41096605.pdf. The extended 2023/24 FMP is now available on the Federal Science Library at: https://waves-vagues.dfo-mpo.gc.ca/library-bibliothequ1253413.pdf

4.6 Central Coast Collaborative Crab Management

February of 2017, the Heiltsuk, Kitasoo Xai'Xais, Nuxalk and Wuikinuxv Nations (Central Coast First Nations – CCFN) and the Department of Fisheries and Oceans (the 'governance partners') signed a Letter of Intent (LOI) that committed the parties to working together to develop and undertake a collaborative process for identifying and recommending management objectives (starting with conservation and sufficient First Nation food, social, and ceremonial access) and measures that will achieve healthy crab populations and sustainable crab fisheries on the Central Coast. The governance partners worked together under the Central Coast Collaborative Crab Management Process (CCCCMP) and in 2020, issued a joint

recommendation proposing commercial and recreational crab fishing closures in order to increase FSC and domestic access to crab for CCFNs. Based on the joint recommendation and associated data/documentation, DFO implemented 11 new commercial crab closures and 15 year-round recreational closures on April 1, 2021, and two seasonal recreational crab closures on June 1, 2021 (See Appendix 2 Section 4.6 and Appendix 3 Section 5 for recreational and commercial closure details, respectively). In 2022, the governance partners transitioned CCCCMP to align with the implementation of the Coastal First Nations Fisheries Resources Reconciliation Agreement (FRRA) between DFO and the Coastal First Nations (including the Central Coast First Nations). Collaborative governance work in the Central Coast is now directed by the Central Coast Subregional Management Council (CCMC) under the FRRA. The CCMC's on-going crab work includes: promoting compliance with the existing crab closures; the development of a comprehensive monitoring and evaluation strategy to determine if the closures are effective at improving FSC access to legal male crab; exploring and refining recreational and FSC catch and effort monitoring; supporting FSC harvest "best practices"; and developing an enhanced approach to crab stakeholder engagement.

4.7 Marine Protected Areas and National Marine Conservation Areas

For information on Marine Protected Areas and Marine Conservation Areas, including harvesting restrictions and area coordinates, please see Sections 6.7 of the main IFMP.

APPENDIX 2: CRAB BY TRAP RECREATIONAL HARVEST PLAN

TABLE OF CONTENTS

1. INTRODUCTION

There are five Guiding Principles for recreational fisheries in Canada which are outlined in "An Operational Policy Framework, Fisheries and Oceans Canada, 2001", with more details available on the Internet at: http://www.dfo-mpo.gc.ca/reports-rapports/regs/op-pc-eng.htm

These Principles are:

1. Recreational fishing is a socially and economically valuable and legitimate use of fishery resources.

2. Fisheries and Oceans Canada is responsible for providing sustainable recreational harvesting opportunities as part of integrated management plans consistent with its policies.

3. Recreational harvesters have responsibility for shared stewardship for resource conservation and enhancement.

4. Mechanisms for federal/provincial cooperation in areas of shared jurisdiction will be established and strengthened.

5. Fisheries and Oceans has a leadership role to coordinate policies/programs with the federal government which relate to recreational fishing.

B.C. Recreational regulations are described in the British Columbia Tidal Waters Sport Fishing Guide, found online at: http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html

2. RECREATIONAL MANAGEMENT HIGHLIGHTS FOR 2026/27

- DFO implemented non-retention of female Puget Sound King Crab and Brown Box Crab. This change will continue for the 2026/2027 fishing season.

- The daily limit for shore crab will be reduced to 25 per day in all areas , except Areas 28 and 29 where retention is 0. This limit change will be implemented for the 2026/2027 fishing season.

3. MANAGEMENT MEASURES FOR THE RECREATIONAL FISHERY

The regulations are summarized in the B.C. Sport Fishing Guide which lists closed times, daily and possession limits and some closed areas. A copy of the B.C. Sport Fishing Guide is available online at: http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html

3.1. Size Limits

Recreational harvesters may not harvest any Dungeness Crab that measures less than 165 mm or any Red Rock Crab that measures less than 115 mm.

Crab are measured in a straight line through the greatest breadth of the carapace. Harvesters are advised to measure crab using a calliper device. Harvesters are responsible for ensuring they only harvest crab that meet minimum size limits. Undersized crab must be returned to the water immediately, in a manner that causes least harm possible. For retained crab, the carapace must remain attached until consumed or until the crab arrives at your ordinary residence.

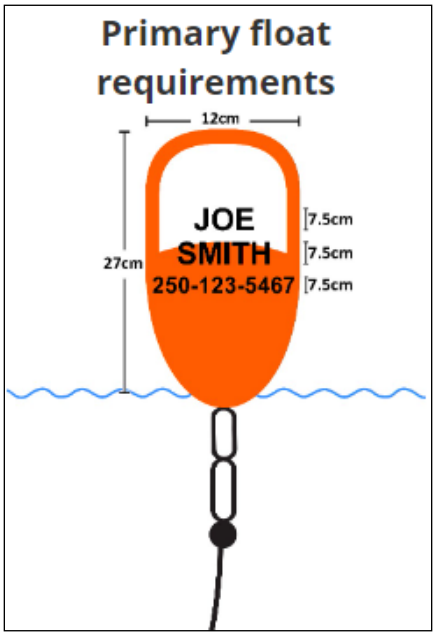
3.2. Non Retention of Female Crab

Recreational harvesters are required to release all female Dungeness, King, Puget Sound King, Brown Box and Red Rock crabs immediately, in a manner that causes the least harm possible. The female's abdomen has a wide "beehive" shape; the male's has a narrow "lighthouse" shape.

3.3. Gear

Crab may be harvested using dip nets, ring nets, traps, or handpicking. It is illegal for an individual to use more than two rings, two dip nets or two traps or more than two of these in combination to fish for crab. It is illegal to use snares, rakes, spears or other pointed instruments to catch or attempt to catch crab.

Crab traps are required to have two unobstructed circular escape holes or rings, measuring a minimum of 105 mm in diameter. All crab traps must have a section in the top or sidewall that has been secured by a single length of untreated cotton twine no greater than No. 120 (approximately 5 mm or 3/16 inch diameter). This twine is often referred to as rot cord. On deterioration this must produce a rectangular opening with a minimum size of 7 cm x 20 cm, or a square opening with a minimum size of 11 cm x 11 cm. This regulation is intended to ensure that if the trap is lost, the section secured by the cord will rot, allowing captive crabs to escape, and preventing the trap from continuing to fish. On traps with a rigid frame and a freely opening hinged lid the trap lid must be secured by a single length of untreated cotton twine no greater than No. 120 so that the trap lid will open freely when the rot cord is broken. No other fastenings may impede the hinged lid of the trap from opening. Rot cord for hinged lid traps are further illustrated in Appendix 6.2.



In 2023/24, mandatory recreational buoy requirements were introduced. Under these new requirements, floats attached to crab traps must be cylindrical or bullet shaped, highly visible, and a minimum of 27 cm in length and 12 cm in diameter. Multiple floats of this type may be used on a single line, and floats must be made of durable material suitable for marine waters. All trap floats must be marked with only your name in legible and visible letters (at least 7.5 cm high) that are consistent in orientation on the float. Containers such as bleach, antifreeze, detergent bottles, paint cans, etc. are not permitted.

3.4. Daily Limits

The aggregate daily limit of Dungeness, Red Rock, and Alaska King Crab in Areas 1-10 and 21-27 is 6; and in Areas 11-20, 28 and 29 is 4.

The daily limit for Alaska King Crab is two per day in Areas 1-10 and 21-27. 0 in Areas 11 to 20, 28 and 29

The daily limit for box crab and Puget Sound King Crab is one per day coast wide.

The daily limit for shore crab is 25 per day, except in Areas 28 and 29 where retention is 0.

The daily limit for all other species of crab not listed is 4 per day coastwide.

3.5. Possession Limits

Possession limits for all crab species are two times the daily limit.

3.6. Best Management Practices

For the benefit of managing and protecting the long-term sustainability of the resource, recreational Crab harvesters are being advised by the Department to undertake the following activities when recreationally fishing for Crab:

1. To improve First Nations food, social, ceremonial (FSC) and domestic access and to reduce conflicts in all crab management areas, keep gear away from areas immediately fronting First Nation communities and Indigenous Reserves.
2. Review the Fishing for Shellfish section of your British Columbia Sport Fishing Guide.
3. Keep crab buoys brightly painted and ensure all buoys are marked in accordance with licence conditions. (Section 5.3)
4. Immediately release all by-catch species with the least possible harm.
5. Avoid setting crab traps on eel grass or other sensitive bottom habitat.
6. Fish away from navigation channels and communities.
7. Ensure your shellfish harvesting details are included in iREC or dockside creel survey requests.
8. Minimize wake in harbours, particularly at boat launches, marinas and other wharves.
9. Crab can be known to contain industrial and biological toxins within their viscera. To avoid ingestion of potentially harmful toxins remove the gills and organs from crab prior to cooking. For more information go to: http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/environ/dioxin-eng.php.

A seasonal gear conflict between the food, social and ceremonial (FSC) and domestic salmon gillnet and recreational crab fisheries has been identified in the Selma Park/Davis Bay area near Sechelt (Subarea 29-1). The Department will continue to work with local First Nation representatives and the SFAB to help facilitate discussions and work towards a solution.

4. OPEN TIMES AND CLOSURES

Recreational harvest of crab occurs year-round. There are some areas that are closed to crab harvest or have consumption advisories. For more information on open and closed areas, visit the Sport Fish Guide for your species and area of interest at:

thttp://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html

4.1. Marine Protected Areas and National Marine Conservation Areas

For an update on the Pacific North Coast Integrated Management Area, Marine Protected Areas, National Marine Conservation Areas, (i.e. Gwaii Haanas and Glass Sponge Reef Areas), and National Marine Wildlife Areas, including harvesting restrictions and area coordinates, please refer to Section 6.6.1 of the main IFMP.

4.2. Roberts Bank/Deltaport/Tsawwassen BC Ferries

To ensure and maintain a safe approach for deep-sea vessels, ferries and berthing tugs transiting in and out of the Roberts Bank/Deltaport and BC Ferries terminal, crab fishing is prohibited within the area described in Appendix 3, Section 5.6.1.8.

A new three-berth marine container terminal located at Roberts Bank in Delta to be located next to the existing Deltaport and Westshore Terminals has been proposed by Port Metro Vancouver. This project known as Roberts Bank Terminal 2, underwent an environmental assessment and was approved by a the federal government on April 20, 2023. The project is now under regulatory review by DFO as it will require a *Species at Risk Act* compliant *Fisheries Act* authorization before it can begin construction. Additional information can be found on the Port Metro Vancouver website: www.robertsbankterminal2.com

4.3. Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site:

Portions of the Gwaii Haanas National Marine Conservation Area, identified by the management plan as fully protected areas, will remain closed to commercial and recreational harvest. Please refer to Section 6.6.1 of the main IFMP for more information.

4.4. Hecate Strait Queen Charlotte Sound Glass Sponge Reef Areas

The Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected area was implemented in February 2017. Please refer to Section 6.6.1 of the main IFMP for more information.

4.5. Strait of Georgia and Howe Sound Glass Sponge Reef Marine Refuges

Since April 1st, 2020 all commercial, recreational and First Nations food, social and ceremonial (FSC) and domestic bottom-contact fishing activities for prawn, shrimp, crab and groundfish, and the use of downrigger gear, are prohibited within portions of Subareas 28-2 and 28-4 to protect Howe Sound glass sponge reefs. In 2020, a DFO Canadian Science Advisory Secretariat

publication confirmed the presence of five additional live sponge reefs and one dead reef in Howe Sound**.** Commercial and recreational bottom-contact fishery closures went into effect on January 17, 2022 for these five sites in portions of Subareas 28-1, 28-2 and 28-3 to protect additional Howe Sound glass sponge reefs. Please refer to Section 6.6.1 of the main IFMP for more information.

4.6. Central Coast Closures for Improved Food, Social, and Ceremonial Access

See Appendix 1 section 4.6 for the background on these closures and the Central Coast Subregional Management Council's (CCMC) on-going collaborative governance crab work.

Sites closed year-round or seasonally to recreational fishing are listed below.

Central Coast Year Round Crab Closures

Subarea 6-16 and 7-3 - Higgins Passage Closure:

Those portions of Subareas 6-16 and 7-3 lying inside of a line that begins at 52°29.074586'N 128°45.836113' W [southwest Swindle Island], then southwest to 52°28.658625' N 128°47.783029' W, then south to 52°27.752182' N 128°47.957771' W, then east to 52°27.505255' N 128°45.896523' W [west Price Island], then following the northern shoreline of Price Island to 52°27.564212' N 128°37.583357' W, then 52°27.919086' N 128°36.925324' W then following the southern shoreline of Swindle Island to the beginning point.

Subarea 6-23 - Khutze Inlet Closure:

A portion of Subarea 6-23 lying southerly of a line that begins at 53°05.7887' N 128°27.1974' W [Pardoe Point] then to due east to 53°05.7865' N 128°25.7469' W.

Subarea 7-6 - Bottleneck Closure:

Those waters of Subarea 7-6 within Bottleneck Inlet: Defined by those waters inside a line that begins at 52°42.7' N 128°25.5' W, then to 52°42.8' N 128°25.5' W, then following the shoreline back to the beginning point.

Subarea 7-7 - Mussel Inlet Closure:

Those portions of Mussel Inlet lying easterly of a line that begins at 52°54.608550' N 128°7.088569' W [Carse Point] then south to 52°53.891016' N 128°6.686082' W [east of David Bay].

Subarea 7-9 - Griffin Closure:

Those waters in a portion of Subarea 7-9 inside a line that begins at 52°46.0240' N 128°20.9051' W, then due east to 52°46.0175' N 128°19.9661' W then following the eastern shoreline to the south to the point 52°40.5787' N 128°16.3566' W and then due west to 52°40.5787' N 128°17.2617' W and then following the west shore north to the beginning point.

Subarea 7-11 - Kynoch Inlet Closure

The portion of Subarea 7-11 that is east of a line starting on the south shore at 52°44.5728' N 127°57.9885' W due north to a point at 52°45.0973' N 127°57.9743' W. This closure includes the eastern portion of Kynoch Inlet and Culpepper Lagoon.

Subarea 7-15 - Troup Passage Closure:

Those portions of Subarea 7-15 lying inside of a line that begins at 52°18.201’ N 127°57.968’ W [Jagers Point], then following the westerly shoreline of Cunningham Island to 52°12.252’ N 128°05.718’ W [Dumas Point], then to 52°13.595’ N 128°07.398’ W [Chatfield Island], then
following the northerly shoreline of Chatfield Island to 52°18.201’ N 128°00.831’ W, then due east to the beginning point.

Subarea 7-17 - Hauyet Closure:

A portion of Subarea 7-17 including Hauyet: Those waters of Lama Passage and adjacent waters inside a line that begins at 52°4.2’ N 128°5.6’ W (Westminster Point), then to 52°3.9’ N 128°3.0’W (Harbourmaster Point), then following the southern shoreline to the beginning point.

Subarea 8-3 - Koeye Inlet Closure

The portion of Subarea 8-3 that is east of a line starting Koeye Point due north to the shoreline. This closes Koeye River estuary.

Subarea 8-8, 8-9 - Kimsquit Closure:

That portion of Subarea 8-8 within the north end of Dean Channel: North of a line that begins at 52°35.3013’ N 127°09.7818’ W, then to 52°34.4591’ N 127°08.9307’ W and subarea 8-9.

Subarea 8-12 - South Bentinck 1 Closure:

That portion of Subarea 8-12 within the south end of Bentinck arm: South of a line that begins at 52°03.4381’ N 126°41.3674’ W, then to 52°02.6243’ N 126°43.1459’ W.

South Bentinck 2 Closure:

That portion of Subarea 8-12 within Bentinck Arm inside a line that begins at 52°08.3851' N 126°49.8189' W, then due north to 52°09.9041' N 126°49.7904' W then following the eastern shoreline to the north to the point 52°14.6654' N 126°55.1455' W and then due west to 52°14.6786' N 126°56.7887' W and then following the west shore south to the beginning point.

Subarea 8-14 - Kwatna Closure:

That portion of Subarea 8-14 within Kwatna Bay: East of a line that begins at 52°07.0781’ N 127°26.0781’ W, then to 52°06.4534’ N 127°26.0781’ W.

Kwatalena Closure:

That portion of Subarea 8-14 within Kwatna Inlet: South of a line that begins at 52°03.5732’ N 127°36.0804’ W, then to 52°03.3190’ N 127°34.8727’ W.

Subarea 9-3 - Johnston Bay Closure:

That portion of Subarea 9-3 including Johnston Bay: Those waters of Rivers Inlet inside a line that begins at 51°30.4’ N 127°32.2’ W, then to 51°30.5’ N 127°31.5’ W, following the southerly shoreline back to the beginning point.

Subareas 9-5 to 9-9 - Rivers Inlet Closure:

Subarea 9-5 through 9-9 inclusive.

Central Coast Seasonal Crab Closures

Subarea 7-14 - Bullock Closure (closed June 1 to Sept 30th):

A portion of Subarea 7-14 within Bullock Channel inside a line that begins at 52°24.8034' N 128°04.7689' W, then due east to 52°24.8034' N 128°04.4230' W then following the eastern shoreline to the south to the point 52°22.3772' N 128°03.4271' W and then due west to 52°22.3729' N 128°03.9442' W and then following the west shore north to the beginning point.

Subarea 8-13 - Doc Creek Closure (closed June 1 to Sept 30th):

Those waters within Subarea 8-13 of Burke Channel inside a line that begins at 51°57.9781' N 127°40.4324' W then southwest to 51°57.0328' N 127°41.3889' W. This closes the estuaries of Doc Creek and Nootsum River.

5. LICENSING

5.1. Tidal Waters Sport Fishing Licence

The recreational harvest of various fish and invertebrate species in B.C. is regulated via the *British Columbia Sport Fishing Regulations*, 1996 made under the *Fisheries Act*. A DFO Tidal Waters Sport Fishing licence is required for the recreational harvest of all species of fish and marine invertebrates.

Tidal Waters Sport Fishing licences may be purchased for a 1 day, 3 day, or 5 day period, or as an annual licence, covering the period April 1 (or date of purchase, whichever is later) to March 31 the following year. The annual licence fee is not pro-rated for annual licences purchased mid-season. Fees depend on licence duration, age (senior, adult, juvenile) and residency status. Licences for juveniles (under 16 years old) are free. Concessionary fees are not otherwise available. There were over 349,000 adult fishers participating in B.C.'s tidal waters recreational fishery in 2024/25.

Licences may be purchased online via the National Recreational Licensing System:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/application-eng.html.

Alternatively, licences may be purchased over the counter at Independent Access Providers (IAPs) in many areas (note that the IAP may charge an additional service fee).

A list of IAPs is available at:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/iap-fai-eng.html.

5.2. Online Regulations

The regulations for recreational fishing are provided online in the British Columbia Tidal Waters Sport Fishing Guide, which lists open and closed times, catch limits, admissible gear types, size limits (where applicable), and open and closed areas. In addition, please check your Conditions of Licence (printed on your fishing licence) for other regulatory requirements.

Changes to regulations are issued in Fishery Notices which are posted online and sent to subscribers by email; these changes are also updated to the Sport Fishing Guide.

The printed Sport Fishing Guide booklet is no longer being produced or distributed to reduce costs and environmental impacts. The online Sport Fishing Guide allows for in-season regulations to be accurately provided and ensures all the regulations are current. Staff at local DFO offices can also provide regulatory information.

The British Columbia Tidal Waters Sport Fishing Guide is available at:

http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html

Viewing Fishery Notices and application to receive Fishery Notices by email is available at:

http://notices.dfo-mpo.gc.ca/fns-sap/index-eng.cfm

Contact information for DFO offices is available at:

https://www.dfo-mpo.gc.ca/contact/regions/pacific-pacifique-eng.html

For questions or comments of a general nature regarding DFO in the Pacific Region,

call 604-666-0384 or email info@dfo-mpo.gc.ca

5.3. Using Mobile Devices and the FishingBC App

The FishingBC App, developed by the Sport Fishing Institute of B.C., can be downloaded to a mobile device to assist with access to regulatory information for species, areas, fishing gear while on the water (along with other functionalities). The FishingBC App may be linked (using the internet) with your National Recreational Licensing System (NRLS) account to download a copy of your tidal water sports fishing licence to your mobile device and record catch (chinook salmon, halibut and lingcod) using the app Catch Log for real-time display to your licence on your mobile device. Note that catch records will then be automatically shared between your NRLS account and your app account. In the event of any technical issues with these new features of the app a paper licence must be used for regulatory catch recording purposes (or NRLS).

Please note: the DFO Sport Fishing Guide website is the official site for regulatory information in the event of a discrepancy with the FishingBC App. The FishingBC App may be downloaded from the App Store (Apple devices) and from the Google Play Store (Android devices). Learn more about these app features at https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/fishingbc-pechecb-app-faq-eng.html and at http://www.fishingbcapp.ca/

5.4. E-licences and Paper licences

At this time most fishers continue to use the traditional paper copy of their licence; however, an e--licence, which is an electronic/pdf copy of the licence, may be used on a mobile device but there are restrictions on its use.

Please consider these licensing requirements before fishing in tidal waters:

- For all recreational tidal waters fishers that do not have an electronic copy of their licence on their mobile device, fishers must have a paper copy of their licence to show to a fishery officer.
- For users of the FishingBC App or on any electronic device, an electronic copy of their licence on the device is acceptable and must be immediately presented to a fishery officer upon request.

- Currently the FishingBC App is the only app authorized to download a licence for catch recording purposes on the electronic licence (using the app Catch Log).
- Catch recording requirement: Immediately upon retention of Chinook and Halibut in any Management Area and Lingcod in Management Areas 12 to 19 (excluding Subarea 12-14), Subareas 20-5 to 20-7 and 29-5, fishers must record these catches on
    - either their paper licence, or
    - their National Recreational Licensing System account (NRLS) which requires internet access, or
    - in the FishingBC App Catch Log when their app account is linked to their NRLS account (which does not require internet access, if the app account link is currently maintained to NRLS).
- The catch recording requirement above applies to all fishers (whether with a paper or e-licence).
- Fishers who record their Chinook, Halibut, and Lingcod catch records in their NRLS account may find it helpful to immediately take a screenshot of their catch records when they have internet access should they subsequently move out of range of a mobile network. Note that a FishingBC app account will continue to allow you to record catch to the app Catch Log even while out of range of a mobile network.

5.5. Supporting Sustainable Fisheries

The Sport Fishing Advisory Board (SFAB) is the primary consultative body for the recreational fishing community and includes individual representatives from all geographic regions in B.C. as well as delegates from a number of fishing and service provider organizations. The SFAB and the recreational fishing sector strongly support effective fishery monitoring and catch reporting programs in recreational fisheries. The SFAB continues to work with DFO on initiatives to strengthen fishing monitoring and catch reporting in the recreational fishery.

5.6. Mandatory Reporting of Fishing Activity and Catch

Recreational fishers are required as a condition of the Tidal Waters Sport Fishing Licence to report accurate information on their recreational fishing activity and catch upon request of designated authorities including creel surveyors, fishery officers and fishery guardians and if assigned to the online iREC reporting program (see below).

5.7. internet Recreational Effort and Catch (iREC) Reporting program

The internet Recreational Effort and Catch (iREC) reporting program is an online program that has been collecting effort and catch information from Tidal Waters Sport Fishing licence holders since July 2012. All 2025/26 standard adult Tidal Water Recreational Fishing licences will be assigned to the iREC reporting program. Annual licence holders are required to report for only one month to limit their reporting burden. Information regarding the iREC reporting requirement is printed on each licence including the reporting period, the website at which to report, a unique iREC Access ID and reporting deadline. Further, licence holders with a valid email address in the National Recreational Licencing system will receive emails reminding them to complete their

iREC reports. Providing complete and accurate information to the iREC program when assigned is a condition of licence (i.e., mandatory requirement).

The iREC reporting program is one of the sources used in developing DFO official catch and effort estimates. The iREC reporting program methodology was peer reviewed and published by the Canadian Science Advisory Secretariat (CSAS) in 2015. This program provides monthly estimates of effort for six fishing methods and catch for over 80 species of sport caught finfish and invertebrates in all Pacific Fishery Management Areas based on responses by Tidal Waters Sport Fishing Licence holders. The recreational fishing methods covered by the iREC reporting program include boat-based angling, angling from shore, shellfish trapping from boat and shore, beach collecting, and diving. iREC estimates are developed for methods and species not covered by the marine creel surveys, which cover only boat-based angling, and for months and areas not covered by marine creel surveys.

More information about the iREC reporting program is available at:

https://www.pac.dfo-mpo.gc.ca/fm-gp/rec/report-declarez-eng.html

APPENDIX 3: CRAB BY TRAP COMMERCIAL HARVEST PLAN

TABLE OF CONTENTS

1 COMMERCIAL CHANGES AND HIGHLIGHTS FOR 2026/27

1.1 Management Changes and Updates:

- Area Reselection is complete. Trap numbers have been updated and are available in section 2.6. DFO will be seeking nominations for Commercial Area Representatives in the Spring. Licence holders will be notified via email and Fisheries Notice when the nomination process is initiated.
- As provided for in the Fisheries Resources Reconciliation Agreement (FRRA), signatory Nations have expressed interest in a Community Based Fishery for crab. Further details are in development as exploratory discussions among the First Nations and DFO are ongoing. Additional information is available on the DFO internet: Fisheries Resources Reconciliation Agreement (FRRA) between Coastal First Nations and Canada | Pacific Region | Fisheries and Oceans Canada
- A reminder that all commercial harvesters must report their lost and subsequently retrieved fishing gear. The inclusion of the reporting requirement in conditions of licence means that not reporting lost and/or retrieved gear is now a chargeable offence.

  Lost gear can be reported through the online Fishing Gear Reporting System, available at: https://www.dfo-mpo.gc.ca/fisheries-peches/commercial-commerciale/reporting-declaration-eng.html
- **Area A:** The Area A Crab Association and the commercial fleet are interested in reviewing and making improvements to their current soft-shell management program.
- **Areas B and G:** Closures in Crab Management Areas B and G to meet Gwa'sala and 'Nakwaxda'xw First Nations need for strengthened food, social, ceremonial (FSC) access were implemented in 2023. DFO will be evaluating the management measures in 2026, and if required will consider adjustment of the strategy for future years.
- **Area G and H:** In 2023, DFO reviewed commercial activity within the voluntary commercial exclusion zones in Area G at Lang Bay-Brew Bay, Savary Island, and Hernando Island, and in Area H at Silva Bay and concluded that commercial harvesters have not been respecting the voluntary exclusion zones during the seasonal time frame. The Department continues to meet bilaterally with Tla'amin Nation to determine a path forward for the zones in Area G.
- **Area J**: DFO is evaluating the possibility of implementation of prop guards in Boundary Bay (Area J) at the request of the commercial fleet.
- Starting **April 1, 2026**, crab management areas **B, E, G, H, I, and J** will begin transitioning to **combination trap tags**. These tags will feature both a radio frequency identification (RFID) chip and a unique identifier. Combination tags will be automatically scanned by the vessel's electronic monitoring system during hauling and are designed to last approximately three years. This change will streamline scanning processes and resolve issues related to scan

failures and aging equipment. See Appendix 9 for further details on these new tags and the associated monitoring requirements.

- Commercial harvesters are reminded to mark gear properly with floats (see Sections 4.4 to 4.6) as there is a concern regarding unmarked, abandoned, and lost gear in the crab fisheries, notably in Boundary Bay (Area J). Reports of suspected violations of unmarked gear can be made to the to ORR: Observe, Record, Report line: 1-800-465-4336 or http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/ORR-ONS-eng.html . Reports of lost or abandoned gear sightings can be submitted online at https://www.dfo-mpo.gc.ca/fisheries-peches/reports-rapports/ghost-gear-engin-fantome/index-eng.html . Commercial fishery Conditions of Licence will continue to include mandatory reporting requirements of lost and retrieved gear.

1.2 Closure Updates

The Roberts Bank Terminal 2 Project underwent an environmental assessment and was approved by the federal government on April 20, 2023. The Project includes expansion of the Roberts Bank/Deltaport Navigational Closure and is now under regulatory review by DFO as it will require a *Species at Risk Ac*t compliant *Fisheries Act* authorization before it can begin construction. Additional information can be found on the Port Metro Vancouver website: www.robertsbankterminal2.com

1.3 Licensing Updates:

- Requirements for service provider arrangement and submission of previous year's harvest logs prior to annual licence renewal are required.
- Licence transferring ("trap stacking") will be allowed again in Area B, E-Sooke, E-Tofino and E-Tofino Outside option, G, H and J for 2026/27. Licences that stack will be allowed to use 66% of the traps from the 2nd licence.

2 MANAGEMENT MEASURES FOR THE COMMERCIAL FISHERY

2.1 Species

Dungeness crab (*Metacarcinus magister,* formerly *Cancer magister*)

Red Rock Crab (*Cancer productus*)

Red and Golden King Crab (*Paralithodes camtschaticus & Lithodes aequispinus*), are permitted to be retained in the north and central coast only, under amended crab conditions of licence and local area crab manager specifications.

Fish harvesters are authorized to incidentally catch and retain octopus *Enteroctopus dofleini* while crab trap fishing, except in octopus closure areas (Section 5.8). Conditions of Licence require all fish harvesters to accurately complete octopus catch and retention information in the crab trap logbook, including any nil catch reports.

Crab-by-trap licence eligibility holders are also permitted to fish for species described in Schedule II Part 2 of the *Pacific Fishery Regulations*. Conditions of Licence for these species are included with crab-by-trap licences. Schedule II Conditions of Licence apply even if the catch is only

intended for bait. For information regarding the harvest of Schedule II, Other Species please refer to the Groundfish IFMP for lingcod, dogfish, sole and flounder, skate and pacific cod. For information regarding transporting please refer to Part III of the Conditions of Licence.

2.2 Size Limits

Undersized crab must be returned to the water immediately upon capture with the least possible harm in the location from which they were caught. It is the responsibility of each harvester to ensure that their measuring gauge is accurate.

The minimum size limit for Dungeness Crab is 165 mm, measured as the maximum distance in a straight line through the greatest breadth of the shell.

The minimum size limit for Red Rock Crab is 115 mm, measured as the maximum distance in a straight line through the greatest breadth of the shell.

The voluntary minimum size limit for King Crab is 178 mm, measured as the maximum distance in a straight line through the greatest breadth of the shell, including the spine. King Crab is only permitted to be retained in the North and Central coast (Crab Management Area B) only, under amended crab conditions of licence and local area crab manager specifications.

2.3 Non-retention of Female Crabs

Retention of female crabs or their roe (eggs or larvae) represents a threat to conservation of crab stocks. Every person engaged in commercial crab fishing shall immediately return all female crabs to the water in the location from which they were caught, in a manner that will cause least harm, unless the crab is infected by the parasite *Briarosaccus callosus* and is being brought ashore to avoid the further spread of that parasite.

Dungeness Crab found with the parasite *Briarosaccus callosus* should be kept cold (approx. 4 ºC), not frozen, and shipped to Eliah Kim at the Pacific Biological station. Call 1-250-740-1462 or email eliah.kim@dfo-mpo.gc.ca for instructions.

Briarosaccus callosus is identified by a reddish-brown, 1 to 2 cm diameter capsule(s), which is the egg sac of the parasite, located under the abdomen (i.e. where the crab eggs would normally be carried). See Figure 1 for a photo of this parasite.

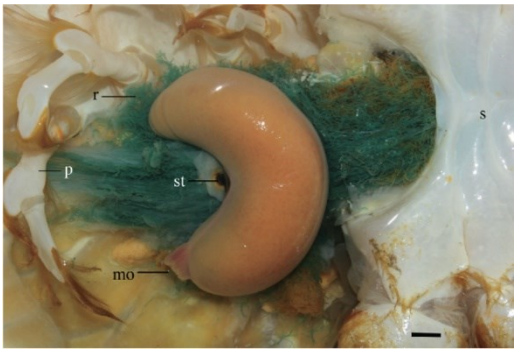


Figure 1: Briarosaccus callosus parasite

2.4 Non-retention of Soft-shell Crabs

Soft-shell crabs may not be retained. A crab is considered soft-shell if the underside of the shell (carapace) yields or flexes under pressure. Crab shell hardness is measured with a durometer, which is a spring driven device specifically designed to measure the shell hardness of Dungeness crab. Durometers are available from PTC Instruments, 2301 Federal Avenue, Los Angeles, CA 90064 (http://www.ptc1.com/). The Dungeness crab durometer is model 307LCRB-4. The appropriate place on a crab to determine if the crab shell is soft is on the underside of the carapace between the widest point of the carapace and the attachment of the leg bearing the claw. The

durometer should be positioned just anterior to the shell suture line as indicated in Appendix 6. The durometer shall be applied to this location on the crab as per the manufacturer's instructions. The indenter of the durometer should be pressed to the crab shell until the foot of the durometer is flush with the surrounding shell. Soft-shell crabs are those crabs that do not exceed a durometer measurement of 70 units.

Crab harvesters are generally aware of the difference between hard and soft-shell crabs. Crabs can be tested with digital pressure in the same location on the shell as indicated in Appendix 6. The legal hardness standard will be the durometer measurement. If the harvester is unsure whether the crab shell is hard enough the crab shall be returned to the water.

In many areas, harvesters have advised the Department that the use of fish frames or "hanging bait" may increase the catch of soft-shell crab. Commercial harvesters should avoid fishing during soft-shell periods in order to minimize damage to crab populations, and to maximize the landed value of harvested product. In-season closures may be implemented in locations where a high incidence of soft-shell is observed. Soft-shell crabs left in traps are subject to increased risk of mortality through cannibalism.

Fisheries and Oceans Canada requires that commercial crab harvesters carefully handle and release soft-shell crab. All undersized crab and soft-shell crab must be removed from the trap and released immediately in the location where they were caught, in a manner that will cause least harm. Harvesters are asked to release soft-shell crab back into the water as close to the surface as possible. Dropping soft-shell crab from any height or throwing them over the side will substantially increase damage and mortality.

For soft-shell management measures, please see Section 2.7 below.

2.5 Crab Management Area Licencing

Area Licencing was initiated in 1990 and the coast was divided into several Crab Management Areas. There are currently seven Crab Management Areas: A, B, E, G, H, I and J. Harvesters may be licenced in a Crab Management Area for three years. See Table 1 and Figure 2 below for a description and map of each area.

Sub-area licensing within crab management Area E, known as "Options", has been in place since 2008. Licence holders selecting to fish in Area E are required to choose a Quatsino, Sooke, or Tofino fishing option. Each Option has common areas shared among all Area E licence holders, as well as exclusive fishing areas.

Table 1 Crab Management Areas

Description	Crab Management Area	Pacific Fishery Management Area
Haida Gwaii	A	Areas 1, 2, 101 to 110 inclusive, 130, and 142
North and Central Coast Mainland	B	Areas 3 to 10 inclusive and a portion of the Nass Estuary
	E Common	Area 21, 22, 25, 26, 121, 123-1, 125, 126

West Coast Vancouver Island	E Quatsino Option	Area 27, 127, and E Common
	E Sooke Option	Area 20 and E Common
	E Tofino Option	Area 23, 24, 123-2 to 123-9, 124, and E Common
Johnstone Strait	G	Areas 11, 12, 13, 15, and 111
Strait of Georgia	H	Area 14, 16 to 19 inclusive and Subarea 29-5
Howe Sound, Burrard Inlet, Fraser River Mouth	I	Areas 28 and 29 excluding Subareas 29-5 and 29-8
Boundary Bay	J	Subarea 29-8

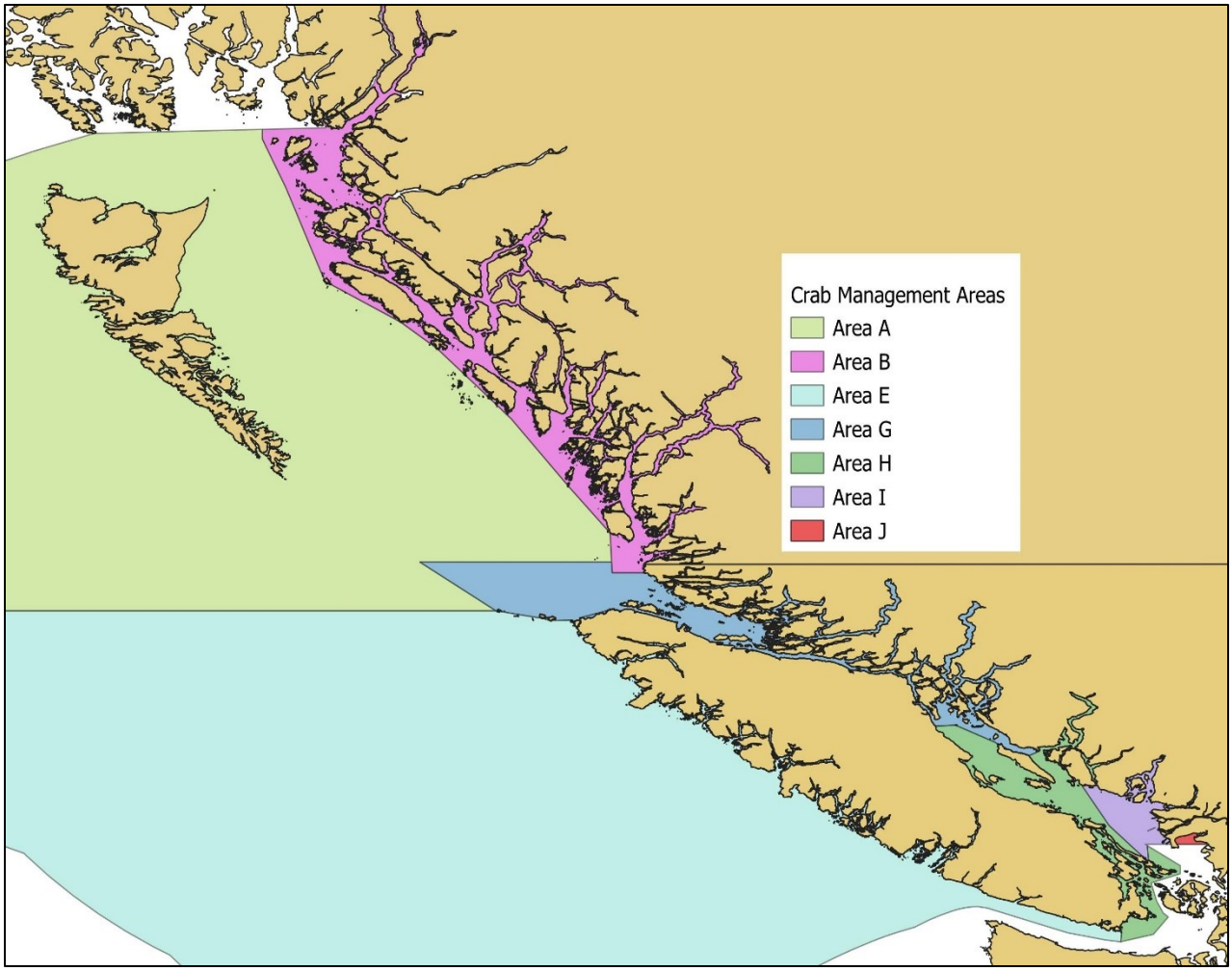


Figure 2. Map of the Crab Management Areas

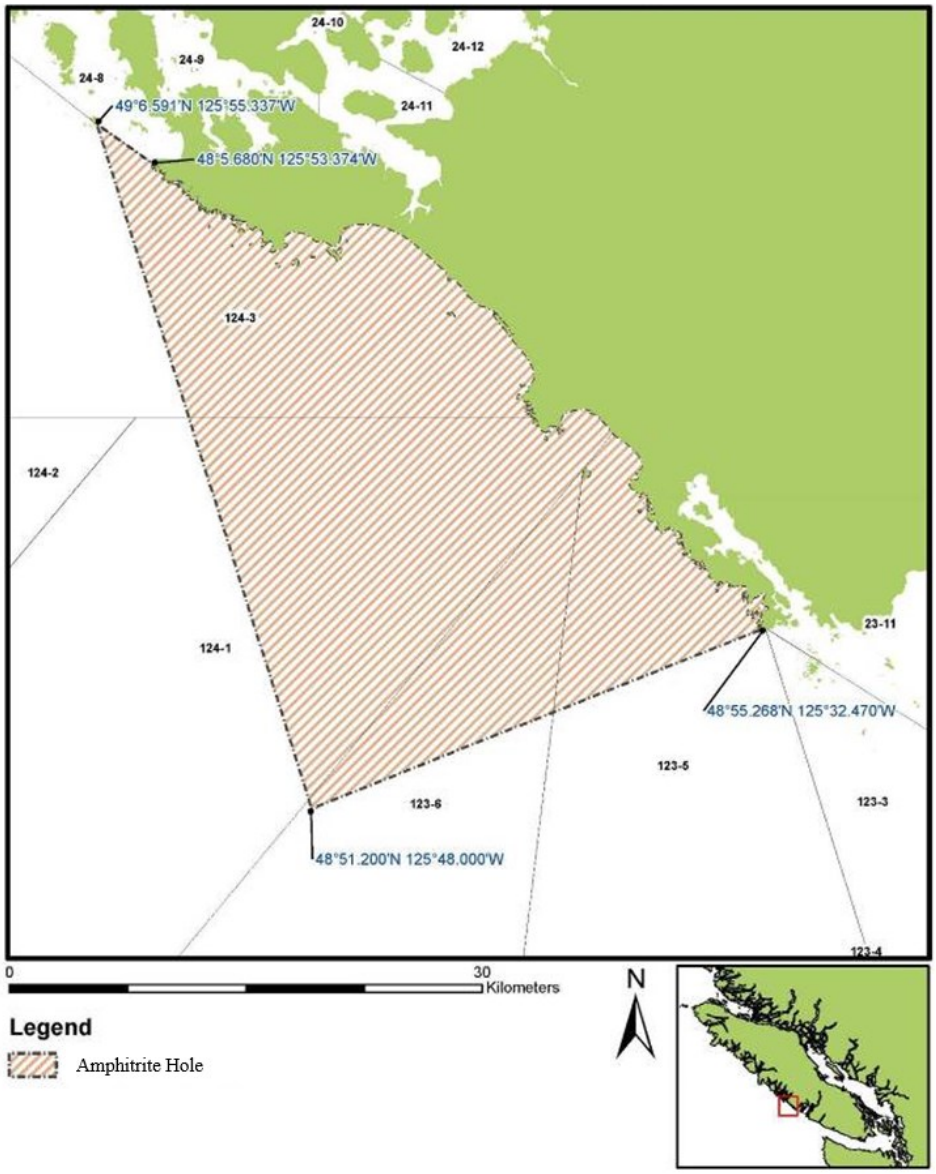


Figure 3. Map of Amphitrite Hole located in Crab Management Area E-Tofino.

2.5.1 Area Re-selection

In 2000, the Department implemented an area re-selection process for the commercial fishery. Area re-selection is a management tool that offers harvesters the opportunity to move between seven management areas so they can adjust to changing conditions in the fishery and potentially change their economic performance based on their current perceptions of productive fishing grounds. In general, licenced commercial crab vessels choose one crab management area to fish in every three years. In 2025, crab licence holders selected an area to fish for the three-year period commencing April 1, 2026 and ending March 31, 2029. Provided below in Table 2 are historical area licencing selection details as well as details for the current period of 2026 to 2029.

Initiation of the next area selection process is expected in 2028.

Table 2 Crab Licence Area Selection and distribution. PICFI/ATP First Nation Crab (FR) Licences are in brackets.

Area Selection Period	A	B	E Quat	E Sooke	E Tofino	E Total	G	H	I	J	Total
2000	48	19				**39**	14	47	36	19	**222**
2001-2002	48	19				**39**	13	48	36	19	**222**
2003-2005	41	17				**42**	13	55	36	18	**222**
2006	56	11				**35**	14	43	41	22	**222**
2007-2008	56	12				**35**	14	42	41	22	**222**
2009	52	17	2	6	18	**26**	19	45	42	21	**222**
2010-2012	53	13	2	6	18	**26**	20	40	51	18	**221**
2013-2015	47	16	2	10	24	**36**	19	51	32	20	**221**
2016-2018	32(3)	24(6)	2	7(1)	32(2)	**41(3)**	17(6)	62(8)	21(5)	24(1)	**221**
2019	32(3)	24(6)	2	7(1)	32(2)	**41(3)**	16(5)	62(8)	21(5)	24(1)	**220**
2020-2023	36(3)	21(6)	3	7(1)	33(2)	**43(3)**	19(5)	54(8)	23(5)	24(1)	**220**
2023-2026	43(3)	21(4)	1	9(1)	21(1)	**31(2)**	16(7)	58(8)	24(7)	23(1)	**216**
2026-2029	50(4)	23(4)	3(1)	9(1)	22(1)	**34(3)**	15(6)	50(9)	24(8)	20	**216**

Licence FR33 was moved from Area G to Area E and retired to partially account for an allocation to the Five Nuu-chah-nulth First Nations.

Licence FR34 was taken from Area H in 2018 to mitigate for Tla'amin Treaty allocation. There are 58 licences in the licencing system, but currently only 57 vessels licenced to fish in Area H.

In 2021/22, DFO received a request for an area change for a commercial licence outside the normal process, to move a licence from Area H to Area I. Upon analysis, a decision was made to allow this move. The move outside of the regular process enabled a Treaty Nation to include a communal commercial crab licence that is consistent with the intent of the negotiated Harvest Agreement. Area H licences reduced from 55 to 54, and Area I licences increased from 22 to 23.

Three licences were relinquished through the Voluntary Licence Relinquishment Program in 2023 to mitigate access for the Five Nuu-chah-nulth First Nations.

2.6 Trap Limits for 2026 to 2029

Trap limits have been required in each Crab Management Area since 2000. All Crab Management Areas have an area trap limit which refers to the maximum number of traps allowed in that area. The trap allocations per commercial licence are calculated using the Area Trap Limits and the number of licenced vessels in each Crab Management Area and Area A also takes vessel length into consideration. There are maximum trap limits per licence that may be reached when calculating trap allocations. Some Crab Management Areas have additional spatial or seasonal trap limits. Refer to the subsections below for additional details.

Compliance with trap limits is monitored through several programs including electronic monitoring or at-sea observers, plastic trap tags, and on-grounds compliance checks. Harvesters must take an active role in ensuring compliance with trap limits by meeting their trap tagging, reporting and monitoring requirements. Note that the following numbers are subject to change and are for a single licence.

2.6.1 Area A Trap Allocations

Area A Trap Limit	Vessel Length	Vessel Share	Current Number of Licences	Traps per Licence*	Traps allowed in McIntyre Bay (Sep. 1 - Nov. 1)**
35,000	**<13m**	1	34	564	282
	13-14m	1.33	4	752	376
	14-15.8m	1.67	4	940	470
	>15.8m	2	8	1129	564

* A maximum number of traps per licence can be reached for different vessel lengths when calculating trap allocations for Area A

**The maximum number of traps permitted to be fished in McIntyre Bay between the September 1 and November 1 is one-half the total trap allocation per licence.

2.6.2 Area B Trap Allocations 2026/29

Number of Licences	Area B Trap Limit	Traps per Licence*	Notes
23	7,600	330	*maximum of 400 traps can be reached per licence*

Additional trap limits subject to the Area B Trap Limit and trap allocation per licence:

Location	Time Period	Trap Limit	Traps per Licence	Notes
Nass Estuary	Oct 1 – Oct 22	3,800	165	*maximum of 200 traps can be reached per licence*
Takush Harbour	Oct 1 to Dec 18	-	20	-
Kitkatla Inlet	First 14 days	-	165	*allocation is half the trap allocation per licence in Area B*
Khutzeymateen Inlet	April 1 – Nov 15	-	165	
Seasonal Areas (See 5.2.2)	Oct 1- Dec 18	-	165	

2.6.3 Area E Trap Allocations 2026/29

2.6.3.1 Area E Common

Licence holders selecting to fish in Area E are required to choose a Quatsino, Sooke, or Tofino fishing option. Each Option has common areas shared among all Area E licence holders, referred to as Area E Common, as well as exclusive fishing areas.

A maximum of 350 traps per licence may be fished in Area E Common, inclusive of any traps being fished in other sections of Area E.

2.6.3.2 Area E Quatsino Trap Allocations:

Current Number of Licences	E Quatsino Area Trap Limit	Traps per Licence	Notes
3	600	200	*maximum of 350 traps can be reached per licence*

Additional trap limits subject to the E Quatsino Area Trap Limit and trap allocation per licence:

Time Period	Location	Trap Limit	Traps per Licence	Notes
Jan 1 - Jun 30 & Nov 16 - Dec 31	27-7 to 27-9	600	200	*maximum of 200 traps can be reached per licence*
Jan 1 - Jun 30 & Nov 16 - Dec 31	27-10 to 27-11	280	93	

Jul 1 - Nov 15	27-7 to 27-10	75	25	*maximum of 75 traps can be reached per licence*

2.6.3.3 Area E Sooke Trap Allocations:

Number of Licences	E Sooke Area Trap Limit	Traps per Licence	Notes
9	2800	311	*maximum of 350 traps can be reached per licence*

Additional trap limits subject to the E Sooke Area Trap Limit and the trap allocation per licence:

Location	Trap Limit	Traps per Licence
20-6 (Harbour)	420	46
20-7 (Basin)	420	46

2.6.3.4 Area E Tofino Trap Allocations:

2026-2029 Number of Licences	E Tofino Area Trap Limit	2026-2027 Five Nations Multi-Species Fishery Allocation	Remaining Trap Limit	2026-2027 Traps Per Licence	Notes
22	8,400	1,672*	6,728*	305*	*maximum of 350 traps can be reached per licence*

Additional trap limits subject to the E Tofino Area Trap Limit and the trap allocation per licence:

Location	Trap Limit	2026-2027 Five Nations Multi-Species Fishery Allocation	Remaining Trap Limit	2026-2027 Traps per Licence	Notes
Area 24	1,600	703*	897*	40*	*maximum of 350 traps can be reached per licence*
Amphitrite Hole (See 2.7.3 for map)	3,200	637*	2,563*	116*	

*five Nations trap allocation may change in relation to ATP/PICFI access

2.6.3.5 Area E Tofino Outside Option

DFO has heard concerns over time from commercial harvesters about the Area E-Tofino fishery licence option with respect to small vessel viability, reduced trap limits, and the inability to explore the potential for an offshore Dungeness crab fishery in areas not currently fished.

Following consultations with industry in 2019, DFO implemented the Area E Outside Option pilot. This management change intended to make the Area E-Tofino Licence Option more economically viable for all vessels by separating small vessels, which choose to fish in inshore areas, from larger vessels that may have the ability to fish more traps in the offshore waters.

Area E-Tofino licenced vessels may choose the "Outside Option" to fish only in Area 123-2 to 123-9, 124, and E_Common (also described as offshore areas) and forgo fishing in Areas 23 and 24. In exchange for not fishing in Areas 23 and 24, vessels are allowed to fish 30% more traps in the offshore areas. The traps that Outside Option vessels forgo in Area 24 will be split among the other vessels that do not choose the Outside Option. Vessels that do not choose the Outside Option will be allowed to fish in all of the Tofino Option Areas (23, 24, 123-2 to 123-9 and 124) and E-Common areas. They will also have their maximum traps per licence limit reduced depending on the number of vessels that choose the Outside Option. The overall trap limit for Area E-Tofino and the Area E maximum trap limit per vessel will not change.

Licence holders in Area E-Tofino have the ability to select the Outside Option on an annual basis. A Notice to Industry will be released annually prior to licence issuance with an application deadline and additional information. DFO is currently reviewing the effectiveness of this pilot due to the number of vessels that left Area E Tofino during the 2023 Area Reselection process.

Below is a table showing an example of several potential scenarios based on an increasing number of vessels choosing the Area E Tofino Outside option. Note that a maximum of 350 traps per licence can be reached when calculating trap allocations in E Tofino.

			Regular E-Tofino Licence		**Outside Option Licence**	
E- Tofino Trap Limit	**# of E- Tofino Licences**	**# of Licences Selecting Outside Option**	**Traps allowed in Area 24 per Licence***	**Total Traps per Licence**	**Traps allowed in Area 24 per Licence***	**Total Traps per Licence**
6728	**22**	**0**	**40**	**305**	**N/A**	**N/A**
	21	1	42	301	0	350
	20	2	44	296	0	350
	19	3	47	291	0	350

*This number is subject to the total traps per licence

2.6.4 Area G Trap Allocations for 2026/29

Number of Licences	Area G Trap Limit	Traps per Licence	Notes
15	5,600	373	*maximum of 400 traps can be reached per licence*

Additional trap limits subject to the Area G Trap Limit and trap allocation per licence:

Location	Time Period	Traps per Licence
Blunden Harbour	Oct 1 to Dec 18	20

2.6.5 Area H Trap Allocations for 2023/2026

Number of Licences	Area H Trap Limit	Traps per Licence	Notes
50	12,900	258	*maximum of 300 traps can be reached per licence*

2.6.6 Area I Trap Allocations for 2023/2026

Number of Licences	Area I Trap Limit	Traps per Licence	Notes
24	8,400	200	*maximum of 200 traps can be reached per licence*

Additional trap limits subject to the Area I Trap Limit and trap allocation per licence:

Time Period	Traps per Licence	Notes
Jun 15-Jul 5	100	*maximum of 100 traps can be reached per licence during this time period.*

2.6.7 Area J Trap Allocations for 2026/29

Number of Licences	Area J Trap Limit	Traps per Licence	Notes
20	3,600	180	*maximum of 200 traps can be reached per licence*

2.7 Seasonal Closures and Gear/ Haul Restrictions

Seasonal management measures such as temporal closures, trap hauling restrictions, and gear restrictions vary across all crab management areas. Restrictions specific to the frequency that traps may be hauled during soft-shell periods are in place in Areas E, G, and H. All seasonal management measures are described below specific to each crab management area. Unless stated otherwise, traps may be hauled once per day. For all areas, a calendar week is described as 00:01 hours Sunday to 23:59 hours Saturday evening.

2.7.1 Area A

Area A conducts an annual soft-shell sampling program in cooperation with the Department and their service provider. Data is collected between February 15 and August 1st to determine the timing of the male moult and soft-shell closure dates may vary annually.

Area	Open Dates	Closed Dates	Notes	Gear and Haul Restrictions
A	Aug 1 – Feb 28*	Mar 1 – Aug 1	Soft-shell closure. Closure dates may vary annually based on results of the Soft-shell Sampling Program.	
A_McIntyre Bay	Sept 1- Feb 28*	Mar 1 – May 1	Soft-shell closure. If this area is not sampled, it will close Mar 1 – May 1	Half trap limit per vessel from Sept 1 to Nov 1.
		May 1 – Sept 1	Conservation, FSC & Rec Harvest Access Closure.	
A_Naden Harbour	Oct 15 – Feb 28*	Mar 1 – May 1	Soft-shell closure. If this area is not sampled, it will close Mar 1 – May 1	Ring-nets only
		May 1 - Oct 15	Conservation, FSC & Rec Harvest Access Closure.	

*Feb 29th on a leap year.

2.7.2 Area B

Due to concerns in the Nass Estuary from the Gingolx Community regarding domestic catches, the Area B harvesters shortened the Nass Estuary fishery from 7 weeks to 3 weeks starting in 2019. The Nass Estuary fishery will continue to be limited to 3 weeks for this fishing season.

Area	Open Dates	Closed Dates	Gear and Haul Restrictions
B	Apr 1 – Dec 18	Dec 19 – Mar 31	-
B_Seasonal Areas (see exceptions below)	Oct 1 – Dec 18	Dec 19 - Sept 30	Vessel half trap restriction. Not to exceed one haul per day.
B_Area 6 Seasonal Areas	Oct 1 – Dec 18	Dec 19 - Sept 30	
B_Nass Estuary Seasonal	Oct 1 – Oct 22	Oct 23 - Sept 30	
Khutzeymateen Inlet Seasonal	April 1 – Nov 15	Nov 16 - Mar 31	
B_Kitkatla	After spring herring fishery to Dec 18*	Dec 19 to after spring herring fishery	Vessel half trap restriction for first 14 days. Not to exceed one haul per day for the first 14 days.
B_Takush Harbour Seasonal	Oct 1 – Dec 18	Dec 19 - Sept 30	Vessel 20 trap limit. Not to exceed one haul per day

*The fishery will open following the completion of the spring Herring Roe on Kelp fishery.

2.7.3 Area E

Area	Open Dates	Closed Dates	Commercial Haul Restrictions:			
			1 Per Day	3 Per Week	2 Per Week	1 Per Week
E_Common	May 1 – Jan 31	-	X			
	Feb 1– Apr 30	-				X
	Mar 1 – Apr 30	-				X

E_Quatsino Area 27-7 to 27-11	May 1 – Feb 28	-		X		
E_Sooke Area 20-1 & 20-2	Apr 1 – Apr 30; Feb 1 – Mar 31	-				X
	May 1 – Jan 31	-		X		
E_Sooke Area 20-3 to 20-7	May 1 – Jan 31	-			X	
	Apr 1 – Apr 30; Feb 1 – Mar 31	-				X
E_Tofino	Jan 1 – Mar 31	-				X
	Apr 1 – Dec 31	-	X			
E_Seasonal Areas	Sept 16 – Mar 14	Mar 15- Sept 15				

2.7.4 Areas G & H

Area	Open Dates	Closed Dates	Haul Restrictions	Gear Restrictions
G	April 16 – Jan 14	-	Not to exceed once per day	Maximum 25 traps per string
	Jan 15 – April 15	-	Not to exceed once per week	
G_Blunden Harbour	Oct 1 to Dec 18	Dec 19 to Sept 30	Not to exceed once per day	Vessel 20 Trap Limit
H	April 16 – Jan 14	-	Not to exceed once per day. Daylight only.	
	Jan 15 – April 15	-	Not to exceed once per week. Daylight only.	
H_Seasonal Areas	Sept 16 – Mar 14	Mar 15 – Sept 15	Not to exceed once per day. Daylight only.	

2.7.5 Areas I & J

Area	Open Dates	Closed Dates	Haul and Gear Restrictions
I	June 15 – Nov 30	Dec 1 – Jun 14	Not to exceed once per day. Daylight only.

J	July 15 – Nov 30	Dec 1 – July 14	Not to exceed once per day. Daylight only.

2.8 Trap Size Limit

The total volume of traps fished for Dungeness crab will not exceed 400 litres. Harvesters requesting openings to fish for king crab in Crab Management Area B will be permitted to fish traps in excess of 400 litres if desired.

2.8.1 Area I and J Trap Size Limit

Trap size will have a diameter no greater than 44 inches (112 cm) and a height no greater than 14 inches (36 cm); this is 355 litres in volume. This maximum trap size was phased in over a four-year period beginning in 2008 for Areas I and J.

2.9 Escape Mechanisms

2.9.1 Escape Holes

All traps fished in all areas must have two escape rings of 105 mm or larger in diameter situated not more than 100mm below the top of the frame. This requirement for escape holes was phased in over a three-year period beginning in 2009.

2.9.2 Biodegradable Escapement Mechanisms

Every trap fished under the authority of a crab licence eligibility must be equipped with a biodegradable escape mechanism in the form of a rot cord, rot panel, or rot panel alternative as described below. These mechanisms are designed to minimize the effects of ghost fishing by lost or abandoned traps. In order to be effective these mechanisms must be under **tension**. These mechanisms do not apply to ring nets.

- **Rot Cord:** Rot cords may only be used on traps with a rigid frame, a freely opening hinged lid, and a volume less than 400 litres. (400 litres is approximately equal to a circular trap 117 cm in diameter and 36 cm high.) The trap lid must be secured by a loop of no greater than #120 untreated cotton twine such that the trap lid will open freely when the rot cord is broken. The rot cord must be attached to the rubber strap by a cow hitch and attached to the hook by a cow hitch (Appendix 6). If the hook is attached permanently to the trap, the trap lid shall close using a single loop of the rot cord from the rubber strap. The rubber strap shall be under tension. No other fastenings may impede the hinged lid of the trap from opening. The opening area created by the hinged lid must exceed the rot panel area requirement (described below), or exceed the size of the largest trap entrance.
- **Rot Panel:** All traps without hinged lids secured by a rot cord (as described above), must have a biodegradable (rot) panel. The rot panel must consist of a section in a trap side wall that has been laced, sewn, or otherwise secured by a single strand of no greater than #120 untreated cotton twine, such that the entire panel remains under tension when the panel is intact but on deterioration or parting produces an unrestricted opening. In Areas A and B, the

opening must exceed a square 35cm by 35cm to protect king crab. In all other areas the opening must exceed a square 11cm by 11cm.

- **Rot Panel Alternative:** Soft-web traps requiring a rot panel may use the following alternative: A trap side wall must contain a cut in the web greater than 20cm in length. The cut shall be made in a "V" pattern with each leg of the "V" greater than 11 cm in length. A single strand of no greater than #120 untreated cotton twine, must be used to lace the cut in the web such that the entire panel remains under tension when the panel is intact but on deterioration or parting produces an unrestricted triangular opening no less than 11 cm on each side.

2.10 Hanging Bait

The use of hanging bait is prohibited in Areas B, H, I, J and the portion of Area E Tofino Option known as the Tofino Trap Limit Area.

Hanging bait is permitted in management Areas A, G and the portions of Area E outside of Area 24.

All bait in hanging bait prohibited areas must be placed within a hard plastic bait cup with a screw-top lid. The bait cups may have holes drilled in them but holes can be no larger than 8 mm in diameter.

All other bait containers, (i.e. bait cages) are not permitted in the hanging bait prohibited areas. Prohibiting the use of hanging bait in areas where it remains permitted is under consideration. The use of hanging bait is said to increase trap catches of soft, undersized, and female crab, which could pose a conservation concern.

2.11 Maximum Soak Time of 18 days

No person shall set a trap and leave the trap in the water for more than 18 consecutive days without lifting the trap from the water and removing all of the crab from it.

The Department originally implemented a 14 day soak limit in the commercial crab fishery in 1978. In 2002, the soak time was increased to 18 days to provide harvesters with more flexibility to ensure they are hauling traps during safe weather windows and consistently adhering to conditions of licence.

2.12 Daylight Fishery - Areas H, I, and J

The setting and hauling of crab traps is permitted only between one hour before sunrise and one hour after sunset in Areas H, I, and J.

2.13 Packers, Barges and Mother Ships

All crab taken under authority of a crab licence shall be transported to land by the vessel named in the licence. All crab traps, holding cages, lines and buoys used by the crab licensed vessel, shall be transported by the vessel named in the licence to and from land, with the exception noted below.

In **Area I**, harvesters may use another vessel to bring traps, holding cages, lines, and buoys to the grounds on opening day, June 15, to bring the remainder of the trap limit onto the grounds.

In **Area J**, harvesters may use another vessel to bring traps, holding cages, lines, and buoys to the grounds on **opening day only**. Opening day will be July 15 in Area J. **All gear must be fished from the licensed vessel.**

2.14 Best Management Practices

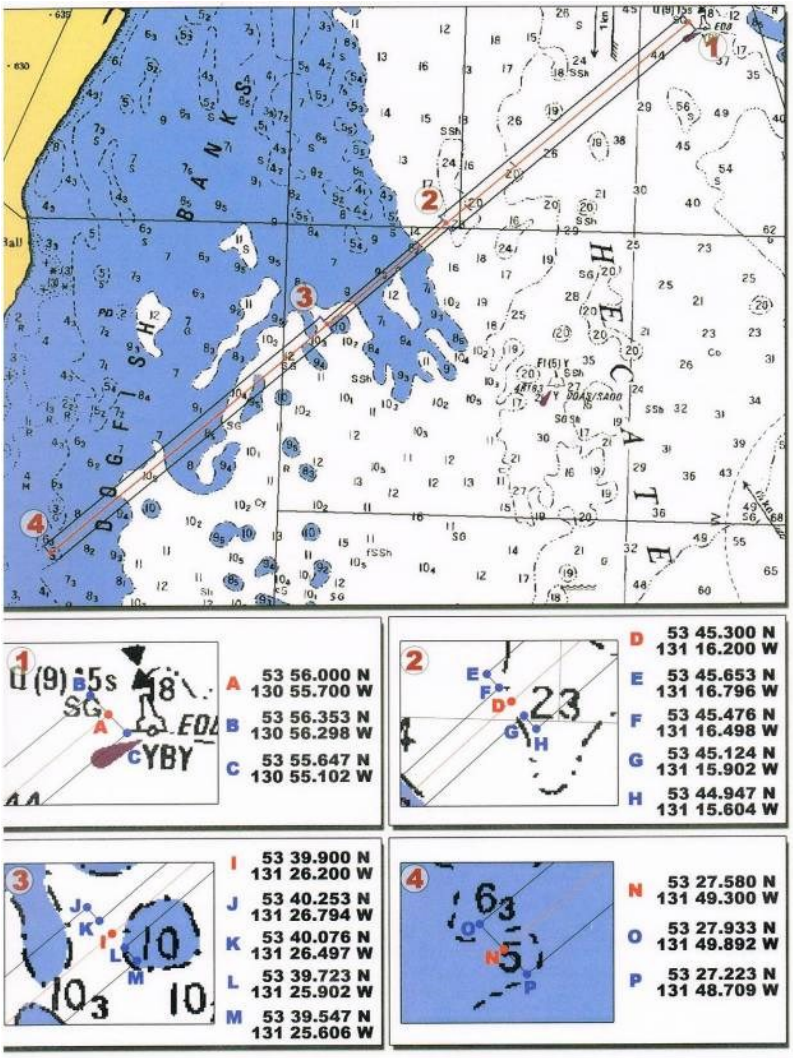
2.14.1 All Crab Management Areas (A,B,E,G,H,I,J):

- To improve First Nations FSC and domestic access and to reduce conflicts in all crab management areas, keep gear away from areas immediately fronting First Nation communities and Indigenous Reserves.
- Buoy lines should be appropriate for water depth and tide cycles.
- Keep crab buoys brightly painted and in accordance with licence conditions, (Section 4.4).
- Minimize wake in harbours, particularly at boat launches, marinas and other wharves.
- Avoid setting crab traps on eel grass or other sensitive bottom habitat.
- If commercial harvesters are replacing active crab traps with ones that have been inactive for more than 18 days they must transfer the RFID chip from the active trap to the replacement trap. This RFID replacement activity will help minimise violation errors associated with over-soak and trap allocation calculations.

2.14.2 Area A

- An agreement between the Area A crab fleet and the groundfish trawl fleet to share access to fishing grounds in a portion of Northern Hecate Strait (east northeast of Rose Point and west of Butterworth Rock, Pacific Fisheries Management Area 104-2) was in place in 2020 and 2021; however, no formal agreement was reached in 2025. Discussions between the two sectors are expected to continue. Details of any agreement reached will be communicated in-season via a fishery notice. Refer to FN0744 and FN0804 for information regarding the 2021 agreement.
- For several years now, a voluntary ferry lane closure between Prince Rupert and Skidegate has been in effect year-round. This closure was developed in cooperation with the Area A Crab Association, the B.C. Ferries Corporation and the Department. To ensure continued participation success, Ecotrust Canada (the Area A electronic monitoring service provider) also provides immediate software feedback to harvesters deploying traps within this closure and further notifies them with monthly vessel compliance summary updates.

  The voluntary ferry line is described as one nautical mile wide corridor, one-half nautical mile on either side of a line between 53° 56.0' N, 130° 55.7' W and 53° 45.3' N, 131° 16.2' W Then one-half nautical mile wide corridor, with one-quarter nautical mile on either side of a line between 53° 45.3' N, 131° 16.2' W and 53° 39.9' N, 131° 26.2' W. This half-mile corridor is eight miles long and traverses "Dog's Head" After this, another one nautical mile wide corridor, with one-half nautical mile on either side of a line between 53° 39.9' N, 131° 26.2' W and 53° 27.58' N, 131° 49.3' W.



- To avoid gear conflicts with Mid-water Trawl vessels, harvesters fishing in the vicinity of Goose Bank are being requested to limit the depth to which they fish. The current depth limit is approximately 40 fathoms. For a more current update on this agreement please contact the Area A Association representative.
- To minimise loss of gear, Area A harvesters have asked for the development of a shipping lane within Hecate Strait.
- To further minimise gear conflicts, co-development of best practices with the Area F Troll fleet is anticipated.

2.14.3 Area E - Tofino

- Commercial crab gear is to be removed or not set during the months of June, July, and August in the area indicated on the map below (See Figure 3). The purpose of this best practice is to minimise gear conflict issues associated with First Nations FSC and domestic Salmon fishing.

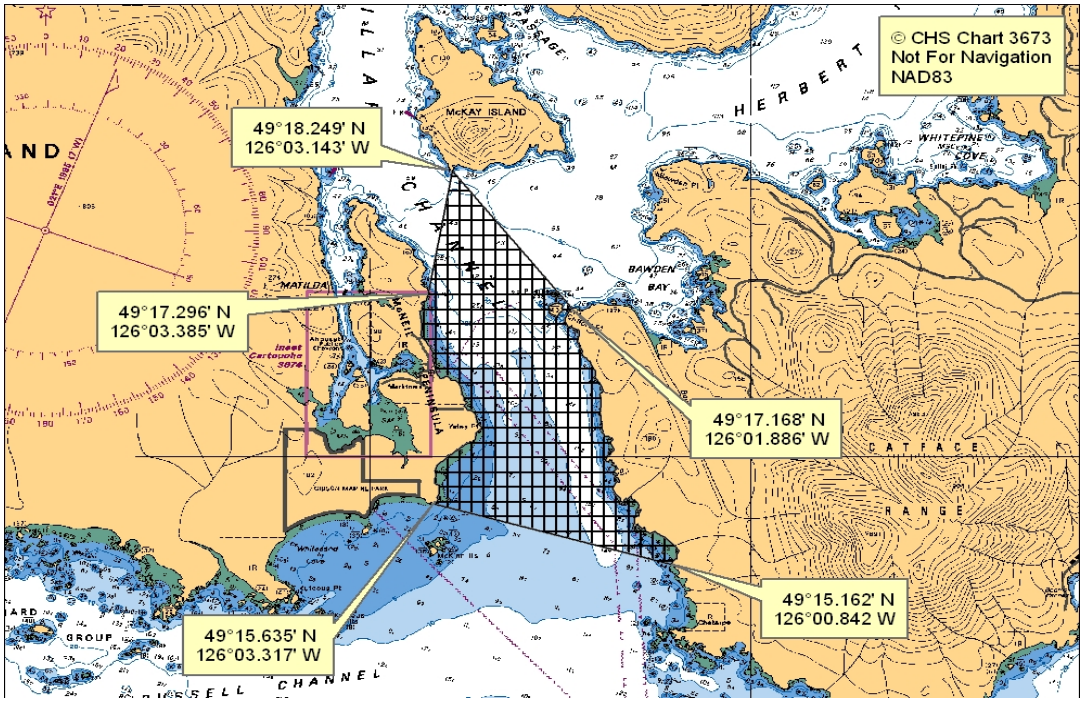


Figure 3. Area within Millar Channel in Crab Management Area E where commercial crab gear is to be removed and should not be set during the months of June, July, and August.

- To reduce gear impact for vessels leaving or returning to Ucluelet, the Area E crab harvesters have agreed to not place crab floats in the described corridor (see Figure 4): starts at 48 54.793N 125 32.856W then to 48 54.647N 125 33.011W then to 48 57.407N 125 45.741W then to 48 57.230N125 45.741W then to the beginning point; and at 48 54.793N 125 32.856W then to 48 54.703N 125 32.622W then to 48 51.461N 125 36.075W then to 48 51.562N 125 36.296W then to the beginning point (See Figure 4).

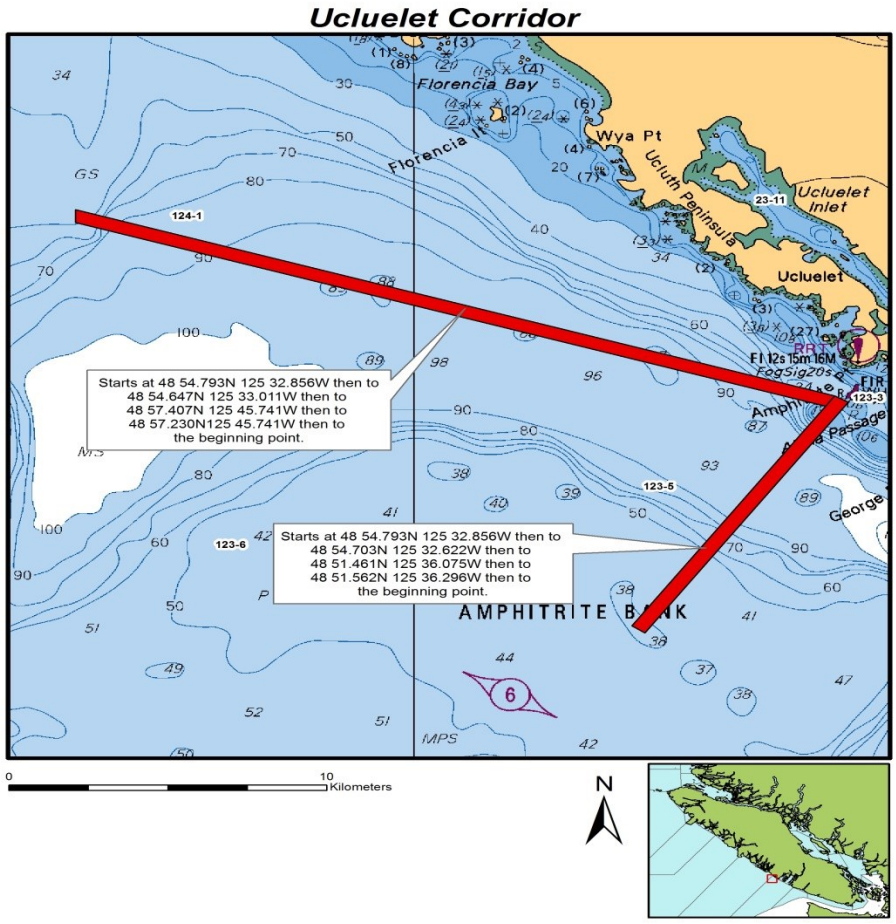


Figure 4. Ucluelet Corridor in Crab Management Area E where commercial crab harvesters have agreed to not place floats to reduce gear impact on vessels leaving or returning to Ucluelet.

2.14.4 Area E – Sooke

- Set string gear in an East- West fashion or paralleling gear already set with the shoreline.
- Strings of gear should not converge at the ends.
- Mark the West ends of all string gear with trailer corks.
- When fishing in 90 foot depths or less, the distance between ends of strings should not exceed 250 fathoms or 1500 feet.
- Do not exceed the harbour cap of 220 traps for either Pedder Bay or Becher Bay.
- In subarea 20-2, to minimize noise, harvesters are requested to refrain from fishing near communities between the hours of 10pm and 6am.
- When the following area is open to recreational harvest of salmon, commercial crab fishing is not to occur from June 15 through to September 8 in waters deeper than 90 feet from Otter Point to Sheringham Point described as: (see Figure 5) starting at 48° 21.794'N and 123° 50.605’ West, Northerly to a mid-point at 48°22.088’ N and 123° 51.406 W and then to

48°22.271 N and 123° 52.713 W as outlined below. The purpose of this best practice is to minimise conflicts with recreational salmon harvesters during the summer Chinook fishery.

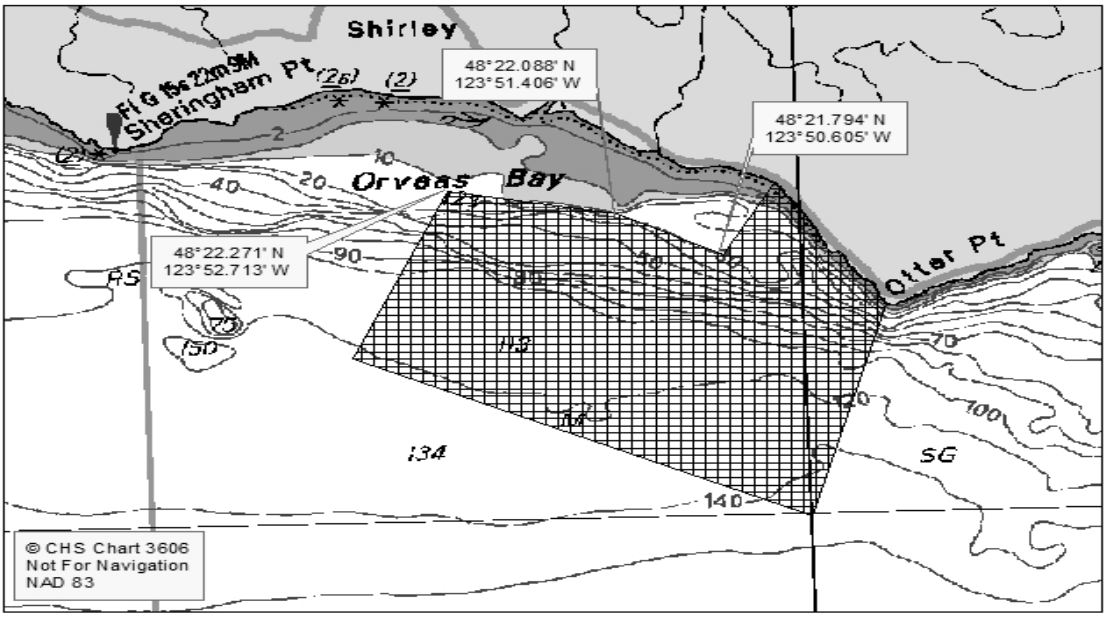


Figure 5. Area in Orveas Bay where commercial harvesting should not occur when the area is open to recreational harvest of salmon, from June 15th through to September 8th.

2.14.5 Area G

- To minimize gear tangles, set gear in a straight line or in a way so other harvesters can tell where the gear is set.
- To minimize noise, harvesters are requested to refrain from fishing near communities between the hours of 10pm and 6am.
- Area G commercial harvesters have agreed as part of their best management practices to remove or not set their gear from June 15 to September 15 in the following voluntary exclusion zones (See Figure 6, this best management practice is currently under review):
    1. Stag Bay (Hernando Island): at a location starting at the Spilsbury Point Commencing at 50° 0.202'N, 124° 56.657'W then to 50° 0.400'N, 124° 56.657'W then to 50° 0.039'N, 124° 54.394'W then to 49° 59.883'N, 124° 54.394'W then following the shoreline of Hernando Island to the beginning point.
    2. Savary Island: waters on the northern side of Savary Island inside a line starting at 49.57.022N and 124.51.607'W Easterly to a point at 49.57.508,N and 124.48.680'W then to Mace Point at 49.57.093'N and 124.45.795'W.
    3. Brew Bay and Lang Bay: inside of a line drawn from Albion point 49.46.014'N and 124.23.729'W then Southerly to a point in Stillwater Bay at 49.46.054'N and 124.18.687'W.

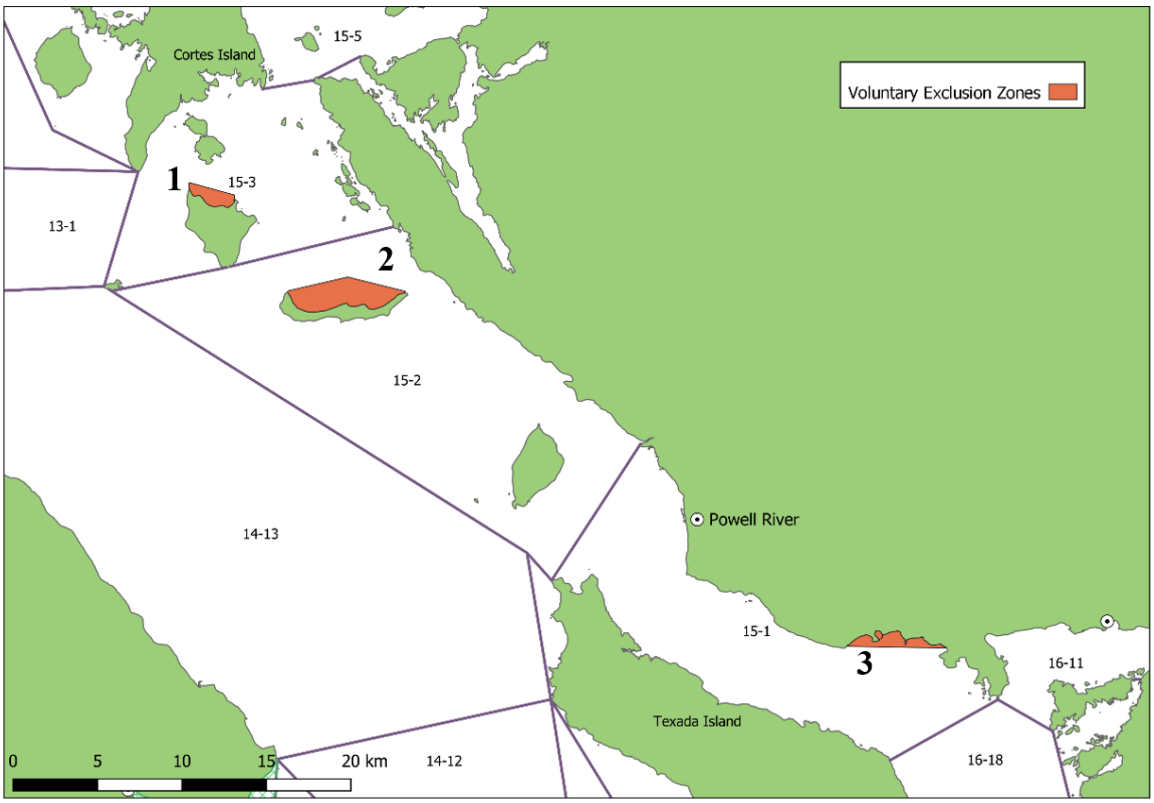


Figure 6. Voluntary commercial exclusion zones from June 15 to September 15 in Crab Management Area G located at: 1) Stag Bay (Hernando Island), PFMA 15-3; 2) Savary Island, PFMA 15-2; and 3) Brew Bay and Lang Bay, PFMA 15-1.

2.14.6 Area H

- Fishers are reminded that in the Sidney Channel area there is a minimum 20LT float size regulation in place to help prevent entanglement with recreational Salmon Fishers. The area running along the eastern side of James Island and southwards is of particular concern. Within this multi-user area, crab floats must remain on the surface at all times.
- Fishers are also asked to keep crab floats clear of BC Ferries traffic lanes and docking facilities. There are also regulated No float zones in both Ganges and Tsehum Harbour (see Appendix 7) to allow for the safe transit of motor vessels. Failure to respect traffic lanes or no float zones may result in seizure and or forfeiture of the problem gear.
- Commercial crab harvesters are advised to avoid setting gear within in that portion of Patricia Bay in Saanich Inlet (portion of Subarea 19-8) inside a line that begins at 48º39.18'N 123º29.35W then to 48º39.18'N 123º29.02'W then to 48º38.97'N 123º29.02'W then to 48º38.97'N 123º29.35'W then returning to the beginning point in order to avoid entanglement with sea bed oceanographic instruments deployed by the University of the Victoria Venus project. Please note that there is also a power and data cable from this location running to shore in Pat Bay, as described in a notice to mariners. For additional information see: www.venus.uvic.ca/index.html

For a map of the undersea infrastructure visit:
https://www.oceannetworks.ca/multimedia/maps/

- Vessel VRN numbers must be of the correct size and contrasting background for the length of the commercial vessel, and must be clearly displayed with an unobstructed view as to allow for a clear aerial sighting on both the port and starboard.
- Area H commercial harvesters have agreed as part of their best management practices to remove or not set their gear from June 15 to September 15 in the following voluntary exclusion zone (This best management practice is currently under review):
    - Silva Bay on Gabriola Island described as beginning at 49º09.500'N 123º42.175'W then to 49º09.434'N 123º42.020'W then to 49º09.424'N 123º41.796'W then southerly following the shoreline to 49º09.258'N 123º41.452'W then to 49º09.154'N 123º41.436'W then southerly following the shoreline to 49º08.925'N 123º41.352'W then to 49º08.900'N 123º41.426'W then southerly following the shoreline to 49º08.640'N 123º41.344'W then to 49º08.600'N 123º41.424'W then northerly following the shoreline to the beginning point.

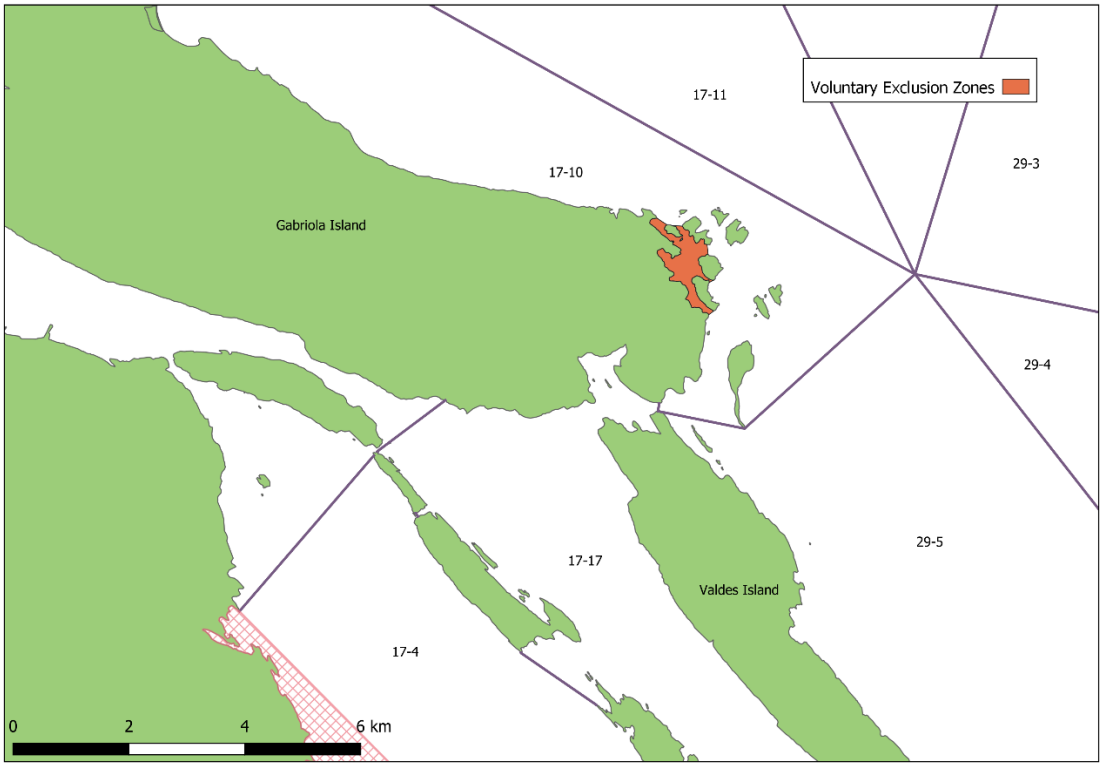


Figure 7. Voluntary commercial exclusion zone from June 15 to September 15 in Crab Management Area H located in PFMA 17-10 at Silva Bay.

2.14.7 Area I

- Harvesters are advised that the installation of sea bed oceanographic monitoring equipment by the University of Victoria VENUS project occurred in May 2013. The location of the instrument arrays are available from the VENUS project website and harvesters are advised to familiarize themselves with the locations of the instruments prior to the fishery. For additional information see: http://venus.uvic.ca/

3 CONTROL AND MONITORING OF COMMERCIAL FISHING ACTIVITIES

3.1 Trap Marking and Tags

All crab traps fished in **Area A** must be marked either by engraving the vessel registration number (VRN) on the escape hole strut, or on the tunnel, or by applying a brightly coloured plastic tag bearing the VRN to the trap. The VRN on the trap shall match the registration number of the vessel fishing the gear. The Crab Sectoral Committee and Fisheries and Oceans Canada suggest that harvesters in all areas mark their traps with their VRN by engraving or stamping the VRN into the tunnel or escape hole strut. Traps recovered without proper identification could be seized or destroyed.

Approved trap tags are required on all commercial crab traps fished in B.C. These include RFID chips for all Licence Areas, and plastic tags or combination tags for Licence Areas B, E, G, H, I, and J.

3.1.1 Radio Frequency Identification (RFID) Chips:

For vessels participating in an electronic vessel monitoring program, (see Section 4.8.2) radio frequency identification (RFID) chips are required. Beginning in 2026 this includes combination tags which contain a radio frequency chip. One RFID chip shall be attached to each trap, or to the buoy if using single buoyed gear. If using combination tags the tag must be attached to trap only. Vessel operators or automated equipment are required to scan every RFID chip as the trap is hauled on-board, with an chip scanner, to record RFID information from each trap hauled. All aspects of RFID chip procurement, distribution, administration, and data entry are the responsibility of the vessel owner/licence holder to arrange with the service provider.

Vessel operators are required to use and scan only those RFID chips registered in the vessel's inventory. Detailed requirements for RFID chip inventory management are provided in Appendix 9.1.

Chips shall be replaced if they become unreadable by the scanner. When a trap is taken out of the water and replaced, the vessel master is responsible for switching the RFID chips or combination tags so that all traps in the water are fitted with RFID chips or combination tags in that vessel's inventory for the current year.

When RFID chips or combination tags are replaced, only the valid chip shall remain on the trap. Old chips must be removed and destroyed and replaced with the replacement chips at the first opportunity the gear is hauled. Only traps tagged with working (readable) RFID chips or

combination tags are permitted to be on-board the licensed vessel utilizing electronic monitoring. For vessels utilizing on-board observers instead of EM, only plastic trap tags are required.

3.1.2 Plastic Trap Tags

In order to help ensure vessel trap limits are adhered to in the commercial crab fishery, DFO approved plastic trap tags that are unique to each vessel are required in Areas B, E, G, H, I, J for each fishing season. Beginning in 2026 combination tags may be used instead of plastic trap tags, see Appendix 9.4 for additional details.

The vessel master shall arrange to have tag numbers for tags that meet the requirements of the Department entered into a database. Data delivery requirements for plastic tags are further described in Appendix 9.3.

In Areas B through J, each vessel will be issued a total number of tags equal to their trap limit plus 10% to allow for replacement of lost traps.

If the vessel master requires more replacement tags than the 10% allotted for lost traps, the vessel master must contact their service provider for instructions on obtaining more tags and submit a ghost gear report. The service provider will then contact the crab manager regarding issuing a complete new set of replacement tags for all traps allocated to that licence. DFO will be reviewing requests to ensure a ghost gear report has been made. New replacement tags shall be marked with the letters “RP” and be a different colour than the original set issued. New replacement tags shall also indicate the licence year and be unique to each individual vessel. Old tags must be removed and replaced with the replacement tags at the first opportunity the gear is hauled. When trap tags are replaced, only the valid tag shall remain on the trap. All the old tags must be returned to the nearest DFO office within 21 days of the new tags being issued. Note: replacement tags will only be issued if lost, stolen or damaged and not in the event of seizure by enforcement personnel.

Two trap tag colours for Area E Tofino harvesters for traps fished inside and outside of Area 24 are no longer required.

3.2 Buoys

Buoys must exceed a minimum diameter of 12 cm and have a volume greater than 2.5 litres. (This is approximately equivalent to a cylinder 12 cm in diameter and 22cm long or a sphere 17cm in diameter.) All buoy lines, trap lines and ground lines shall be non-floating so that the lines remain below the surface of the water in order to minimize navigational hazards. This regulation is in place to avoid potential gear conflict between resource user groups. Utility cans, bleach bottles and other domestic containers are not permitted.

3.2.1 Standard Buoy Marking

The VRN must be painted, branded or affixed to each buoy, such that it is visible at all times without raising the gear from the water. The VRN shall be in solid block Arabic numerals, without ornamentation, no less than 75 mm in height and in a colour that contrasts with their background. The VRN on the buoy shall match the registration number of the vessel licensed to fish the gear for crab.

3.2.2 Buoy Registration

Area A: Licence holders fishing within Area A must register buoys with a unique colour combination with their service provider.

Area B: Licence holders fishing within Area B must register buoys with a unique colour combination with their service provider.

Area G, E (Quatsino) & E (Sooke): Licence holders fishing within Area G, Area E-Quatsino and Area E-Sooke must register buoys with a unique colour combination with the service provider.

Area E (Tofino): Licence holder fishing within Area E-Tofino Trap Limit Area must register buoys with a unique colour combination with the service provider and local C&P Department.

Other Areas: Discussions will occur with harvesters regarding requiring vessels to register individual buoy colours such that gear belonging to each vessel can be easily identified.

A standards document on Buoy registry programs will be developed sometime in the near future.

3.2.1 Buoy Lines

All **buoy lines** must be of a non-floating material so that the lines remain below the surface of the water while fishing, to minimize navigational hazards. String gear is permitted with the following exceptions:

3.2.1.1 Areas J, and E (Tofino) – Single Traps and Buoys

A buoy and buoy line shall be attached to each trap fished in Areas J and E Tofino in Areas 24-1 to 24-14. The traps must not be connected with lines.

3.2.1.2 Area G Maximum Trap Per String

In Area G, no more than 25 traps can be on one line.

3.2.2 Special Buoy Requirements

3.2.2.1 Subarea 19-5 - Waters of Sidney and Cordova Channels

Within the waters of Sidney and Cordova Channels, larger minimum buoy sizes have been adopted to improve gear visibility in these multi-use channels. A minimum buoy size of 10 litres is now required for commercial crab trap gear. This is equivalent to a buoy of 26.7 cm diameter.

The portion of Subarea 19-5 in which this requirement applies has been set to ensure that all channel areas and their approaches will have improved trap gear marking, makes use of landmarks that are distinguishable by commercial and recreational boaters without the need for electronic aids, and are locations which can be located on a chart. The southern boundary extends from Cowichan Head on the east shore of Saanich Peninsula to D'Arcy Shoals to the southernmost point of Sidney Island. The northern boundary extends from a point on Saanich Peninsula true west of the light at the north end of James Island, to the light on the north end of James Island, then to the light on the U2 navigation buoy in Sidney Channel, then true east to Sidney Island.

It should be noted that a poorly marked recreational fishing buoy is just as difficult to see and as dangerous as a poorly marked commercial trap buoy. The overall intent is to work towards

improved buoy marking in the commercial crab fishery and in the recreational crab and prawn fisheries.

All trap harvesters are recommended to set gear in such a way that channel areas remain free of buoys and lines in order to provide for safe navigation, while allowing for the continuation of the trap fisheries while minimizing conflicts with other user groups.

3.3 Holding Cages

In 2022, additional language was included in the Commercial Conditions of Licences clarifying the marking and use requirements of holding cages. A unique set of RFID tags for holding cages will be distributed to commercial harvesters. These RFID tags must be attached to all holding cages and scanned whenever the holding cage is hauled. Further amendments may be developed throughout following consultation with harvesters.

3.3.1 Marking of Holding Cages

All holding cages must be identified with a buoy with the registration number of the crab licensed vessel which harvested the impounded crabs. Harvesters must maintain holding cages so that crab mortalities are minimized. Holding cages must not be left in the water for more than 18 consecutive days without lifting the trap from the water and removing all of the crab from it. If holding cages are unmarked, or if significant crab mortalities are observed in cages, the crabs may be seized or released by Fishery Officers.

3.3.2 Transportation of Holding Cages

Each licenced vessel must transport its own holding cages to and from land.

3.3.3 Storage of Holding Cages

Holding cages containing crab may only be left unattended if the area is open to fishing and within an area that the licence holder is eligible to fish unless tied to the licensed vessel or to a dock. Holding cages cannot be stored in dioxin and furan closure areas.

3.4 Fishery Monitoring Programs

Full fishery monitoring, either through an at-sea observer or an electronic monitoring (EM) system, has been required in this fishery since April 1, 2006. This requirement will continue for the commercial fishery. Vessel owners/licence eligibility holders in all crab management areas may elect one of the following two options for full (100 percent) fishery monitoring:

- Participation in an at-sea observer monitoring program; or
- Participation in an approved EM program.

Crab monitoring programs will provide reports to Fisheries and Oceans Canada on fishing activity (hails) for Area A and plastic trap tags for all other licence areas, in order to review compliance with trap limits. In all crab management areas, harvest logbooks and on-grounds biological sampling are also required.

Prior to licence issue, the vessel owner/ licence eligibility holder must sign up with the approved program service provider chosen for each of these programs by the area representative and/or the commercial harvesters for that area.

For more information on these programs see the Fishery Monitoring and Catch Reporting Program Standards (Appendix 9).

3.4.1 At-Sea Fishery Monitoring

Vessel owners/licence eligibility holders electing to meet the full monitoring requirements by participating in an at-sea fishery monitoring program must ensure the program includes a method to accurately monitor each individual trap haul, to accurately record trap identification, and to accurately record fishing activity, fishing location, date, and time. At-sea observers must participate in a training program specific to crab trap monitoring, and must be designated under Section 39 of the *Fishery (General) Regulations*. If vessels opt to utilize an at-sea observer program instead of an EM program they must contact the Department for a complete list of requirements. Data delivery requirements for an at-sea observer program are provided in Appendix 9 (Annex 2).

3.4.2 Electronic Monitoring

The requirement for electronic monitoring (EM), or full at-sea-observer coverage, was established in 2006. To date, all licence holders have elected to participate in an EM program, whereas at-sea observers have been used only on a temporary basis where EM systems were not fully functioning. The rationale for establishing an EM program was to improve compliance with trap limits and to improve accuracy of fishing location data. The EM program also monitors compliance with a range of licence conditions including maximum soak time, area closures, and weekly trap haul restrictions.

Vessel owners/licence eligibility holders electing to participate in an EM program must adhere to the standards provided in detail in Appendix 9 (Annex 1), which includes requirements for system equipment, data collection, and data delivery including compliance reporting. EM equipment must accurately monitor the vessel 24 hours per day, seven days per week while it is engaged in fishing, where fishing is defined as the entire period of time that traps are in the water. Specifically, equipment must accurately monitor vessel position and activity through a GPS, identify trap-hauling activity, and identify individual traps using a radio frequency identification (RFID) chip on each trap (or on each buoy, when using single buoyed gear), and an RFID chip scanner to record RFID information. On behalf of the licence holder, a service provider will install and maintain EM equipment, carry out the required data analysis, and deliver both raw data and summary data including reports of non-compliance to the Department. The service provider must be trained in the requirements of category R and FR licensed fishing vessels as outlined in this IFMP and Conditions of Licence, and approved by DFO, and a single service provider is required for each licence area for the EM program.

The vessel master of a vessel participating in an EM program must ensure the EM system on their vessel is installed and fully operational for the entire period when traps are in the water. The Conditions of Licence reflects the option to participate in these programs and vessel masters must ensure that their Conditions of Licence are met. For a complete description of what meets the requirements for EM programs and data delivery requirements including compliance reporting, please see Appendix 9.

Video monitoring is required in Area A, B, and J and may be implemented in other areas if overall compliance with non-video systems is poor. Specifically, improved compliance with scanning RFID chips on all traps is needed.

Electronic Monitoring data, including vessel position data, hydraulic data, and individual trap haul locations (RFID chip data), are used by the Department in the proper assessment, management and control of the fishery. Upon receipt by the Department of electronic monitoring data supplied by the fish harvester in accordance with the 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 prejudice the competitive position of the licence holder.

The Department can only release EM data to the reported licence holder, and only upon written request.

3.5 On-Board Biological Sampling

The introduction of a biological sampling component to on-grounds inspections was implemented in 2005. On-board monitoring and biological data collection will occur throughout the fishing season, and must be completed by DFO certified At-Sea Observers. Agents of the service provider will report significant violations of Conditions of Licence immediately to the local crab fishery manager or to the O.R.R. line at 1-800-465-4336.

The biological information collected shall be entered into a Fisheries and Oceans Canada approved database and submitted to the Department in electronic form no later than seven (7) days following the end of the month when data were collected.

For area specific biological sampling details please refer to Annex 5 of Appendix 9.

3.6 Fishery Notification Procedures – Hails

Trip hails will continue to be a requirement in Area "A". Data delivery requirements for the hail program are detailed in Appendix 9 (Annex 6).

For all areas excluding Area A, daily activity reports that include the vessels location meets hail program objectives. As Area A has a camera program in which all data is stored on hard drives, the hail program will continue to support program objectives.

3.7 Catch and Fishing Data

3.7.1 Harvest Log Data

The vessel master/licence holder 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 and Research Division's Shellfish Data Unit.

Since 2018, vessel masters are required to print their name and provide a signature and FIN for every line entry. (See Appendix 5 for a draft example of the Harvest Log).

To fulfil stock assessment objectives, it is imperative that a very fine resolution of fishing location be reported in this fishery. The vessel master/licence holder is responsible for reporting latitude/longitude position on harvest logs in the "location" field for each string or group of traps.

Logbooks meeting the requirements of the Department are available from service providers who, for a fee, will provide the logbook coding and data entry service, thus complying with the requirements for a hard (paper) copy and an electronic copy of harvest data.

The original white page copy of the log and the electronic copy must be forwarded within 28 days following the end of each month in which fishing occurred. This information must be sent to:

Fisheries and Oceans Canada
Shellfish Data Unit
Pacific Biological Station
3190 Hammond Bay Road
Nanaimo, B.C., V9T 6N7
Phone: (250) 756-7022
Email: PACSDU@dfo-mpo.gc.ca

As an alternative to harvest log provision through a service provider, the vessel master/licence holder may provide a hard copy log in the same form and providing the same particulars as shown in the fishing log sample attached as Appendix 5 Example of Crab Fishery Harvest Log. The vessel master/licence holder must also provide an electronic copy of the harvest data, which is required to be a true and accurate transcription of the hard copy data, delivered on a Shellfish Data Unit approved media. The media will remain the property of Fisheries and Oceans Canada. The electronic copy must be a database table of specific design created by Microsoft Access 2010 (or earlier version).

Contact the Shellfish Data Unit at the above address to obtain the full requirements and acceptable data formats that meet the Conditions of Licence. The hard copy and the electronic copy of the harvest log must be forwarded within 28 days following the end of the month in which fishing occurred. This information must be sent to the above address.

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

3.7.1.1 Submission and Release of Harvest Log Data

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

3.7.1.2 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 issue 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 reminds harvesters that harvest logs must be completed accurately during fishing operations and submitted to the department in accordance with the timing set out in Conditions of Licence. Delay of completion or submission of logs is a violation of a condition on licence.

3.7.1.3 Confidentiality of Harvest Data

Harvest data, including fishing location data supplied through latitude/longitude co-ordinates, collected for use under the harvest logbooks for shellfish fisheries programs, are used by the Department in the proper assessment, management and control of the fisheries. Upon receipt by the Department of harvest log data and/or fishing location information, supplied by the fish harvester in accordance with the 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 prejudice the competitive position of the licence holder.

3.7.2 Fish Slip Requirements

It is a Condition of Licence that an accurate written report shall be furnished on a fish slip of all fish and shellfish caught under the authority of this licence. A report must be made even if the fish and shellfish landed are used for bait, personal consumption, or otherwise disposed. This includes all crab and octopus retained under authority of the licence. The written report shall be posted 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
(604) 666-3784

3.7.3 Octopus Retention

All harvesters are required to accurately report information about octopus caught and retained in their logbooks. There is no longer a separate octopus logbook. Octopus catch information is now included as part of the Crab by Trap Logbook and all octopus catch must be recorded (including nil catches, if none are caught). This information is required to develop a further understanding of the distribution and abundance of octopus species caught by commercial trap harvesters. Octopus may not be retained if caught in octopus closure areas. All octopus caught in octopus closure areas must be removed from the trap and released immediately in the location where they were caught, in a manner that will cause least harm. See Section 5.9 for further information.

4 OPEN TIMES

With exception of those permanent and seasonal closures noted in Section 5 of this plan, the closed time for the harvest of crab shall be varied to permit fishing from April 1, 2026 to March 31, 2027.

Harvesters are advised to check local area charts and public notices for no fishing zones or no access zones for navigational and military purposes.

5 CLOSURES

5.1 Haida Gwaii - Area A

5.1.1 Area A Year Round Crab Closures

The following areas are closed permanently to commercial crab harvesting:

5.1.1.1 Mammin River:

Subarea 1-6:

That portion of subarea 1-6 that lies inside a line commencing at a point in water at 53° 37.804' N, 132° 18.775' W then easterly to a point in water at 53° 37.873' N, 132° 18.071' W then southerly to a point on land at 53° 37.848' N, 132° 18.067' W then southerly following the shoreline to 53° 36.881' N, 132° 19.331' W then northerly to a point in water at 53° 37.323' N, 132° 19.221' W, then north easterly to the beginning point. (G?aw ?áahlii / Masset Inlet Marine Refuge)

5.1.1.2 Dawson Island

Subarea 1-6

That portion of subarea 1-6 that lies inside a line commencing at 53° 43.462' N, 132° 21.075' W then south easterly to a point in water at 53°42.965' N, 132° 20.001' W then south westerly to a point in water at 53° 42.844' N, 132° 20.274' W then westerly to a point in water at 53° 42.819' N, 132° 21.257' W then north westerly to a point in water at 53° 43.086' N, 132° 21.732' W then north easterly to the beginning point. (G?aw ?áahlii / Masset Inlet Marine Refuge)

5.1.1.3 Ain 6

Subarea 1-6

That portion of subarea 1-6 that lies inside a line commencing at 53° 44.573' N, 132° 24.659' W then south easterly to a point in water at 53°44.328' N, 132° 23.916' W then southerly to a Kwaikans Island at 53° 43.294' N, 132° 24.927' W then south westerly to McCreight Island at 53° 42.260' N, 132° 27.365' W then westerly to a point on land at 53° 42.414' N, 132° 28.393' W then following the shoreline to the beginning point. (G?aw ?áahlii / Masset Inlet Marine Refuge)

5.1.1.4 Juus Káahlii South

Subarea 1-6

That portion of subarea 1-6 that lies inside a line commencing at 53° 36.742' N, 132° 27.661' W then north easterly to a point on land at 53°37.393' N, 132° 23.520' W then southerly following the shoreline to 53° 34.255' N, 132° 28.526' W then easterly to a

point on land at 53° 34.253' N, 132° 28.993' W,then northerly following the shoreline to the beginning point. That portion of subarea 1-6 that lies inside a line commencing at 53° 34.253' N, 132° 28.993' W then easterly to a point on land at 53° 34.255' N, 132° 28.526' W the following the shoreline southerly to the beginning point. (G?aw ?áahlii / Masset Inlet Marine Refuge)

5.1.1.5 Awun Bay

Subarea 1-6

That portion of subarea 1-6 that lies inside a line commencing at 53° 40.417' N, 132° 34.226' W then easterly to a point in water at 53° 40.557' N, 132° 31.780' W then southerly to a point in water at 53° 39.431' N, 132° 30.352' W then following the shoreline to a point on land at 53° 40.014' N, 132° 34.154' W, then northerly following to the beginning point. (G?aw ?áahlii / Masset Inlet Marine Refuge)

5.1.1.6 Skidegate Inlet:

Subarea 2-1

Those waters of Skidegate Inlet and adjacent waters lying westerly of a line that begins at 53°25.854’N 131°54.640’W [Lawn Point] then southerly following the surfline to 53°15.632’N 131°46.232’W [surfline] then true west to 53°15.632’N 131°49.290’W [Spit Point] and easterly of the meridian passing through 132°16.966’W at McLellan Point (First Nations FSC and Recreation Closure).

5.1.1.7 Tllgaduu G?andlaay S??aagiidaay (Slatechuk Creek):

Subarea 2-1

That portion of subarea 2-1 that lies inside a line commencing at 53° 13.649' N, 132° 13.500' W then southerly to a point on land at 53° 13.303' N, 132° 13.595' W then southerly to a point on land 53° 13.056' N, 132° 14.151' W then easterly to a point on land at 53° 13.129' N, 132° 14.603' W then northerly to the beginning point. (X?aana K?aahlii / Skidegate Inlet Marine Refuge)

5.1.1.8 Diina (Deena Creek):

Subarea 2-1

That portion of subarea 2-1 that lies inside a line commencing at 53° 09.415' N, 132° 06.870' W then south easterly to a point on land at 53° 09.105' N, 132° 05.650' W then westerly following the shoreline to 53° 09.246' N, 132° 07.064' W then northerly to a point in water at 53° 09.306' N, 132° 07.036' W then northerly to a point in water at 53° 09.381' N, 132° 06.947' W then northerly to the beginning point. (X?aana K?aahlii / Skidegate Inlet Marine Refuge)

5.1.1.9 Hl??aagilda Llnagaay S??aagiidaay (Skidegate):

Subarea 2-1

That portion of subarea 2-1 that lies inside a line commencing at 53° 17.933' N, 131° 57.984' W then easterly to a point in water at 53° 17.887' N, 131° 57.517' W then southerly to a point in water at 53° 15.335' N, 131° 58.180' W then southerly to a point in water at 53° 14.616' N, 131° 58.830' W then north westerly to a point on land at 53° 14.856' N, 131° 59.749' W then northerly to the beginning point. (X?aana K?aahlii / Skidegate Inlet Marine Refuge)

5.1.1.10 Additional Portions of Area 2

Subarea 2-2

Those waters inside a line that begins at 53°15.632’N 131°49.290’W [Spit Point] then true east to 53°15.632’N 131°46.232’W [surfline] then southerly following the surfline to 53°06.533’N 131°38.748’W [Gray Point] then northerly following the shoreline to the beginning point (First Nations FSC and Recreation Closure).

Subarea 2-3

Those waters of Cumshewa Inlet and adjacent waters lying westerly of a line that begins at 53°06.533’N 131°38.748’W [Gray Point] then southerly following the surfline to 52°57.832’N 131°32.897’W [surfline] then true west to 52°57.832’N 131°36.199’W [Skedans Point] and easterly of the meridian passing through 131°50.320’W at Conglomerate Point (First Nations FSC and Recreation Closure).

Subarea 2-4

Those waters of Cumshewa Inlet and adjacent waters lying westerly of the meridian passing through 131°50.320’W at Conglomerate Point and easterly of a line that begins at 53°01.476’N 131°57.690’W [near Barge Point] then to 53°00.859’N 131°55.969’W [Louise Island] (First Nations FSC and Recreation Closure).

Subarea 2-63

Those waters of Buck Channel and adjacent waters inside a line that begins at 53°09.121’N 132°37.757’W [surfline] then true east to 53°09.121’N 132°35.137’W [Tcenakun Point] then following the southerly shoreline of Chaatl Island to 53°07.576’N 132°24.043’W [Chaatl Island] then true east to 53°07.576’N 132°23.622’W [Demariscove Point] then westerly following the shoreline to 53°05.732’N 132°34.496’W [Buck Point] then northerly following the surfline to the beginning point (First Nations FSC and Recreation Closure).

Subarea 2-64

Those waters of Skidegate Channel inside a line that begins at 53°10.603’N 132°33.832’W [Ells Point] then southeasterly following the shoreline to 53°09.163’N 132°30.818’W [Mercer Point] then to 53°08.687’N 132°29.959’W [Newton Point] then true south to 53°07.704’N 132°29.959’W [Chaatl Island] then following the northerly shoreline to 53°09.121’N 132°35.137’W [Tcenakun Point] then to the beginning point (First Nations FSC and Recreation Closure).

Subarea 2-65

Those waters of Dawson Inlet and Dawson Harbour lying northerly of a line that begins at 53°09.163’N 132°30.818’W [Mercer Point] then to 53°08.687’N 132°29.959’W [Newton Point] (First Nations FSC and Recreation Closure).

Subarea 2-66

Those waters of Skidegate Channel lying easterly of the meridian passing through 132°29.959’W at Newton Point and westerly of a line that begins at 53°07.576’N 132°24.043’W [Chaatl Island] then true east to 53°07.576’N 132°23.622’W [Demariscove Point] then true north to 53°08.316’N 132°23.622’W [Graham Island] (First Nations FSC and Recreation Closure).

Subarea 2-67

Those waters of Skidegate Channel and adjacent waters lying easterly of the meridian passing through 132°16.966’W at McLellan Point and westerly of the meridian passing through 132°23.622’W at Demariscove Point (First Nations FSC and Recreation Closure).

Subarea 2-77

Those waters of Shields Bay inside a line that begins at 53°20.424’N 132°26.568’W [Dawson Head] then true north to 53°21.050’N 132°26.569’W [Graham Island] then following the shoreline of Shields Bay to 53°19.419’N 132°27.322’W [Graham Island] then true north to 53°19.476’N 132°27.322’W [Shields Island] then following the westerly shoreline of Shields Island to the beginning point (First Nations FSC and Recreational Access Closure).

5.1.1.11 Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site

Harvesting of all species is prohibited within Strict Protection Zones of Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site identified in the Gina ‘Waadluxan KilGuhlGa Land-Sea-People Management Plan. Descriptions of strict protection areas are as follows:

Area 2

T’aanuu K’aadxwah Xyangs sda Gwaay Xaa’ans (Klue Passage to Lost Islands)

Those waters of Subareas of 2-7 and 2-8 inside a line commencing on a point of the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°48.570’N and 131°39.433’W northeasterly to a point in water at 52° 49.383’N and 131°29.039’W, thence southeasterly to a point in water at 52° 48.148’N and 131°28.849’W, thence southwesterly to a point in water at 52° 44.898’N and 131°34.035’W, thence northwesterly to 52°45.113’N and 131° 34.125’W, thence following the northern shoreline of K’ang.Guu Gwaay.yaay (Kunga Island) to 52°45.220’N and 131°35.574’W, thence southwesterly to a point on T’aanuu Gwaay (Tanu Island) at 52°45.002’N and 131°36.770’W, thence northerly following the eastern shoreline of T’aanuu Gwaay (Tanu Island) to 52° 46.725’N and 131°38.878’W, thence northwesterly across to a point on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby

Island) at 52°47.837’N and 131°39.371’W, and thence northerly following the eastern shoreline to the beginning point.

Didxwahxyangs (Darwin Sound)

Those waters of Subarea 2-10 inside a line commencing at a point on land on Shuttle Island at 52°40.053’N and 131°42.328’W northeasterly to a point on the western shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°40.466’N and 131° 41.105’W, thence southerly following the western shoreline of Tllga Kun Gwaay.yaay (Lyell Island) to 52°37.301’N and 131°38.800’W, thence northwesterly to a point on land of Gwaay DaaGaaw (Shuttle Island) at 52°38.522’N and 131° 41.409’W, and thence following the eastern shoreline of Shuttle Island to the beginning point.

Gandaawuu.ngaay Xyangs sda Tllga Kun Gwaay.yaay (Juan Perez Sound to Lyell Island

Those waters of Subareas 2-11 and 102-2 inside a line commencing on the eastern shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°42.074’N and 131° 26.535’W southeasterly to a point in water at 52°41.073’N and 131°14.523’W, thence southeasterly to a point in water at 52°38.666’N and 131°12.987’W, thence southwesterly to 52°35.106’N and 131°22.254’W, thence following the northern shoreline of Xiina Gwaay.yaay (Ramsay Island) to 52°34.964’N and 131° 22.963’W, thence southwesterly across to 52°34.116’N and 131°25.603’W, thence southwesterly across to 52°33.844’N and 131°26.324’W, thence southwesterly to a point on Gandaawuu.ngaay Gwaay.yaay (Marco Island) at 52°31.498’N and 131° 30.354’W, thence northwesterly to a point on Gandaawuu.ngaay Gwaayts’idaay (Hoskins Islets) at 52°32.405’N and 131°32.946’W, thence following the northern shoreline of Gandaawuu.ngaay Gwaayts’idaay (Hoskins Islets) to 52°32.435’N and 131°33.055’W, thence southwesterly to a point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°32.211’N and 131° 34.475’W, thence easterly following the eastern shoreline to 52°32.956’N and 131°37.729’W, thence northeasterly to a point on the shoreline of Kingts’ii Gwaay.yaay (Bischof Islands) at 52°34.143’N and 131°33.379’W, thence easterly following the southeastern shoreline of Kingts’ii Gwaay.yaay (Bischof Islands) to 52°34.340’N and 131°33.098’W, thence northeasterly to a point on an islet at 52°34.530’N and 131°32.890’W, thence northeasterly to a point on the southern shoreline of Tllga Kun Gwaay.yaay (Lyell Island) at 52°35.767’N and 131° 32.891’W, and thence easterly and northerly following the shoreline of Tllga Kun Gwaay.yaay (Lyell Island) to the beginning point.

Kuuniisii Xaw GawGa sda Gaaduu Gwaay (Matheson Inlet to Huxley Island)

Those waters of Subareas 2-12 and 2-13 inside a line commencing on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°30.038’N and 131°28.071’W southeasterly to a point on land on Gwaay Guusdagang (All Alone Stone Island) at 52°29.081’N and 131°24.042’W, thence southeasterly to a point on the northern shoreline of Gaaduu Gwaay (Huxley Island) at 52°28.066’N and 131°21.772’W, thence southerly following the western shoreline of Gaaduu Gwaay (Huxley Island) to 52°25.934’N and 131°21.927’W, thence southwesterly to the northern shoreline of GaysiiGas K’iidsii Gwaay (Section Island) at 52°25.435’N and 131°22.425’W, thence westerly following the northern shoreline of GaysiiGas K’iidsii Gwaay (Section Island) to 52°25.460’N and 131°22.513’W, thence northwesterly to a

point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°26.039’N and 131° 25.343’W, thence northerly following the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to 52°28.460’N and 131°27.972’W, and thence northerly to the beginning point.

Suu Kaahlii sda SGwaay Kun Gwaay.yaay (Skincuttle Inlet to Burnaby Island)

Those waters of Subareas 2-13 to 2-16 and 102-2 inside a line commencing at a point on the eastern shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°26.521’N and 131°14.153’W southeasterly to a point in water at 52°25.980’N and 131°04.477’W, thence southeasterly to a point in water at 52°22.825’N and 131°00.885’W, thence southwesterly to a point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°18.124’N and 131° 18.347’W, thence northerly following the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to 52°23.055’N and 131°23.441’W, thence northeasterly to the western shoreline of Gwaay GudgiiGaagid (Kat Island) at 52° 23.082’N and 131°22.916’W, thence easterly following the southern shoreline of Gwaay GudgiiGaagid (Kat Island) to 52°23.147’N and 131°22.260’W, thence northeasterly to the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°23.276’N and 131°21.333’W, thence southerly following the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) to 52°20.949’N and 131° 15.569’W, thence northeasterly to the easternmost point of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°22.315’N and 131°14.689’W, thence following the western shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) to 52°22.377’N and 131°14.683’W, thence northwesterly to a point on the eastern shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) at 52°24.494’N and 131°15.832’W, and thence following the eastern shoreline to the beginning point.

Gid Gwaa GyaaGa GawGa (Poole Inlet)

Those waters of Subarea 2-14 south of a line drawn from a point on the shoreline of SGwaay Kun Gwaay.yaay (Burnaby Island) in Gid Gwaa GyaaGa GawGa (Poole Inlet) at 52°22.764’N and 131°18.249’W southeasterly across the inlet to a point on the opposite shore at 52°22.505’N and 131°17.665’W.

GawGan (Huston Inlet) – Head

Those waters of Subarea 2-15 south of a line drawn from a point on the western shoreline of GawGan (Huston Inlet) at 52°15.732’N and 131°15.643’W northeasterly across the inlet to a point on the opposite shore at 52°16.111’N and 131°14.231’W.

Kayjuu Kun (Benjamin Point)

Those waters of Subareas 2-17, 2-18 and 102-2 inside a line commencing at a point on the eastern shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°10.262’N and 131°01.993’W northerly following the eastern shoreline to 52°13.232’N and 131°00.777’W, thence northeasterly to a point in water at 52°17.724’N and 130°55.078’W, thence southeasterly to a point in water at 52°12.476’N and 130°49.103’W, and thence southwesterly back to the beginning point.

K’insiGid (Rose Inlet) – Head

Those waters of Subarea 2-18 north of a line drawn from the western shoreline of K'insiGid (Rose Inlet) on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°11.327'N and 131°08.370'W northeasterly across the inlet to a point on the opposite shore at 52°11.328'N and 131°07.115'W.

Gangxid Tllgaay (South Kunghit Island)

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line commencing at a point on the western shoreline of Gangxid Tllgaay (South Kunghit Island) at 51°57.689'N and 131°03.375'W easterly following the southern shoreline of Gangxid Tllgaay (South Kunghit Island) to 52°00.343'N and 130° 59.788'W, thence southeasterly to a point in water at 51°50.159'N and 130° 53.207'W, thence southwesterly to a point in water at 51°47.954'N and 130° 53.613'W, thence northwesterly to a point in water at 51°54.927'N and 131° 07.801'W, and thence northeasterly to the beginning point.

SGang Gwaay (Wailing Island)

Those waters of Subareas 2-31 and 142-1 inside a line commencing at a point on the western shoreline of T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°07.210'N and 131°15.838'W easterly following the shoreline to 52° 07.440'N and 131°14.307'W, thence southeasterly to a point on the northern shoreline of K'il (Flatrock Island) at 52°06.468'N and 131°10.300'W, thence easterly following the shoreline to 52°06.388'N and 131°10.079'W, thence southeasterly to the westernmost point of Sii.niihl Gwaay.yaay (Gordon Islands) at 52°06.018'N and 131°09.391'W, thence southerly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.884'N and 131°09.283'W, thence southeasterly to 52°05.806'N and 131°09.208'W, thence easterly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.787'N and 131° 09.097'W, thence northeasterly to the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) at 52°05.788'N and 131°08.938'W, thence easterly following the shoreline and thence crossing the channel to 52°05.778'N and 131°08.861'W, thence southeasterly following the shoreline to 52°05.741'N and 131°08.788'W, thence following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52° 05.708'N and 131°08.697'W, thence easterly across the channel to 52°05.709'N and 131°08.673'W, thence southerly following the shoreline of Sii.niihl Gwaay.yaay (Gordon Islands) to 52°05.468'N and 131°08.425'W, thence southeasterly to a point on the western shoreline of Gangxid Gwaay.yaay (Kunghit Island) at 52°04.414'N and 131°07.720'W, thence northerly and southerly following the shoreline of Gangxid Gwaay.yaay (Kunghit Island) to 52° 04.366'N and 131° 07.720'W, thence southwesterly to a point in water at 52° 03.175'N and 131°14.399'W, thence northwesterly to a point in water at 52° 05.826'N and 131°17.913'W, and thence northeasterly back to the beginning point.

GawGajaang (Louscoone Inlet) – Head

Those waters of Subarea 2-34 north of a line drawn from a point on land on T'aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°11.841'N and 131° 15.670'W northeasterly across the inlet to a point on the opposite shoreline of GawGajaang (Louscoone Inlet) at 52°12.245'N and 131°14.568'W.

St'aa K'ii GawGa (Flamingo Inlet) – Head

Those waters of Subarea 2-37 north of a line drawn from a point on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°14.455’N and 131°22.232’W southeasterly across St’aa K’ii GawGa (Flamingo Inlet) to a point on land on the opposite shore at 52°14.228’N and 131°21.503’W.

Kun Skuujii sda GawGaay.ya (Kwoon Cove to Gowgaia Bay)

Those waters of Subareas 2-38 to 2-41 and 142-1 inside a line commencing at a point on land on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°23.311’N and 131°35.794’W northwesterly to a point on land on GuuGaalas Gwaay (south Gowdas Islands) at 52°23.340’N and 131°35.859’W, thence northerly following the shoreline of GuuGaalas Gwaay (south Gowdas Islands) to 52° 23.489’N and 131°36.092’W, thence southwesterly to a point in water at 52° 18.982’N and 131°43.957’W, thence northwesterly to a point in water at 52° 38.114’N and 132°10.004’W, thence southeasterly to a point on land on T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) at 52°38.177’N and 131°56.374’W, and thence southerly following the western shoreline of T’aaxwii XaaydaGa Gwaay.yaay iinaGwaay (Moresby Island) to the beginning point.

Gangxid Xyuu Kun sda Kan ’Láas Kun (Lyman Point to Receiver Point)

Those waters of Subareas 102-2 and 102-3 inside a line commencing at a point on land of Kildaga T’awts’iiGaay (islet) at 52°04.541’N and 130°56.293’W following the shoreline of the islet to 52°04.598’N and 130°56.368’W, thence northwesterly to the eastern shoreline of Gangxid Gwaay.yaay (Kunghit Island) at 52°04.652’N and 130°56.414’W, thence northerly following the eastern shoreline of Gangxid Gwaay.yaay (Kunghit Island) to 52°05.734’N and 130° 56.365’W, thence northeasterly to a point in water at 52°10.225’N and 130° 49.512’W, thence southwesterly to a point in water at 52°02.632’N and 130° 50.910’W, thence northwesterly back to the beginning point.

Area 105

West Banks Island:

Those waters of Area 105 and Subareas 5-20 and 5-22 that lie inside a line that begins at 53°27.900'N, 130°39.800'W then easterly to a point on Bonilla Island at 53°27.985'N, 130°35.246'W then southerly to a point in water at 53°23.700'N, 130°22.700'W then southerly to a point in water at 53°18.700'N, 130°21.500'W then northerly to a point in water at 53°24.300'N, 130°38.000'W then to the beginning point. (Banks Marine Refuge)

Subarea 105-2

North Danger Rocks:

Those waters of Subarea 105-2 that lie inside a line that begins at a point in water at 53°15.900'N, 130°22.200'W then easterly to a point in water at 53°16.100'N, 130°16.700'W then southerly to a point in water at 53°10.000'N , 130°06.200'W then west to a point in water at 53°10.000'N, 130°19.110'W then northerly to a point in water at 53°11.881'N, 130°19.785'W then westerly to a point in water at 53°12.373'N , 130°21.662'W then to the beginning point. (Banks Marine Refuge)

Subarea 106-1

Otter Passage:

Those waters of Subareas 6-9 and 106-1 that lie inside a line that begins at 53°09.835'N, 129°47.579'W then southerly to a point in water at 53°05.100'N, 129°46.600'W then westerly to a point in water at 53°05.000'N, 129°50.100'W then northerly to a point in water at 53°08.600'N, 130°08.900'W then northerly to a point in water at 53°10.000'N, 130°08.900'W then east to Terror point at 53°10.000'N, 129°57.127'W then following the southerly shoreline of Banks Island to the beginning point. (Banks Marine Refuge)

5.1.1.12 Bowie Seamount:

Portions of Subarea 101-1 and 142-2

Area bounded by a series of rhumb lines drawn from a point 53°03′07.6″ N, 135°50′25.9″ W, to a point 53°16′20.9″ N, 134°59′55.4″ W, then to a point 53°39′49.2″ N, 135°17′04.9″ W, then to a point 53°39′18.0″ N, 135°53′46.5″ W, then to a point 53°52′16.7″ N, 136°30′23.1″ W, then to a point 53°49′19.6″ N, 136°47′33.1″ W, then to a point 53°40′02.5″ N, 136°57′03.5″ W, then to a point 53°13′59.2″ N, 136°10′00.0″ W, then back to the point of commencement as laid out in the Bowie Seamount Marine Protected Area Regulations. (Marine Protected Area)

5.1.1.13 Hecate Strait Queen Charlotte Sound Glass Sponge Reef Areas:

Portions of Subarea 105-2, 106-1, 106-2, 107-1, 107-2, 110-0 and 111-0

The Northern Reef Area. Area bounded by a series of rhumb lines drawn from a point 53º11'52.9" North latitude and 130º19'47.2" West longitude, to a point having coordinate values of 53º09'22.0" North latitude and 130º18'53.0" West longitude, then to a point having coordinate values of 53º02'54.5" North latitude and 130º25'16.2" West longitude, then to a point having coordinate values of 53º03'06.9" North latitude and 130º30'35.6" West longitude, then to a point having coordinate values of 53º07'17.8" North latitude and 130º42'03.2" West longitude, then to a point having coordinate values of 53º07'44.5" North latitude and 130º46'26.5" West longitude, then to a point having coordinate values of 53º13'28.7" North latitude and 130º47'28.7" West longitude, then to a point having coordinate values of 53º19'20.0" North latitude and 130º54'24.2" West longitude, then to a point having coordinate values of 53º24'05.4" North latitude and 130º48'37.8" West longitude then to a point having coordinate values of 53º23'40.7" North latitude and 130º42'52.2" West longitude then to a point having coordinate values of 53º18'42.5" North latitude and 130º38'09.3" West longitude, then to a point having coordinate values of 53º15'20.6" North latitude and 130º33'01.3" West longitude, then back to the point of Commencement.

The Northern Reef Area Core Protection Zone (CPZ). Area bounded by a series of rhumb lines drawn from a point having coordinate values of 53º18'40.4" North latitude and 130º52'46.5" West longitude, to a point having coordinate values of 53º22'12.1" North latitude and 130º47'01.7" West longitude, then to a point having coordinate values of 53º22'20.2" North latitude and 130º43'12.5" West longitude, then to a point having coordinate values of 53º17'22.8" North latitude and 130º38'18.2" West longitude, then to a point having coordinate values of 53º15'01.7" North latitude and 130º36'35.5" West longitude, then to a point having coordinate values of 53º10'55.2" North latitude and

130º20'19.3" West longitude, then to a point having coordinate values of 53º04'30.2" North latitude and 130º25'53.6" West longitude, then to a point having coordinate values of 53º04'58.0" North latitude and 130º32'16.9" West longitude then to a point having coordinate values of 53º07'22.2" North latitude and 130º37'37.6" West longitude, then to a point having coordinate values of 53º08'36.6" North latitude and 130º39'29.5" West longitude, then to a point having coordinate values of 53º08'41.8" North latitude and 130º45'40.0" West longitude, then to a point having coordinate values of 53º13'51.2" North latitude and 130º46’41.2" West longitude, then back to the point of Commencement.

The Central Reefs Area is described as bounded by a series of rhumb lines drawn from a point 52º00'24.4" North latitude and 129º14'12.6" West longitude, to a point having coordinate values of 51º55'50.5" North latitude and 129º18'13.8" West longitude, then to a point having coordinate values of 51º51'32.5" North latitude and 129º36'37.4" West longitude, then to a point having coordinate values of 51º53'00.7" North latitude and 129º44'03.4" West longitude, then to a point having coordinate values of 52º05'14.1" North latitude and 129º36'14.1" West longitude, then to a point having coordinate values of 52º08'46.0" North latitude and 129º33'33.5" West longitude, then to a point having coordinate values of 52º15'42.6" North latitude and 129º44'12.3" West longitude, then to a point having coordinate values of 52º29'35.4" North latitude and 129º52'32.7" West longitude, then to a point having coordinate values of 52º32'05.4" North latitude and 129º53'06.2" West longitude, then to a point having coordinate values of 52º34'05.6" North latitude and 129º47'51.4" West longitude, then to a point having coordinate values of 52º25'42.7" North latitude and 129º35'12.2" West longitude, then to a point having coordinate values of 52º20'02.8" North latitude and 129º29'51.7" West longitude, then to a point having coordinate values of 52º09'52.3" North latitude and 129º25'29.5" West longitude, then back to the point of Commencement.

The Central Reefs Area Core Protection Zone (CPZ) Zone ‘A’ is described as bounded by a series of rhumb lines drawn from a point having coordinate values of 52º14'03.4" North latitude and 129º38'33.2" West longitude, to a point having coordinate values of 52º16'54.8" North latitude and 129º43'13.4" West longitude, then to a point having coordinate values of 52º21'57.1" North latitude and 129º43'56.5" West longitude, then to a point having coordinate values of 52º24'24.5" North latitude and 129º47'22.8" West longitude, then to a point having coordinate values of 52º29'05.9" North latitude and 129º50'59.4" West longitude, then to a point having coordinate values of 52º31'05.2" North latitude and 129º50'13.9" West longitude, then to a point having coordinate values of 52º31'06.7" North latitude and 129º47'40.9" West longitude, then to a point having coordinate values of 52º27'42.0" North latitude and 129º40'25.1" West longitude, then to a point having coordinate values of 52º25'22.9" North latitude and 129º37'24.0" West longitude, then to a point having coordinate values of 52º19'47.0" North latitude and 129º32'43.2" West longitude, then to a point having coordinate values of 52º16'18.2" North latitude and 129º33'22.8" West longitude, then back to the point of Commencement.

The Central Reefs Area Core Protection Zone (CPZ) Zone ‘B’ is described as bounded by a series of rhumb lines drawn from a point having coordinate values of 51º54'43.1" North latitude and 129º41'22.2" West longitude, to a point having coordinate values of

52º01'22.5" North latitude and 129º35'48.4" West longitude, then to a point having coordinate values of 52º05'13.5" North latitude and 129º34'32.5" West longitude, then to a point having coordinate values of 52º08'48.5" North latitude and 129º31'44.1" West longitude then to a point having coordinate values of 52º08'51.3" North latitude and 129º29'18.0" West longitude, then to a point having coordinate values of 52º04'27.1" North latitude and 129º21'17.3" West longitude, then to a point having coordinate values of 51º59'40.8" North latitude and 129º15'23.9" West longitude, then to a point having coordinate values of 51º56'04.5" North latitude and 129º18'46.2" West longitude, then to a point having coordinate values of 51º52'55.7" North latitude and 129º36'49.8" West longitude, then back to the point of Commencement.

The Southern Reef Area is described as bounded by a series of rhumb lines drawn from a point 51º24'44.2" North latitude and 128º47'58.3" West longitude, to a point having coordinate values of 51º18'32.5" North latitude and 128º40'35.6" West longitude, then to a point having coordinate values of 51º14'57.6" North latitude and 128º47'01.2" West longitude, then to a point having coordinate values of 51º14'33.9" North latitude and 128º55'45.5" West longitude, then to a point having coordinate values of 51º17'42.3" North latitude and 129º00'29.0" West longitude, then to a point having coordinate values of 51º19'24.5" North latitude and 129º00'53.6" West longitude, then back to the point of Commencement.

The Southern Reef Area Core Protection Zone is described as bounded by a series of rhumb lines drawn from a point having coordinate values of 51º17'59.2" North latitude and 128º57'31.9" West longitude, to a point having coordinate values of 51º19'30.8" North latitude and 128º58'22.7" West longitude, then to a point having coordinate values of 51º23'41.9" North latitude and 128º48'50.9" West longitude, then to a point having coordinate values of 51º19'17.5" North latitude and 128º42'33.6" West longitude, then to a point having coordinate values of 51º18'24.5" North latitude and 128º42'37.7" West longitude, then to a point having coordinate values of 51º15'56.0" North latitude and 128º47'04.2" West longitude, then to a point having coordinate values of 51º15'52.2" North latitude and 128º54'20.4" West longitude, then back to the point of Commencement.

5.1.2 Area A Seasonal Crab Closures

5.1.2.1 Area A - Soft-shell Closure (excluding McIntyre Bay, Naden Harbour):

Area A closes due to soft-shell crab 00:01 hours March 1 to 08:00 hours August 1. The Department may endorse a monitoring program in accordance with the soft-shell guidelines, (see Appendix 10). If a program is in place and testing commences no later than March 1, the Area, or portions of the Area (see Appendix 10 for a map and a description of the Area A Soft-shell Management Areas), could close earlier or later than March 1 if sampling indicates a change to the closing date is appropriate. If a program is in place, the Area, or portions of the area, could also open earlier or later than August 1 if sampling indicates a change to the opening date is appropriate.

5.1.2.2 McIntyre Bay (Soft-shell Area 10) :

Subareas 1-5 and 101-4 to 101-10

Those portions of Subareas 1-5 and 101-4 to 101-10 that lie east of the meridian passing through 132°04' west longitude, and west of the meridian passing through 131°30' west longitude, except for that portion of Subarea 101-10 that lies southeasterly of a line that begins at 54°09' N 131°40' W [Rose Spit] then to 54°12'N 131°38' W then to 54°14.9' N 131°30.7' W, closed 00:01 hours, March 1 to 08:00 hours, September 1. (Soft-shell, Conservation, First Nation FSC and Recreational Access Closure). The Department may endorse a monitoring program in accordance with the soft-shell guidelines (see Appendix 10). If a program is in place and testing commences no later than March 1, the area may close no later than May 1, if soft-shell sampling indicates a change to the closure date is appropriate. McIntyre Bay may re-open at the earliest 08:00 hours September 1.

The maximum number of traps permitted to be fished in McIntyre Bay between September 1 and November 1, is one-half the total trap allocation indicated on the vessel licence.

5.1.2.3 Naden Harbour :

Subarea 1-4

Those waters of Naden Harbour and adjacent waters lying southerly of a line that begins at 54°02.830’N 132°34.166’W [Mary Point] then to 54°03.010’N 132°32.731’W [Deepwater Point] closed 00:01 hours March 1 to 08:00 hours October 15. **Ring net fishery only**. (Soft-shell closure). If a program is in place and testing commences no later than March 1, the area may close no later than May 1, if soft-shell sampling indicates a change to the closure date is appropriate.

5.2 North Coast Mainland - Area B

All areas within Area B are closed from Dec 19 to April 1 of each calendar year. The 11 Central Coast Collaborative Crab Management Process Closures came into effect April 1, 2021 to improve First Nations FSC access.

5.2.1 Area B Year Round Crab Closures

The following areas are closed year-round to commercial crab harvesting:

5.2.1.1 Gingolx:

Subarea 3-12:

Those portions of Subarea 3-12 and the Nass River estuary inside a line that begins at 55°00.626’N 130°00.329’W [Nass Point] then to 55º00.000’N 130º01.000’W then to 54º58.200’N 129º55.000’W then to 54°59.082’N 129°55.053’W [Fort Point navigation marker] then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.2.1.2 Stewart:

Subarea 3-15:

That portion of 3-15 lying northerly of the parallel passing through 55°37.617’N [Green Islets] and easterly of the international boundary between Canada and the United States. (First Nations FSC and Recreational Access Closure)

Subarea 3-16:

Those waters of Portland Canal and adjacent waters lying northerly of the parallel passing through 55°47.807’N at Engineers Point and easterly of the international boundary between Canada and the United States. (First Nations FSC and Recreational Access Closure)

5.2.1.3 Prince Rupert:

Subarea 4-9 :

That portion of Subarea 4-9 inside a line that begins at 54°20.141’N 130°27.678’W [Observation Point] then to 54°19.921’N 130°29.696’W [Doolan Point] then following the easterly shoreline of Tugwell Island to 54°19.125’N 130°30.980’W [Dawes Point] then to 54°18.447’N 130°28.457’W [Straith Point] then to the beginning point. (First Nations FSC and Recreational Access Closure)

Subarea 4-10:

Those waters of Prince Rupert Harbour and adjacent waters inside a line that begins at 54°20.141’N 130°27.678’W [Observation Point] then following the shoreline of Tuck Inlet to 54°20.197’N 130°16.490’W [Pethick Point] then to 54°20.052’N 130°17.009’W [Ritchie Point] then following the westerly shoreline of Kaien Island to 54°14.079’N 130°20.085’W [near Bishop Island] then to 54°14.113’N 130°22.665’W [Lima Point] then following the easterly shoreline of Digby Island to 54°18.447’N 130°28.457’W [Straith Point] then to the beginning point. (First Nations FSC and Recreational Access Closure)

Subarea 4-11:

Those waters of Porpoise Harbour, Wainwright Basin, Morse Basin, and adjacent waters lying southerly of a line that begins at 54°20.052’N 130°17.009’W [Ritchie Point] then to 54°20.197’N 130°16.490’W [Pethick Point] and northerly of a line that begins at 54°12.152’N 130°18.514’W [Ridley Island] then to 54°12.097’N 130°18.142’W [Lelu Island] then northerly following the shoreline to 54°12.634’N 130°17.485’W [Lelu Island] then true east to 54°12.634’N 130°17.199’W [Tsimpsean Peninsula].Please refer to the First Nations Harvest plan or the B.C. Tidal Water Sport Fishing Guide for the Dioxin Closure information. (First Nations FSC, Recreational Access, and Dioxin Closure)

5.2.1.4 Kitkatla:

Subarea 5-3:

Those waters of Kitkatla Channel and adjacent waters inside a line that begins at 53°50.268’N 130°30.206’W [Chief Point] then easterly following the shoreline to 53°49.704’N 130°20.488’W [Sparrowhawk Point] then to 53°47.766’N 130°18.771’W

[McCauley Island] then to 53°47.308’N 130°23.724’W [Browning Island] then to 53°47.490’N 130°24.571’W [Dolphin Island] then following the northerly shoreline of Dolphin Island to 53°47.819’N 130°25.981’W [Kitkatla Village on Dolphin Island] then to 53°49.194’N 130°30.009’W [Goschen Island] then to the beginning point. (First Nations FSC and Recreational Access Closure)

Subarea 5-10:

Those waters of Browning Entrance and adjacent waters inside a line that begins at 53°49.194’N 130°30.009’W [Goschen Island] then to 53°47.819’N 130°25.981’W [Kitkatla Village on Dolphin Island] then following the southerly shoreline of Dolphin Island to 53°47.490’N 130°24.571’W [Dolphin Island] then to 53°47.308’N 130°23.724’W [Browning Island] then to 53°47.766’N 130°18.771’W [McCauley Island] then southerly following the shoreline to 53°40.427’N 130°24.525’W [Baird Point] then to 53°38.261’N 130°27.990’W [Banks Island] then to 53°47.291’N 130°33.162’W [Viscount Point] then northeasterly following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.2.1.5 Kitimat:

Subarea 6-1:

Those waters of Douglas Channel, Devastation Channel, Kitimat Arm, and adjacent waters lying northeasterly of a line that begins at 53°45.238’N 129°01.852’W [Paisley Point] then to 53°41.498’N 129°05.121’W [Grant Point] then following the shoreline to 53°41.197’N 129°04.789’W [Maitland Island] then to 53°40.494’N 129°04.797’W [Hawkesbury Island] then following the easterly shoreline of Hawkesbury Island to 53°33.600’N 128°53.406’W [Eva Point] then to 53°34.147’N 128°49.007’W [Staniforth Point] then to 53°33.903’N 128°46.107’W [mainland]. (First Nations FSC and Recreational Access Closure)

5.2.1.6 Coghlan Anchorage:

Subarea 6-2:

That portion of Subarea 6-2 west of a line begins at 53°25.478’N 129°14.242’W [Halsey Point] then to 53°24.728’N 129°14.214’W [Dawson Point] then following the westerly shoreline of Promise Island to 53°22.022’N 129°15.699’W [Thom Point] then to 53°21.878’N 129°16.208’W [Waterman Point] then northerly following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.2.1.7 Kitkiata Inlet:

Subarea 6-2:

That portion of Subarea 6-2 west of a line begins at 53°37.876’N 129°13.853’W [Gertrude Point] then to 53°36.798’N 129°14.411’W [Helen Point]. (First Nations FSC and Recreational Access Closure)

5.2.1.8 Kiskosh Inlet:

Subarea 6-2:

That portion of Subarea 6-2 west of a line begins at 53°31.180’N 129°13.955’W then to 53°30.579’N 129°14.140’W. (First Nations FSC and Recreational Access Closure)

5.2.1.9 Higgins Passage:

Subarea 6-16 and 7-3:

Those portions of Subareas 6-16 and 7-3 lying inside of a line that begins at 52°29.074586'N 128°45.836113'W [southwest Swindle Island], then southwest to 52°28.658625'N 128°47.783029'W, then south to 52°27.752182'N 128°47.957771'W, then east to 52°27.505255'N 128°45.896523'W [west Price Island], then following the northern shoreline of Price Island to 52°27.564212'N 128°37.583357'W, then 52°27.919086'N 128°36.925324'W then following the southern shoreline of Swindle Island to the beginning point. (First Nations FSC Access Closure)

5.2.1.10 Khutze Inlet:

Subarea 6-23:

A portion of Subarea 6-23 lying southerly of a line that begins at 53°05.7887’ N 128°27.1974’ W [Pardoe Point] then to due east to 53°05.7865’ N 128°25.7469’ W. (Central Coast Collaborative Crab Management Closure)

5.2.1.11 Bottleneck:

Subarea 7-6:

Those waters of PFMA 7-6 within Bottleneck Inlet: Defined by those waters inside a line that begins at 52°42.7’ N 128°25.5’ W, then to 52°42.8’ N 128°25.5’ W, then following the shoreline back to the beginning point. (Central Coast Collaborative Crab Management Closure)

5.2.1.12 Mussel Inlet:

Subarea 7-7:

Those portions of Mussel Inlet lying easterly of a line that begins at 52°54.608550'N 128°7.088569'W [Carse Point] then south to 52°53.891016'N 128°6.686082'W [east of David Bay]. (First Nations FSC Access Closure)

5.2.1.13 Griffin:

Subarea 7-9:

Those waters in a portion of 7-9 inside a line that begins at 52°46.0240’ N 128°20.9051’ W, then due east to 52°46.0175’ N 128°19.9661’ W then following the eastern shoreline to the south to the point 52°40.5787’ N 128°16.3566’ W and then due west to 52°40.5787’ N 128°17.2617’ W and then following the west shore north to the beginning point. (Central Coast Collaborative Crab Management Closure)

5.2.1.14 Kynoch Inlet:

Subarea 7-11:

Those waters of Kynoch Inlet lying easterly of a line that begins at 52°46.109'N 128°07.820'W [Garvey Point] then to 52°45.582'N 128°06.788'W [Kynoch Point]. This closure includes the eastern portion of Kynoch Inlet and Culpepper Lagoon. (First Nations FSC and Recreational Access Closure)

5.2.1.15 Bullock:

Subarea 7-14:

A portion of 7-14 within Bullock Channel inside a line that begins at 52°24.8034' N 128°04.7689' W, then due east to 52°24.8034' N 128°04.4230' W then following the eastern shoreline to the south to the point 52°22.3772' N 128°03.4271' W and then due west to 52°22.3729' N 128°03.9442' W and then following the west shore north to the beginning point. (Central Coast Collaborative Crab Management Closure)

5.2.1.16 Troup Passage:

Subarea 7-15:

Those portions of Subarea 7-15 lying inside of a line that begins at 52°18.201′N 127°57.968′W [Jagers Point], then following the westerly shoreline of Cunningham Island to 52°12.252′N 128°05.718′W [Dumas Point], then to 52°13.595′N 128°07.398′W [Chatfield Island], then following the northerly shoreline of Chatfield Island to 52°18.201′N 128°00.831′W, then due east to the beginning point. (First Nations FSC Access Closure)

5.2.1.17 Hauyet:

Subarea 7-17:

A portion of 7-17 including Hauyet: Those waters of Lama Passage and adjacent waters inside a line that begins at 52°4.2' N 128Â°5.6' W (Westminster Point), then to 52°3.9' N 128°3.0'W (Harbourmaster Point), then following the southern shoreline to the beginning point. (Central Coast Collaborative Crab Management Closure)

5.2.1.18 Fitz Hugh Sound/Koeye Inlet:

Subarea 8-3:

Those waters of Fitz Hugh Sound including the Koeye River estuary inside a line that begins at 51°44.011'N 127°59.798'W [Kelpie Point Light] then to 51°48.949'N 127°53.842'W [Uganda Point] then southerly following the shoreline to 51°42.967'N 127°53.462'W [Whidbey Point] then to the beginning point. This closes Koeye River estuary. (First Nations FSC Access Closure)

5.2.1.19 Dean Channel

Subarea 8-7:

Those waters of Dean Channel and adjacent waters lying northeasterly of a line that begins at 52°16.065'N 127°47.100'W [Boscowitz Point] then to 52°14.759'N 127°45.956'W [Rattenbury Point] and southwesterly of a line that begins at 52°27.297'N 127°17.586'W [north of Eucott Bay] then to 52°26.354'N 127°16.415'W [Edward Point]. (First Nations FSC and Recreational Access Closure)

5.2.1.20 Kimsquit:

Subarea 8-8, 8-9:

That portion of subarea 8-8 within the north end of Dean Channel: North of a line that begins at 52°35.3013' N 127°09.7818' W, then to 52°34.4591' N 127°08.9307' W and subarea 8-9. (Central Coast Collaborative Crab Management Closure)

5.2.1.21 North Bentinck Arm

Subarea 8-11:

Those waters of North Bentinck Arm and adjacent waters lying easterly of a line that begins at 52°19.948′N 126°59.164′W [Loiyentsi Point] then to 52°18.084′N 127°00.457′W [near Menzies Point] then to 52°18.727′N 126°57.905′W [Tallheo Point]. (First Nations FSC and Recreational Access Closure)

5.2.1.22 South Bentinck:

Subarea 8-12:

That portion of subarea 8-12 within the south end of Bentinck arm: South of a line that begins at 52°03.4381' N 126°41.3674' W, then to 52°02.6243' N 126°43.1459' W. (Central Coast Collaborative Crab Management Closure)

South Bentinck 2:

That portion of Subarea 8-12 within Bentinck Arm inside a line that begins at 52°08.3851' N 126°49.8189' W, then due north to 52°09.9041' N 126°49.7904' W then following the eastern shoreline to the north to the point 52°14.6654' N 126°55.1455' W and then due west to 52°14.6786' N 126°56.7887' W and then following the west shore south to the beginning point. (Central Coast Collaborative Crab Management Closure)

5.2.1.23 Burke Channel/Doc Creek

Subarea 8-13:

Those waters within Subarea 8-13 of Burke Channel inside a line that begins at 51°57.9781' N 127°40.4324' W then southwest to 51°57.0328' N 127°41.3889' W. This closes the estuaries of Doc Creek and Nootsum River. (First Nations FSC and Recreational Access Closure)

5.2.1.24 Kwatna

Subarea 8-14:

That portion of subarea 8-14 within Kwatna Bay: East of a line that begins at 52°07.0781’ N 127°26.0781’ W, then to 52°06.4534’ N 127°26.0781’ W. (Central Coast Collaborative Crab Management Closure)

5.2.1.25 Kwatalena:

Subarea 8-14:

That portion of subarea 8-14 within Kwatna Inlet: South of a line that begins at 52°03.5732’ N 127°36.0804’ W, then to 52°03.3190’ N 127°34.8727’ W. (Central Coast Collaborative Crab Management Closure)

5.2.1.1 Johnston Bay:

Subarea 9-3:

That portion of subarea 9-3 including Johnston Bay: Those waters of Rivers Inlet inside a line that begins at 51°30.4’ N 127°32.2’ W, then to 51°30.5’ N 127°31.5’ W, following the southerly shoreline back to the beginning point. (Central Coast Collaborative Crab Management Closure)

5.2.1.2 Rivers Inlet:

Subareas 9-5 through 9-9: Central Coast Collaborative Crab Management Closure

5.2.1.3 Takush Harbour:

Subarea 10-4, 10-5 and 10-12:

Those portions of Subareas 10-4, 10-5 and 10-12 lying east of a line that begins at 51°16.356’N and 127°40.651’W due north to 51°16.851’N and 127°40.661’W then southeast of a line from 51°16.851’N and 127°40.661’W to 51°18.664’N and 127°35.260’W and southwest of a line from 51°18.664’N and 127°35.260’W to 51°18.395’N and 127°33.750’W on Greaves Island then following the westerly shoreline of Greaves Island to 51°17.014’N and 127°35.527’W then to 51°17.000’N and 127°35.526’W then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.2.2 Area B Seasonal Crab Closures

Please see Section 2.6.2 for the applicable open times.

5.2.2.1 Khutzeymateen Inlet:

Subarea 3-10:

Those waters of Khutzeymateen Inlet and adjacent waters lying easterly of a line that begins at 54°42.989'N 130°13.731'W [Keemein Point] then to 54°43.589'N 130°13.050'W [Welgeegenk Point] opens to commercial crab fishing at 08:00 hours April 1, and closes 00:01 hours November 16. (Winter Ice Closure)

5.2.2.2 Nass Estuary (with half trap vessel limit and one haul per day):

Subareas 3-12 and 3-18:

Those portions of Subareas 3-12, 3-18 and the Nass River estuary inside a line begins at 54°58.995'N 130°06.270'W [Ramsden Point Light] then to a 54°56.5'N 130°04.2'W located three nautical miles southwest of Arrandale on Mylor Peninsula then following the shoreline to 54°58.933'N 129°50.385'W [Leading Point] then to 54°59.620'N 129°53.467'W [east of Mill Bay] then following the shoreline to 55°00.626'N 130°00.329'W [Nass Point] then dues west to 55°00.626'N 130°03.350'W, (on the opposite mainland shore) then following the shoreline to the beginning point closed January 1 to 08:00 hours October 1 of each year and from 00:01 hours, October 23 to December 31 of each calendar year. The opening date of October 1, closure date of October 22, and closure area boundary may be changed pre-season based on consultation. (First Nations FSC and Recreational Access Closure)

5.2.2.3 Stewart:

Subarea 3-15:

That portion of 3-15 lying southerly of the parallel passing through 55°37.617'N [Green Islets] and easterly of the international boundary between Canada and the United States. (First Nations FSC and Recreational Access Closure)

5.2.2.4 Big Bay:

Subarea 4-8:

That portion of Subarea 4-8 east of a line that begins at 54°28.461'N 130°25.712'W [Shattock Point] then to 54°27.342'N 130°27.049'W [Simpson Point]. (First Nations FSC and Recreational Access Closure)

5.2.2.5 Prince Rupert:

Subarea 4-9:

That portion of Subarea 4-9 inside a line that begins at 54°21.803'N 130°29.243'W [Ryan Point] then to 54°20.355'N 130°30.519'W [Chapman Point] then following the easterly shoreline of Tugwell Island to 54°19.921'N 130°29.696'W [Doolan Point] then to 54°20.141'N 130°27.678'W [Observation Point] then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.2.2.6 Kitkatla:

The following areas are closed by variation order and notice to industry during the herring seine and roe-on-kelp fisheries. Since 2018, half trap limits and daily haul restrictions will be in place for the first 14 days of the commercial crab fishery.

Subarea 5-4:

Those waters of Kitkatla Inlet and adjacent waters inside a line that begins at 53°53.961'N 130°41.984'W [Porcher Peninsula] then true east to 53°53.961'N 130°39.758'W [Gurd Island] then following the southerly shoreline of Gurd Island to 53°53.765'N 130°35.208'W [Gurd Island] then to 53°53.765'N 130°33.400'W [Snass Point] then to 53°52.233'N 130°30.941'W [Whiteley Point] then southerly following the shoreline to 53°50.268'N 130°30.206'W [Chief Point] then to 53°49.194'N 130°30.009'W [Goschen Island] then following the northeasterly shoreline of Goschen Island to 53°51.024'N 130°33.962'W [Nubble Point] then to 53°51.333'N 130°35.312'W [Coquitlam Island] then to 53°51.542'N 130°36.661'W [Porcher Peninsula] then northerly following the shoreline to the beginning point. (Herring Seine and Roe-on-Kelp Closure)

Subarea 5-5:

Those waters of Kitkatla Inlet and adjacent waters inside a line that begins at 53°56.184'N 130°38.170'W [Porcher Island] then to 53°55.438'N 130°35.062'W [Porcher Island] then southerly following the shoreline to 53°53.765'N 130°33.400'W [Snass Point] then true west to 53°53.765'N 130°35.208'W [Gurd Island] then northerly following the shoreline to 53°55.237'N 130°37.984'W [Gurd Point] then to the beginning point. (Herring Seine and Roe-on-Kelp Closure)

Subarea 5-6:

Those waters of Dries Inlet and adjacent waters lying northerly of a line that begins at 53°56.184'N 130°38.170'W [Porcher Island] then to 53°55.438'N 130°35.062'W [Porcher Island]. (Herring Seine and Roe-on-Kelp Closure)

Subarea 5-7:

Those waters of Serpentine Inlet and adjacent waters lying northerly of a line that begins at 53°55.060'N 130°40.843'W [Porcher Peninsula] then to 53°56.184'N 130°38.170'W [Porcher Island]. (Herring Seine and Roe-on-Kelp Closure)

Subarea 5-8:

Those waters of Kitkatla Inlet and adjacent waters inside a line that begins at 53°55.060'N 130°40.843'W [Porcher Peninsula] then to 53°56.184'N 130°38.170'W [Porcher Island] then to 53°55.237'N 130°37.984'W [Gurd Point] then southerly following the shoreline to 53°53.961'N 130°39.758'W [Gurd Island] then true west to 53°53.960'N 130°41.984'W [Porcher Peninsula] then northerly following the shoreline to the beginning point. (Herring Seine and Roe-on-Kelp Closure)

5.2.2.7 Portions of Area 6 (with half trap vessel limit and one haul per day):

Subarea 6-3:

Those waters of Verney Passage, Ursula Channel, and adjacent waters inside a line that begins at 53°33.600’N 128°53.406’W [Eva Point] then to 53°34.147’N 128°49.007’W [Staniforth Point] then southerly following the shoreline to 53°18.723’N 128°53.302’W [mainland] then to 53°18.867’N 128°56.685’W [Pilot Point] then following the northerly shoreline of Gribbell Island to 53°22.910’N 129°07.364’W [Gribbell Island] then true west to 53°22.910’N 129°09.921’W [Money Point] then following the easterly shoreline of Hawkesbury Island to the beginning point. (First Nations and Recreational Access Closure)

Subarea 6-4:

Those waters of Gardner Canal and adjacent waters lying southerly of a line that begins at 53°34.147’N 128°49.007’W [Staniforth Point] then to 53°33.903’N 128°46.107’W [mainland]. (First Nations and Recreational Access Closure)

5.2.2.8 Khutze Inlet:

Subarea 6-23:

Those waters of Khutze Inlet lying easterly of a line that begins at 53°05.259’N 128°33.381’W [Asher Point] then to 53°04.041’N 128°33.051’W [Griffin Point]. (First Nations and Recreational Access Closure)

5.2.2.9 Portions of Area 7:

Subarea 7-6:

Those waters of Finlayson Channel inside a line that begins at 52°53.012’N 128°30.634’W [Sarah Head] then true east to 52°53.012’N 128°29.883’W [mainland] then following the shoreline to 52°49.124’N 128°23.499’W [Carter Point] then to 52°48.316’N 128°23.541’W [Fawn Point] then following the westerly shoreline of Roderick Island to the mouth of Bottleneck Inlet 52°42.8’N 128°25.5’W then true south to 52°42.7’N 128°25.5’W to exclude Bottleneck inlet and continuing to follow the westerly shoreline to 52°38.529’N 128°26.799’W [Roderick Island] then true west to 52°38.529’N 128°30.330’W [Pering Point] then northerly following the shoreline to the beginning point. (First Nations and Recreational Access Closure)

Subarea 7-10:

Those waters of Mathieson Channel and adjacent waters inside a line that begins at 52°46.109’N 128°09.358’W [Pooley Island] then true east to 52°46.109’N 128°07.820’W [Garvey Point] then to 52°45.582’N 128°06.788’W [Kynoch Point] then southerly following the shoreline to 52°34.310’N 128°14.752’W [Hird Point] then to 52°35.229’N 128°17.203’W [Charles Head] then northerly following the shoreline to the beginning point. (First Nations and Recreational Access Closure)

Subarea 7-13:

Those waters of Spiller Channel and adjacent waters lying southerly of the parallel passing through 52°23.665’N near Mosquito Bay and northerly of a line that begins at 52°15.694’N 128°17.072’W [Don Peninsula near Foote Islets] then to 52°15.735’N 128°14.647’W [Hyndman Reefs Light] then to 52°16.773’N 128°12.912’W [Grief

Island] then following the northerly shoreline of Grief Island to 52°16.742’N 128°12.261’W [Grief Island] then true east to 52°16.742’N 128°11.656’W [Yeo Island] (First Nations and Recreational Access Closure)

Subarea 7-14:

Those waters of Spiller Channel, Bullock Channel, Briggs Inlet and adjacent waters lying northerly of a line that begins at 52°23.665’N 128°09.896’W [near Mosquito Bay] then true east to 52°23.665’N 128°07.908’W [Yeo Island] then following the northerly shoreline of Yeo Island to 52°19.144’N 128°02.819’W [Ettershank Point] then to 52°19.177’N 128°01.551’W [Coldwell Point] then to 52°19.085’N 128°00.469’W [Florence Peninsula] . (First Nations and Recreational Access Closure)

Subarea 7-15:

Those waters of Return Channel and adjacent waters inside a line that begins at 52°19.144′N 128°02.819′W [Ettershank Point] then to 52°19.177′N 128°01.551′W [Coldwell Point] then to 52°19.085′N 128°00.469′W [Florence Peninsula] then easterly following the shoreline to 52°22.251′N 127°53.051′W [Roscoe Point] then to 52°21.764′N 127°52.023′W [Clatse Point] then southerly following the shoreline to 52°18.201′N 127°55.805′W [near Albert Islet] then true west to 52°18.201′N 127°57.968′W [Jagers Point] then true east to 52°18.201′N 128°00.831′W to exclude the waters of Troup Passage then following the northerly shoreline of Chatfield Island to 52°14.911′N 128°10.574′W [Noon Point] then to 52°16.477′N 128°10.894′W [Yeo Island] then easterly following the shoreline to the beginning point. (First Nations and Recreational Access Closure)

Subarea 7-16

Those waters of Roscoe Inlet and adjacent waters lying north-easterly of a line that begins at 52°22.251’N 127°53.051’W [Roscoe Point] then to 52°21.764’N 127°52.023’W [Clatse Point] (First Nations and Recreational Access Closure)

Subarea 7-17

Those waters of Hunter Channel, Lama Passage, and adjacent waters inside a line that begins at 52°11.109’N 128°06.733’W [Dryad Point] then to 52°12.252’N 128°05.718’W [Dumas Point] then following the southerly shoreline of Cunningham Island to 52°11.355’N 127°53.653’W [Madigan Point] then to 52°11.111’N 127°53.058’W [Georgie Point] then following the westerly shoreline of Denny Island to 52°04.549’N 127°56.547’W [Start Point] then to 52°03.829’N 127°57.056’W [Kaiete Point] then following the northerly shoreline of Hunter Island to 52°3.9’N 128°3.0’W (Harbourmaster Point) then to 52°4.2’N 128°5.6’W (Westminster Point) then to 52°4.0038’N 128°5.974’W to exclude the waters of Huayet then continuing on the northerly shoreline to 52°00.589’N 128°09.961’W [Hunter Island] then true west to 52°00.589’N 128°11.012’W [Soulsby Point] then northerly following the shoreline to the beginning point (First Nations and Recreational Access Closure)

5.2.2.10 Portions of Area 9:

Subarea 9-2

Those waters of Rivers Inlet inside a line that begins at 51°30.536’N 127°41.792’W [Penrose Island] then to 51°30.246’N 127°41.186’W [Walbran Island] then following the southerly shoreline of Walbran Island to 51°31.166’N 127°34.918’W [Walbran Island] then to 51°30.398’N 127°32.954’W [west of Johnston Bay] then southerly following the shoreline to 51°28.498’N 127°33.745’W [north shoreline of Draney Narrows] then to 51°28.375’N 127°33.947’W [south shoreline of Draney Narrows] then southwesterly following the shoreline to 51°22.624’N 127°44.777’W [Mainland, near Open Bight] then to 51°27.209’N 127°44.705’W [Dimsey Point] then to 51°27.348’N 127°44.219’W [Joachim Island] then following the easterly shoreline of Joachim Island to 51°27.762’N 127°43.838’W [Joachim Island] then to 51°27.982’N 127°43.341’W [Penrose Island] then following the easterly shoreline of Penrose Island to the beginning point (First Nations and Recreational Access Closure)

Subarea 9-3

Those waters of Rivers Inlet inside a line that begins at 51°34.251’N 127°34.217’W [Walbran Island] then to 51°34.210’N 127°31.450’W [near Ida Island] then southerly following the shoreline to 51°30.5’N 127°31.5’W then to 51°30.4’N 127°32.2’W to exclude Johnston Bay 51°30.398’N 127°32.954’W [west of Johnston Bay] then to 51°31.166’N 127°34.918’W [Walbran Island] then northerly following the shoreline to the beginning point. (First Nations and Recreational Access Closure)

Subarea 9-4

Those waters of Rivers Inlet inside a line that begins at 51°38.657’N 127°30.325’W [near Whannock Cove] then to 51°37.393’N 127°30.284’W [Stone Point] then southerly following the shoreline to 51°34.210’N 127°31.432’W [near Ida Island] then to 51°34.251’N 127°34.217’W [Walbran Island] then westerly following the shoreline to 51°34.477’N 127°34.820’W [McLeod Point] then to 51°34.638’N 127°34.982’W [near Dawsons Landing] then northerly following the shoreline to the beginning point. (First Nations and Recreational Access Closure)

5.2.2.11 Subarea 9-6 Takush Harbour (with 20 trap vessel limit and one haul per day):

Subarea 10-12

That portion of Subarea 10-12 that lies east of a line that begins at 51°17.014’N and 127°35.527’W on Greaves Island to 51°17.000’N and 127°35.526’W and west of a line that begins at 51°16.244’N and 127°34.314’W on Greaves Island to 51°15.799’N and 127°34.094’W closed to commercial crab fishing from 00:00 hours January 1 to 08:00 hours October 1 and from 00:00 hours December 19 to 23:59 hours December 31. (First Nations FSC and Recreational Access Closure). Gwa’sala-’Nakwaxda’xw Nations have requested an adjustment to this closure. There will be a review of FSC and commercial harvest, and management approaches will be adapted as required.

5.3 West Coast Vancouver Island - Area E

5.3.1 Area E Year Round Crab Closures

The following areas are closed permanently to commercial crab harvesting:

5.3.1.1 Port Renfrew:

Subarea 20-2

That portion of Subarea 20-2 northerly of a line that begins at 48°32.574'N 124°29.861'W [Owen Point] then to 48°34.395'N 124°24.440'W. (First Nations and Recreational Access Closure)

5.3.1.2 Race Rocks:

Subareas 19-3 and 20-5

Those waters of Subareas 19-3 and 20-5 within 0.5 nautical miles of Great Race Rock. (Marine Reserve) This closure is within both Area 'H' and Area 'E'.

5.3.1.3 Becher Bay – Inside:

Subarea 20-5

That portion of Subarea 20-5 inside a line that begins at 48°20.111'N 123°36.205'W then to 48°20.010'N 123°35.511'W then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure). Becher Bay First Nations have requested an adjustment to this closure. DFO is consulting with Becher Bay and the area E Sooke commercial representatives. The boundaries or times for this closure may be changed prior to the fishery start or in season.

5.3.1.4 Alberni Inlet :

Subarea 23-1

Those waters of Alberni Inlet lying northerly of the parallel passing through 49°06.222'N. (First Nations FSC and Recreational Access Closure)

5.3.1.5 Pacific Rim National Park, Broken Group Islands:

Subareas 23-6, 23-7, 23-8, 23-9 and 23-11

Those portions of Subareas 23-6, 23-7, 23-8, 23-9 and 23-11 inside a line that begins at 48°57.752'N 125°19.689'W then to 48°55.575'N 125°12.795'W then to 48°50.221'N 125°18.865'W then to 48°51.757'N 125°23.699'W then to 48°54.318'N 125°23.719'W then to the beginning point. (Park)

5.3.1.6 Ahousaht/Millar Channel:

Subarea 24-4

That portion of Subarea 24-4 inside a line that begins at 49°18.030'N 126°04.140'W [northern end of McNeill Peninsula] then to 49°18.030' N 126°03.710' W then to

49°17.483’ N 126°03.024’ W then to 49°16.814’ N 126°02.960’ W then to 49°16.439’ N 126°02.608’ W then to 49°16.226’ N 126°02.823’ W [Yates Point]. (Navigational and First Nations and Recreational Access Closure)

5.3.1.7 Tofino Navigation Channel:

Subareas 24-4, 24-6, 24-8, 24-9 and 124-3

No buoys are permitted in those portions of Subareas 24-4, 24-6, 24-8, 24-9 and 124-3 shown below. See Section 5.9 below for additional details (Navigation Closure)

5.3.1.8 Muchalat Inlet:

Subarea 25-1

Those waters of Muchalat Inlet lying easterly of the meridian at 126°12.867’W at the Muchalat Inlet south shore Light. (Dioxin Closure)

Subarea 25-2

Those waters of Muchalat Inlet lying westerly of the meridian at 126°12.867’W at the Muchalat Inlet south shore Light and easterly of a line that begins at 49°38.680’N 126°20.888’W [Muchalat Inlet Light] then to 49°38.150’N 126°21.250’W [Ous Point]. (Dioxin Closure)

Subarea 25-3

Those waters of King and Williamson Passages lying westerly of a line that begins at 49°38.680’N 126°20.888’W [Muchalat Inlet Light] then to 49°38.150’N 126°21.250’W [Ous Point] and easterly of a line that begins at 49°39.178’N 126°26.457’W [Atrevida Point Light] then to 49°38.767’N 126°28.292’W [Anderson Point Light]. (Dioxin Closure)

5.3.2 Area E Seasonal Crab Closures

5.3.2.1 Becher Bay – Outside:

Subarea 20-5

That portion of Subarea 20-5 north of a line that begins at 48°20.196’N 123°37.377’W then to 48°19.848’N 123°37.243’W [Lamb Islet] then to 48°19.848’N 123°35.568’W then following the shoreline to the beginning point closed to commercial crab fishing from 00:01 March 15 to 23:59 September 15. (First Nations FSC and Recreational Access Closure). Becher Bay First Nations have requested an adjustment to this closure. DFO is consulting with Becher Bay and the area E Sooke commercial representatives. The boundaries or times for this closure may be changed prior to the fishery start or in season.

5.3.2.2 Pedder Bay:

Subarea 20-5

That portion of Subarea 20-5 north of a line that begins at 48°19.927’N 123°32.892’W [Manor Point] then to 48°20.245’N 123°32.458’W then following the Pedder Bay

shoreline to the beginning point closed to commercial crab fishing from 00:01 March 15 to 23:59 September 15.(First Nations FSC and Recreational Access Closure)

5.3.2.3 Sooke Harbour:

Subarea 20-6

That portion of Subarea 20-6 inside a line that begins at 48°22.500'N 123°42.012'W [Trollope Point] then to 48°22.651'N 123°42.643'W then to 48°22.770'N 123°42.684'W then following the shoreline to 48°22.684'N 123°41.487'W [Billings Point] then to 48°22.444'N 123°41.487'W then following the shoreline to the beginning point closed to commercial crab fishing from 00:01 March 15 to 23:59 September 15. (First Nations FSC and Recreational Access Closure)

5.3.2.4 Ucluelet Harbour:

Subarea 23-11

That portion of Subarea 23-11 north of a line that begins at 48°55.289'N 125°30.572'W then to 48°55.295'N 125°31.429W [Francis Island] then following the southerly shore of Francis Island to 48°55.313'N 125°31.572'W then to 48°55.329'N 125°31.711'W then following the shoreline to the beginning point closed to commercial crab fishing from 00:00 hours January 1 to 23:59 hours March 31 and 00:01 hours October 1 to 23:59 hours December 31. (First Nations FSC and Recreational Access Closure)

5.4 Johnstone Strait - Area G

5.4.1 Areas G Year Round Crab Closures

The following areas are closed permanently to commercial crab harvesting:

5.4.1.1 Blunden Harbour

Subarea 12-13

That portion of Subarea 12-13 that lies northwest of a line that begins at 50°54.238'N and 127°16.571'W on Robinson Island to a point at 50°54.388'N and 127°16.292'W on Edgell Island, following the northerly shoreline of Edgell Island to 50°54.571'N and 127°15.977'W to 50°54.578'N and 127°15.968'W on the mainland, following the shoreline to 50°54.132'N 127°17.797'W and across to a point located at 50°54.135'N and 127°17.762'W on Robinson Island then following the northerly shoreline of Robinson Island to the beginning point. (First Nations FSC and Recreational Access Closure)

5.4.1.2 Nimpkish:

Subarea 12-19

Those waters of Broughton Strait inside a line that begins at 50°36.260'N 127°04.710'W [Ledge Point] then to 50°35.910'N 127°01.490'W [Haddington Island South Light] then to 50°35.213'N 126°57.052'W [Yellow Bluff Light] then following the southerly shore of Cormorant Island to 50°34.791'N 126°54.329'W [Gordon Bluff] then to 50°33.108'N

126°51.257’W [Lewis Point Light] then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.4.1.3 Discovery Passage:

Subarea 13-3

Those waters of Discovery Passage inside a line that begins at 50°07.837’N 125°21.532’W [Wilfred Point Light] then to 50°07.830’N 125°20.870’W [Maud Island Light] then northerly following the shoreline to the dam, then across the dam to the shoreline of Quadra Island, then southerly following the shoreline to 50°03.142’N 125°13.866’W [north entrance to Quathiaski Cove] then to 50°02.496’N 125°13.287’W [south entrance to Quathiaski Cove] then southerly following the shoreline to 49°59.913’N 125°11.737’W [Cape Mudge Light] then true west to 49°59.913’N 125°13.794’W [Vancouver Island] then northerly following the shoreline to 50°02.664’N 125°15.037’W [Tyee Spit] then true east to 50°02.664’N 125°14.215’W [Discovery Passage] then to 50°04.392’N 125°15.510’W [Discovery Passage] then true west to 50°04.392’N 125°16.608’W [Orange Point] then northerly following the shoreline to the beginning point. (Dioxin Closure)

Subarea 13-4

Those waters of Quathiaski Cove on Quadra Island lying easterly of a line that begins at 50°03.142’N 125°13.866’W [north entrance to Quathiaski Cove] then to 50°02.496’N 125°13.287’W [south entrance to Quathiaski Cove]. (Dioxin Closure)

Subarea 13-5

Those waters of Discovery Passage and the Campbell River lying westerly of a line that begins at 50°04.392’N 125°16.608’W [Orange Point] then true east to 50°04.392’N 125°15.510’W [Discovery Passage] then to 50°02.664’N 125°14.215’W [Discovery Passage] then true west to 50°02.664’N 125°15.037’W [Tyee Spit]. This includes the tidal portion of the Campbell River. (Dioxin Closure)

Subarea 13-6

Those waters of Discovery Passage inside a line that begins at 50°11.181’N 125°22.914’W [Vancouver Island] then to 50°10.827’N 125°21.137’W [Separation Head] then southerly following the shoreline to 50°07.830’N 125°20.870’W [Maud Island Light] then to 50°07.837’N 125°21.532’W [Wilfred Point Light] then northerly following the shoreline to the beginning point. (Dioxin Closure)

Subarea 13-7

That portion of Subarea 13-7 southeast of a line that begins at 50°10.827’N 125°21.137’W [Separation Head] then to 50°11.487N 125°20.344W. (Dioxin Closure)

Subarea 13-10

That portion of Subarea 13-10 east of a line that begins at 50°17.702N 125°18.922W [Chonat Point] then to 50°17.367N 125°18.922W. (Dioxin Closure)

Subarea 13-11

Those waters of Kanish Bay lying easterly of a line that begins at 50°16.644'N 125°23.000'W [Granite Point] then to 50°14.883'N 125°22.016'W [Bodega Point]. (Dioxin Closure)

Subarea 13-14

That portion of Subarea 13-14 inside a line that begins at 50°00.696'N 125°08.802'W [Francisco Point] then northerly along the shore for 5 km to 50°03.208'N 125 10.347W then true east to the 200 m contour then following the 200 m contour south to 50°00.696'N 125°06.956'W then to the beginning point. (Dioxin Closure)

5.4.1.4 Owen Bay:

Subarea 13-12

That portion of Subarea 13-12 north of a line from 50°18.872'N 125°14.203'W [Walters Point] to 50°18.872'N 125°13.339'W. (Dioxin Closure)

5.4.1.5 Heydon Bay:

Subarea 13-43

That portion of Subarea 13-43 westerly of a line that begins at 50°35.649'N 125°33.219'W then to 50°34.700'N 125°33.652'W. (First Nations FSC and Recreational Access Closure)

5.4.2 Area G Seasonal Crab Closures

5.4.2.1 Blunden Harbour: (with 20 trap vessel limit and one haul per day):

Subarea 12-13

That portion of Subarea 12-13 that lies southeast of a line that begins at 50°54.238'N and 127°16.571'W on Robinson Island to a point at 50°54.388'N and 127°16.292'W on Edgell Island, following the southerly shoreline of Edgell Island to 50°54.571'N and 127°15.977'W across to 50°54.578'N and 127°15.968'W then following the westerly shoreline to 50°53.545'N and 127°13.867'W, then northwest of a line from a point at 50°53.545'N and 127°13.867'W to a point at 50°53.528'N and 127°13.976'W on the one of the Raynor Group islands, following the northerly shoreline of that island to 50°53.515'N and 127°14.289'W then to a point at 50°53.515'N and 127°14.586'W on another island in the Raynor Group then following the northeasterly shoreline of that island to a point at 50°53.648'N and 127°15.057'W on the northwest side that island, then easterly of a line from a point at 50°53.648'N and 127°15.057'W on the Raynor Group Island to Shelf Head located at 50°54.067'N and 127°16.277'W on the southeast tip of Robinson Island, then following the shoreline to the beginning point closed to commercial crab fishing from 00:00 hours January 1 to 12:00 hours October 1 and from 0:00 hours December 19 to 23:59 hours December 31. (First Nations FSC and Recreational Access Closure). Gwa'sala-'Nakwaxda'xw Nations have requested an adjustment to this closure. There will be a review of FSC and commercial harvest, and management approaches will be adapted as required.

5.5 Strait of Georgia - Area H

5.5.1 Area H Year Round Crab Closures

The following areas are closed permanently to commercial crab harvesting:

5.5.1.1 Strait of Georgia Glass Sponge Reefs

A description of the closures is provided on the Strait of Georgia and Howe Sound Glass Sponge Reef Conservation Initiative website: http://www.dfo-mpo.gc.ca/oceans/ceccsr-cerceef/closures-fermetures-eng.html

5.5.1.2 Comox Harbour:

Subarea 14-11

Those waters of Comox Harbour inside a line that begins at 49°42.059'N 124°51.581'W [Cape Lazo] then to 49°38.488'N 124°51.685'W [Comox Bar Light and Bell Buoy P54] then to 49°36.540'N 124°50.647'W [Longbeak Point] then to 49°35.613'N 124°53.240'W [near Hart Creek] then northerly following the shoreline to 49°38.707'N 124°55.541'W [Gartley Point] then to 49°39.618'N 124°55.505'W [Goose Spit Light] then northerly following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

Subarea 14-14

Those waters of Comox Harbour inside a line that begins at 49°39.618'N 124°55.505'W [Goose Spit Light] then to 49°38.707'N 124°55.541'W [Gartley Point] then following the shoreline to the beginning point.(First Nations FSC and Recreational Access Closure)

5.5.1.3 Pender Harbour:

Subarea 16-4

Those waters of Pender Harbour lying easterly of a line that begins at 49°37.878'N 124°03.443'W [Henry Point] then true south to 49°37.497'N 124°03.443'W [Francis Peninsula] then following the easterly shoreline of Francis Peninsula to 49°36.995'N 124°01.988'W [Bargain Narrows] then true south to 49°36.985'N 124°01.988'W [Bargain Narrows], (First Nations FSC and Recreational Access Closure)

5.5.1.4 Porpoise Bay:

Subarea 16-5

That portion of Subarea 16-5 inside a line that begins at 49°29.917'N 123°44.798'W then to 49°29.917'N 123°46.401'W then following the shoreline to the beginning point, (First Nations FSC and Recreational Access Closure).

5.5.1.5 Stuart Channel North:

Subareas 17-4 and 17-5

Those portions of Subareas 17-4 and 17-5 west of a line that begins at 49°05.799'N 123°48.039'W [Reynolds Point] then to 49°02.255'N 123°42.580'W [Miami Islet] then to 49°00.466'N 123°45.806'W [south of Kulleet Bay]. (Dioxin Closure)

5.5.1.6 Stuart Channel South:

Subareas 17-6, 17-7 and all of Subarea 17-9

Those waters in portions of Subareas 17-6, 17-7 and all of Subarea 17-9 lying inside a line that begins at 48°57.934'N 123°39.673'W [Donckele Pt] 48°58.155'N 123°40.417'W [south-eastern entrance to Preedy Harbour, Thetis Island] then to 48°58.241'N 123°41.441'W [Dayman Island] then to 48°58.283N 123°41.706'W [Scott Island] then to 48°58.882'N 123°46.105'W [Sharpe Point] then to 48°58.296'N 123°47.239'W then following the westerly shoreline of Vancouver Island to 48°50.851'N 123°35.530'W [Grave Point] then to 48°51.000'N 123°34.242'W [Erskine Point] then following the easterly shoreline of Saltspring Island to 48°53.963'N 123°35.559'W [Parminter Point] then to then to 48°56.031'N 123°37.921'W [Josling Point]] then following the westerly shore of Penelakut Island (Kuper Island) to the beginning point. (Dioxin Closure).

5.5.1.7 Satellite Channel:

Subareas 18-6 and 18-7

Those portions of Subareas 18-6 and 18-7 that begins at 48°42.472'N 123°30.216'W then to 48°42.815'N 123°28.800'W then to 48°41.883'N 123°28.285'W then to 48°41.540'N 123°29.699'W then to the beginning point. (British Columbia Provincial Ecological Reserve #67) Note: some electronic charts do not correspond to these boundaries. You must ensure that you use the above coordinates when determining the closure area.

5.5.1.8 Burgoyne Bay:

Subarea 18-7

That portion of Subarea 18-7 east of a line that begins at 48°47.259'N 123°33.235'W [Bold Bluff Point] then to 48°48.820'N 123°33.235'W. (Dioxin Closure)

5.5.1.9 Maple Bay:

Subarea 18-7

Those waters of Subarea 18-7 westerly of a line from 48°48.500'N 123°35.322'W [Paddy Mile Stone] to 48°49.257'N 123°35.318'W [Arbutus Point]. (Dioxin Closure)

5.5.1.10 Cowichan Bay:

Subarea 18-8

Those waters of Cowichan Bay lying westerly of a line that begins at 48°44.564'N 123°34.203'W [Separation Point] then to 48°42.945'N 123°33.292'W [Cherry Point]. (First Nations FSC and Recreational Access Closure)

5.5.1.11 Fulford Harbour:

Subarea 18-10

Those waters of Fulford Harbour inside a line that begins at 48°43.998'N 123°25.533'W [Isabella Point] then to 48°45.220'N 123°23.219'W [Eleanor Point] then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.5.1.12 Sidney Spit:

Those waters easterly of a line that begins at 48º39.223'N 123º 20.763'W [navigation light at the north end of Sidney Island] then to 48º38.245'N 123º20.437'W then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.5.1.13 Victoria Harbour:

Subarea 19-1

That portion of Subarea 19-1 inside a line that begins at 48º26.444'N 123º23.267'W [Chapman Point] then to 48º26.409'N 123º23.317'W then following the shoreline to 48°25.024'N 123°24.494'W [Macauley Point] then to 48°24.814'N 123°23.633'W [the light at the western end of the Ogden Point breakwater] then following the shoreline to the beginning point. (Dioxin Closure)

5.5.1.14 Ogden Point:

Subarea 19-3

Those portions of Subarea 19-3 inside a line that begins at 48°24.814'N 123°23.633'W [the light at the western end of the Ogden Point breakwater] then to 48°24.387'N 123°23.280'W [Brotchie Ledge Light] then to 48°24.649'N 123°22.701'W [Holland Point]. (Marine Reserve)

5.5.1.15 Race Rocks:

Subareas 19-3 and 20-5

Those waters of Subareas 19-3 and 20-5 within 0.5 nautical miles of Great Race Rock. (Marine Reserve) This closure is within both Area 'H' and Area 'E'.

5.5.1.16 Ganges Harbour:

Subarea 18-3

No buoys are permitted in that portion of Subarea 18-3 described and shown in Section 5.9 below. (Navigation Closure)

5.5.1.17 Dinner Bay:

Subarea 18-2

That portion of 18-2 inside a line from 48°50.427'N 123°19.984'W then to 48°50.010'N 123°19.675'W [Dinner Point] then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.5.1.18 Horton Bay:

Subarea 18-5

That portion of 18-5 inside a line that begins at 48°50.123'N 123°14.703'W then to 48°50.062'N 123°14.571'W then following the shoreline to 48°49.566'N 123°14.230'W then to 48°49.481'N 123°14.206'W then following the shoreline to the beginning point. (First Nations FSC and Recreational Access Closure)

5.5.1.19 Esquimalt Harbour

Subarea 19-2

As a precautionary measure, Esquimalt Harbour (Subarea 19-2) was closed on May 10th, 2016 to all fishing due to a fuel spill (see Fisheries Notices FN0393 & FN0700). This closure will remain in place until a recommendation to reopen is provided by the local health authority. Please check fisheries notices for status updates on this closure for the duration of this plan. (Fuel Spill)

5.5.1.20 Tsehum Harbour:

Subarea 19-5

No buoys are permitted in that portion of Subarea 19-5 described and shown in Section 5.9 below. (Navigation Closure)

5.5.1.21 Cordova Channel:

Subarea 19-5

Those waters of Subarea 19-5 inside a line that begins at 48º35.990'N and 123º23.400'W [Turgoose Point] then to 48º37.040' N 123º22.780' W [light off NW point of James Island] then following the shoreline of James Island to 48º35.370' N 123º20.960' W then to 48º33.490'N 123º21.750'W [Cowichan Head] then northerly following the shoreline to the beginning point, (First Nations FSC and Recreational Access Closure)

5.5.2 Area H Seasonal Crab Closures

5.5.2.1 Sechelt Inlet:

Subarea 16-5

That portion of Subarea 16-5 inside a line that begins at 49°31.389'N 123°46.759'W [Four Mile Point] then to 49°31.943'N 123°47.393'W [Carlson Point] then following the shoreline to 49°29.917'N 123°46.401'W then to 49°29.917'N 123°44.798'W then following the shoreline to the beginning point closed to commercial crab fishing from 00:01 March 15 to 23:59 September 15. (First Nations FSC and Recreational Access Closure)

5.5.2.2 Penelakut Island (Kuper Island):

Subarea 17-8

That portion of Subarea 17-8 that begins at 48°59.397'N 123°39.126'W [Thetis Island] then to 48°59.181'N 123°38.201'W [navigational buoy near Centre Reef] then to 48°58.897'W 123°37.627'W [Norway Island] then following the northerly shoreline of Norway Island to 48°58.549'N 123°37.021'W then to 48°58.121'N 123°36.838'W then to 48°57.981'N 123°36.575'W then to 48°56.031'N 123°37.921'W [Josling Point] then following the easterly shoreline of Penelakut Island (Kuper Island) to 48°59.043'N 123°39.648'W then to 48°59.122'N 123°39.648'W then following the southerly shoreline of Thetis Island to the beginning point closed to commercial crab fishing from 00:01 March 15 to 23:59 September 15. (First Nations FSC and Recreational Access Closure)

5.5.2.3 Nanaimo Harbour:

Subarea 17-14

Those waters of Newcastle Channel and Nanaimo Harbour lying southerly of a line that begins at 49°11.598'N 123°56.936'W [Pimbury Point] then to 49°11.677'N 123°56.829'W [Shaft Point] then following the southwesterly shoreline of Newcastle Island to 49°11.023'N 123°55.553'W [Newcastle Island] then true south to 49°10.638'N 123°55.553'W [Protection Island] then following the southwesterly shoreline of Protection Island to 49°10.226'N 123°55.082'W [Gallows Point] then to 49°09.996'N 123°53.676'W [Jack Point] and northerly of the parallel passing through 49°06.952'N at the Cedar Road Bridge on the Nanaimo River closed to commercial crab fishing from 00:01 March 15 to 23:59 September 15. (First Nations FSC and Recreational Access Closure)

5.6 Fraser River - Area I

5.6.1 Area I Year Round Crab Closures

The following areas are closed permanently to commercial crab harvesting:

5.6.1.1 Strait of Georgia Glass Sponge Reefs

A description of the closures is provided on the Strait of Georgia and Howe Sound Glass Sponge Reef Conservation Initiative website: http://www.dfo-mpo.gc.ca/oceans/ceccsr-cerceef/closures-fermetures-eng.html

5.6.1.2 *Howe Sound*

Subarea 28-1

Those waters of Howe Sound inside a line that begins at 49°25.664'N 123°28.767'W [near Langdale ferry landing] then to 49°26.083'N 123°26.853'W [Gambier Island] then following the southerly shoreline of Gambier Island to 49°26.735'N 123°19.302'W [Halkett Point] then to 49°25.189'N 123°18.962'W [Hood Point] then following the westerly shoreline of Bowen Island to 49°20.397'N 123°25.979'W [Cape Roger Curtis] then to 49°20.907'N 123°27.903'W [Worlcombe Island] then to

49°21.500’N 123°29.157’W [Popham Island] then to 49°23.021’N 123°32.166’W [Gower Point] then northerly following the shoreline to the beginning point, (Dioxin Closure)

Subarea 28-2

Those waters of Howe Sound inside a line that begins at 49°32.108’N 123°22.823’W [Ekins Point Light] then to 49°33.251’N 123°21.500’W [east of McNab Creek] then to 49°33.348’N 123°19.415’W [Domett Point] then following the westerly shoreline of Anvil Island to 49°30.614’N 123°18.214’W [Irby Point] then to 49°31.558’N 123°15.673’W [Brunswick Point] then southerly following the shoreline to 49°19.823’N 123°15.880’W [Point Atkinson Light] then to 49°20.135’N 123°21.643’W [Point Cowan] then following the easterly shoreline of Bowen Island to 49°25.189’N 123°18.962’W [Hood Point] then to 49°26.735’N 123°19.302’W [Halkett Point] then northerly following the easterly shoreline of Gambier Island to the beginning point, (Dioxin Closure);

Subarea 28-3

Those waters of Thornbrough Channel inside a line that begins at 49°33.251’N 123°21.500’W [east of McNab Creek] then to 49°32.108’N 123°22.823’W [Ekins Point Light] then following the westerly shoreline of Gambier Island to 49°26.083’N 123°26.853’W [Gambier Island] then to 49°25.664’N 123°28.767’W [near Langdale ferry landing] then northerly following the shoreline to the beginning point, (Dioxin Closure);

Subarea 29-1

Those waters of the Strait of Georgia inside a line that begins at 49°28.409’N 123°53.287’W [Reception Point] then southeasterly following the shoreline to 49°23.021’N 123°32.166’W [Gower Point] then to 49°25.100’N 123°42.717’W [White Islets Light] then to the beginning point, (Dioxin Closure);

Subarea 29-2 and 29-3

Those portions of 29-2 and 29-3 north of a line that begins at 49°28.409’N 123°53.287’W [Reception Point] to 49°19.615’N 123°25.979’W then to 49°19.823’N 123°15.880’W [Point Atkinson Light], (Dioxin Closure).

5.6.1.3 *Point Atkinson Reef*

Subarea 28-6

That portion of Subarea 28-6 bounded by a line commencing at the southwest entrance to Starboat Cove thence seaward in a southwest direction for 85 m, thence westerly following the shoreline for 100 m, thence in a northeast direction to a point on land. (Conservation Closure)

5.6.1.4 *Burrard Inlet*

Subarea 28-10

Those waters of Burrard Inlet lying easterly of a line from 49°19.023'N 123°08.230'W [First Narrows Bridge] to 49°18.796'N 123°08.440'W [First Narrows Bridge] and westerly of a line from 49°17.959'N 123°01.590'W [Second Narrows Bridge] to 49°17.561'N 123°01.582'W [Second Narrows Bridge]. (Navigational Closure)

5.6.1.5 *False Creek*

Subarea 28-8

Those waters of English Bay lying southeasterly of a line that begins at 49°18.069'N 123°09.526'W [Ferguson Point] then to 49°16.554'N, 123°12.113'W [near Jericho Dock]. (Navigational Closure)

5.6.1.6 *Whytecliff Park*

Subarea 28

That portion of Subarea 28 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 Inlet; thence following the southern shoreline of Whyte Inlet at a distance of 100 m to a point lying 100 m from the most south-westerly point of Whyte Inlet; thence in a straight line to a point lying 100 m west of White Cliff Point; thence following the shoreline at a distance of 100 m in a northerly direction to a point 100 m north of Lookout Point; thence following the shoreline at a distance of 100 m in an easterly direction to a point 100 m perpendicular to the most northerly point of Whytecliff Park; thence to the most northerly point of Whytecliff Park on the mainland. (Marine Reserve)

5.6.1.7 *Porteau Cove*

Subarea 28-4

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)

5.6.1.8 Roberts Bank/Deltaport/Tsawwassen BC Ferries:

Subarea 29-7

To ensure and maintain a safe approach for deep sea vessels, ferries, and berthing tugs transiting in and out of the Deltaport and BC Ferries terminals, as of 2022 crab fishing is prohibited within those waters bounded by the following coordinates. Note that the Roberts Bank Terminal 2 expansion project is ongoing and additional information can be found on the Port of Vancouver website: www.robertsbankterminal2.com

Commencing from the in-shore end of the turning basin:

49° 1.567' North Latitude 123° 08.783West Longitude
49°1.467' North Latitude 123° 8.533' West Longitude
49° 0.950' North Latitude 123° 8.450' West Longitude

49° 0.933’ North Latitude 123° 8.183’ West Longitude
49° 0.600’ North Latitude 123° 7.767’ West Longitude
49° 0.433’ North Latitude 123° 7.983’ West Longitude
49° 0.367’ North Latitude 123° 7.833’ West Longitude
49° 0.467’ North Latitude 123° 7.583’ West Longitude
49° 0.117’ North Latitude 123° 7.117’ West Longitude
49° 0.117’ North Latitude 123° 11.267’ West Longitude
49° 0.917’ North Latitude 123° 11.267’ West Longitude
49° 0.767’ North Latitude 123° 10.583’ West Longitude
49° 1.083’ North Latitude 123° 10.317 West Longitude
49° 0.817’ North Latitude 123° 9.533’ West Longitude
then to the beginning point.

5.6.2 Area I Seasonal Crab Closures

5.6.2.1 Fraser River:

Areas 28 and 29, excluding Subareas 29-5 and 29-8 are closed January 1 to 08:00 hours June 15 and from 16:00 hours November 30 to December 31. (Soft-shell and Conservation Closure).

5.7 Boundary Bay - Area J

5.7.1 Area J Seasonal Crab Closures

5.7.1.1 Boundary Bay:

Subarea 29-8 is closed January 1 to 08:00 hours July 15 and 16:00 hours November 30 to December 31. (Soft-shell and Conservation Closure)

5.8 Octopus Closures

All octopus caught in octopus closure areas must be removed from the trap and released immediately in the location where they were caught, in a manner that will cause least harm. The retention of incidentally caught octopus species is prohibited within the following areas:

5.8.1 Area 6

Subarea 6-2 (First Nations FSC access closure)

5.8.2 Area 13

5.8.2.1 Discovery Passage:

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

5.8.2.2 Mitlenatch Island

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

5.8.3 Area 14

5.8.3.1 Hornby Island:

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

5.8.3.2 Mitlenatch Island

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

5.8.4 Area 15

5.8.4.1 Vivian Island

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)

5.8.4.2 Rebecca Rock

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)

5.8.4.3 Dinner Rock

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

5.8.4.4 Emmonds Beach

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)

5.8.4.5 Mitlenatch Island

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

5.8.4.6 Beach Gardens

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

5.8.5 Area 16

5.8.5.1 Skookumchuck Narrows Provincial Park

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

5.8.6 Area 19

5.8.6.1 Ogden Point

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

5.8.6.2 10 Mile Point

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

5.8.6.3 Race Rocks

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

Note: Consultation regarding the boundaries for the Race Rocks Marine Protected Areas are ongoing. Changes to boundary descriptions resulting from consolations may occur in season.

5.8.6.4 Saanich Inlet

Subareas 19-7 to 19-12 inclusive. (First Nations FSC and Recreational access closure)

5.8.7 Area 20

5.8.7.1 Botanical Beach Provincial Park

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

5.8.7.2 Pacific Rim National Park, Juan de Fuca

That portion of Subarea 20-1 between the lowest low water on record and the highest high water on record from Bonilla Light thence following the shoreline of Vancouver Island easterly to Owen Point. (Park)

5.8.8 Area 21

5.8.8.1 Pacific Rim National Park

That portion of Area 21 between the lowest low water on record and the highest high water on record from Pachena Point thence following the Vancouver Island shoreline easterly to Bonilla Point. (Park)

5.8.9 Area 23

5.8.9.1 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)

5.8.9.2 Pacific Rim National Park

That portion of Area 23 between the lowest low water on record and the highest high water on record from Whittlestone Point to Cape Beale. (Park)

5.8.9.3 Bamfield Marine Station Research Area Closure

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

5.8.10 Area 26

5.8.10.1 Checleset Bay Fishery Closure Area

Those waters of Checleset Bay within Subareas 26-7, 26-8 and 26-10 and 126-1 on the northwest coast of Vancouver Island enclosed by a line drawn from a point on the Brooks Peninsula at 50°05.18’ N and 127°49.58’ W, then true south to the intersection with the parallel passing through 50°00.0’ N, then easterly to Alert Point on Lookout Island, then northeasterly to 50°02.1’ N and 127°25.03’ W on Vancouver Island, then northwesterly following the shore of Vancouver Island to 50°05.53’ N and 127°28.95 W at Malksope Point, then true west to a point midchannel on the southeast end of Gay Passage at 50°05.53’ N and 127°30.1’ W, then to 50°06.7’ N and 127°31.8’ W, then to 50°07.7’ N and 127°32.8’ W, near Theodore Point, then westerly following the Vancouver Island shore to 50°08.75’ N and 127°38.6 W on the east side of Nasparti Inlet, then westerly across Nasparti Inlet to 50°08.7’ N and 127°37.8’ W on Vancouver Island, then following the shoreline of Vancouver Island to the beginning point (Ecological Reserve); and those waters consisting of a portion of Subarea 26-6 inside or northerly of a line from White Cliff Head to Racoon Point; and from the western point of Union Island at 50°0.35’ N and 127°19.29’ W, northerly along the shoreline to 50°0.50’ N and 127°19.25’ W, then westerly to a point on an island at 50°0.52’ N and 127°19.29’ W, then along the western shoreline to 50°0.58’ N and 127°19.35’ W, then westerly to a point on an island at 50°0.58’ N and 127°19.40’ W, then along the western shoreline to 50°0.71’ N and 127°19.60’ W, then south-westerly to a drying rock at 50°0.45’ N and 127°20.18’ W, then south-easterly to the point of commencement (Research Area);

5.8.10.2 Kyuquot Sound Marine Communities Study Area

Kyuquot Bay: A portion of 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, and:

Entrance to Crowther Channel: A portion of 26-6 on the west side of Union Island commencing at position 50° 0.4’ N, 127° 19.3’ W and identified on the map attached to this plan. (Research Closures)

5.8.11 Area 28

5.8.11.1 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)

5.8.11.2 Whytecliff Park

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

5.8.11.3 Burrard Inlet

Subarea 28-10. (Navigational Closure)

5.8.11.4 False Creek

Subarea 28-8. (Navigational Closure)

5.9 Navigation Channels and Restricted Areas, Navigation Protection Act

The *Navigation Protection Act* (NPA) is a federal statute designed to protect the public right of navigation by prohibiting the building or placement of works in, on, over, under, through, or across any waterway without approval of the Minister of Transport Canada. The Navigation Protection Division, which is a directorate of Transport Canada - Marine, is responsible for administering the NPA.

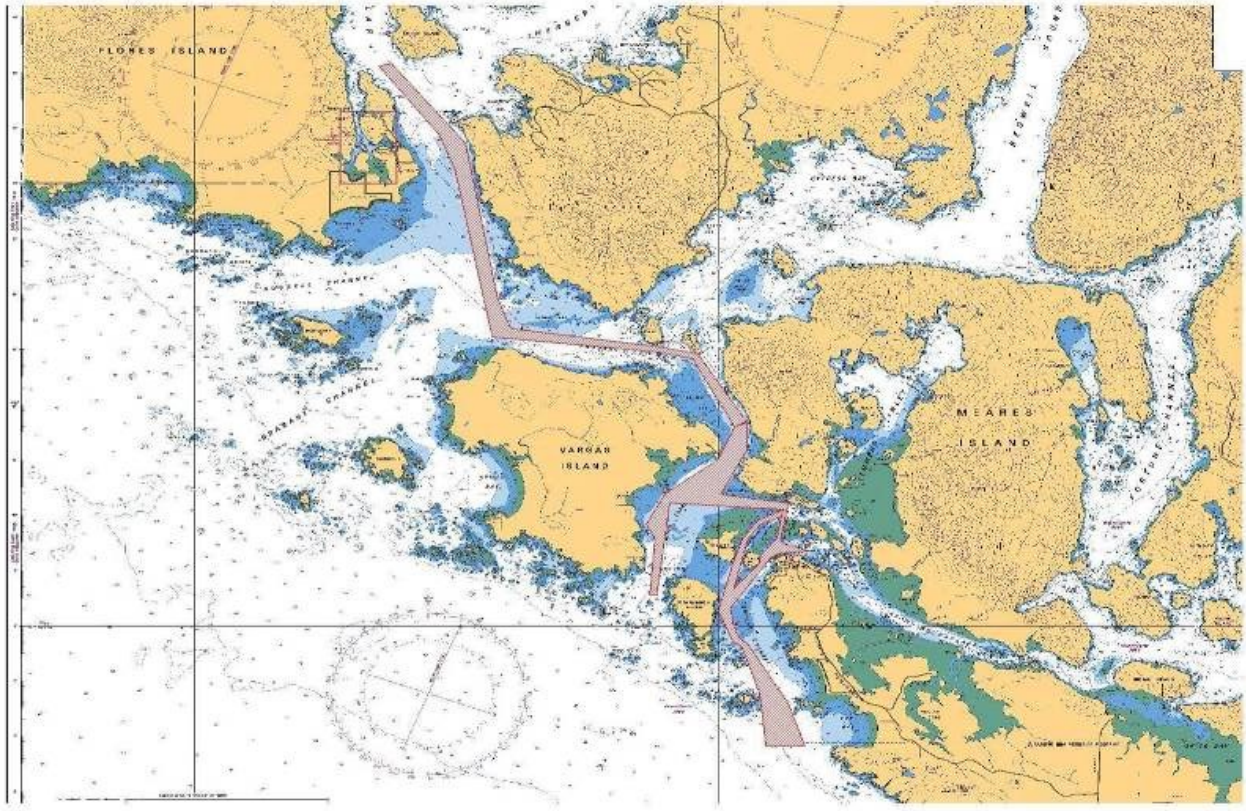
For Navigational issues, contact Navigation Protection Division, Transport Canada, Marine Safety at (604) 775-8867.

There are a number of restricted Areas identified through the Navigation Protection Division. The purpose of the restricted areas described below is to maintain a safe navigation passage for small vessels transiting in and out of the harbour by restricting the use of floats within the prescribed

channel. Please note that this restriction is for floats and not traps. However lines to the traps must be made of a non-floating material and kept as close to the bottom as possible. Floats identifying fishing gear shall be of a size and marked in accordance with the appropriate regulations. All fishing gear must have a float of sufficient size such that it will not submerge with tidal or current change.

Transport Canada will be implementing further closures for the purpose of safe navigation in other high traffic, high density areas, and subject to further consultation. These may include approaches to Pedder Bay, Nanaimo Harbour, Sidney, and Cordova Channels. Regardless of what area it is in, any fishing gear or private mooring buoy that hinders or impedes safe navigation may be removed under the NPA.

Harvesters are reminded to keep navigation channels clear of buoys and lines. The number of complaints to Transport Canada, the Coast Guard, Conservation and Protection and Fishery Management offices, has significantly increased in recent years. The Tofino area in the map below is one area that continues to have issues with respect to the crab fishery and maintaining navigation channels. Maps of these areas are also posted around the Tofino community and specifically at the 4th Street dock.



5.9.1 Restricted Areas

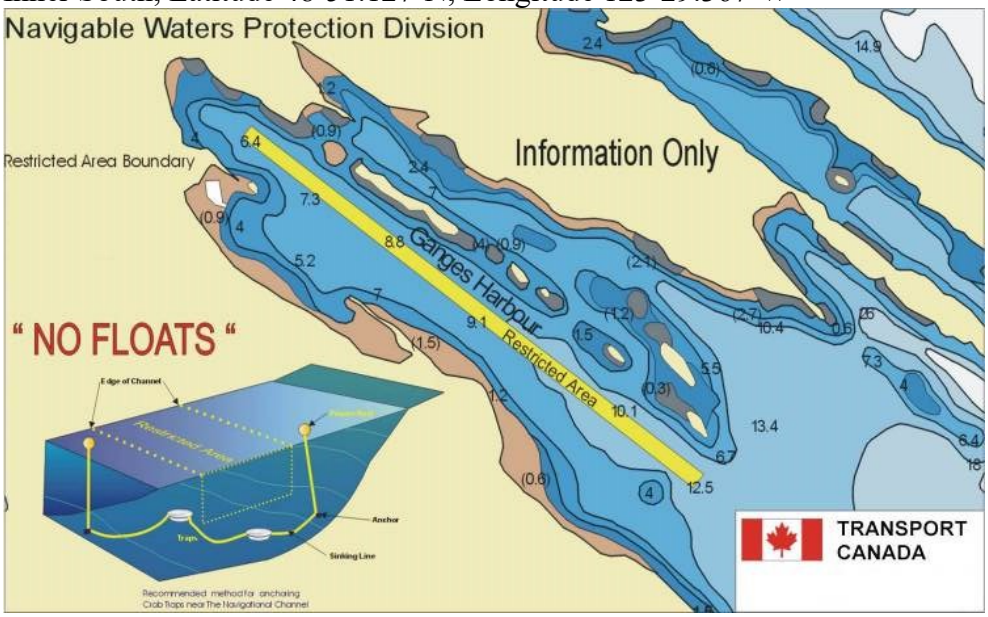
The restricted areas described below, Ganges Harbour and Tsehum Harbour are reserved for navigation only. Crab floats must remain outside of the restricted area at all times.

5.9.1.1 Ganges Harbour, Chart 3478, NAD 83

The channel is 110 meters wide by two nautical miles long; bearing 308º true inbound and 128º outbound. The entrance to the channel is just off Sister Island and Ganges Shoal in 12.5 meters of water at LLW. The north side of the channel follows the marked submarine cable for approximately 2/3 its length. The channel ends inside the harbour at 90º to the second green navigation light off of the fuel dock in approximately 5.5 meters of water at LLW. At present, there are no navigational marks for this channel.

Restricted area description:

Outer North, Latitude 48º50.096, Longitude 123º27.191'W
Outer South, Latitude 48º50.057'N, Longitude 123º27.251'W
Inner North, Latitude 48º51.134'N, Longitude 123º29.241'W
Inner South, Latitude 48º51.127'N, Longitude 123º29.367'W



5.9.1.2 Tsehum Harbour, Chart 3476, NAD 83

A dogleg channel approximately 112 meters across at the most Easterly point, which is located at the 10m LLW contour mark on chart 3476 on the following locations:

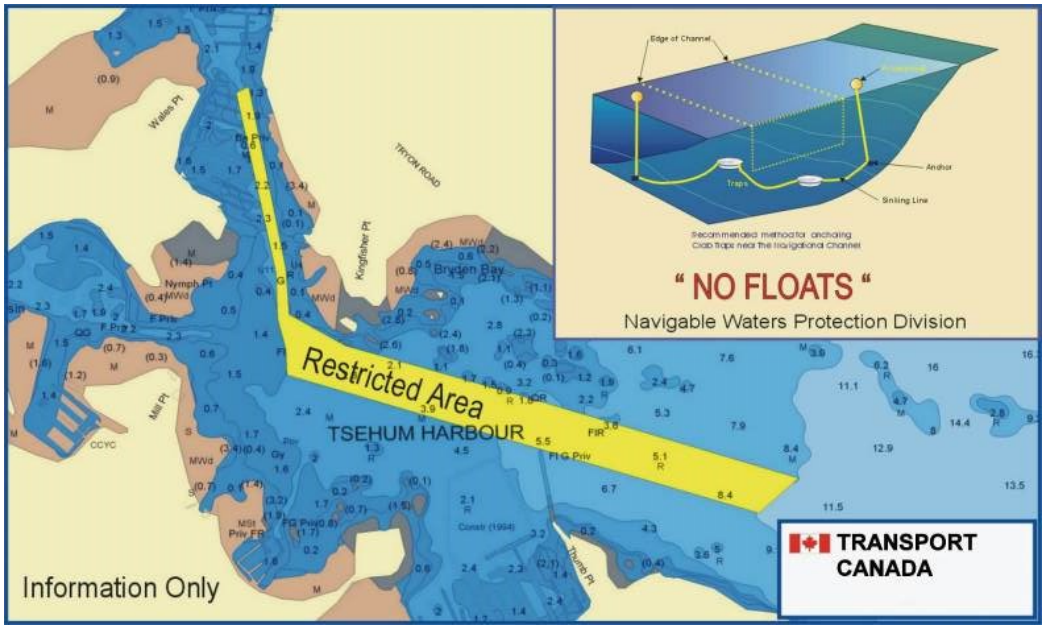
North East point Latitude 48º40.234'N, Longitude 123º23.850'W
South East point Latitude 48º40.183'N, Longitude 123º23.916'W
Bearing 290º True Inbound
Bearing 110º True Outbound

Restricted area description:

Travelling westerly for approximately 1050 meters the north side of the channel is bounded by the starboard hand red buoy showing QR directly across from the breakwater, and further into the harbour by the Starboard hand day marks (red triangles). The Southern side of the channel is in line with the northern tip of the breakwater at the entrance to Tsehum Harbour.

At latitude 48º40'25"N / 123º24'33"W is on a transit from the marked wreck on the south shore to the small Islet just south of Kingfisher Point. The channel turns north and narrows to approximately 30 meters, staying within the bounds of the marked navigation channel. The

Channel terminates at its northern end at latitude 48º40’43”N, longitude 123º24’45”W which is at the port hand day mark (square green/white).



6 LICENCING

6.1 Licence Category

A crab by trap, category R or communal commercial category FR licence is required to commercially harvest crab by trap gear. Category R licence eligibilities are limited entry and vessel based. Category FR licence eligibilities are limited entry and party based; a First Nations group is the licence eligibility holder and the eligibility must be designated annually at the time of licensing to a commercially registered fishing vessel that meets maximum vessel length restrictions.

6.2 Licence Issuance

Renewal of a category R licence and payment of fees must be done on an annual basis to retain the privilege to be issued the licence in the future, regardless of whether or not fishing is carried out. The category R licences not renewed by March 31 will cease and licence issuance requests will be unable to be considered in future.

Prior to annual licence issuance of a communal commercial licence, licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the ‘Submit a Request’ menu selection within the National Online Licencing System (NOLS). Full instructions are available at: http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/licence-permis-eng.html.

Prior to annual licence issuance, vessel owners/licence eligibility holders are required to ensure:

a.) Any Ministerial conditions placed on the licence eligibility are met;

b.) Any conditions of the previous year's licence, such as submission and approval of logbooks, have been met and approved by the Shellfish Data Unit;

c.) Any application for re-allocation of traps must be submitted **by March 1, 2026**.

6.3 Licence Documents

Crab by Trap licence documents are valid from the date of issue to March 31 of the following calendar year. Replacement for lost or destroyed licence documents may be obtained by reprinting the licence document through the licence holders account via the National Online Licencing System.

6.4 Trap Re-allocation

Temporary crab trap re-allocation (stacking) will be permitted on an annual basis in Areas B, E-Tofino, E-Sooke, G, H and J. The reallocated licence must come from the same licence area.

Where traps are reallocated to another vessel within the same fishing area, 100% of the traps associated with the crab licence eligibility reallocating the traps will be relinquished, and the trap allocation will be zero for the licence year. Whereas the receiving vessel may then fish a maximum of 66% of the relinquished traps. All trap reallocations will be reverted back to the original crab licence eligibility at the end of the licence year.

All request to temporarily reallocate the crab traps must be submitted through the National Online Licensing System before licences are issued. No exceptions. Please refer the Notice to Industry for more information and the deadline date.

Trap reallocations cannot be reversed once the transaction has been completed.

6.5 Vessel Replacement

The owner(s) of a category R licence may make an application to replace the commercial fishing vessel. Both the replacement vessel and the vessel being replaced must have a survey on file with the Pacific Fishery Licence Unit (PFLU) or submitted with the vessel replacement application. Vessel measurement must be surveyed in accordance to Department guidelines.

The replacement vessel may not exceed the overall length of the vessel being replaced. A vessel may hold only one crab by trap licence eligibility.

Category R licence eligibilities become married to other vessel based licence eligibilities when combined on a vessel.

Temporary vessel replacement may be permitted if the vessel has been declared a loss or the vessel is out of service due to an accident or unforeseen incident. Vessels that are in disrepair at the time of purchase, or have encountered delays in annual maintenance or rebuilding do not qualify for a temporary replacement. Written confirmation from an insurance company, shipyard, or marine engineer explaining why the vessel is inoperative must be submitted to a Pacific Fishery Licence Unit when declaring the vessel a total loss. The temporary replacement vessel may not exceed the overall vessel length, plus 10 per cent, of the vessel that holds the Crab by Trap licence eligibility. Should the crab licence eligibility be temporarily split from other licence

eligibilities, the remaining eligibilities may not be placed on a third vessel. For further information on vessel replacement policies, please contact DFO by telephone at 1-877-535-7307 or email at fishing-peche@dfo-mpo.gc.ca.

6.6 Designation of Harvesters to Fish a Communal Commercial Licence

Under the *Aboriginal Communal Fishing Licence Regulations*, every person working on a vessel that is fishing under authority of a Communal Commercial Licence must be designated by the First Nation that holds the licence. The designation must be made in writing and include the person's name and reference the Communal Commercial Licence. The designation must be carried on-board and be produced on request of any Fishery Officer.

First Nations licence holders interested in obtaining an example template to use to designate their fish harvesters may contact the Pacific Fishery Licensing Unit at fishing-peche@dfo-mpo.gc.ca.

6.7 Licence Renewal Fees

In accordance with the *Service Fees Act*, annual licence renewal fees will be adjusted by the annual rate of inflation determined by the Consumer Price Index (CPI) published by Statistics Canada.

The commercial Crab by Trap (Category R) licence renewal fee may be found on the following link:

https://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.html

There is no annual licence renewal fee for communal commercial (Category FR) licences.

7 OTHER RESTRICTIONS AND GENERAL INFORMATION

7.1 Domoic Acid and Paralytic Shellfish Poison

In some areas, high levels of naturally occurring toxins such as domoic acid (DA) and paralytic shellfish poison (PSP) have been found in the viscera of Dungeness crabs. DA can cause a variety of gastrointestinal symptoms and also fatigue, disorientation, and memory loss. In extreme circumstances, ingestion of high concentrations of PSP and DA can be fatal to humans. Crab harvesters should be aware of the potential for PSP and DA accumulation in crabs harvested in areas where there are concerns or closures due to increased marine biotoxin levels, which could lead to fishery closures. Fishers may be called upon to help prevent fishery closures by contributing to area sampling programs and should always keep accurate harvest information.

7.2 Violations and Licence Suspensions

The Crab Sectoral Committee has recommended the application of court imposed licence suspensions in cases of serious violations in this fishery.

7.3 Groundfish Taken for Bait

Harvesters are reminded that any groundfish taken for bait must be taken in accordance with the appropriate groundfish licence and attached licence conditions. Dockside monitoring is an essential element of groundfish stock monitoring and quota management. Therefore, it is important that harvesters using any groundfish for bait (e.g. dogfish, rockfish, and flatfish), land and validate that groundfish catch prior to using it for bait, in accordance with the Schedule II Conditions of Licence under which authority that groundfish species are taken.

APPENDIX 4: FISHING VESSEL SAFETY

TABLE OF CONTENTS

1. OVERVIEW – FISHING VESSEL SAFETY

Vessel owners and masters have a duty to ensure the safety of their crew and vessel. Adherence to safety regulations and good practices by owners, masters and crew of fishing vessels will help save lives, prevent vessel damage and protect the environment. All fishing vessels must be in a seaworthy condition, registered and maintained as required by Transport Canada (TC), WorkSafeBC, and other applicable agencies. Vessels subject to inspection should ensure that the certificate of inspection is valid for the area of intended operation.

In the federal government, responsibility for shipping, navigation, and vessel safety regulations and inspections lies with TC; emergency response with the Canadian Coast Guard (CCG) and DFO has responsibility for management of the fisheries resources. The Transportation Safety Board is an independent agency that advances transportation safety by investigating selected occurrences in the air, marine, pipeline and rail modes of transportation including fishing vessel occurrences. In B.C., WorkSafeBC exercises jurisdiction over workplace health and safety and conducts inspections on commercial fishing vessels in order to ascertain compliance with the Workers Compensation Act (WCA) and the Occupational Health and Safety Regulation (OHSR).

Before departing on a voyage the authorized representative (normally the owner), must ensure that the fishing vessel is capable of and safe for the intended voyage and fishing operations. Critical factors for a safe voyage include the seaworthiness of the vessel, having the required personal protective and life-saving equipment in good working order, adequate number of properly trained crew, and knowledge of current and forecasted weather conditions. As safety requirements and guidelines may change, the vessel's authorized representative, crew, and other workers must be aware of the latest legislation, policies and guidelines prior to each trip.

There are many useful tools available for ensuring a safe voyage. These include:

- Education and training programs
- Marine emergency duties training
- Fish Safe – Stability Education Program & 1 Day Stability Workshop
- Fish Safe – SVOP (Subsidized rate for B.C. commercial fishers provided)
- Fish Safe – *Safest Catch* program – **FREE** for B.C. commercial fishers
- Fish Safe *Safe At Sea* DVD Series – Fish Safe
- Fish Safe Stability Handbook – *Safe at Sea* and *Safest Catch* – DVD Series
- Fish Safe *Safest Catch* Log Book
- Fish Safe *Safety Quiz*
- First Aid training
- Radio Operators Course (Subsidized rate for B.C. commercial fishers provided)
- Fishing Masters Certificate training
- Small Vessel Operators Certificate training

Publications:

- *Gearing Up for Safety* - WorkSafeBC
- https://tc.canada.ca/en/marine-transportation/marine-safety/tp-15393e-adequate-stability-safety-guidelines-fishing-vessels TP 15393E - Adequate stability and safety guidelines for fishing vessels
- TP 15392E - Guidelines for fishing vessel major modification or a change in activity. https://tc.canada.ca/en/marine-transportation/marine-safety/tp-15392e-guidelines-fishing-vessel-major-modification-change-activity
- Transport Canada Publication TP 10038 Small Fishing Vessel Safety Manual (can be obtained at Transport Canada Offices from their website at: http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-menu-548.htm
- Amendments to the Small Fishing Vessel Inspection Regulations (can be obtained from: http://www.gazette.gc.ca/rp-pr/p2/2016/2016-07-13/html/sor-dors163-eng.php)
- Safety Issues Investigation into Fishing Safety in Canada report can be accessed: https://www.tsb.gc.ca/eng/rapports-reports/marine/etudes-studies/M09Z0001/M09Z0001.html

For further information see: https://tc.canada.ca/en/marine-transportation
www.fishsafebc.com
www.worksafebc.com
www.tsb.gc.ca/eng/rapports-reports/marine/index.html

2. IMPORTANT PRIORITIES FOR VESSEL SAFETY

There are three areas of fishing vessel safety that should be considered a priority. These are: vessel stability, emergency preparedness, and cold water immersion.

2.1 Fishing Vessel Stability

Vessel stability is paramount for safety. Care must be given to the stowage and securing of all cargo, skiffs, equipment, fuel containers and supplies, and to correct ballasting. Fish harvesters must be familiar with their vessel's centre of gravity, the effect of liquid free surfaces on stability (e.g. loose water or fish on deck), loading and unloading operations, watertight integrity and the vessel's freeboard. Know the limitations of your vessel; if you are unsure contact aa naval architect, marine surveyor or the local Transport Canada Marine Safety Office.

Fishing vessel authorized representatives/owners are required to develop detailed instructions addressing the limits of stability for each of their vessels. These instructions must include detailed safe operation documentation kept on board the vessel.

In 2017, Transport Canada Marine Safety (TC) issued Ship Safety Bulletin (SSB) No. 03/2017 announcing the coming into force of the New Fishing Vessel Safety Regulations.

The initial regulations were published in the Canada Gazette Part II on July 13, 2016 and came into force on July 13, 2017. The bulletin includes important information on changes to requirements for Written Safety Procedures, Safety Equipment and Vessel Stability.

As of July 13, 2017, new regulations pertaining to stability assessments to be performed by a competent person came into effect, as follows:

- A new fishing vessel that has a hull length of more than 9 m where the vessel construction was started or that a contract was signed for the construction after July 13, 2018;
- A fishing vessel more than 9 m and that has undergone a major modification or a change in activity that is likely to adversely affect its stability;
- A fishing vessel that is fitted with an anti-roll tank at any time;
- A fishing vessel more than 15 gross tonnage and used for catching herring or capelin during the period beginning on July 6, 1977 and ending on July 13, 2017
- For an existing fishing vessel that is not required to undergo a stability assessment, the owner shall be capable of demonstrating that their vessel has adequate stability to safely carry out the vessel's intended operations. Guidelines have been developed and are available online to help small fishing vessel owners and operators meet their regulatory requirements
- Two good resources can be found here: TP 15393 - Adequate stability and safety guidelines for fishing vessels (2018) and TP 15392 – Guidelines for fishing vessel major modification or a change in activity (2018)

Further, the new Regulation requires a "Stability Notice" to be developed after a stability assessment. This notice includes a simple diagrammatic of the vessel, its tanks and fish holds, or deck storage as the case may be. It is intended to assist fishing vessel crews in quickly determining the safe carriage limits of the vessel without having to reference a complicated Trim and Stability Book.

Additionally, Transport Canada published a Stability Questionnaire (SSB No. 04/2006) and Fishing Vessel Modifications Form (SSB No. 01/2008) which enable operators to identify the criteria which will trigger a stability assessment. Please contact the nearest Transport Canada office if you need to determine whether your vessel requires a stability assessment, or to receive guidance on obtaining competent assessor.

In 2019, TC provided an updated SSB 03/2019, which sets out a voluntary record of modifications for the benefit of owners/masters of any fishing vessels. For vessels of more than 15 gross tons, the record of modifications was to be reviewed by TC inspectors during regular inspections and entered on the vessel's inspection record. However, information gathered during the Transportation Safety Board's (TSB) Safety Issues Investigation into the fishing industry showed minimal recording of vessel modifications prior to this date.

The TSB has investigated several fishing vessel accidents since 2008 and found a variety of factors that effected the vessel's stability were identified as contributing factors in vessels capsizing, such as with: M08W0189 - *Love and Anarchy*, M09L0074 – *Le Marsouin I*, M10M0014 - *Craig and Justin*, M12W0054 – *Jessie G*, M12W0062 - *Pacific Siren*, M14P0121 – *Five Star*, M15P0286 – *Caledonian*, M16A0140 – *C19496NB*, M17C0061 – *Emma Joan,* M17P0052 – *Miss Cory,* M18P0073 – *Western*

*Commander,*M18A0425 – *Charlene A,* M18A0454 – *Atlantic Sapphire,* M20P0229 – *Arctic Fox II,* M20A0434 – *Chief William Saulis,* M20A0160 – *Sarah Anne* and the *Tyhawk* – M21A0065.

Vessel masters are advised to carefully consider stability when transporting gear. Care must be given to the stowage and securing of all traps, cargo, skiffs, equipment, fuel containers and supplies and also to correct ballasting. Know the limitations of your vessel; if you are unsure contact a reputable marine surveyor, naval architect or the local Transport Canada Marine Safety office.

WorkSafeBC's Occupational Health and Safety Regulations (OHSR) require owners of fishing vessels to provide documentation on board, readily accessible to crew members, which describes vessel characteristics, including stability.

Fish Safe has developed a code of best practices for the food and bait/roe herring fisheries, dive fisheries and the prawn fishery: These Best Practices are available on Fish Safe's website for convenient download here: https://www.fishsafebc.com/best-practices Please contact John Krgovich at Fish Safe for a copy of the program materials they developed to address safety and vessel stability in these fisheries. John Krgovich – office: (604) 261-9700 - Email: john@fishsafebc.com.

2.2 Emergency Drill Requirements

The *Canada Shipping Act, 2001* requires that the Authorized Representative of a Canadian Vessel shall develop procedures for the safe operation of the vessel and for dealing with emergencies. The Act also requires that crew and passengers receive safety training. The Marine Personnel Regulations require that all personnel on board required to meet the minimum safe manning levels have received MED (Marine Emergency Duties) training to an A1 or A3 level, depending on the vessel's voyage limits, within 6 months of serving aboard. MED A3 training is 8 hours in duration and is applicable to seafarers on fishing vessels less than 150 GRT that are within 25 miles from shore (NC2). MED A1 training is 19.5 hours duration and is applicable to all other fishing vessels.

To assist fishers in meeting their crew training requirements, Fish Safe has created a downloadable '*New Crew Orientation Form and How To Guide'* available on Fish Safe's website here: https://www.fishsafebc.com/downloadable-tools

MED provides a basic understanding of the hazards associated with the marine environment; the prevention of shipboard incidents; raising and reacting to alarms; fire and abandonment situations; and the skills necessary for survival and rescue.

WorkSafeBC's Occupational Health and Safety Regulation (OHSR) requires written rescue and evacuation procedures for work on or over water. Additionally, fishing vessel masters must establish procedures and assign responsibilities to each crew member to cover all emergencies, including the following: crew member overboard, fire on board, flooding of the vessel, abandoning ship, and calling for help. Fishing vessel masters are

also required to conduct emergency drills at the start of each fishing season, when there is a change of crew, and at periodic intervals to ensure that crewmembers are familiar with emergency procedures.

Between 2015 and 2021, 15 fishing vessel accidents were reported to the TSB which resulted in 34 fatalities. In all 15 occurrences, distress alerting devices (EPIRBs, PLBs) were not used. The report's findings highlighted the lack of safety drills and safety procedures and practices. The *Safest Catch* program, delivered by Fish Safe and free to B.C. commercial fishers, includes comprehensive practice of drills such as abandon ship, man overboard and firefighting drills.

2.3 Cold Water Immersion

Drowning is the number one cause of death in B.C.'s fishing industry. Cold water is defined as water below 25 degrees Celsius, but the greatest effects occur below 15 degrees C. B.C. waters are usually below 15 degrees C. Normal body temperature is around 37 degrees Celsius; cold water rapidly draws heat away from the body. The effects of cold water on the body occur in four stages: cold shock, swimming failure, hypothermia and post-rescue collapse. Know what to do to prevent you or your crew from falling into the water and what to do if that occurs. More information is available in the WorkSafeBC Bulletin Cold Water Immersion (available from the WorkSafeBC website at www.worksafebc.com).

Under the recently amended (June 2019) OHS Regulation, section 24.96.1, a crewmember must wear a PFD or lifejacket when on board a fishing vessel that has no deck or deck structure or when on the deck of a fishing vessel that has a deck or deck structure. The use of a PFD will prepare a crewmember to remain afloat, to survive the effects of cold shock, reduce the need to swim and give rescuers time to respond.

Section 8.26, which requires workers to wear a PFD or lifejacket when working "under conditions which involve a risk of drowning", would continue to apply to fishing crewmembers and other workers (e.g. when they are working on shore, docks and other vessels). The specific requirements can be found on WorkSafeBC's PFD Primer provided on Fish Safe's website here: https://www.fishsafebc.com/cold-water-survival.

It has been demonstrated time and again that, when worn, PFD's save lives - and the chance of surviving a mishap increases significantly when these devices are worn while working on deck.

Resulting from the TSB investigations into the *Diane Louise* - M14P0110, *Caledonian* – M15P0286 and the *C19496NB* - M16A0140 fishing vessel accidents the Board recommended that both TC, WorkSafeBC and WorkSafeNB require that persons wear a suitable personal flotation devices (PFDs) at all times when: on the deck of a commercial fishing vessel; or, when on board a commercial fishing vessel without a deck or deck structure, and ensure that programs are developed to confirm compliance. Between 2015

and 2021, 15 occurrences were reported to the TSB, resulting in the loss of life of 34 fish harvesters. In 11 of the 15 occurrences, personal flotation devices (PFDs) were not used.

2.4 Other Issues

2.4.1 Weather

Vessel owners and masters are reminded of the importance of paying close attention to current weather trends and forecasts during the voyage. Marine weather information and forecasts can be obtained on VHF channels 21B, Wx1, Wx2, Wx3, or Wx4. Weather information is also available from Environment Canada website at: https://weather.gc.ca/mainmenu/marine_menu_e.html

2.4.2 Emergency Radio Procedures, EPIRBs, PLBs and AIS

Vessel owners and masters should ensure that all crew are able to activate the Search and Rescue (SAR) system early rather than later by contacting the Canadian Coast Guard (CCG). All fishing vessels greater than 20m in length must carry a Class A AIS, as well as a float free 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). These beacons must be registered with the Canadian Beacon Registry. When activated, an EPIRB transmits a distress call that is picked up or relayed by satellites and transmitted via land earth stations to the Joint Rescue Co-ordination Centre (JRCC), which will task and co-ordinate rescue resources. The TSB notes in the *Island Lady* – M21A0315 that there have been 15 similar occurrences reported to the TSB, resulting in the loss of life of 34 fish harvesters. In all 15 occurrences, distress alerting devices (e.g., emergency position-indicating radio beacons [EPIRBs] and personal locator beacons [PLBs] were not used. (M15A0189, M16A0140, M16A0327, M18A0076, M18A0303, M18A0078, M18P0184, M18P0394, M19A0082, M19A0090, M19P0242, M20A0258, M20A0160, M21A0412, and M21A0161). The carriage of both AIS, PLB and EPIRB is strongly encouraged for all fishing vessels who do not fall under the mandatory threshold. PLBs require manual activation, so fish harvesters are encouraged to carry them while working on deck. You may not have time to go locate your PLB in an emergency.

Fish harvesters should monitor VHF channel 16 or MF 2182 KHz and make themselves and their crews familiar with other radio frequencies. All crew should know how to make a distress call and should obtain their restricted operator certificate from Industry Canada. However, whenever possible, masters should contact the nearest Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS) station (on VHF channel 16 or MF 2182 kHz) prior to a distress situation developing. Correct radio procedures are important for communications in an emergency. Incorrect or misunderstood communications may hinder a rescue response. Further information is available at Radio Aids to Marine Navigation General

Since August 1, 2003 all commercial vessels greater than 8 metres in length are required to carry a Class D VHF Digital Selective Calling (DSC) radio. A registered DSC VHF radio has the capability to alert other DSC equipped vessels in your immediate area and MCTS that your vessel is in distress. Masters should be aware that they should register their DSC radios with Industry Canada to obtain a Marine Mobile Services Identity

(MMSI) number or the automatic distress calling feature of the radio may not work. For further information see the Coast Guard website at: https://www.coast-guard.gc.ca/index-eng.html or go directly to the Industry Canada web page: www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01032.html

A DSC radio that is connected to a GPS unit will also automatically include your vessel's current position in the distress message. More detailed information on DSC can be found here: TC DSC Safety Bulletin. Questions regarding Coast Guard DSC capabilities can be obtained by contacting your local MCTS centre (Prince Rupert MCTS (250) 627-3070 or Victoria MCTS (250) 363-6333).

Collision Regulations

Fish harvesters must be knowledgeable of the Collision Regulations and the responsibilities between vessels where risk of collision exists. Navigation lights must be kept in good working order and must be displayed from sunset to sunrise and during all times of restricted visibility. To help reduce the potential for collision or close quarters situations which may also result in the loss of fishing gear, fish harvesters are encouraged to monitor the appropriate local Vessel Traffic Services (VTS) VHF channel when travelling or fishing near shipping lanes or other areas frequented by large commercial vessels. Vessels required to participate in VTS include:

a) every ship twenty metres or more in length,
b) every ship engaged in towing or pushing any vessel or object, other than fishing gear,
c) where the combined length of the ship and any vessel or object towed or pushed by the ship is forty five metres or more in length; or
d) where the length of the vessel or object being towed or pushed by the ship is twenty metres or more in length.

Exceptions include:

a) a ship towing or pushing inside a log booming ground,
b) a pleasure yacht **less than** 30 metres in length, and
c) a fishing vessel that is **less than** 24 metres in length and not **more than** 150 tons gross.

More detailed information on VTS can be obtained by calling either Prince Rupert MCTS (250)627-3070 or Victoria MCTS (250)363-6333 or from the Coast Guard website: https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/part3-eng.html

Buddy System

Fish harvesters are encouraged to use the buddy system when transiting and fishing as this allows for the ability to provide mutual aid. An important trip consideration is the use of a sail/voyage plan which includes the particulars of the vessel, crew and voyage. The sail plan should be left with a responsible person on shore or filed with the local MCTS. After

leaving port the fish harvester should contact the holder of the sail plan daily or as per another schedule. The sail plan should ensure notification to JRCC when communication is not maintained which might indicate your vessel is in distress. Be sure to cancel the sail plan upon completion of the voyage.

3. WORKSAFEBC

WorkSafeBC exercises jurisdiction over workplace health and safety, including the activities of crews of fishing vessels. Commercial fishing, diving and other marine operations are subject to the provisions of the *Workers Compensation Act (WCA)* and requirements in Part 24 of the Occupational Health and Safety Regulation (OHSR). Examples of Part 24 regulatory requirements related to fishing include, but are not limited to, the requirement to establish emergency procedures, to conduct emergency drills, to provide immersion suits for the crew, to provide stability documentation for the vessel, safe work procedures, injury reporting, correction of unsafe working conditions, the requirement to wear personal floatation devices (PFDs), etc.

Other sections of the OHSR also apply to commercial fishing operations. For example, Part 3 addresses training of young and new workers, first aid, and employer incident/accident investigations. Part 4 addresses general conditions such as maintenance of equipment, workplace conduct and impairment. Part 8 addresses issues related to safety headgear, safety footwear, eye and face protection, limb and body protection and personal flotation devices (PFDs) when working on the dock. Part 12 addresses issues related to tools, machinery and equipment, including safeguarding. Part 15 addresses issues related to rigging.

Both owners and masters of fishing vessels are considered to be employers. Under the *Workers Compensation Act* and the OHS Regulation (OHSR) they have varying and overlapping duties and responsibilities. Masters, because they have the most control during fishing and related activities, are considered to be the employer with primary responsibility for the health and safety of the crew.

The OHSR and the *WCA* are available from the Provincial Crown Printers or by visiting the WorkSafeBC website: www.worksafebc.com

NOTE: Regarding the OHSR requirement to wear PFD's, WorkSafeBC has produced a video entitled "Turning the Tide – PFD's in the Fishing Industry". For more information on PFD use, including a link to the video, please access the following site:

https://www.worksafebc.com/en/about-us/news-events/news-releases/2018/November/new-fishing-industry-safety-video?origin=s&returnurl=https%3A%2F%2Fwww.worksafebc.com%2Fen%2Fsearch%23q%3DTurning%2520the%2520Tide%26sort%3Drelevancy%26f%3Alanguage-facet%3D%5BEnglish%5D

For further information, contact an Occupational Safety Officer:

Bruce Logan	Field Services	Vancouver/ Richmond/Delta	(604) 244-6477
Cody King	Field Services	Courtenay	(250) 334-8733
Paul Matthews	Field Services	Courtenay	(250) 334-8741
Wayne Tracey	Field Services	Central	(604) 232-1939

or the Manager of Interest for Marine and Fishing, Pat Olsen (250) 334-8777

For information on projects and initiatives related to commercial fishing health and safety please contact Tom Pawlowski, Manager, OHS Consultation and Education Services, at (604) 233-4062 or by email: tom.pawlowski@worksafebc.com or Helen Chandler, OHS Consultant at (604) 276-3174 or by email: helen.chandler@worksafebc.com.

4. FISH SAFE BC

Fish Safe encourages Vessel masters and crew to take ownership of fishing vessel safety. Through this industry driven and funded program Fish Safe provides fishing relevant tools and programs to assist fishers in this goal. The Fish Safe Stability Education Program and 1 Day Stability Workshop are available to all fishers who want to improve their understanding of stability and find practical application to their vessel's operation. The SVOP (Small Vessel Operator Proficiency) Course is designed to equip crew with the skills they need to safely navigate during their wheel watch. The Safest Catch Program, along with fisher-trained Safety Advisors, is designed to give fishers the tools they need to create a vessel specific safety management system.

As referenced throughout the above documentation, Fish Safe provides a broad range of courses, programs and services that are either free for B.C. commercial fishers or highly subsidized.

Fish Safe is managed by John Krgovich, Program Manager and support staff including John Krgovich, Program Coordinator, Stephanie Nguyen, Program Assistant, Rhoda Huey, Bookkeeper/Administrative Assistant, and an experienced team of fisher Safety Advisors. All activities and program development is directed by the Fish Safe Advisory Committee (membership is open to all interested in improving safety on board fishing vessels). The Advisory Committee meets two to three times annually to discuss safety issues and give direction to Fish Safe in the development of education and tools for fish harvesters.

Fish Safe also works closely with WorkSafeBC to improve the fishing injury claims process. For further information contact:

John Krgovich
Program Coordinator
Fish Safe
#100, 12051 Horseshoe Way
Richmond, BC V7A 4V4

Cell: (604) 729-8407
Office: (604) 261-9700
Email: john@fishsafebc.com
www.fishsafebc.com

5. TRANSPORTATION SAFETY BOARD

The Transportation Safety Board (TSB) is not a regulatory board. The TSB is an independent agency that investigates marine, pipeline, railway and aviation transportation occurrences to determine the underlying risks and contributing factors. Its sole aim is the advancement of transportation safety by reporting publicly through Accident Investigation Reports or Marine Safety Information Letters or Advisories. It is not the function of the Board to assign fault or determine civil or criminal liability.

In 2014 the TSB pacific region released three fishing vessel investigation reports:

- the collision between trawl fishing vessel *Viking Storm* and US long line fishing vessel *Maverick* and the subsequent fatality,
- the person over board off the prawn fishing vessel *Diane Louise* and the subsequent fatality, and
- the capsizing of the crab fishing vessel *Five Star* and subsequent fatality.

In 2016 the TSB pacific region released one investigation report:

- the capsizing of the trawl *Caledonian* and subsequent fatalities.

In 2018 the TSB pacific region released two investigation reports:

- the capsizing and sinking of the *Miss Cory* and subsequent fatality
- the sinking of the *Western Commander* and loss of life

In 2022 the TSB pacific region released one investigation report:

- the sinking of the *Arctic Fox II* and subsequent fatalities.

In 2023, the TSB pacific region released one investigation report:

- the sinking of the Tug Ingenika and barge Miller 204 and subsequent fatalities.

The TSB issued five recommendations following the *Caledonian* report. Three recommendations issued are aimed at ensuring all crews have access to adequate stability information that meets their needs. That means:

- All commercial fishing vessels should have a stability assessment appropriate for their size and operation.
- The information from that assessment must then be kept current, and it must be used to determine safe operating limits.

Moreover, these operating limits must be easily measurable, and relevant to the vessel's operation. For example, that could mean marking the sides of a vessel's hull to indicate the maximum operating waterline, or maximum permitted loads can be specified in the most relevant unit of measure—total catch weight for instance, or the safe number of traps. Regardless, for it to be of real, practical use, the information must be presented in a format that is clearly understood and easily accessible to crew.

The other two recommendations address the most basic step that harvesters can take: wearing a personal flotation device. Here in British Columbia, roughly 70 percent of all fishing-related fatalities in the past decade came while not wearing a PFD. Yet many harvesters still do not wear them. TC regulations currently require that PFDs be worn only if harvesters identify a risk, however; you never know when you could end up in the water. So the TSB is recommending to TC to require persons to wear suitable personal flotation devices at all times when on the deck of a commercial fishing vessel or when on board a commercial fishing vessel without a deck or deck structure and that programs are developed to confirm compliance. In June 2019, WorksafeBC amended its fishing regulation related to the use of PFDs. Under the amendments, crewmembers must wear a PFD or lifejacket when on board a fishing vessel that has no deck or deck structure, or when on the deck of a fishing vessel that has a deck or deck structure. Crewmembers are not required to wear lifejackets or PFDs below deck or when inside a deck structure where there is risk of entrapment. This amendment removes the need for a risk of drowning to be present before a PFD must be worn.

For more information about the TSB, visit the website at www.tsb.gc.ca
For information about the TSB's safety issues investigation into fishing safety, visit:
https://www.tsb.gc.ca/eng/rapports-reports/marine/etudes-studies/m09z0001/m09z0001.html

To view information on the TSB's recent safety Watchlist, visit:
https://www.bst-tsb.gc.ca/eng/surveillance-watchlist/marine/2022/marine-01.html

The TSB has also produced a Safe at Sea: Activity book on fishing safety intended for the next generation of fish harvesters (ages 4-7). Download a copy.
https://www.tsb.gc.ca/sites/default/files/eng/medias-media/prudence-safe/safe-at-sea.pdf

Reporting an Occurrence

https://www.tsb.gc.ca/eng/incidents-occurrence/index.html
After a reportable occurrence happens you can fill out the reporting form or contact the TSB using the contact information below.

Transportation Safety Board of Canada
4 - 3071 No. 5 Road
Richmond, BC, V6X 2T4

Email: marinenotifications.pacific@bst-tsb.gc.ca
Phone: 604-219-2414

APPENDIX 5. HARVEST LOG EXAMPLE

CRAB TRAP HARVEST LOG

V.R.N. *Vessel Registration No.* Vessel *Vessel Name* Year 2018 Page No.

Fishing Method: (check all that apply) [ ] Singles [X] Ground Lines

Depth: (check one) [ ] Fathoms or [X] Meters

Catch Weight: (check one) [X] Pounds or [ ] Kilograms

Bait Fastener: (check all that apply) [X] Jars [ ] Cages [ ] Clips / Hooks

Bait Type: *Herring*

Section A: Fishing Information - make a new entry for each day, where sub-area, soak time and depth range fished are the same

	DATE HAULED month		day		SOAK TIME (days or hours) Days		Hours		Give one representative point for each sub-area where the soak time and depths fished are the same Latitude dd° mm.mmm	Longitude ddd° mm.mmm	PACIFIC FISHERY MANAGEMENT Area		Sub-area		DEPTH Min.		Dungeness Crab √ (specify if other)	CATCH INFORMATION No. of Pieces	Weight	No. of Traps Pulled	Vessel Master Name (printed)	Vessel Master Signature	Vessel Master FIN	PBS Code	
1	0	3	1	5		2			51° 03.123′	127° 18.421′		1	1		3	14	20	√	96	156	195	Joe Happy	Joe Happy	54321		1
2		↓	↓	↓		↓			50° 54.316′	127° 16.523′		1	2	1	3	4	8	√	24	38	50	Joe Happy	Joe Happy	54321		2
3		↓	1	8		3			51° 03.123′	127° 18.421′		1	1		3	14	20	√	72	117	195	John Smith	John Smith	12345		3
4																										4
5																										5
6																										6
7																										7
8																										8
9																										9
10																										10
11																										11
12																										12
13																										13
14																										14
15																										15

INSTRUCTIONS FOR COMPLETING CRAB HARVEST LOG WITH EXPLANATION OF CRAB LOG TERMS

Each entry must be completed by midnight of the day that fishing occurred. Each entry must include the name, signature and FIN of the vessel master.

SECTION A: FISHING INFORMATION

TERM	*DESCRIPTION*
Fishing Method	Indicate if the traps were attached to a Ground line, Single-buoyed or a mix of both (check all that apply)
Bait Fastener	Indicate if bait is in a Jar (container), in Cages or held on by a Clip or Hook (check all that apply)
Catch Weight	Check off if reporting weights in Pounds or Kilograms
Date Hauled	Month and day that gear was HAULED. Month (01 to 12); Day (01 to 31)
Latitude/Longitude	The vessel master shall record a position to represent the fishing location in the Pacific Fishery Management sub-area, for traps with equal soak times being fished at equal depth ranges. See example above for format.
Species	Use check mark to indicate Dungeness Crab as species of crab retained. Describe if other: RR = Red Rock , RK = Red King Crab, GK = Golden King Crab

TERM	*DESCRIPTION*
Depth	Check off if reporting in Fathoms or Meters. Record minimum and maximum depth of traps set.
Bait Type	Indicate bait used; for example herring, squid, salmon heads, etc.
Catch Information	Record the total count of crab retained and/or total weight of crab retained
Soak Time	Length of time that traps were in water fishing. Records as total DAYS soaked OR total HOURS soaked.
Pacific Fishery Management Area/Sub-area	Boundaries are defined in the *Pacific Fishery Management Area Regulations, 2007.* Must correspond to Latitude and Longitude recorded.
No. of Traps Pulled	Total number of traps pulled. Not to exceed total allowable limit.

Section B: Incidental Octopus Catch - report by number and weight

Line Number	Count of Octopus	Total Weight	Line Number	Count of Octopus	Total Weight
2	2	30			
3	1	10			

Section C: Description of Traps - must complete at beginning of every season and each time trap descriptions change during the season

Trap information same as previous page? (check box for yes) [ ]

Trap Type	No. of Traps	Trap Shape (circle one)	Frame Type (circle one)	Diameter (inches)	Height (inches)	Mesh Type (circle one)	Escape Ring Size (mm)
#1	200	circular square conical	Iron **Iron+Stainless** Stainless	36	12	**Stainless** Synthetic	110
#2	95	**circular** square conical	Iron Iron+Stainless **Stainless**	36	12	Stainless **Synthetic**	105
#3		circular square conical	Iron Iron+Stainless Stainless			Stainless Synthetic	

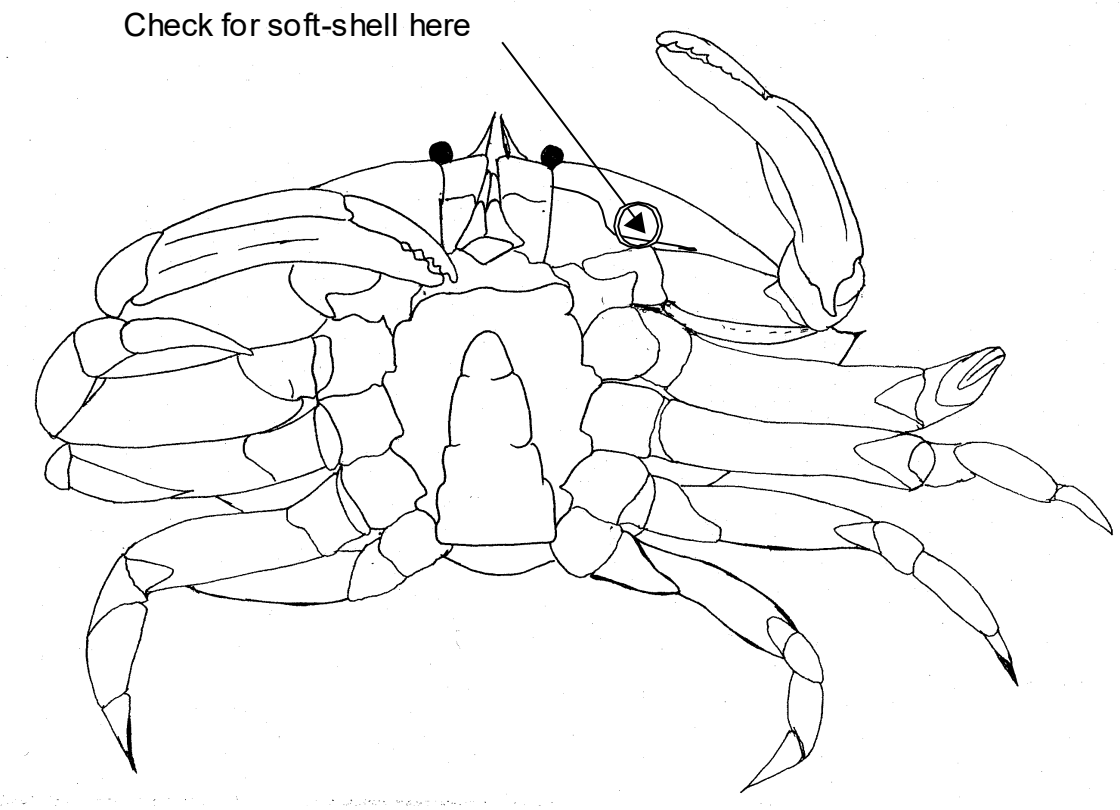
(original white copies) Mail to: **Fisheries and Oceans Canada Shellfish Data Unit, Pacific Biological Station, 3190 Hammond Bay Road, Nanaimo, BC, V9T 6N7**

revised December 2017

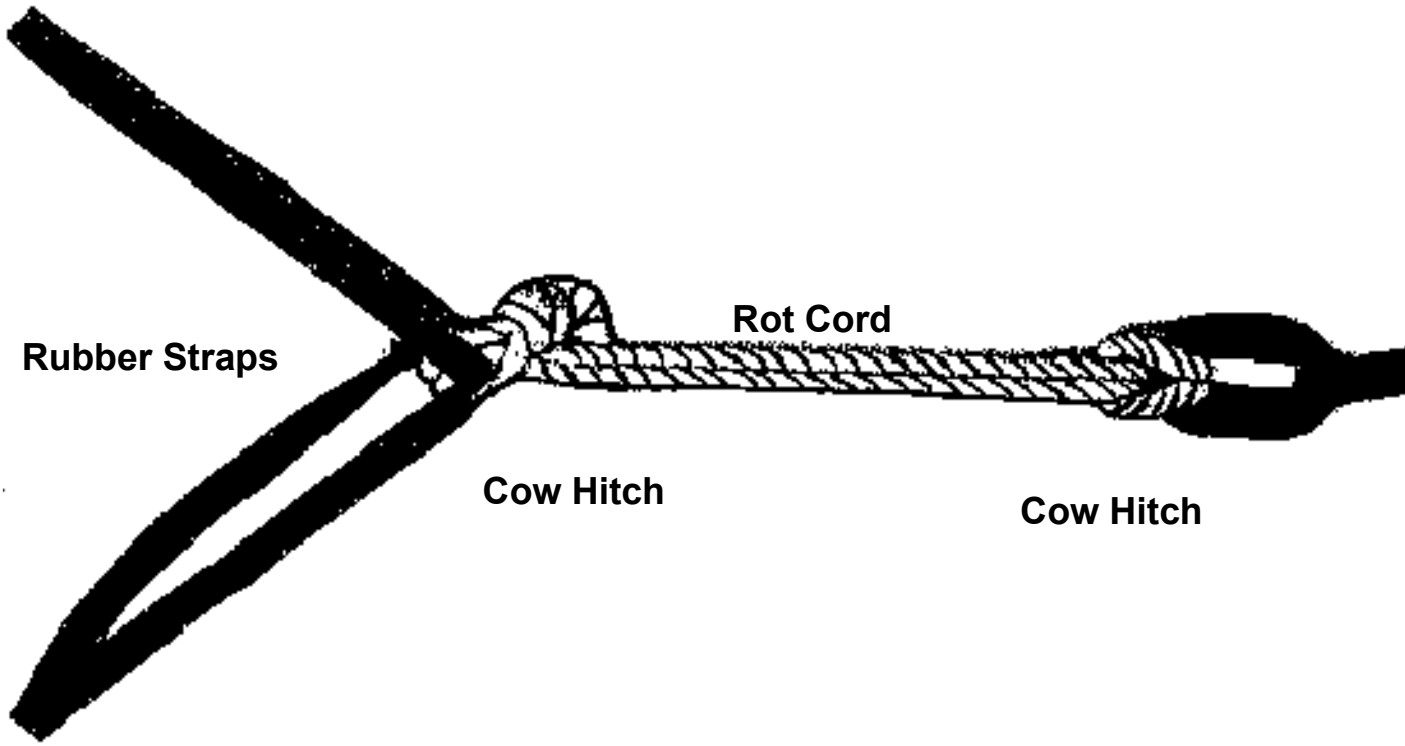
APPENDIX 6: CRAB BY TRAP DIAGRAMS

6.1 DIAGRAM OF WHERE TO CHECK CRAB FOR SOFT-SHELL

This diagram is of the underside of a male Dungeness crab. The arrow indicates the location where a crab shall be checked for soft-shell. The circle indicates the correct position for the placement of the foot of the durometer when measuring shell hardness. The adjacent curved line is the suture line.



6.2 ROT CORD DIAGRAM PLACEMENT



APPENDIX 7: CRAB CONSUMPTION ADVISORIES

TABLE OF CONTENTS

1. INTRODUCTION

Certain coastal areas of British Columbia are either closed to all crab harvesting or have consumption advisories in effect for First Nations and recreational harvesters due to contamination from heavy metals, dioxins, and/or furans. The affected zones are listed below and may change throughout the year. Commercial crab harvesting is prohibited in these locations.

For more information on Dioxin and Furans please see the following website: https://www.canada.ca/en/health-canada/services/healthy-living/your-health/environment/dioxins-furans.html#ro

2. CLOSURES

2.1. Area 4

The harvesting of crab is prohibited due to dioxin contamination in that portion of Subarea 4-11 west of the Highway #16 bridge at Galloway Rapids, which includes Wainwright Basin, Porpoise Harbour, and Porpoise Channel.

2.2. Area 13

No consumption of **crab hepatopancreas** harvested in the waters bounded by the eastern shore of Quadra Island from Francisco Point, thence 5 km north along the shore, thence east from the shoreline to the 200 m contour.

2.3. Area 19-2 Esquimalt Harbour

As a precautionary measure, Esquimalt Harbour (Subarea 19-2) was closed on May 10th, 2016 to all fishing due to a fuel spill (see Fisheries Notices FN0393 & FN0700).

This closure will remain in place until a recommendation to reopen is provided by the local health authority. In the event the closure is lifted during the duration of this plan, if no new advisory is provided, the following consumption advisory will apply:

For those waters north of a line connecting Fisgard Light House, Scroggs Rocks, and Duntze Head, the recommended maximum weekly intakes for a variety of invertebrate species are listed below:

Table 1: Recommended maximum weekly consumption

Seafood	**Toddlers (1 to 4 years old)** Recommended maximum consumption: **(grams per week)**	**Adults** Recommended maximum consumption: **(grams per week)**
Dungeness crab hepatopancreas	**24 g**	**109 g**
Dungeness crab muscle	**200 g**	**905 g**
Red rock crab hepatopancreas	**22 g**	**102 g**
Red rock crab muscle	**416 g**	**1,879 g**
Sea urchin roe	**288 g**	**1,302 g**
Rockfish muscle	**182 g**	**825 g**

NOTE: The recommended maximum amounts that could be consumed per week of a specific seafood assumes that none of the other seafood types would be consumed in the same week.

3. CONSUMPTION ADVISORIES

3.1. Area 13

Consumption of **crab hepatopancreas** harvested in Discovery Passage should not exceed **100 g/week**. This area includes those waters north of a line from the Cape Mudge Lighthouse on Quadra Island true west to the shore of Vancouver Island and south of a line from Separation Head (Quadra Island) true west to Vancouver Island.

Consumption of **crab hepatopancreas** harvested in Deepwater Bay should not exceed **100 g/week**. This area includes those waters southeast of a line from Separation Head on Quadra Island 50° true to the opposite shore.

Consumption of **crab hepatopancreas should not exceed 135 g/week** in the waters east of a line on Quadra Island from Chonat Point south to the opposite bay (Chonat Bay) and from Kanish Bay, Quadra Island, east of a line from Granite Point to Bodega Point.

Consumption of **crab hepatopancreas should not exceed 135 g/week** in the area described as the waters north of a line extending from Walters Point on Sonora Island true east to a point on the opposite shore (Owen Bay).

3.2. Area 17

Consumption of **crab hepatopancreas** harvested in a portion of Stuart Channel **should not exceed 40 g/week**. This area of Stuart Channel is bounded on the north by a line from Donckele Point on Penelakut Island (Kuper Island) to the point at the southeastern entrance to Preedy Harbour on Thetis Island, thence to the most southern point of Dayman Island, thence to the most southern point of Scott Island, westerly to Sharpe Point on Vancouver Island, thence southwesterly across Ladysmith Harbour to a point on the shore 230° true from Sharpe Point; thence southerly along the shore of Vancouver Island to Grave Point;

thence north of a line to Erskine Point on Saltspring Island; thence northerly along the shore to Parminter Point, thence west of a line to Josling Point on Penelakut Island (Kuper Island), thence northerly along the shore to the point of commencement at Donckele Point.

Consumption of **crab hepatopancreas should not exceed 105 g/week** harvested in the waters west of a line from Reynolds Point to Miami Islet to a point at the entrance to Kulleet Bay true south of Deer Point

3.3. Area 18

Consumption of **crab hepatopancreas** harvested in Burgoyne Bay, Saltspring Island **should not exceed 60 g/week.**

Consumption of **crab hepatopancreas** harvested in Maple Bay **should not exceed 125 g/week**.

3.4. Area 19

Victoria Harbour: Consumption of **crab hepatopancreas** harvested in those waters of Victoria Harbour **should not exceed 135 g/week**. This are is described as north of a line from Macaulay Point to the navigation light at the western end of the Ogden Point breakwater to a line from Chapman Point southwesterly to the opposite shore.

3.5. Area 25

Consumption of **crab hepatopancreas** harvested from Muchalat Inlet **should not exceed 70 g/week.** This area includes those waters of Muchalat Inlet lying east of the Gold River Harbour limit, and in those waters of Muchalat Inlet lying east of a line between Anderson Point and Atrevida Point**.**

3.6. Area 28

Consumption of **crab hepatopancreas** harvested in Howe Sound in subarea 28-3 and portions of subarea 28-1 **should not exceed 55 g/week**. These areas are described as the waters of Thornbrough Channel, bounded on the north by a line from McNab Point on the mainland southwest to Ekins Point on Gambier Island, and on the south by a line from Gower Point to the southern tip of Home Island, thence north to Keats Island and along the western and northern shore to Cotton Point, thence west of a line to the government wharf at Gambier Harbour on Gambier Island.

3.7. Areas 28 and 29:

Consumption of **crab hepatopancreas** harvested **should not exceed 130 g/ week** in the following areas:

Howe Sound and the Strait of Georgia in Subareas 28-2 and 29-1 and portions of Subareas 28-1, 29-2 and 29-3, in the waters bounded:

- on the north by a line from Brunswick Point west to Irby Point on Anvil Island and along the shoreline to Domett Point on Anvil Island, west to McNab Point on the mainland,
- on the west by a line from McNab Point to Ekins Point on Gambier Island that follows the eastern and southern shoreline to the government wharf at Gambier Harbour, then proceeds south to Cotton Point on Keats Island and along the eastern and southern

shoreline, south to Home Island and continues from southern tip of Home Island west to Gower Point, then follows the shoreline north and west to Reception Point,
- then on the south by a line that goes from Reception Point east to a point 1.5 km true south of Cape Roger Curtis on Bowen Island, and finally east to Point Atkinson

4. HUMAN WASTE CONTAINMENT REGULATIONS

Disposal of human waste into waters where shellfish are harvested or adjacent to shellfish harvest areas creates unnecessary and potentially serious health risks for shellfish consumers. In accordance with the Canadian Shellfish Sanitation Program (CSSP) and Regulations administered by Transport Canada, raw sewage (Human wastes, sewage or refuse) shall not be discharged from vessels while in or adjacent to shellfish areas. Vessels operating at a distance which does not allow for timely access to on-shore washroom facilities are expected to have a designated human waste receptacle on board. Receptacles could include a portable toilet, a fixed toilet, or other containment device as appropriate. Such devices must be made of impervious, cleanable materials and have a tight-fitting lid. (Refer to Division 4 of the *Vessel Pollution and Dangerous Chemicals Regulations* under the *Canada Shipping Act*):

1. Portable toilets or other designated human waste receptacles shall be used only for the purpose intended, and shall be so secured and located as to prevent contamination of the shellfish area or any harvested shellfish on board by spillage or leakage.
2. The contents of toilets or other designated human waste receptacles shall be emptied only into an approved sewage disposal system.
3. Every person onboard a shellfish harvest vessel must wash and sanitize their hands after using or cleaning a waste receptacle, or after using an onshore washroom facility.

Information on Human Waste Containment Receptacle Requirements under the CSSP can be found at the following Canadian Food Inspection Agency internet site: https://inspection.canada.ca/preventive-controls/fish/cssp/questions-and-answers/eng/1563470479199/1563470589053

APPENDIX 8: CRAB BY TRAP, AREA "A" SOFT-SHELL SAMPLING

Guidelines for Closing and Opening the Commercial Dungeness Crab Fishery

Prepared by DFO Science Branch Crab Program, (Expert Advice) January 9, 2014

The purpose of this document is to provide guidelines to fishery managers and industry regarding closing and opening the Dungeness crab fishery in Area A based on the existing soft-shell sampling program. Goals of the soft-shell program include:

a) protecting soft-shell male Dungeness crabs in Hecate Strait during the spring moulting period from fishery related injuries and mortality, and
b) providing a mechanism to extend the fishing season beyond set closing and opening dates as outlined in the Crab By Trap Integrated Fisheries Management Plan (IFMP) as there is considerable variability in the timing of the major spring moult.

Relevant Documents

There are three additional documents that complement this one:

1) Protocols for the Area A soft-shell sampling program - provides program details to charter vessels.
2) The Crab By Trap IFMP - provides details regarding management of various crab fisheries.
3) The crab survey manual – provides details about the collection of crab biological information (Dunham, J.S., Phillips, A., Morrison, J., and Jorgensen, G. 2011. A manual for Dungeness crab surveys in British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 2964: viii + 68 p.).

Please contact the Area A Crab Manager for copies of these documents.

Soft-Shell Program Sampling

- Sampling begins prior to March 1 to ensure initial crab biological data are collected and analyzed before the March 1 fishery closure date as outlined in the IFMP.
- Sampling should occur approximately every 2 weeks, and ideally should continue until both fishery closing and opening dates are determined. Sampling can also be suspended during the closure period.
- A minimum 5 sites should be sampled. Core sites consistent with previous years are #2, 3, 4, 5, and 7 in Hecate Strait. Sites may be moved at times of low crab abundance to find crab in other locations. Sites should be spread out as much as logistically possible throughout the fishing area. See Figure 1 for a map of the 16 Soft-shell Management Areas.

- A minimum 15 traps should be set at each site, 75 traps in total over the 5 sampling locations. If crab abundance is high at a particular site and subsampling fewer traps is possible, then those 'extra' traps may be allocated elsewhere.
- For detailed sampling protocols, please refer to the Protocols document listed above.

Dungeness Crab Biological Data

- Biological data are collected by trap.
- Biological data are collected from individual Dungeness crabs for all crab types (legal male, sublegal male, female). Legal male crabs are ≥154 mm carapace width notch-to-notch; sublegal male crabs are <154 mm carapace width notch-to-notch.
- Crab biological data includes: sex, shell condition (see Table 1), injuries, mating marks, carapace width notch-to-notch. Please refer to the crab survey manual listed above for more details.
- Sample size per site should be a minimum 50 legal size male Dungeness crabs. If fewer legal crabs are collected during a sampling event, please refer to options outlined in the "sampling when crab abundance is low" section.
- Bycatch (i.e., those species captured in traps other than Dungeness crabs) should be identified to species and numbers and weights (kg) recorded for each species per trap.
- For the purpose of determining moult timing, crab biological data should be summarized by sampling site, date, proportions of legal male crabs in each shell condition code, total number of legal male crabs sampled, number of traps sampled.
- Once the charter vessel has returned to port after a sampling event, copies of raw data sheets must be provided to DFO and the service provider immediately, with data summaries provided to all interested parties within 3 days.

Guidelines for Closing and Opening the Fishery

The following management guidelines are based closely on those previously used in Area A (Appendix A). These guidelines are to assist in the interpretation of the results from the soft-shell sampling program.

Rationale for changes from the previous guidelines are:

- provides additional clarity and context for opening and closing decisions.
- shell condition 3 (crackly soft) should be included in the closing guidelines since crabs in shell condition 4 (plastic soft) and 5 (moulting) are often absent in test traps.
- closing guidelines were made to complement existing opening guidelines, which already incorporate crabs in shell condition 3.
- opening guidelines have essentially been left unchanged.

Closing

Greater than or equal to 5% legal male crabs with very soft shells (shell codes 5, 4, 3). This indicates the start of the male moult period.

A decreasing trend in the proportion of old shell (shell codes 8, 6, 7) legal male crabs may also signal the onset of the moulting period.

When 35% or more of the legal male crabs have soft shells (shell codes 5, 4, 3, 2), consideration should be given to closing the fishery quickly as this situation can be interpreted as being in the middle of the major moult.

Opening

Less than 5% legal male crabs with very soft shells (shell codes 5, 4, 3).

An increasing trend in the proportion of new hard shell (shell code 1) (and possibly springy soft; shell code 2) legal male crabs may also signal the end of the moulting period.

When more than 65% of the legal male crabs have hard shells (shell codes 1, 8, 6, 7), the fishery can open as this situation can be interpreted as being the end of the major moult period.

Sampling when crab abundance is low

If crab abundance is low and the moult signal unclear, then sample size can be increased by:

1a) leaving traps at a particular site in anticipation of more crabs moving into the area.
1b) selecting new sampling sites and moving traps.
2) pooling data for all sampling sites by date.
3) using male crabs >143 mm notch width to determine moult timing.

Table 1. Dungeness crab shell condition codes.

Shell Code	Shell Description	Time Since Last Moult	Shell Plasticity	Shell Age
5	Moulting	0	Soft	New
4	Plastic soft	2-6 days		
3	Crackly soft	6 days to 1 month		
2	Springy soft	1 to 3 months		
1	New hard	3 to 6 months	Hard	
8	Transition	6 to 12 months		Old
6	Old hard	12 to 24 months		
7	Very old hard	>24 months		
9	Shell only			

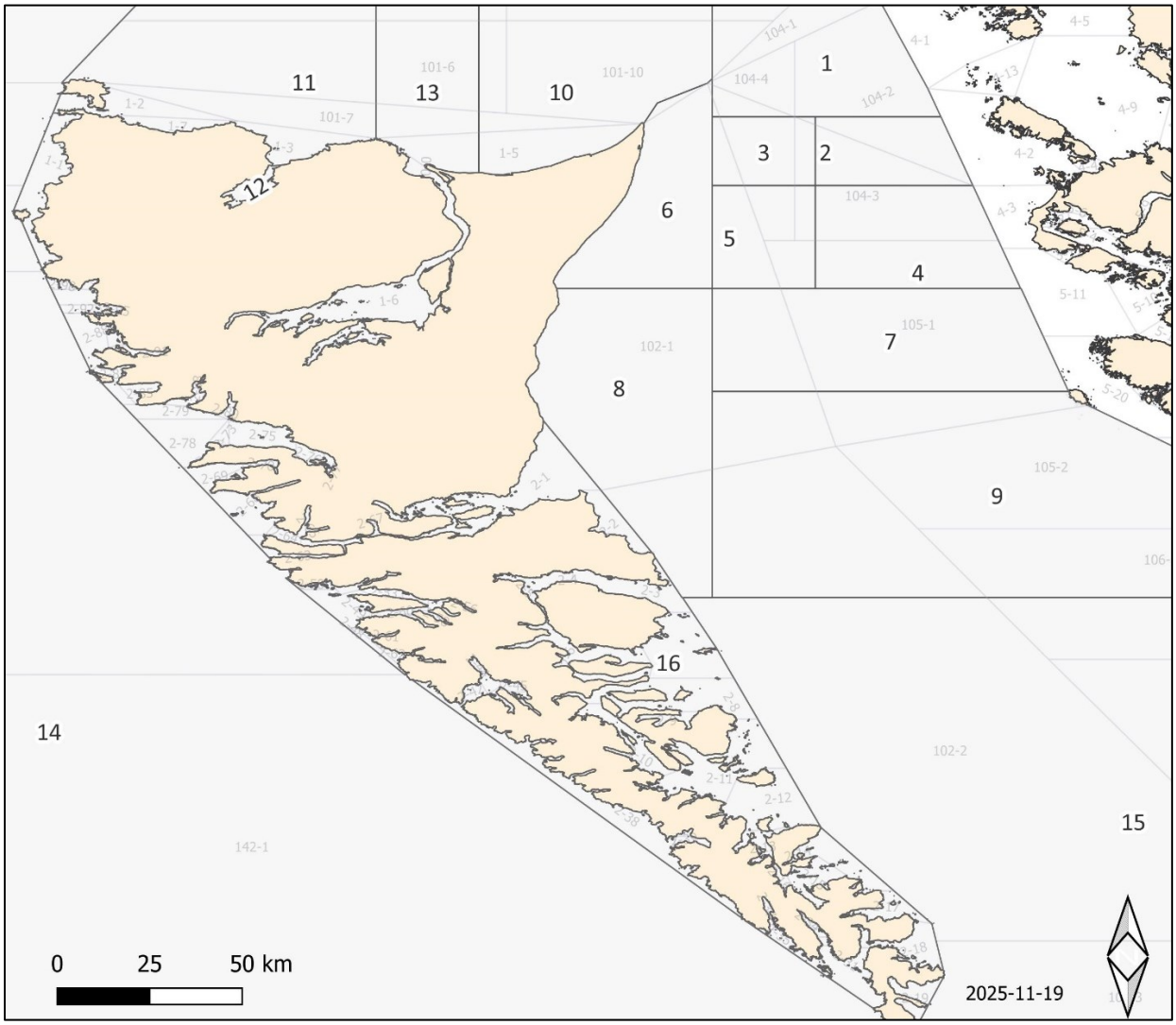


Figure 1. Map of Area A Soft-shell Management Areas.

Appendix A

Previous closing and opening guidelines in Area A

Closing

An increasing trend in the percentages of shell code 6 and 7 coupled with:

- greater than 1% of crabs in shell code 5 (actually in the process of moulting)

And/or

- greater than 3% of crabs in shell code 4 (newly moulted, plastic soft)

Opening

- greater than 65% of crabs in shell code 1 and 6 (hard shell)
- less than 5% in shell codes 3 and 4 (crackly soft and plastic soft)

Area A Soft-shell descriptions:

1. Area 103, those portions of Subareas 101-8 to 101-10, 104-1 east of the meridian running through 131°30.000′ west longitude and those portions of Subareas 102-1, 104-2, 104-4 and 104-5 that are north of the parallel running through 54°10.000' north latitude.

2. Those portions of Subareas 104-2 and 104-3 that lie:
   - south of the parallel passing through 54°10.000' north latitude
   - north of the parallel passing through 54°00.000' north latitude, and
   - east of the meridian passing through 131°15.00' west longitude.

3. Those portions of Subareas 102-1, 104-3 and 104-5 that lie inside a line:
   - that begins at 54°10.000' N 131°30.000' W
   - then true east to 54°10.000' N 131°15.000' W
   - then true south to 54°00.000' N 131°15.000' W
   - then true west to 54°00.000' N 131°30.000' W
   - then to the beginning point.

4. Those portions of Subareas 104-3 and 105-1 that lie:
   - south of the parallel passing through 54°00.000' north latitude,
   - north of the parallel passing through 53°45.000' north latitude, and
   - east of the meridian passing through 131°15.000' west longitude.

5. Those portions of Subareas 102-1, 104-3, 104-5 and 105-1 that lie inside a line:
   - that begins at 54°00.000' N 131°30.000' W
   - then true east to 54°00.000' N 131°15.000' W
   - then true south to 53°45.000' N 131°15.000' W

- then true west to 53°45.000' N 131°30.000' W
- then to the beginning point.

6. That portion of Subarea 101-10 that lies southeasterly of a line:
   - that begins at 54°09.000' N 131°40.000' W [Rose Spit]
   - then to 54°12.000' N 131°38.000' W
   - then to 54°14.9.000' N 131°30.700' W

   and that portion of Subarea 102-1, 104-1, 104-4, and 104-5 that lies north of the parallel passing through 53°45.000' north latitude and west of the meridian passing through 131°30.000' west longitude.

7. Those portions of Subareas 102-1 and 105-1 that lie:
   - south of the parallel passing through 53°45.000' north latitude
   - north of the parallel passing through 53°30.000' north latitude, and
   - east of the meridian passing through 131°30.000' west longitude.

8. Those portions of Subareas 102-1 and 102-2 that lie:
   - south of the parallel passing through 53°45.000' north latitude
   - north of the parallel passing through 53°00.000' north latitude, and
   - west of the meridian passing through 131°30.000' west longitude.

9. Those portions of Area 105 and Subareas 102-1, 102-2 and 106-1 that lie:
   - south of the parallel passing through 53°30.00' north latitude
   - north of the parallel passing through 53°00.00' north latitude, and
   - east of the meridian passing through 131°30.000' west longitude.

10. Those portions of Subareas 1-5 and 101-4 to 101-10 that lie:
    - east of the meridian passing through 132°04.000' west longitude at Skonun Point, and
    - west of the meridian passing through 131°30.000' west longitude,
    - except for that portion of Subarea 101-10 that lies southeasterly of a line
    - that begins at 54°09.000' N 131°40.000' W [Rose Spit]
    - then to 54°12.000' N 131°38.000' W
    - then to 54°14.900' N 131°30.700' W.

11. Subareas 1-2, 1-3, 1-7 and those portions of Subareas 101-4 to 101-7 that lie west of the meridian passing through 132°19.000' west longitude at Wiah Point.

12. Subarea 1-4 (Naden Harbour).

13. Subarea 1-6 those portions of Subareas 1-5, and 101-4 to 101-7 that lie:
    - east of the meridian passing through 132°19.000' west longitude, and
    - west of the meridian passing through 132°04.000' west longitude.

14. Areas 130 and 142, and Subareas 101-1, 101-2 and 101-3 (WCQCI)

15. Areas 107 to 110, Subareas 102-3 and 106-2 and those portions of Subareas 102-2, and 106-1 that lie south of the parallel passing through 53°00.000' north latitude (SHS)

16. Subareas 1-1, 2-5 to 2-62, 2-68 to 2-76, 2-78 to 2-100 (QCI)

APPENDIX 9: CRAB BY TRAP COMMERCIAL FISHERY MONITORING AND CATCH REPORTING PROGRAM STANDARDS

British Columbia Commercial Crab
Fishery Monitoring and Catch Reporting Program Standards

TABLE OF CONTENTS

1. PURPOSE OF THIS DOCUMENT

This document describes the official Fisheries and Oceans Canada standards for fishery monitoring and catch reporting in the commercial crab fishery, including data collection, and data submission, Through conditions of licence commercial harvesters are required to establish programs for:

- Vessel activity monitoring through an electronic monitoring system or through at-sea observer coverage;
- Trap limit compliance through plastic trap tags (Licence Areas B, E, G, H, I, and J);
- Harvest logbook reporting;
- Fish Slip reporting;
- Biological sampling;
- Fishing Hail reporting (Licence Area 'A' only); and
- Buoy Marking Registry (Licence Areas 'A', 'B', 'G', and portions of 'E')

This document is intended to be used by commercial licence holders in discussions with third-party service providers who may be interested in bidding on the opportunity to provide these programs and requirements on behalf of licence holders.

Persons applying for a licence will be required to demonstrate that they have made arrangements, either individually or through an area association, for an approved service provider to conduct each element of the fishery monitoring programs on their behalf.

All program components must be in place for April 1 or the start of the fishery in a particular licence area.

All biological sampling conducted at-sea must be conducted by an approved DFO-designated Observer.

The Department requires that all licence holders within a single crab licence area choose a single service provider for the electronic monitoring program in that licence area. A single service provider for each licence area must also be established for the biological sampling program and for the harvest log program. The electronic monitoring, biological sampling, and harvest log programs do not have to be provided by the same service provider.

To assist the Department and crab licence holders in evaluating the efficiency and effectiveness of the programs, it is expected that service providers will participate in a post-season review and performance evaluation of the programs (see Sections 4 and 5).

2. MONITORING OBJECTIVES FOR COMMERCIAL CRAB FISHERY

Over-arching objectives for monitoring of the fishery were developed at the beginning of the electronic monitoring program, and have been recently updated to include:

- Collect accurate harvest and effort data
- Collect accurate and timely data on vessel activity
- Collect data to support compliance with conditions of licence
- Collect biological data on target and non-target catch
- Collect economic data from the fishery

3. MONITORING PROGRAMS

The monitoring of the commercial crab fishery will be accomplished through seven programs. It is expected that most harvesters will meet the monitoring requirements through electronic monitoring, plastic trap tags, harvest logbook, fish slip, biological sampling, hail reporting, and buoy marking programs. Detailed reporting standards for each of these programs are provided in Appendices 1 through 6.

3.1. Fishery Monitoring

3.1.1. Electronic Monitoring

Harvesters may choose to use an electronic monitoring program to meet the objectives of collecting accurate and timely data on vessel activity and compliance with conditions of licence.

Electronic monitoring system equipment must accurately record vessel activity, identify trap-hauling activity, and accurately identify individual traps. A radio frequency identification (RFID) chip is required on each trap fished by licensed crab vessels (in addition to plastic tags). In instances where a combination tag has been issued, this will replace the former RFID chip and the plastic trap tag. Harvesters or automated equipment must scan each trap as it is hauled on board. The detailed information on equipment and data collection requirements are provided in Appendix 1.

Data delivery requirements consist of providing raw data as well as reports based on the analysis of these data. This includes potential violations of conditions of licence, and summary reports providing details of fishing activity for each vessel. The detailed information on data delivery requirements; including fields and formats required for raw data and summary reports, and the required timeliness of delivering these data and reports, is provided in Appendix 1.

3.1.2. At-Sea Observers

Vessel owners/licence holders electing not to participate in the electronic monitoring programs must arrange for 100% at-sea observer designated by the Regional Director

General for monitoring, and must ensure the program includes a method to accurately monitor and report on all the detailed standards outlined in this document. At-sea observers must participate in a training program specific to crab trap monitoring, and must be designated under Section 39 of the *Fishery (General) Regulations*. Details on required information reports are provided in Appendix 3. Contact a Resource Manager for more information (see Section 6).

3.1.3. Plastic Trap Tags

In Crab Areas B, E, G, H, I and J, beginning April 1, 2026 plastic trap tags will only be required if a vessel has not yet been supplied with combination tags. Combination tags and/or plastic trap tags are used to help ensure vessel trap limits are adhered to. Each licence holder in Crab Areas B, E, G, H, I, and J shall purchase a limited number of combination tags or plastic trap tags for the fishing season. Each trap active in the fishery shall have an approved plastic trap tag or combination tag attached to the trap. The tags shall indicate the licence year and have an identification number unique to each individual vessel. Each vessel will be issued a total number of tags equal to their trap limit plus 10% to allow for replacements. Extra replacement tags may only be used to replace lost tags. If the vessel master requires more replacement tags than the 10% allotted for lost traps, a ghost gear report must be submitted and then a request for more tags must be made to the local area service provider. The service provider will then contact the area crab manager regarding issuing a complete new set of replacement tags. New replacement tags shall be marked with the letters "RP" and be a different colour than the original set issued. New replacement tags shall also indicate the licence year and be unique to each individual vessel. Old tags must be removed and replaced with the replacement tags at the first opportunity the gear is hauled. When trap tags are replaced, only the valid tag shall remain on the trap. All the old tags must be returned to the nearest DFO office within 21 days of the new tags being issued. Trap tag inventory data must be reported to the Department following the specific data format and reporting timelines detailed in Appendix 3. Information must be updated within 24 hours of tags being issued. Note: replacement tags will only be issued if lost, stolen or damaged and not in the event of seizure by enforcement personnel.

3.1.4. Combination Trap Tags

In Crab Areas B, E, G, H, I and J, beginning April 1, 2026 DFO will begin transitioning to combination trap tags. These tags will feature both a radio frequency identification (RFID) chip and a unique identifier. Combination tags will be automatically scanned by the vessel's electronic monitoring system during hauling and are designed to last approximately three years. This change will streamline scanning processes and resolve issues related to scan failures and aging equipment. Combination tags may not be placed on buoys and must be fastened to traps to ensure the unique identifier is visible.

When trap tags are replaced, only the valid tag shall remain on the trap. All the old tags must be returned to the nearest DFO office within 21 days of the new tags being issued. Trap tag inventory data must be reported to the Department following the specific data format and reporting timelines detailed in Appendix 9.4. Information must be updated

within 24 hours of tags being issued. Note: replacement tags will only be issued if lost, stolen or damaged and if a ghost gear report has been submitted, and not in the event of seizure by enforcement personnel.

3.2. Catch Reporting

3.2.1. Harvest Logbooks

The goal of this program is to obtain accurate harvest and effort data in the commercial crab fishery. As a Condition of Licence, the vessel master/licence holder 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 and Research Division's Shellfish Data Unit, within 28 days following the end of the month in which fishing activity occurred. Licence holders must use a service provider to meet the requirement for provision of electronic data (see Appendix 5).

3.2.2. Fish Slips

The fish slip program is intended to collect economic data from the fishery. Licence holders are responsible for ensuring fish slips are submitted. It is a Condition of Licence that an accurate written report shall be furnished on a fish slip of all fish and shellfish caught under the authority of this licence. A report must be made even if the fish and shellfish landed are used for bait, personal consumption, or otherwise disposed.

This includes all crab and octopus retained under authority of the licence. The written report shall be posted 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
(604) 666-3784

3.3. Biological Sampling

The collection of biological data on crab populations is required in each licence area. Each licence holder must make arrangements for a designated Observer to collect and submit data to DFO according to the standards outlined in Appendix 9.6. During a sampling event, the observer must be positioned in such a way as to accurately collect all required data. Generally, this means the observer will need to be onboard the commercial vessel while the samples are being removed from the commercial traps, in order to collect accurate gear information and ensure proper sampling by trap. Observers must have access to the traps being sampled if requested in order to collect necessary data on the fishing gear.

The intention of the sampling is to collect information on biological characteristics of crab populations which will be used to evaluate future management options. Data will help support development of management approaches in accordance with the Precautionary Approach, as well as help to determine soft-shell periods.

The biological information collected shall be entered into a Fisheries and Oceans Canada approved database and submitted to the Department in electronic form no later than seven (7) days following the end of the month when data were collected. Detailed requirements are outlined in Appendix 9.6.

3.4. Hail Program – Licence Area 'A'

Vessels fishing within Licence Area 'A' shall arrange to have hail information on fishing activity reported prior to leaving port when intending to haul fishing gear; prior to moving to a new fishing location; and a minimum of 2 hours prior to returning to port.

The data fields to be reported are detailed in Appendix 9.7.

3.5. Registration of Unique Buoy Colour Designs

Licence holders fishing within Licence Areas A, B, G, and the Quatsino and Tofino trap limit areas of Licence Area E must register with the Department their unique colour buoy design for the fishing season. A colour photograph is required. Only the colour combination registered with the Department for a particular licence may be used during fishing.

Licence holders within Licence Area 'A' and 'B' must make arrangements for the registry of their buoy with their service provider.

Licence holders within Licence Area 'G' must provide a colour photograph to their local DFO crab manager. See contact list in Section 6.

Licence holders within the special Quatsino and Tofino Trap Limit Areas of Licence Area 'E' must register their buoy design with the local Tofino DFO office.

4. MID-YEAR AND YEAR-END SUMMARY REPORTS

As a condition of licence each licence holder is responsible for providing a report to the Department on fishing activity during the course of the season. In practice, it is expected that most licence holders will arrange with a service provider to prepare a summary report on their behalf that may be combined with other licence holders' information into a licence area report. A mid-year report must be completed by November 21, 2026 for the fishing period of April 1 to October 31. A year-end report shall be completed by April 30, 2027 covering the period of the entire fishing season. A copy of these reports shall be provided to the Department lead crab resource manager in electronic format by the required completion dates. A public copy of the report shall also be provided to

licence holders for which the service provider is contracted to perform duties on their behalf. Confidential information on individual vessels may be provided to the Department. It is expected that no confidential fishing information on individual vessel's harvest or economic information will be shared or released in the public version of the report, nor will it be released to any party other than DFO or the authorized licence holder of record for that crab fishing licence.

Mid-year and year-end reports shall include:

- For each of the program elements (Electronic Monitoring, plastic trap tags, logbooks, and biological sampling), a description of duties performed by the service provider (excluding confidential information in the public version).
- Summary of program elements completed and not completed on behalf of licence holders.
- Summary of Incident/Occurrence Reports by month and occurrence type, excluding confidential information in public versions.
- Issues or problems encountered during the period.
- Recommendations to licence holders and the Department on possible management changes to the fishery, or changes to the monitoring programs.

5. PROGRAM EVALUATION CRITERIA

The performance of the service providers in meeting the requirements of the monitoring programs will be evaluated against program criteria during the current licence year. Service providers failing to meet a minimum level of performance in a particular program during the season may not be approved by the Department to perform those duties in the following season.

The Department is not responsible for third-party contracts or other arrangements between individual licence holders and service providers. It is the responsibility of licence holders to ensure that arrangements are in place to meet all DFO licence conditions for the commercial crab licence.

The Department reminds all licence holders that licence conditions and program designs may change for the next season or in subsequent years.

DFO performance evaluations against the evaluation criteria will continue next season and feedback will be provided to both the service provider(s) and local area licence holder representative(s). Opportunities to improve performance will be documented during the first 8 months of the year.

5.1. Electronic Monitoring

- Success of data collection and transmission / delivery within the specified timeframe
- Availability of updated raw data to DFO on a daily basis
- Documentation of equipment issues, malfunctions and repair as defined in Appendix 9.1
- Rate of equipment malfunctions, and timeliness of equipment repair
- Timeliness and completeness of reporting occurrences (potential violations) as defined in Appendix 9.1
- Timeliness and completeness of providing summary reports as defined in Appendix 9.1

- Accuracy of RFID tag inventory, and timeliness of update and delivery to DFO

5.2. Biological Sampling

The biological sampling program meets the minimum amount of sampling required by DFO Science. Therefore, DFO requires 100% sampling success by service providers. Sufficient flexibility has been built into the program to ensure all sampling targets can be met. DFO will be monitoring and evaluating service provider performance. Sampling success under 100% by a service provider will be considered unacceptable by DFO without reasonable explanation.

Service Providers are required to submit to the DFO monthly sampling summary reports, separate for commercial vessel and fishery independent sampling, for each Crab Management Area. Such reports should summarize the following:

- Sampling dates
- Names of vessels sampled
- Number of traps examined
- Total number of Dungeness crabs sampled
- Details regarding which sampling goals were not met and reasons why.

5.3. Harvest Logbooks

- Timeliness of data entry and delivery
- Accuracy of data transcription (measured in error rate per page)

5.4. Plastic Trap Tags

- Documentation and tracking of plastic tag issuance as required in Appendix 9.3

5.5. Combination Trap Tags

- Documentation and tracking of combination tag issuance as required in Appendix 9.4

6. CONTACTS FOR MORE INFORMATION

Electronic Monitoring	Rachel McGuinness	(250) 616-3095 Rachel.McGuinness@dfo-mpo.gc.ca
Biological Sampling	Andres Araujo	(250) 713-0268 Andres.Araujo@dfo-mpo.gc.ca
Harvest Logbook Data	Rob Flemming	(250) 756-7014 DFO.PACSDU-UDMCPAC.MPO@dfo-mpo.gc.ca

Area Resource Managers	Karen Martz, Region	(236) 203-0212 Karen.Martz@dfo-mpo.gc.ca
	Sara Dansereau, Prince Rupert	(250) 627-3455 Sara.Dansereau@dfo-mpo.gc.ca
	Mike Kattilakoski, Nanaimo	(250) 756-7315 Mike.Kattilakoski@dfo-mpo.gc.ca
	Abigail Mitchell, Lower Fraser Area	(778) 361-0271 Abigail.Mitchell@dfo-mpo.gc.ca
	Brittany Myhal, West Coast VI	(250) 739-9217 Brittany.Myhal@dfo-mpo.gc.ca

APPENDIX 9.1: CRAB BY TRAP, ELECTRONIC MONITORING

Data Collection Program Name: Electronic Monitoring (EM)

This document provides information on the data requirements and specifications for programs collecting data for transfer to Fisheries and Oceans Canada, Pacific Region. The intended audience is both DFO staff and external groups involved in collecting, transferring or managing fisheries data.

Table of Contents:

List of Tables:

Equipment and Data Collection Requirements

1. EQUIPMENT REQUIREMENTS

System equipment shall:

- Accurately monitor the vessel 24 hours per day, seven days per week while it is engaged in fishing. Fishing is defined as the entire period of time that traps are in the water.
- Accurately record and store data.
- Have Global Positioning System (GPS) capable of Wide Area Augmentation System (WAAS) differential GPS with typical position errors of less than three metres.
- For vessels within all Licence Areas except Area A:
    - automatically transmit the collected data to the approved service provider prior to midnight each day where possible, with a maximum of 14 days between successful transmissions to the service provider;
    - provide a feedback mechanism to indicate to the vessel master if the data has not been sent within the last 24 hours;
    - where requested for enforcement purposes, and where possible, automatically transmit the data to the service provider throughout the day as data are collected (with ability to make this change in transmission frequency via remote command by the service provider);
    - where cellular data transmission is not possible for a particular vessel due to remote location of its home port, alternative arrangements can be made for data delivery within a maximum of 14 days from data collection.
- Provide a feedback mechanism to indicate to the vessel master if the system is operational and functioning properly;
- Include an independent and reliable power supply capable of meeting program standards; and
- Be tamper-proof.

For vessels within all Licence Areas except Area A, if the collected data cannot be transmitted within 14 days since the last transmission, the vessel master shall notify the service provider as soon as possible (explanation is required in occurrence report:
Table 8).

2. VESSEL ACTIVITY

System equipment must accurately record vessel location, date, time, and speed (vessel position data) at a minimum frequency of every two minutes while the vessel is active (travelling, setting, or hauling traps). A higher frequency is required to identify trap hauling activity (see section 3) if a hydraulic sensor is not employed. If the vessel is within 50 metres of the southern Canada/USA international border and travelling at a speed of less than four knots, the equipment shall record data at a minimum of every 10 seconds.

While the vessel is not active (not engaged in travelling, setting, or hauling traps), equipment shall record vessel position data at a minimum of every 60 minutes.

As per conditions of licence, The vessel master is responsible for ensuring that their EM system is turned on before leaving port, and is left on until they return to port and as long as there are traps in the water, in order to ensure the required data is recorded and delivered.

3. TRAP HAULING ACTIVITY

The electronic monitoring program must accurately identify trap-hauling activity by one of two means:

- A hydraulic sensor that allows trap hauling activity to be identified independently of RFID chip scans. The equipment shall collect data every time the vessel is engaged in hauling traps; or
- If the vessel is travelling at a speed of less than four knots, the equipment shall collect vessel position data at a minimum of every 10 seconds.

4. TRAP IDENTIFICATION: RFID CHIPS AND COMBINATION TAGS

The electronic monitoring program must accurately identify individual traps. A radio frequency identification (RFID) chip is required on each trap and holding cage fished by licensed crab vessels. Beginning April 1, 2026 RFID tags will begin being replaced with combination trap tags, which also contain an RFID chip, and capture additional information. These new tags will replace plastic trap tags as they have unique visual identification. See Appendix 9.4 for additional information on combination trap tags. Vessel operators or automated equipment are required to scan every RFID chip as the trap or holding cage is hauled onboard, with an RFID chip scanner to record RFID information from each trap hauled. System equipment shall provide a feedback mechanism to indicate to the vessel master if the scanner is functioning properly (RFID chips are successfully scanned and recorded). System equipment shall also differentiate between trap RFID tags and holding cage RFID tags.

All aspects of RFID chip procurement, distribution, administration, and data entry are the responsibility of the vessel owner/licence holder to arrange with the service provider. The service provider will enter the trap RFID chip inventory data into a database that they provide, and submit it to the Department within 24 hours of issuing chips. The database will contain all inventory data for all vessels within a licence area.

Vessel operators are required to use and scan registered RFID chips in the vessel's inventory for the current licence year. RFID chip inventories for each vessel must be updated at the beginning of each fishing season, unless harvesters are using combination tags. Combination tags may be used in place of current RFID chips and must be updated every three years For Licence Areas open to fishing year-round, the operator is responsible for arranging for the service provider to update the vessel's entire RFID chip inventory within the first 30 days of fishing for the 2026/27 licence year. Each vessel's RFID chip inventory will include three classifications (or four if traps are lost):

1. "Main": main set of RFID chips (actively fished traps), limited to the vessel's trap limit. The service provider will define the main chips based on the chips scanned at the

beginning of the licence year/ season, until the trap limit has been reached. Any lost traps will be redefined as "lost", and new chips defined as "main" chips in the vessel's inventory only after the lost traps are identified as such.

2. "Spare": secondary set of RFID chips limited to a maximum of 10% of the vessel trap limit. The service provider will define the spare chips to be those scanned over and above the trap limit, up to a maximum of 10% spare chips.
3. "Over-Limit": Any RFID chips scanned during the licence year over and above the 10% allowable inventory of spare chips will be defined as 'over-limit' chips.
4. "Lost": Any 'main' or 'spare' RFID chips not scanned in over 30 days will be defined as 'lost' chips and will no longer be deemed part of the valid inventory of RFID chips.

The RFID chip inventory for each vessel must be provided to DFO within seven days of the 30-day requirement for completing initial inventories for the licence year, and within 24 hours of updating the inventory during the fishing year.

The vessel master is responsible for ensuring that each trap is fitted with a working RFID chip and must arrange with the service provider to replace any RFID chips that are no longer scanning successfully. As per conditions of licence, the vessel master is responsible for scanning the RFID chip on every trap they haul onboard.

When a trap is taken out of the water and replaced, the vessel master is responsible for switching the RFID chips so that all traps in the water are fitted with RFID chips in that vessel's inventory for the current licence year. When new traps and RFID chips are used to replace lost traps, the vessel master is responsible for removing the lost traps with the RFID chips from the water, if they are found, and communicating with the service provider to ensure that the vessel's RFID chip inventory is updated to identify the lost and replaced traps RFID chips.

5. VIDEO CAMERAS (AREAS A, B AND J)

In Licence Areas A, B and J, the electronic monitoring program must accurately monitor fishing activity by camera as described below:

- EM equipment capable of collecting video data.
- Digital video recording of all deck activity while the vessel is outside of harbour limits. This shall be collected by a minimum of one camera. Multiple cameras may be required if vessels have more than one hauling station.
- While the vessel is travelling, setting, or hauling traps/gear, the equipment shall collect data at a minimum of every 10 seconds and video shall be recorded continuously at a frame rate and quality adequate to monitor onboard activities. Cameras shall provide an unobstructed view at all times of onboard activities and camera quality shall be sufficient such that unique buoy colours can be determined, by-catch species can be identified and activity such as gear tangles and line cutting can be observed.
- While the vessel is not engaged in travelling, setting, or hauling traps and the vessel is within harbour limits, video data collection is not required. If video data collection is

disabled at the dock, the EM system must automatically restart video collection as the vessel departs harbour limits. Vessel tracking information must be continually collected at all time the vessel has gear deployed.

- Accurately identify trap-hauling activity using video recording of activity focused on the hauling stations in addition to the hydraulic sensor.

Potential violations identified (or "flagged") through a cursory review of EM data shall be investigated via review of video data, and details of observed occurrences (potential violations) shall be reported to the Department within 31 days of retrieving data indicating an occurrence.

In addition, for every vessel, a minimum of 10% of the video data collected while fishing will be reviewed. If the "flagged" video analysis comprises less than 10% of the fishing time, additional video will be selected at random (from periods of fishing) for review, to identify any violations of the conditions of licence. Where a compliance problem is identified, additional video data review over 10% must be conducted as needed to document the extent of the problem.

Video data for a suspected or observed violation shall be saved by the service provider for potential use in enforcement actions for at least one year; when the Department notifies the service provider of an investigation, the video data shall be saved by the service provider until the Department notifies them that the file is closed. Video data for which no suspected or observed violations have occurred is not required to be stored and is not required to be submitted to the Department.

For further details on video monitoring requirements in Crab Management Areas A, B, and J, contact the local area manager.

Data Transfer Requirements

The electronic monitoring program is comprised of five types of data delivery processes. Data transfer requirements and format are described in the following five sections. All data submitted is subject to the *Privacy Act* and *Access to Information Act*.
For all tables, all fields are mandatory unless they are not applicable or values are unknown, in which case a null (blank) value is to be entered.

1. DAILY RAW DATA DELIVERY

The vessel owner / licence holder shall ensure the service provider provides the raw fishing data for each of the three fishing data types (vessel position data, hydraulic data if applicable, and RFID chip data), as well as a record of data transmission, as described below.

- **Format:** Comma Separated Value (*.csv).
- **Medium:**
  - DFO File Transfer Protocol (FTP) site (DFO's internet server for the exchange of files between DFO staff and external groups; site and login details will be provided)
- **Timeliness:**
  - For vessels in Area A, the licence holder shall ensure that the service provider retrieves and delivers to the Department all data from the vessel within 30 days of hard drive or usb collection.
  - For vessels within all Licence Areas except Area A, raw data must be automatically transmitted to the approved service provider prior to midnight each day where possible, with a maximum of 14 days between successful transmissions to the service provider (as per section 1, Equipment Requirements, p.3). If data cannot be delivered within 14 days, the vessel master shall notify the service provider as soon as possible (explanation is required in occurrence report: Table 8).
  - For vessels within all Licence Areas except Area A, all data received by the service provider shall be made available to DFO on a daily basis (no more than 24 hours after data received)
  - For vessels within all Licence Areas except Area A, where requested for enforcement purposes, and where possible, raw data for particular vessels must be accessible to the Department on a near real-time basis, throughout the day as data are collected (see Equipment Requirements, section 1)

Tables posted on FTP for DFO download shall be updated daily to meet the timeliness requirement of delivery within 24 hours of service provider receipt. These tables shall include all data to date for at least the current month (thus replacing previous versions of data files for the current month). Tables for previous months that have been updated in the past 30 days must also remain posted (i.e., tables for previous months that have not been updated with new data in the past 30 days are not required to be posted)

Table 1: Vessel position data

- **File Naming Conventions:** [licence area]_TRACK_[month: 2 digits]_[year: 4 digits] (e.g., B_TRACK_01_2026.csv)

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Datetime	Date and time of vessel location record	YYYY-MM-DD HH:MM:SS (e.g. 2026-03-31 23:59:59) (corrected for UTC offset)
Latitude	Latitude (decimal degrees)	Decimal (e.g. 54.1923416)
Longitude	Longitude (decimal degrees)	Decimal, negative (e.g. -130.338375)
Heading	Heading (degrees)	Decimal (e.g. 222.1)
Speed	Speed (nautical miles per hour)	Decimal, one decimal place (e.g. 2.1)
Sat_num	Number of satellites used to acquire the position	Integer
Sat_quality	Satellite Quality[1]	Integer
HDOP	Horizontal Dilution of Precision[2]:	Decimal
EPE	Estimated Position Error[3] (metres)	Decimal

Table 2: Hydraulic data

- **File Naming Conventions:** [licence area]_HYD_[month: 2 digits]_[year: 4 digits] (e.g., B_HYD_01_2026.csv)

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer

[1] Satellite Quality is an indication of satellite fix type i.e. 0 = fix not available, 1 = Non-differential GPS fix is available, 2 = Differential GPS (WAAS) fix available, 6 = Estimated (definitions taken from Garmin GPS specifications)
[2] HDOP is a measure of the relative GPS receiver/satellite geometry and corresponding accuracy (GPS industry standard). Lowest value (1) represents the highest precision, and values >20 are considered poor.
[3] EPE is a measure of horizontal position error in metres (GPS industry standard).

Field Name	Description	Field Type/Size
Datetime	Date of hydraulic pressure record	YYYY-MM-DD HH:MM:SS (e.g. 2026-03-31 23:59:59) (corrected for UTC offset)
Pressure	Hydraulic pressure	Integer
Latitude	Latitude (decimal degrees)	Decimal (e.g. 54.1923416)
Longitude	Longitude (decimal degrees)	Decimal, negative (e.g. -130.338375)
Heading	Heading (degrees)	Decimal
Speed	Speed (nautical miles per hour)	Decimal
Sat_number	Number of satellites used to acquire the position	Integer
Sat_quality	Satellite quality	Integer
HDOP	Horizontal Dilution of Precision	Decimal
EPE	Estimated Position Error (metres)	Decimal

Table 3: Trap RFID Chip Data.

- **File Naming Conventions:** [licence area]_RFID_[month: 2 digits]_[year: 4 digits] (e.g., B_RFID_01_2026.csv)

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Datetime	Date and time of RFID chip scan	YYYY-MM-DD HH:MM:SS (e.g. 2026-03-31 23:59:59) (corrected for UTC offset)
Chip_num	Unique RFID chip identification number	Text
Latitude	Latitude (decimal degrees)	Decimal (e.g. 54.1923416)
Longitude	Longitude (decimal degrees)	Decimal, negative (e.g. -130.338375)
Heading	Heading (degrees)	Decimal
Speed	Speed (nautical miles per hour)	Decimal
Soak	Number of days since last scan of this RFID chip	Integer
Sat_num	Number of satellites used to acquire the position	Integer
Sat_quality	Satellite quality	Integer
HDOP	Horizontal Dilution of Precision	Decimal

Field Name	Description	Field Type/Size
EPE	Estimated Position Error (metres)	Decimal

2. DAILY TRAP SCAN LOCATION REPORTS

The vessel owner/licence holder shall ensure the service provider prepares daily trap scan location reports from the electronic data as described below. These reports are not required for Area A where fishing activity is monitored through a hail program.

Table 4: Summary of Trap Scans (RFID chip scans) by Sub Area and Date.

- **Format:** Microsoft Excel (*.xlsx OR *.xls)
- **Medium:** DFO FTP site or service provider website
- **Timeliness:**
  - Trap scan location reports shall be provided or updated within 24 hours of receiving data indicating RFID chip scans.
  - Table must be updated on a daily basis to include all trap haul location reports for the year to date.
- **File Naming Conventions:** Activity_[year: 4 digits] (e.g., Activity_2026.xlsx)
- **Special Requirements:** For each vessel and fishing date, at least one record is required; a separate record is required for each Sub Area[4] fished on a given fishing date.

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Year	Year of RFID chip scans	Integer (4 digits)
Month	Month of RFID chip scans	Integer (2 digits)
Day	Day of RFID chip scans	Integer (2 digits)
PFMA	Pacific Fishery Management Area[4] in which trap scans recorded on given date	Integer (e.g. 24)
Sub Area	Pacific Fishery Management Sub Area[4] in which trap scans recorded on given date	Integer (e.g. 9)
Chip_Scans	Number of RFID chips scanned in given Sub Area on given fishing date	Integer

3. DAILY EQUIPMENT STATUS REPORTS

The vessel owner / licence holder shall ensure the service provider reports all malfunctions or suspected malfunctions of EM equipment (e.g. GPS, scanner, hydraulics, data storage

[4] Areas and Sub Areas are described in the Pacific Fishery Management Area Regulations

or transmission hardware, etc.), any repair or servicing of equipment, and any information relevant to equipment status (e.g. vessel is not fishing). EM system failures must be repaired as soon as possible after the date of detection. Data requirements are described below.

Table 5: Equipment Status

- **Format:** Microsoft Excel (*.xlsx OR *.xls)
- **Medium:** DFO FTP site or Service Provider website
- **Timeliness:**
  - Must be reported within 24 hours of the service provider becoming aware of any malfunction or required repair / servicing. Update record within seven days of occurrence to report Fishing Comments (see Special Requirements).
  - If, after initial report, the EM system is serviced, or the service provider acquires new information on the status of the malfunction, the record must be updated with details (or a new record added) within 24 hours.
  - Table must be updated with new records as per the above timelines, to include all equipment reports for the year to date.
- **Special Requirements**: If a malfunction has occurred, comment is required as to whether fishing continued while the EM system was not functioning properly (see Fishing Comments field).
- **File Naming Conventions:** Equipment_[year: 4 digits] (e.g., Equipment_2026.xls)

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel Name	Vessel Name	Text
Incident_ID	Unique identification number for this record	Integer
Date_of_Detection	Date on which the service provider became aware of the issue or required repair / servicing	Short Date (month/day/year, e.g. 12/31/23)
Mode_of_Detection	How the service provider became aware of the malfunction (i.e. reported by fisher, detected from data analysis)	Text
Date_of_Malfunction	Date on which the malfunction occurred If date is not known, enter 'unknown'	Short Date (month/day/year, e.g. 12/31/23) Or text: 'unknown'
Type_of_Malfunction	Select type from MALFUNCTION TYPE* table	Text

Field Name	Description	Field Type/Size
Date_of_Service	Date of repair or service	Short Date (month/day/year, e.g. 12/31/23)
Technician_Name	Name of person completing repair or service	Text
Description	Description of equipment issue or required service, and details of any repair or service completed.	Memo
Fishing_Comments	Confirmation of whether the vessel continued to fish (set or haul gear) without a fully functioning EM system (e.g., yes, no, unknown, or any relevant comment)	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

MALFUNCTION TYPES*
Hardware
Software
Hardware & Software
Sensor(s)
Camera
RFID Scanner
Other

4. OCCURRENCE REPORTS

From the electronic data, the vessel owner / licence holder shall ensure the service provider prepares reports of occurrences (potential violations) as described below. All occurrences (including eight types defined below) must be reported in a summary table (Table 6), and detailed reports are required for each type of occurrence, as described under Table 7 through Table 14.

- **Format:** Microsoft Excel (*.xlsx OR *.xls). Table 7 through Table 14 are to be included as separate worksheets in an Excel workbook; worksheet names for each table are provided below.. Each sheet is to include all occurrences reported for the year to date.
- **Medium:** DFO FTP site or Service Provider website
- **File Naming Conventions:** [Licence Area]_Occurrences_2026.xls
- **Special Requirements:** DFO will provide direction to Service Providers on additional analysis that may be required for occurrence reporting and enforcement purposes.

Table 6: Occurrence Summary Data

- **Description:** This table provides a summary of occurrences by vessel and month, including all occurrences reported in Table 7 through Table 14.
- **Timeliness:** Table must be updated whenever a new occurrence is reported; to include all occurrences reported to date (see timeliness requirements for each type of occurrence).
- **Worksheet name:** Occurrence_Summary

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel Name	Vessel Name	Text
Year	Year of occurrence	Integer (4 digits)
Month	Month of occurrence	Integer (2 digits)
occurrence_Type	Type of occurrence reported. Use the name of the worksheet specified for each of the following occurrence tables	Text
Number_occurrences	Number of occurrences of this type of occurrence in the current month (number of records in specific occurrence table)	Integer

Table 7: Closed Area Occurrences

- **Description:** Occurrences are defined as any fishing inside a closed area boundary while the closure is in effect**.** Occurrences are to be reported by individual dates. Where fishing occurs inside an area that is closed seasonally, only those occurrences during the closed period are to be reported.

- **Timeliness:**
  - For Areas A and B, report within 31 days of retrieving data indicating an occurrence, including comments/ verification of the occurrence.
  - For all other Licence Areas, report within 24 hours of the service provider receiving data indicating an occurrence. Update record to provide verification/ comment within seven days of occurrence.
- **Worksheet name:** Closed_Areas

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel Name	Vessel Name	Text
Occurrence ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of occurrence	Integer (4 digits)
Month	Month of occurrence	Integer (2 digits)
Day	Day of occurrence	Integer (2 digits)
Closure Name	Closed area name	Text
Traps_less_50m	Number of RFID chips scanned less than 50 metres inside closure boundaries while closure in effect (excluding dock areas)	Integer
Traps_50_100m	Number of RFID chips scanned from 50 to 100 metres inside closure boundaries while closure in effect (excluding dock areas)	Integer
Traps_100m_plus	Number of RFID chips scanned) more than 100 metres inside closure boundaries while closure in effect (excluding dock areas)	Integer
Tracks_less_50m	Number of vessel positions less than 50 metres inside closure boundaries while closure in effect (while travelling below four knots, excluding dock areas)	Integer
Tracks_50_100m	Number of vessel positions from 50 to 100 metres inside closure boundaries while closure in effect (while travelling below four knots, excluding dock areas)	Integer

Field Name	Description	Field Type/Size
Tracks_100m_plus	Number of vessel positions more than 100 metres inside closure boundaries while closure in effect (while travelling below four knots, excluding dock areas)	Integer
Comments	Comments/verification of occurrence, including a description of where the fishing occurred (how far inside the closure boundary, and a geographical description with place names if possible)	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

Table 8: Data Delivery Occurrences

- **Description:** Occurrences are defined as:
  - For Area A, raw data not provided to DFO within 31 days of data retrieval.
  - For all Licence Areas except Area A, raw data not delivered to service provider within 14 days since last data delivery.
- **Timeliness:**
  - Report in Table 8 within 24 hours of occurrence.
  - Update record to provide investigation/ comment within seven days of occurrence. Comments must be updated when the reason for the problem is discovered, and when action is taken.
  - When data received, update record with data receipt date and time, and total lag time (data fields: Next_Date, Next_Time, Delivery_Lag_Time).
- **Special Requirements:** If an equipment problem is indicated, it must also be reported in Table 5.
- **Worksheet name:** Data_Delivery

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Occurrence_ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of occurrence	Integer (4 digits)

Field Name	Description	Field Type/Size
Month	Month of occurrence	Integer (2 digits)
Last_Date	Date of last data delivery	Short Date (month/day/year, e.g. 12/31/23)
Last_Time	Time of last data delivery	hh:mm:ss (e.g. 23:59:59)
Next_Date	Date of next data delivery (to be entered when data received)	Short Date (month/day/year, e.g. 12/31/23)
Next_Time	Time of next data delivery (to be entered when data received)	hh:mm:ss (e.g. 23:59:59)
Delivery_Lag_Time	Number of days between subsequent data receipt events (to be entered when data received).	Decimal (2 decimal places)
Comments	Comments must include an explanation or possible reason for the data delivery occurrence, and the action taken to retrieve data.	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

Table 9: Time Gaps

- **Description:** Occurrences are defined as any gap in vessel position data that is:
  - greater than one hour while in port; or
  - greater than 10 minutes while at sea.
- **Timeliness:**
  - For vessels in Area A, report occurrences within 31 days of retrieving data indicating a time gap, including investigation/ comments.
  - For all other Licence Areas, report within seven days of the service provider receiving data indicating a time gap, and update record to provide investigation/ comments within 15 days of receiving data for the end of the fishing month for that vessel.
- **Special Requirements:**
  - If an equipment problem is indicated, it must also be reported in Table 5.
  - If more than one type of gap (harbour or outside) occurs on a given day, two separate records are required.
  - False reports due to missing data that has since been delivered must be excluded.
- **Worksheet name:** Time_Gaps

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Occurrence_ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of time gap	Integer (4 digits)
Month	Month of time gap	Integer (2 digits)
Day	Day of time-gap end (this may be later than the day of time-gap start, depending on the length of the gap)	Integer
Num_gaps	Number of time gaps ending on the given day	Integer
Max_previous_time	For the longest time gap ending on the given day: Date and time of last vessel position recorded before the interruption	YYYY-MM-DD HH:MM:SS (e.g. 2026-03-31 23:59:59) (corrected for UTC offset)
Max_time_gap	Length (hours) of the longest time gap ending on the given day	Decimal (1 decimal place)
Min_time_gap	Length (hours) of the shortest time gap ending on the given day	Decimal (1 decimal place)
Avg_time_gap	Average length of the time gaps ending on the given day	Decimal (1 decimal place)
Total_time_gaps	Total length of all time gaps ending on the given day	Decimal (1 decimal place)
Event_type	Location of vessel when the gap commenced (“harbour” or “outside”)	Text
Comments	Comments must include an explanation or possible reason for the time gap, and the action taken to retrieve data. If an equipment problem is indicated, it must also be reported in Table 5.	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

Table 10: Weekly Trap Haul Occurrences

- **Description:** Occurrences are defined as any number of traps hauled more than the maximum number of times allowed in a calendar week[5], when weekly trap haul restrictions are in effect in Licence Areas E, G, and H. Please see the IFMP for details of trap haul restrictions and their timing.
- **Timeliness:** Must be reported within 24 hours of the service provider receiving data from the given vessel indicating an occurrence (end of calendar week). Update record to provide verification/ comment within seven days of occurrence.
- **Worksheet name:** Weekly_Hauls

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Occurrence_ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of occurrence	Integer (4 digits)
Month	Month of occurrence	Integer (2 digits)
Haul_Area_Code*	Portions of licence area E with specific trap haul restrictions. Required only for occurrences in Area E	Text
Stat_Week	Calendar week of the year (DFO to provide definitions of numbered weeks)	Integer, 2 digits
Traps_Hauled_2 times	Number of unique RFID chips scanned twice during the week, in the licence area or special area where the restriction applies	Integer
Traps_Hauled_3_ times_plus	Number of unique RFID chips scanned three or more times during the week, in the licence area or special area where the restriction applies	Integer
Comments	Comments/ verification of occurrence based on manual data review.	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)

[5] A calendar week is described as 00:01 hours Sunday to 23:59 hours Saturday.

Field Name	Description	Field Type/Size
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

* Codes defined as follows:

Haul Area Code	Description
COMMON_PLUS	PFMA 21, 22, 25, 26, 121, 123-1, 125, 126 (Common Areas, i.e. areas common to all sub-area licence Options); Sub Areas 20-1 to 20-5 (portion of the Sooke Option); and Sub Areas 27-1 to 27-6 and Area 127 (portion of the Quatsino Option).
SOOKE_20_1_2	Sub Areas 20-1 and 20-2 (portion of the Sooke Option).
SOOKE_20_3_5	Sub Areas 20-3 to 20-5 (portion of the Sooke Option).
SOOKE_20_6_7	Sub Areas 20-6 and 20-7 (portion of the Sooke Option).
TOFINO_23_24	Areas 23, 24, 123-2 to 123-9, and 124 (portion of the Tofino Option)

Table 11: Soak Limit Occurrences

- **Description:** Occurrences are defined as any number of traps soaked longer than 18 days, as indicated by the number of days between subsequent scans of RFID chips. Given that time between subsequent trap scans may exceed 18 days without a true soak time violation, "false" reports must be excluded for the following cases:
  - where these traps have been moved (last scanned in a different location, i.e. more than one kilometre away or in a different PFM Sub Area).
  - where the RFID chips have not previously been used, or have not been used for more than six months.
  - where the traps represent individual missed trap scans on a string of gear (i.e. the RFID chip that is "over soak" is within 100 metres of other RFID chips that were scanned more recently by the same vessel).

- **Timeliness:**
  - For vessels in Areas A and B, report occurrences within 31 days of retrieving data indicating an occurrence, including comments/verification of the occurrence.
  - For all other Licence Areas, report occurrences for each vessel within seven days of receiving data for the end of the fishing month for that vessel. Update record to provide verification/comment within seven days of occurrence.
- **Special Requirements:**
  - If soak time occurrences are detected in multiple Sub Areas for a given vessel and date, they must be reported as separate records of soak time occurrences by date and Sub Area.
  - Any apparent soak time occurrences that are due to an EM equipment issue or malfunction (i.e. not recording or storing data while the vessel was hauling traps, or scanner malfunction) must also be reported in Table 5.
  - False reports due to missing data that has since been delivered must be excluded or corrected.
- **Worksheet name:** Soak_Limit

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Occurrence_ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of occurrence	Integer (4 digits)
Month	Month of occurrence	Integer (2 digits)
Day	Day of occurrence	Integer (2 digits)
PFMA	Pacific Fishery Management Area in which the Occurrence was detected.	Integer
Sub Area	Pacific Fishery Management Sub Area in which the occurrence was detected.	Integer
Soak_19_29_days	Number of trap hauls (RFID chip scans) on this date, that show between 19 and 29 days since last scan, excluding "false" reports of soak occurrences*	Integer
Soak_30_days_plus	Number of trap hauls (RFID chip scans) on this date, that show 30 or more days since last scan, excluding "false" reports of soak occurrences*	Integer
Comments	Comments/ verification of occurrence based on manual data review, including a description of the incident (numbers of traps, locations, dates, and soak times)	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

* "false" reports to be excluded are defined above (see Description)

Table 12: Trap Limit Occurrences

- **Description:** Occurrences are defined as:
  - Number of traps fished (unique RFID chips scanned) in the month is in excess of the trap limit per vessel for the licence area, or for areas within Licence Areas A, B, and E where specific trap limits apply. Please see the IFMP for details on area-specific trap limits and their timing.

- For areas where specific trap limits are in effect only during specific months, occurrence reports must include only those incidents where vessels exceed the area-specific trap limits during the months when the limits are in effect.

- **Timeliness:**
  - For vessels in Areas A and B, report occurrences within 31 days of retrieving data for the end of the fishing month for that vessel, including comments / verification of the occurrence.
  - For all other Licence Areas, report occurrences for each vessel within seven days of receiving data for the end of the fishing month for that vessel, and update record to provide verification/ comments within 15 days of receiving data for the end of the fishing month for that vessel.
  - The numbers of traps reported on the initial trap limit occurrence report must be updated within 15 days of receiving data for the end of the fishing month for each vessel, so that the numbers of traps fished in the month are accurately reported for these occurrences.

- **Worksheet name:** Trap_Limit

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
Trap_Area_Code*	Areas within Licence Areas A, B, and E where trap limits differ from licence area trap limits	Text
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Occurrence_ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of occurrence	Integer (4 digits)
Month	Month of occurrence	Integer (2 digits)
Day	Day of occurrence	Integer (2 digits)
Traps_total	Number of actively fished traps (unique RFID chips scanned) in the current month. This number should equal the sum of the number of traps reported in the categories below.	Integer
Traps_main	Number of unique RFID chips scanned in the current month that are categorized as “main” in this vessel’s RFID chip inventory	Integer
Traps_spare	Number of unique RFID chips scanned in the current month that are categorized as “spare” in this vessel’s RFID chip inventory	Integer

Field Name	Description	Field Type/Size
Traps_over_limit	Number of unique RFID chips scanned in the current month that are categorized as "over-limit" in this vessel's RFID chip inventory.	Integer
Traps_lost	Number of unique RFID chips scanned in the current month that have not been scanned in over a month	Integer
Comments	Comments/ verification of occurrence based on manual data review	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

* Codes for these specific areas are defined as follows:

Trap Area Code	Description
A_MCINTYRE	McIntyre Bay (see IFMP for timing of trap limit)
B_NASS	Nass Estuary (during seasonal opening)
E_SOOKE_20_6	Sub Area 20-6
E_SOOKE_20_7	Sub Area 20-7
E_TOFINO	Area 24 inclusive
E_TOFINO_OUTSIDE	See description in Section 2.7.2 (Area B to J Trap Allocations) of Appendix 3: Commercial Harvest Plan
E_QUATSINO	Sub Areas 27-7 to 27-11
None	Areas that do not have a trap code (whole licence area)

Table 13: Non-Inventory traps

- **Description:** Occurrences are defined as any RFID chips scanned that are registered to another vessel's RFID inventory.
- **Timeliness:**
  - For vessels in Areas A and B, report occurrences within 31 days of recording data indicating an occurrence, including comments investigation of the occurrence.
  - For all other Licence Areas, report occurrences for each vessel within 24 hours of receiving data indicating an occurrence, and update record to provide verification/ comments within 15 days of receiving data for the end of the fishing month for that vessel.
- **Worksheet name:** Non_Inventory_Traps

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Occurrence_ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of occurrence	Integer (4 digits)
Month	Month of occurrence	Integer (2 digits)
Day	Day of occurrence	Integer (2 digits)
Registered_VRN	VRN of vessel to which the scanned RFID chips were registered.	Integer
Registered_Vessel	Name of vessel to which the scanned RFID chips were registered.	Integer
Comments	Comments/ verification of occurrence, based on manual data review	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

Table 14: Fishing without scanning RFID chips on traps

- **Description:** Full reporting of fishing without scanning RFID chips is required, based on analysis of RFID chip and hydraulic/vessel position data for each vessel. All incidents of apparent fishing activity without associated chip or combination scans must be reported.
- **Timeliness:**
  - For vessels in Areas A and B, report occurrences within 31 days of recording data indicating an occurrence, including description/verification of the occurrence in the "Description" field.
  - For all other Licence Areas, report occurrences for each vessel within seven days of receiving data indicating an occurrence, and update record to provide verification/comments within 15 days of receiving data for the end of the fishing month for that vessel.
- **Special Requirements:**
  - Occurrences must be listed and detailed by date and PFM Sub Area. If a vessel fails to scan RFID chips or combination tags in multiple PFMAs on a given day, these incidents must be reported as separate records by PFMA.
  - If a scanner problem is indicated, it must also be reported as an equipment malfunction in Table 5.

- Descriptions are required for significant occurrences, including any detail on attempts to contact the harvester to resolve the problem, and communications with the harvester.
- False reports due to missing data that has since been delivered must be excluded.

Worksheet name: Non_Scanning

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Occurrence_ID	Unique identification number for this incident (must be unique among all occurrence types)	Integer
Year	Year of occurrence	Integer (4 digits)
Month	Month of occurrence	Integer (2 digits)
Day	Day of occurrence	Integer (2 digits)
PFMA	Pacific Fishery Management Area in which the occurrence was detected.	Integer
Sub Area	Pacific Fishery Management Sub Area in which the occurrence was detected.	Integer
Description	Description of the extent of the occurrence (apparent # strings or traps fished and not scanned), and details of fishing locations. Communications with the harvester (attempted or successful) must be documented here.	Memo
Record_Entry_Date	Date on which this record was first entered	Short Date (month/day/year, e.g. 12/31/23)
Record_Update	Date on which this record was last updated	Short Date (month/day/year, e.g. 12/31/23)

5. MONTHLY EM DATA SUMMARY REPORTS

From the electronic data, the vessel owner/licence holder shall ensure the service provider prepares monthly reports as described below.

Format:

- Microsoft Excel (*.xlsx OR *.xls).
- Table 15 through Table 18: Summary of monthly trap haul frequency

- **Medium:** DFO FTP site or Service Provider website
- **Timeliness:**
  - For vessels in Area A, monthly summary tables to be delivered within 31 days of the end of the month in which fishing occurred.
  - For all other Licence Areas, monthly summary tables to be delivered within 15 days of the end of the month in which fishing occurred.
  - Records for previous months must be updated if and when data for those months are received late, to provide up-to-date summary statistics for each month of the year to date.
- **File Naming Conventions:** EM_Summary_2026.xls

Table 15: Summary of electronic monitoring status.

- **Special Requirements:** All licensed vessels must be listed in this table for each month of the year.
- **Worksheet Name:** EM_Status

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Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
Year	Year	Integer (4 digits)
Month	Month of the year	Integer (2 digits)
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel name	Text
Active_Hours	Total number of hours the electronic monitoring system was required to be collecting information per month (based on the number of hours in the month)	Integer
Working_Hours	Total number of hours the electronic monitoring system was collecting information per month.	Integer
Time_Gaps	Total time gaps: number of hours the electronic monitoring system was not collecting information per month	Integer
Active_Tracks	Number of vessel positions recorded while in “active” mode (travelling)	Integer
Sleep_Tracks	Number of vessel positions recorded while in “sleep” mode (at port)	Integer

Field Name	Description	Field Type/Size
Average_Active_Track_Time	Average time between recorded positions while in “active” mode (minutes)	Integer
Average_Sleep_Track Time	Average time between recorded positions while in “sleep” mode (minutes)	Integer
Track_Days	Total number of days on which vessel position data were collected	Integer
Hyd_Days	Total number of days on which hydraulic data were collected	Integer
RFID_Days	Total number of days on which RFID chip scan data were collected	Integer
Last_Data_Date	Last day of the month on which track data were present. If blank, no data were submitted	Integer

Table 16: Summary of total numbers of trap RFID chips scanned

- **Worksheet Name:** Traps_Fished

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
Year	Year	Integer (4 digits)
Month	Month of the year	Integer (2 digits)
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Trap_Limit	total trap allocation	Integer
Unique_Traps_Month	Number of actively fished traps (unique RFID chips scanned) in the current month	Integer
Unique_Traps_Year	Cumulative number of traps fished (unique RFID chips scanned) in the current year to date	Integer
Traps_main	Number of unique RFID chips scanned in the current month classified in the vessel’s current inventory as “main”	Integer
Traps_spare	Number of unique RFID chips scanned in the current month classified in the vessel’s current inventory as “spare”	Integer

Field Name	Description	Field Type/Size
Traps_over_limit	Number of unique RFID chips scanned in the current month classified in the vessel's current inventory as "over-limit"	Integer
Traps_lost	Number of unique RFID chips scanned in the current month that have not been scanned in over a month	Integer
Traps_non_inventory	Number of unique RFID chips scanned in the current month that are registered to another vessel	Integer

Table 17: Summary of trap hauls and soak time

- **Worksheet Name:** Soak_Time

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
Year	Year	Integer (4 digits)
Month	Month of the year	Integer (2 digits)
VRN	Vessel Registration Number	Integer
Vessel_Name	Vessel Name	Text
Haul_Count	Total number of trap hauls (RFID chip scans) in the fishing month	Integer
Soak_18_days_less	Number of trap hauls (RFID chip scans) showing 18 days or less since last scan, in the fishing month	Integer
Soak_19_22_days	Number of trap hauls (RFID chip scans) showing between 19 and 22 days since last scan, in the fishing month, excluding "false" reports of soak occurrences*	Integer
Soak_23_29_days	Number of trap hauls (RFID chip scans) showing between 23 and 29 days since last scan, in the fishing month, excluding "false" reports of soak occurrences*	Integer
Soak_30_days_plus	Number of trap hauls (RFID chip scans) showing 30 or more days since last scan, in the fishing month, excluding "false" reports of soak occurrences*	Integer
Number_hauls_excluded	Number of trap hauls showing more than 18 since last scan, in the fishing month, that were excluded (not reported in the last two categories)*	Integer

* "false" reports to be excluded are defined under Table 11: Soak Limit Occurrences (see Description).

Table 18: Summary of monthly trap haul frequency

- **Worksheet Name:** Haul_Frequency

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text – 1 character, capital letter, no spaces
Year	Year	Integer (4 digits)
Month	Month	Integer (2 digits)
VRN	Vessel Registration Number	Integer
Vessel	Vessel name	Text
Unique_Traps_Month	Number of actively fished traps (unique RFID chips scanned) in the current month	Integer
5_times_less	Number of traps hauled (scanned) 5 times or less during the month	Integer
6_15_times	Number of traps hauled more than 5 times and up to 15 times during the month	Integer
16_30_times	Number of traps hauled more than 15 times and up to 30 times during the month	Integer
31_times_plus	Number of traps hauled 31 times or more during the month	Integer

6. EM HARD DRIVE TRACKING (AREAS A, B AND J)

From the electronic data, the vessel owner/licence holder shall ensure the service provider prepares reports as described below.

- **Format:**
  - Microsoft Excel (*.xlsx OR *.xls).
  - Table 19 and 20 are to be included as separate worksheets in an Excel workbook, with worksheet names provided below for each table. Each table shall include a record for each vessel in each licence area, for each month of the year to date.
- **Medium:** DFO FTP site or Service Provider website
- **Timeliness:**
  - **Data** shall be made available to DFO on a daily basis.
- **File Naming Convention:** EM_Hard Drive Tracking_2026.xls

Table 19: Summary of hard drive installation, removal and replacement on vessels

- **Worksheet Name:** Hard_Drive_Tracking

Field Name	Description	Field Type/Size
Hard_Drive_Action	Indicate whether hard-drive was installed, replaced or removed using Hard Drive Action* from table below	Text
Hard-drive_Unique_Identifier	Unique identification number of hard-drive	Integer
Date_of_Action	Date of hard drive installation, removal or replacement on vessel	Short Date (month/day/year, e.g. 12/31/23)

HARD DRIVE ACTION*
Install
Replace
Remove

Table 20: Manual Analysis (Areas A and B)

- **Description:** In cases where a vessel's hydraulic sensor or RFID scanner was not working, resulting in inability to identify potential violations via an automated process, "Manual" analysis of the EM and video data is required to identify violations. A minimum of 10% of the video data must be reviewed. If non-compliance is apparent, additional video must be reviewed as necessary to document the problem.
- **Special Requirements:** EM review must be completed within 30 days of the end of the fishing month, including EM reviews that are greater than 10% video footage reviews. In addition, all equipment problems must be reported in Table 5.
- **Worksheet Name:** Manual_Analysis

Field Name	Description	Field Type/Size
Hard-drive_Unique_Identifier	Unique identification number of hard-drive	Integer
EM_Hard-drive_Start_Date	Date of hard-drive installation	Short Date (month/day/year, e.g. 12/31/23)

Field Name	Description	Field Type/Size
EM_Hard-drive_End_Date	Date of hard-drive removal	Short Date (month/day/year, e.g. 12/31/23)
10%_Manual_Reeview	Rational for 10% manual analysis	Text
Date_of_10%_Manual_Review	Date of 10% manual analysis	Short Date (month/day/year, e.g. 12/31/23)
Greater_Than_10%_Manual_Review	Rationale for greater than 10% manual analysis	Text
Date_of_Greater_Than_10%_Manual_Review	Date of greater than 10% manual analysis	Short Date (month/day/year, e.g. 12/31/23)
Comments	Comments must include details of why EM review occurred as well as equipment malfunction information or occurrence information as appropriate	Memo

7. COMPLIANCE REVIEW LETTERS

Vessel Compliance Review Letters must summarize individual vessel compliance for each month the vessel is active. These reports must document all non-compliance occurrences that have been verified via review of EM and video data. From the electronic data, the vessel owner / licence holder shall ensure the service provider prepares reports which are sent to both the vessel owner/licence holder and DFO Crab Lead Manager for each month as described below.

- **Format:**
  - Microsoft Word (*.docx or *.doc) or Adobe (*.pdf).
- **Medium:** Emailed to DFO Crab Lead Manager and licence holders, and any other requested DFO staff.
- **Timeliness:**
  - Vessel Compliance Review Letters will be generated within 15 days of EM hard drive review for Area A, and within 30 days of the end of the month for Areas B - J.
- **File Naming Convention: (v**essel name) (period of review).xls
- **Content – Area A**
  - Name and email of the licence holder(s) to whom the Compliance Review Letter is being sent.
  - Name of vessel master.
  - Port of offload.
  - Unique Reference number for the compliance letter.
  - Hails:
    - Letters will use TRIP STATUS terminology from Annex 6 and indicate how many hails were missed during the review period. For example: “Vessel X had 10 trips during this review period, and missed 1 hail during this time”.
    - Compliance review periods will always begin with a ‘START’ TRIP STATUS.
  - Trap hauling and scanning: (scan attempted – RFID not read, failure to scan, gear tangle, hauling strays, hauling other vessels gear and retaining catch, total number of gear hauls, and retaining prohibited species).
  - Traps fished over allocated trap threshold (including traps scanned and traps not scanned as identified above).
  - Oversoaked traps .
  - Fishing in Closures.
  - Time gaps at the dock. Must include data type (vessel position) and both start location and end location in latitude & longitude for each time gap.
  - Time gaps while fishing. Must include data type (vessel position, hydraulic, RFID chip, or video) and both start location and end location in latitude & longitude for each time gap.

- Prohibited species (species retained, number retained, GPS location, date and time).
- Any other infractions observed.

Content – Areas B, E, G, H, I, and J:

- Name and of the licence holder(s) to whom the Compliance Review Letter is being sent.
- Name of vessel master.
- Unique Reference number for the compliance letter.
- Fishing in Closures- provide verification including number of traps scanned, hauling traps without scanning (for Area B include the number of traps hauled based on video data review) and geographical description of where the fishing occurred inside the closure).
- Total number of unique traps scanned in the month.
- Failure to scan traps – description of fishing without scanning verified via EM data, (and video footage review for Area B). Details should include date, PFMA, and a description of the approximate number of traps not scanned. For Area B, details based on video data review should include: number of strings reviewed, number of traps hauled and not scanned in each string, scan attempted – RFID not read, failure to scan, gear tangle, hauling other vessels gear and retaining catch). Communications with the harvester (or attempts to contact) to try to resolve the problem must be included in the description.
- Traps fished over allocated trap threshold (including traps scanned and traps not scanned as identified above for Area B) in the licence area as a whole, and in specific trap limit areas within the licence area (e.g. Nass, Sooke, Inside Tofino, Outside Tofino, Quatsino).
- Hauling other vessels gear - include non-inventory RFID-chips scanned, and the vessel to which the chips are registered (for Area B, include any retaining of catch from other vessels gear, based on video review).
- Oversoaked Traps (provide comment on the last fishing date, how long traps were soaked, verification of the occurrence based on manual review of EM and video data).
- Time gaps at the dock. Must include data type (vessel position) and both start location and end time and location in latitude & longitude for each time gap.
- Time gaps while fishing. Must include data type (vessel position, hydraulic, RFID chip, or video) , both start location and end time and location in latitude & longitude for each time gap, and explanation or comment on why the gap may have occurred, such as evidence of turning the EM system off.
- Data delivery occurrences: cases where vessel position, hydraulic, or RFID chip data were not delivered within 14 days, including explanation, follow up, and resolution.
- Prohibited species (species retained, number retained, GPS location, date and time).
- Any other infractions observed.

APPENDIX 9.2: CRAB BY TRAP, AT-SEA OBSERVER SPECIFICATIONS

Data Collection: At-Sea Observers

This document provides information on the data requirements and specifications for programs collecting data for transfer to Fisheries and Oceans Canada, Pacific Region. The intended audience is both DFO staff and external groups involved in collecting, transferring or managing fisheries data. All data submitted becomes the exclusive property of Fisheries and Oceans Canada

Data Transfer Requirements

On each fishing day, information shall be recorded in the following two tables.

- **Format:** Microsoft Excel (*.xls or *.xlsx)
- **Medium:** DFO ftp site or Email to Local Area Crab Manager
- **Timeliness:** The observer shall prepare information reports within seven days of fishing activity. Data recorded for the week should be appended into each table (i.e. one of each of Table 1 and Table 2 is submitted for the week)

Table 1: Daily Fishing Trip Information

- **File Naming Conventions:** [VRN]_Trip_[Date of weekly data delivery] (e.g. 311288_Trip_06_30_2026)

Field Name	Description	Field Type/Size
Area	Licence Area (A, B, E, G, H, I, or J)	Text, 1 char, no spaces
VRN	Vessel Registration Number	Integer
Vessel_Name	Name of Vessel	Text
Vessel_Mast_Name	Name of Vessel Master	Text
Observer_Name	Name of Onboard Observer	Text
Conf_Log	Confirmation of a valid logbook on board	Memo
Conf_Log_current	Confirmation that logbooks are up to date	Memo
Conf_fish_activ	Confirmation that the vessel fishing activity location report is up to date (Licence Area A only)	Memo
Fish_activ_verf_num	Fishing activity location report verification number (Licence Area A only)	Integer
Crabs_retained	An estimate of the total number of crabs retained on board the vessel from all the traps hauled on this date	Integer
Crabs_released	An estimate of the total number of crabs released by the vessel from the traps hauled on this date	Integer
Octopus_num	Total number of Octopus caught in all the traps hauled on this date	Integer
Num_traps	Total number of traps hauled on this date	Integer

Table 2: Trap Information

- **File Naming Conventions:** [VRN]_Trap_[Date of data delivery] (e.g. 311288_Trap_06_30_2026)

Field Name	Description	Field Type/Size
VRN	Vessel Registration Number	Integer
Date	Date of fishing	Short Date (month/day/year)

Field Name	Description	Field Type/Size
Latitude	Latitude (decimal degrees) of trap (where traps are on a string, record this field only for the first and last trap on the string)	Decimal (e.g. 54.1923416)
Longitude	Longitude (decimal degrees) of trap (where traps are on a string, record this field only for the first and last trap on the string)	Decimal, negative (e.g. -130.338375)
Conf_tag	Confirmation of plastic tag on trap	Memo
Tag_num	Plastic tag number	Integer
Conf_buoy	Confirmation that buoys labeled with VRN and proper colours (where traps are on a string, record this field only for the first and last trap on the string)	Memo

APPENDIX 9.3: CRAB BY TRAP, PLASTIC TRAP TAG SPECIFICATIONS

Data Collection: Plastic Trap Tags

This document provides information on the data requirements and specifications for programs collecting data for transfer to Fisheries and Oceans Canada, Pacific Region. The intended audience is both DFO staff and external groups involved in collecting, transferring or managing fisheries data. All data submitted becomes the exclusive property of Fisheries and Oceans Canada.

Plastic Trap Tag Issuance

In 2026 vessels in crab management areas B, E, G, H, I and J are transitioning to combination trap tags. Vessels that receive combination trap tags will not be required to use plastic trap tags. See Appendix 9.4 for additional details on combination trap tags. All aspects of plastic trap tag procurement, distribution, administration, and data entry are the responsibility of the vessel owner/licence holder to arrange with the service provider. The service provider will issue plastic trap tags to licence holders at least two weeks in advance of the beginning of the fishing season for each licence area, where contracts are in place with licence holders. See Commercial Harvest Plan for procedures for issuing spare plastic tags (when a number of traps up to 10% of the vessel trap limit are lost) and replacement plastic tags (when a number of traps over 10% of the trap limit are lost).

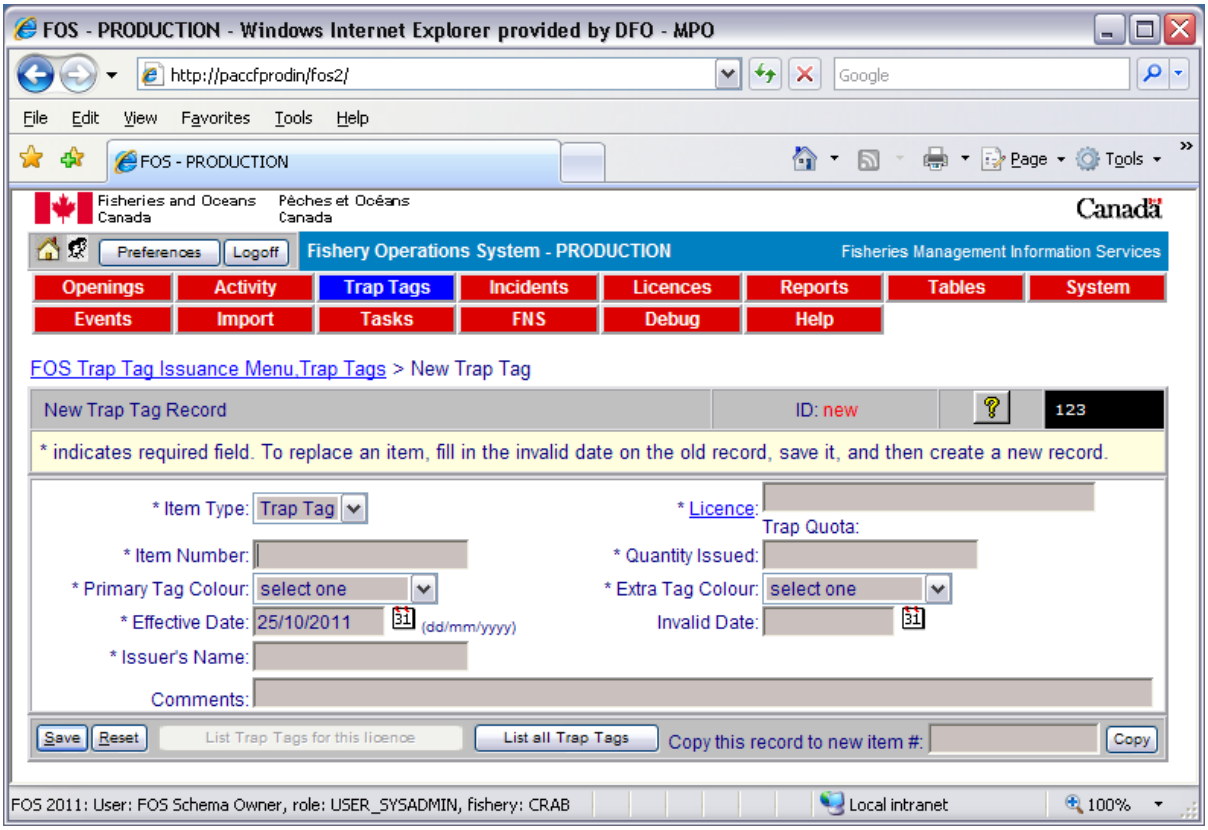
Data Transfer Requirements

The service provider shall notify the DFO Licence Area crab manager via email when replacement plastic tags are requested by a licence holder. In addition, the following data shall be reported.

- **Format:** data will be entered directly into a DFO website application. Please note that DFO may be updating the Department's Fisheries Operating System data delivery system during the current licence year. In the event of changes, a new data delivery mechanism may be required.
- **Medium:** Direct data entry into the approved Departmental Database**.**
- **Timeliness:** within 24 hours of issuing the crab trap tags
- **Data Ownership:** All data submitted becomes the exclusive property of Fisheries and Oceans Canada.

Data Transfer Format

Please note that all trap tag data are to be entered into the web-based Fishery Operation System. The Departmental database specifications and screen shot below will provide an overview of the data to be entered. For fields that are not applicable, a null (blank) value is to be entered.



The following table describes the fields to be entered on the FOS web application:

Field Name	Description	Mandatory?	Form Type
Item Type	Item Type is always "Trap Tag" (select this option from form)	Y	Drop down
Licence	Licence tab number (select from licence search form)	Y	Licence search
Item Number	Numbers printed on the series of plastic tags issued (e.g. 001-300)	Y	Textbox
Quantity Issued	Number of tags issued on this date	Y	Textbox
Primary Tag Colour[1]	Colour of primary tags (enter if issuing primary tags at this time)	N	Drop down
Extra Tag Colour[2]	Colour of extra tags (enter if issuing extra tags at this time)	N	Drop down
Effective Date	Date on which the tags will be valid (e.g. the latter of Jan. 1 or issue date)	Y	Date picker
Invalid Date	Date on which the tags will become invalid (e.g. Dec. 31)	Y	Date picker
Issuer's Name	Issuer's Name	Y	Textbox
Comments	Any relevant information (e.g. number of primary vs. extra tags, Item Numbers specific to each)	N	Textbox

[1] Primary Tag Colour Options

ORANGE
WHITE
YELLOW
PINK
RED
GREY
GREEN
BLUE-DARK
BEIGE
BLUE-LIGHT
BLACK
PURPLE
GOLD
BROWN
FL.PINK
BURGUNDY

[2] Extra Tag Colour Options

ORANGE
WHITE
YELLOW
PINK
RED
GREY
GREEN
BLUE-DARK
BEIGE
BLUE-LIGHT
BLACK
PURPLE
GOLD
BROWN
FL.PINK
BURGUNDY

APPENDIX 9.4: CRAB BY TRAP, COMBINATION TRAP TAG SPECIFICATIONS

Combination Trap Tags

This document provides information on the data requirements and specifications for programs collecting data for transfer to Fisheries and Oceans Canada, Pacific Region. The intended audience is both DFO staff and external groups involved in collecting, transferring or managing fisheries data. All data submitted becomes the exclusive property of Fisheries and Oceans Canada.

Combination Trap Tag Issuance

All aspects of combination trap tag procurement, distribution, administration, and data entry are the responsibility of the vessel owner/licence holder to arrange with the service provider. The service provider will issue combination trap tags to licence holders. See Commercial Harvest Plan for procedures for issuing spare combination tags (when a number of traps up to 10% of the vessel trap limit are lost) and replacement combination tags (when a number of traps over 10% of the trap limit are lost).

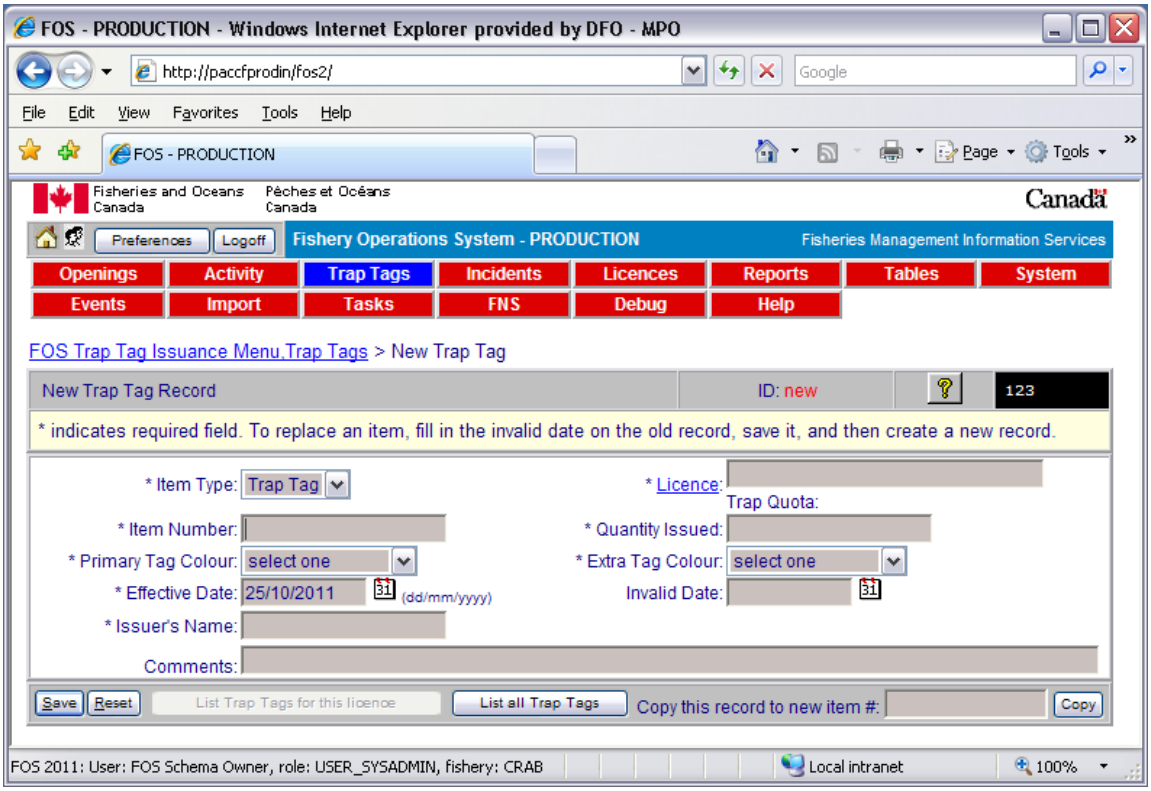
Data Transfer Requirements

The service provider shall notify the DFO Licence Area crab manager via email when replacement combination tags are requested by a licence holder. In addition, the following data shall be reported.

- **Format:** Microsoft Excel (*.xlsx OR .xls). In the event of changes, a new data delivery mechanism may be required.
- **Medium:** DFO FTP site
- **Timeliness:** within 24 hours of issuing the crab trap tags
- **Data Ownership:** All data submitted becomes the exclusive property of Fisheries and Oceans Canada.

Data Transfer Format

Please note that all trap tag data are to be entered into the web based Fishery Operation System. The Departmental database specifications and screen shot below will provide an overview of the data to be entered. For fields that are not applicable, a null (blank) value is to be entered.



The following table describes the fields to be entered on the FOS web application:

Field Name	Description	Mandatory?	Form Type
Item Type	Item Type is always "Trap Tag" (select this option from form)	Y	Drop down
Licence	Licence tab number (select from licence search form)	Y	Licence search
Item Number	Numbers printed on the series of combination tags issued (e.g. 001-300)	Y	Textbox
Quantity Issued	Number of tags issued on this date	Y	Textbox
Primary Tag Colour[1]	Colour of primary tags (enter if issuing primary tags at this time)	N	Drop down
Extra Tag Colour[2]	Colour of extra tags (enter if issuing extra tags at this time)	N	Drop down
Effective Date	Date on which the tags will be valid (e.g. the latter of Jan. 1 or issue date)	Y	Date picker
Invalid Date	Date on which the tags will become invalid (e.g. Dec. 31)	Y	Date picker
Issuer's Name	Issuer's Name	Y	Textbox
Comments	Any relevant information (e.g. number of primary vs. extra tags, Item Numbers specific to each)	N	Textbox

APPENDIX 9.5: CRAB BY TRAP, LOGBOOK SPECIFICATIONS

Shellfish Crab Harvest Log Program

This document provides information on the data requirements and specifications for programs collecting data for transfer to Fisheries and Oceans Canada, Pacific Region. The intended audience is both DFO staff and external groups involved in collecting, transferring or managing fisheries data, including Service Providers hired by harvesters or harvester associations to support compliance with Conditions of Licence.

Document Change History

Author	*Date*	*Description of Change*
Lorne Collicutt	Sept 7, 2011	First draft of template
Leslie Barton	October 20, 2011	Addition of specifics for crab harvest log program
Leslie Barton	Jan 5, 2012	Review and inclusion of Service Provider accumulated instructions
Leslie Barton	Feb 3, 2012	Incorporated G. Jorgensen edits
Sandra Bassett	Jan 14, 2015	Addition of trap information, data collected on harvest logs commencing 2015
Sandra Bassett	October 15, 2015	Incorporated edits to harvest logs and data specification

Data Transfer Requirements

- **Format:** MS Access 2010 (or earlier version) database file following the prescribed data transfer format (below) + hardcopy (paper) from which electronic data were transcribed.
  - A separate file must be created for each calendar year.
  - Hardcopy (paper) must be sorted by Vessel Registration Number (VRN) (ascending), with multiple pages for a single vessel paper clipped together. For any given vessel with multiple pages for the batch, the pages should be sorted in chronological order.
  - Hardcopy (paper) must be separated by calendar year.
  - Hardcopy (paper) must be accompanied by a batch summary report, consisting of the batch number/id, a listing of the VRN's contained in the batch, sorted in ascending order, with a count of records associated with each VRN. The total number of records associated with the batch must also be provided.
- **Conduit:** Data transfer to DFO to be effected via the DFO Contractor Data Exchange FTP site or other FTP service approved by the Shellfish Data Unit. Service Provider is to notify Shellfish Data Unit via email each time a file is posted to an FTP site.

- **Medium:** In the absence of data transfer via FTP, contact the Shellfish Data Unit to determine an acceptable physical medium for data transfer.
- **Hardcopy delivery**: All deliveries of hardcopy and physical media must be via courier service, in-person or by a Shellfish Data Unit approved alternative. The mailing address is:

  Fisheries and Oceans Canada
  Shellfish Data Unit
  Pacific Biological Station
  3190 Hammond Bay Road
  Nanaimo, BC, V9T 6N7
- **Timeliness:** Within three weeks of the date of receipt of hardcopy by the Service Provider.
- **Data Ownership:** All data submitted becomes the exclusive property of Fisheries and Oceans Canada.
- **File Naming Conventions:** Files should be named such that the Service Provider, Fishery, Origin (paper-based [P]) Unique Batch number and year (YYYY) are all present in the file name (e.g. ABCCo_Crab_P_B389_2017).
- **Special Requirements:**
  - The electronic version must be a true and accurate transcription of the hardcopy data. Each record will represent, gear within a Pacific Fisheries Management Sub-Area, where all traps have the same soak time and depth.
  - The database file submitted must consist of only one table named **'new_logs'**, with the fields and field characteristics as shown in the 'DATA TRANSFER FORMAT' section in this document. Regardless of the table design and relationships defined by the external group or Service Provider system for proprietary purposes, data transferred to DFO must be extracted in a manner which conforms to the design described in the 'DATA TRANSFER FORMAT' section.
  - To support consistency in interpretation of harvest log content, Shellfish Data Unit will review harvest logs received from harvesters in advance of the harvest logs being sent to the Service Provider for electronic data capture. Any modifications to the content of harvest log undertaken by the Shellfish Data Unit will be indicated using red pen.

Data Transfer Format

More extensive descriptions of data fields marked with an asterisk are available following the table.

Note: When data is missing on the harvest logs, key the value from the column **'Value if N/A or Unknown'**

Field Name	Description	Mandatory	Field Type/Size	Value if N/A or Unknown	Validation Rules
CFV	Vessel Registration Number (VRN) of Vessel	Yes	Long Integer		
FIN	Vessel Master Fisher Identification Number (FIN)		Long Integer	Null	
YEAR	Year of fishing event	Yes	Integer		
PAGE_NUM	Page Number	Yes	Long Integer		
FISHING_METHOD	*Fishing Method	Yes	Text – 1 character	U	
BAIT_METHOD	*Bait Attachment: Jars, Clips or Cages	Yes	Text – 1 character	U	
BAIT_CODE	*Bait code for type of bait used	Yes	Text – 3 characters	UNK	
DEPTH_UNIT	*Depth Unit	Yes	Text – 1 character	U	
WEIGHT_UNIT	*Weight Unit	Yes	Text – 1 character	U	
NUM_TRAP1	Number of traps - Trap type 1		Integer	Null	
FRAME1	*Frame – Trap Type 1		Text – 2 characters	Null	
DIAMETER1	Diameter in inches - Trap type 1		Byte	Null	
HEIGHT1	Height in inches – Trap type 1		Byte	Null	
MESH1	*Mesh – Trap type1		Text – 2 characters	Null	

RING_SIZE1	Escape Ring size in mm - Trap type 1		Integer	Null	
Field Name	**Description**	**Mandatory**	**Field Type/Size**	**Value if N/A or Unknown**	**Validation Rules**
NUM_TRAP2	Number of traps - Trap type 2		Integer	Null	
FRAME2	*Frame – Trap type 2		Text – 2 characters	Null	
DIAMETER2	Diameter in inches - Trap type 2		Byte	Null	
HEIGHT2	Height in inches – Trap type 2		Byte	Null	
MESH2	*Mesh – Trap type2		Text – 2 characters	Null	
RING_SIZE2	Escape Ring size in mm - Trap type 2		Integer	Null	
NUM_TRAP3	Number of traps – Trap type 3		Integer	Null	
FRAME3	*Frame – Trap type 3		Text – 2 characters	Null	
DIAMETER3	Diameter in inches – Trap type 3		Byte	Null	
HEIGHT3	Height in inches – Trap type 3		Byte	Null	
MESH3	*Mesh – Trap type 3		Text – 2 characters	Null	
RING_SIZE3	Escape Ring size in mm - Trap type 3		Integer	Null	
LINE_NUM	Line Number	**Yes**	Integer or byte		
MONTH	Month of fishing event	**Yes**	Integer or byte	0	1-12
DAY	Day of fishing event	**Yes**	Integer or byte	0	Valid calendar day (1-31)
SOAK_DAYS	* Soak Time in Days		Integer or byte	0	
SOAK_HOURS	* Soak Time in Hours		Integer	0	

Field Name	**Description**	**Mandatory**	**Field Type/Size**	**Value if N/A or Unknown**	**Validation Rules**
LAT_DEG	*Degrees of Latitude		Integer or byte	Null	
LAT_MIN	*Minutes of Latitude		Single (floating point)	Null	
LONG_DEG	*Degrees of Longitude		Integer or byte	Null	
LONG_MIN	*Minutes of Longitude		Single (floating point)	Null	
STAT_AREA	*Statistical Area		Integer or byte	0	Valid PFM Area from PacFish Data Standard list
SUB_AREA	*Statistical Sub-area		Integer or byte	0	Valid PFM Sub-area from PacFish Data Standard list
MIN_DEPTH	Minimum Depth reported		Integer	0	
MAX_DEPTH	Maximum Depth reported		Integer	0	
SPECIES_CODE	* Species Code	**Yes**	Text – 3 characters		Valid PacCode from PacFish Data Standard list
CATCH_NUMBER	Number of crabs landed		Integer	0	
WEIGHT	Total landings		Integer	0	
NUM_TRAPS	Number of traps pulled		Integer	0	
OCT_NUM_REL	Number of Octopus Released		Integer	Null	
OCT_WGT_REL	*Weight of Octopus Released		Single Float	Null	
OCT_NUM_KPT	Number of Octopus Kept		Integer	Null	

OCT_WGT_KPT	*Weight of Octopus Kept		Single Float	Null	
PBS_CODE	*Usability /Remarks		Integer or byte	0	
REC_STATUS	*Status of Record	**Yes**	Integer or byte		0,1,2

Fishing Method

Use the following codes to report what the traps are attached to.
Enter **'G'** for Ground Lines, **'S'** for Singles (individually buoyed), **'B'** for Both, **'U'** if Unknown.

Bait Fastener

Use the following codes to report how bait is held: **'J'** for Jars or Containers, '**K**' for Cages, **'C'** for Clips or Hooks, **'V'** for various (more than one selected), **'B'** for Bags, **'O'** for other (none of the above), or **'U'** for unknown.

Bait Type

Use the following codes for the type of bait most commonly used:

QID ---------- Squid
GEO ---------- Geoducks
HER ---------- Herring
OCT ---------- Octopus
ROC ---------- Whole Rockfish
KKK ---------- Hake
PEL ---------- Pellets
TIN -------- Tinned Fish
ZOR -------- Razor Clams
CLA --------- Clams
DOG -------- Dogfish
XXX -------- Experimental
UNK --------- Unknown
YYY -------- Other
SAL -------- Salmon (all species + heads + frames)
FRA ------- Fish Frames (not Salmon)
AST -------- Fish Paste
EUL -------- All Smelt species
MIX --------- Mixed Fish Species (and offal and scraps)

A mixture of two baits listed above can be coded as first code letter (**W**)ith first code letter. For example, squid and razor clams would be coded as **QWZ**. A mix of herring and squid would be coded as **HWQ**. For a mixture of greater than 2 types of bait, use the most dominant/common type (if possible) with mixed fish species (and offal and scraps) e.g. **HWM**, (see exception codes below).

Bait Type – additional codes

These codes are for rarely encountered bait types and should **not be used in mixture situations** as described in the previous paragraph.

PIL ------- Pilchards **TBT** ------- Turbot **KOD** ------- Codfish **TUN** ------- Tuna

In the event that these items are indicated as mixed with another bait type, code as **'**bait type from common list above**'** (**W**)ith **'Y'** (other), e.g. Clam with codfish = **CWY**

Bait Type – exception codes

Codes for 3 way mixtures include:

HCQ ------- Herring with clam and squid **HDB** ------- Herring with dogfish and gurdy

Depth Unit

Enter **'M'** for depths in Meters, or **'F'** for Fathoms, **'U'** if Unknown.

Weight Unit

Enter **'P'** for weights reported in Pounds, **'K'** for weights reported in Kilograms, **'M'** for weights reported in Mixed units e.g. crab in Kilograms and octopus in Pounds or vice versa (this is mainly to be consistent with the prawn fishery and may not get used), **'U'** if Unknown.

Frame Type

Use the following codes for the type of Frame most commonly used:
'SS' = Stainless, 'MS' = Rubber Wrapped Iron, 'RS' = Rubber Wrapped Iron with Stainless top, 'OT' = Other, 'UN' = Unknown

Mesh Type

Use the following codes for the type of Mesh most commonly used:
'SS' = Stainless, 'NW' = Synthetic, 'BO' = Both, 'UN' = Unknown

Soak Time (Days or Hours)

Fish harvesters have an option to report Soak Times in one of two ways, either as days for soaks of 1 or more days, or hours for soaks of less than a day. Use only one and enter 0 in the other. Sometimes fish harvesters will

report something like 1 day, 4 hours, which can be recorded as 28 hours. Sometimes fish harvesters will report 1 day 24 hours, which is interpreted to mean the fish harvester has reported the same time in both places, and is recorded as 1 day, 0 hours.

Latitude/Longitude Position Fields

The latitude and longitude data are to be entered as degrees and decimal minutes. For instance, for latitude of 49 degrees, 10 minutes, 15 seconds, you would enter 49 in the LAT_DEG field and 10.25 in the LAT_MIN field (15 divided by 60 gives 0.25 minutes). Values for longitude are entered as positive values.

Statistical Area / Sub-Area

This is the Pacific Fisheries Management Area (PFMA) and Sub-Area as specified in the *Fisheries Act*, Pacific Fishery Management Area Regulations, 2007.

Species Codes

Use the following Hart codes for crab species type being reported.

Species	Species Code	Species	Species Code	Species	Species Code
Dungeness	**XKG**	Brown (Golden) King	**VMC**	King (Unidentified)	**VIA**
Red Rock	**XLA**	Red King	**VNH**		

Weight of Octopus Released

The total or combined weight of all octopus released in a string or group of traps.

Weight of Octopus Kept

The total or combined weight of all octopus retained in a string or group of traps.

PBS Code

Use default value of 0 or use code 99 to indicate that the data entry person has a problem (interpretation or other) with the record. Data entry person is to use pencil to write '99' in the PBS Code column of the paper log and include

a sticky note affixed to the log page with a brief description of the issue. The sticky note must project up from the page such that it is easily seen. Example problems: ‘handwriting hard to interpret’, ‘damage to page’, etc. Occasionally Shellfish Data Unit staff will enter a numeric code in the PBS Code column of the harvest log (identified by red pen). These codes are to be transcribed to the electronic version of the data.

Status of Record

Use the following codes for the status of each record.

Status	Code
Record **Newly Submitted** to Shellfish Data Unit	0
Record has been **Previously Submitted** and is **Unchanged**	1
Record has been **Edited** and **Re-submitted** to Shellfish Data Unit	2

APPENDIX 9.6: CRAB BY TRAP, BIOLOGICAL SAMPLING PROGRAM

British Columbia Commercial Crab Fishery
Biological Sampling Program

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Table of Contents

1. Introduction

The objective of a biological sampling program in the commercial Dungeness Crab (*Metacarcinus magister*) trap fishery is to collect biological data on target and non-target catch. The commercial fishery is managed with a minimum size limit (165 mm carapace width point-to-point), non-retention of females and soft-shell crabs, and in certain areas there are seasonal closures to protect moulting male crabs. The fishery targets large male Dungeness crabs. Non-target catch or bycatch include discarded Dungeness crabs such as sublegal males, females, and soft crabs, and species other than Dungeness crabs.

For management purposes, the British Columbian (B.C.) coast is divided into seven crab management areas (CMAs) (Fig. 1).

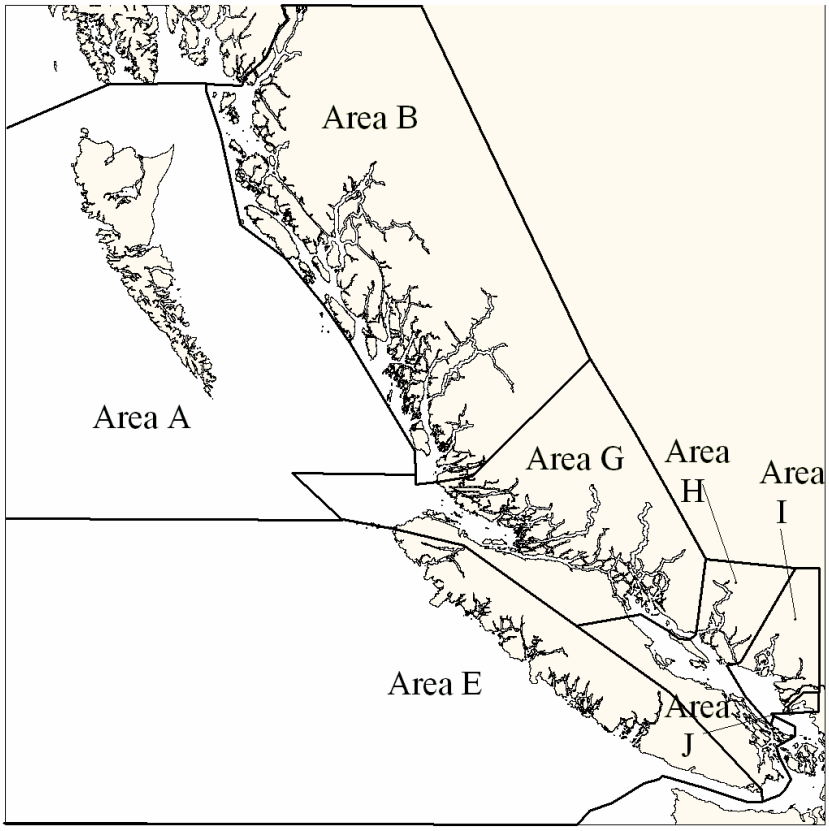


Figure 1. Crab Management Areas (CMAs) in British Columbia.

A particular commercial vessel must choose and fish in only one CMA for a three year period. Not all management measures are consistent between CMAs.

Management concerns in crab fisheries include: unbalanced allocation between sectors, excessive handling mortality, over-exploitation, and unknown moult timing in certain

areas. Ecosystem-based management policies falling under the Sustainable Fisheries Framework, including the Precautionary Approach, Managing Bycatch, Sensitive Benthic Areas and Forage Species policies, will guide management direction in the future and the types of biological information required. The crab biological sampling program will continue to evolve as Science, Fisheries Management, First Nations and Stakeholders work together to ensure B.C.'s crab resources remain healthy and the fisheries sustainable and economically prosperous.

There are two important documents that compliment this one. The crab survey manual by Dunham et al. (2011) provides much detail about the collection of crab biological information and it should be used in conjunction with this document. The Crab By Trap Integrated Fisheries Management Plan (IFMP) provides additional detail regarding management of various crab fisheries (Fisheries and Oceans Canada 2026). Please contact the appropriate Area Manager to obtain copies.

2. Crab Biological Sampling Program

The crab biological sampling program has two components:

1) commercial catch sampling,
2) fishery independent (standardized) sampling.

Please note sampling programs vary depending on the CMA. The department's (DFO) goal is to move toward a consistent coast-wide biological sampling program.

Catch sampling on commercial vessels is done by trained, certified observers during the commercial fishing season throughout the CMA to gather catch information on target and bycatch species and to monitor gear compliance. Commercial catch sampling should be spread equitably throughout the duration of the fishing season.

Fishery independent sampling using standardized trap gear tracks changes in crab abundance, especially females and sublegal males, over time at particular locations scattered throughout the coast. Standardized trap gear means the fishing gear is similar in terms of trap type, bait type, and soak time. Fishing standardized gear allows trap catches to be compared between different locations and time periods. Standardized sampling is done by service providers, DFO, First Nations, and other groups.

There is interest by certain groups, primarily First Nations, to conduct their own crab stock assessment surveys in local areas. In anticipation of this, DFO Marine Ecosystems and Aquaculture Division (MEAD) has produced a crab survey protocols manual that will help to standardize crab surveys done by various parties (see *Dunham et al. 2011*).

2.1 Area A

2.1.1 *Commercial catch sampling*

Four sampling events on four different vessels are required during the fishing season. A sampling event should occur once every two months beginning within one month of the fishery opening in the summer and another event in February/March or upon consultation with the Department. A certified observer will live aboard a commercial vessel for a fishing trip (3-6 days in duration) and collect crab biological data from approximately every sixth trap that is hauled.

2.1.2 *Fishery independent standardized sampling*

At present, fishery independent standardized sampling is not required in Area A. Fishery independent biological sampling data is collected for Area A through the Softshell Sampling Program.

2.2 Areas B to J

2.2.1 *Commercial catch sampling*

Sampling occurs throughout each management area and is to be carried out according to the following requirements:

1. Sample size:
    - Minimum 200 crabs collected per month.
    - Minimum 50 crabs or 10 traps sampled per vessel during a sampling event.
    - Each trap sampled must be sampled in its entirety.

2. Sampling frequency:
    - >6 month fishing season: number samples = 2× number vessels.
    - ≤6 month fishing season: number samples = 1× number vessels.
    - Every vessel must be visited at least once during the fishing season by the service provider (twice in areas where the fishing season is more than 6 months).

- Vessel sampling should be spread as equitably as possible throughout all months of the fishing season (Table 1).

The above requirements are to be met within the service provider's control. If the requirements cannot be met, justification must be provided at the time of data delivery.

Table 1. Number of vessels to be sampled each month during the fishing season to collect crab biological data, assuming that all vessels licensed for an area are active.

Date	Area B	Area E	Area G	Area H	Area I	Area J
January		5	2	8		
February		5	2	8		
March		6	2	8		
April	6	6	3	8		
May	5	6	3	9		
June	5	6	3	9	4	
July	5	6	3	9	4	4
August	5	6	3	9	4	4
September	5	6	3	8	4	4
October	5	6	2	8	4	4
November	5	5	2	8	4	4
December	5	5	2	8		
Total	46	68	30	100	24	20

Please refer to Table 2 for area specific commercial vessel crab biological sampling requirements.

Table 2. Fishery independent and commercial vessel crab biological sampling program requirements, assuming that all vessels licensed for an area are active.

Area	Sampling Type	Index Site	Fishing Season (months)	No. Boats	Visits Per Boat	Sampling Events Per Year
B	Indep	Skeena River (4-12, 15)				5
	Comm		9	23	2	46
E	Indep	Tofino (24-6, 8, 9)				6
	Comm		12	34	2	68
G	Indep	Village Is (12-6, 26)				6
	Comm		12	15	2	30
H	Indep	Sidney (19-5, 6)				6
	Comm		12	50	2	100
I	Indep	Fraser River (28, 29)				DFO[a]
	Comm		5.5	24	1	24
J	Indep	Boundary Bay (29-8)				DFO[a]
	Comm		4.5	20	1	20

[a]DFO has been conducting research surveys on the Fraser River delta for approximately 20 years. Trap surveys are done twice a year, pre- and post commercial fishery. In the event DFO cannot continue to conduct such surveys, the service provider will be requested to collect fishery independent data in the future.

2.2.2 *Fishery independent standardized sampling*

Sampling is to occur at index sites (one site per crab management area). The service provider must respect any commercial crab fishing closures currently existing in index site subareas as outlined in the Crab by Trap IFMP. Sampling is to be carried out in accordance with the following requirements:

1. Sample size
    - Minimum 200 crabs per sampling event.
    - Each trap sampled must be sampled in its entirety.

2. Sampling Frequency:

    - Minimum one sampling event for every two month block during the fishing season (Jan/Feb, Mar/Apr, May/June, July/Aug, Sept/Oct, Nov/Dec); 6 sampling events per year. Ideally sampling should occur in the middle of each two month block and be consistently spaced throughout the year.
    - Sampling occurs ≥ 4 weeks apart at each site.

3. Standardized Fishing
    - Standardized fishing gear and practices are to be employed in accordance with the details outlined in Dunham et al. (2011).

    - Standardized fishing gear is briefly defined as:
        i. commercial style circular stainless traps 90 centimetres (36 inches) diameter by 26 centimetres (10 inches) high with two opposing tunnels, each with a single set of triggers. The frames are steel, rubber wrapped on the bottom ring, and covered by stainless steel mesh with approximately 6 centimetre (2½ inch) squares or diamonds.
        ii. existing escape ports are closed with rot cord.
        iii. two large herring torn in half are placed in a 500 millilitre bait jar with small (one millimetre in diameter) holes in the lid and sides. The bait jar is suspended not touching the ground in the center of the trap.
        iv. traps are soaked overnight between 16 and 28 hours, as close to 24 hours as possible.

Please refer to Table 2 for area-specific fishery independent crab biological sampling requirements. Note there are only five fishery independent sampling events required in Area B because the commercial fishery is closed mid December thru March. In 2026, DFO will pilot pre-season data collection in Area B during March, ahead of the April 1 commercial opening. This approach aligns with survey practices in Areas I and J, where seasonal closures allow DFO to conduct pre-season assessments. No fishery-independent sampling is required in Areas I and J in 2026 because DFO conducts research surveys there.

The above requirements are to be met within the service provider's control. If the requirements cannot be met, justification must be provided at the time of data delivery.

3. Crab Biological Information

Biological sampling must be conducted by DFO employees or DFO certified at-sea observers who have participated in a training program for crab biological sampling. Observers must be designated under Section 39 of the *Fishery (General) Regulations*. Direction of observers on the grounds will be done by the service provider in conjunction with the local crab fishery manager and vessel masters (Fisheries and Oceans Canada 2021).

To ensure data quality, DFO Science suggests two people, one of whom is a certified observer, should work together to collect crab biological data. Typically one person (the observer) holds and measures the crabs; the other person records biological data either on waterproof data sheets or electronically.

Trap catches must be sampled separately and not combined with other trap catches to ensure catch per unit effort (CPUE) can be estimated. All species of crabs caught in each trap should be described with respect to species, sex, shell condition, injuries, mating marks, various other observations, and the maximum carapace width exclusive of spines (notch-to-notch) measured. Although the crab fisheries target Dungeness crabs, the information is applicable to all species of crabs with the exception of King crabs (Golden King, *Lithodes aequispinus*; Red King, *Paralithodes camtschaticus*; Puget Sound King, *Lopholithodes mandtii*) where length is substituted for the width measurement. Please refer to Dunham et al. (2011) for more details regarding the collection of crab biological information. Normally all crabs in all traps are measured during research sampling, or all crabs in selected traps when commercial sampling. The information for individual crabs is recorded by trap. Traps that are selected and empty should not be ignored; they should be recorded as empty traps.

Collecting crab biological data provides information about: sex composition, injury rates, size structure, discard ratios, Catch Per Unit Effort (CPUE), soft-shell periods, mating periods, egg production, larval release times, and year-to-year variation and trends.

Bycatch is an important component of all fisheries and needs to be documented. Observers are responsible for identifying and recording all bycatch species caught in traps.

4. Recording Crab Survey Information

When recording crab biological data in the field, the following forms should be completed for every group/string of traps (singles or ground lines):

a) Fishing Gear Header Form
b) Crab Biological Data Form
c) Bycatch Form.

The Fishing Gear Header Form provides general information about each string. This form is linked to the Crab Biological Data Form where individual trap and crab data are recorded. The Bycatch Form is where catch data of species other than crabs are recorded.

4.1 Fishing Gear Header Form

For each group of traps, information such as general location, date, GPS position, details about the fishing gear, depth, and soak time is collated on the Header Form and will be linked to all traps and crabs in the sample. Please refer to Appendix 9.1 for form fields and codes. The Fishing Gear Header Form is called "Headers" in Access.

4.2 Crab Biological Data Form

Individual trap catch information for a particular group of traps is recorded on the Crab Biological Data Form along with individual crab biological data. Relevant crab biological information includes species, sex, shell condition, injuries, mating marks, observations, and size. Please refer to Appendix 9.2 for form fields and codes. The Crab Biological Data Form is based on the underlying "LF" table in Access.

4.3 Bycatch Form

Bycatch is pooled for all traps sampled in a particular string and recorded on the Bycatch Form. Please refer to Appendix 9.3 for form fields and codes. The Bycatch Form is called "ByCatch" in Access.

5. Data Delivery

Complete data (header, biological, and by-catch forms) shall be made available to the Shellfish Data Unit in an acceptable electronic format (Microsoft Access 2010 or earlier) via the DFO Contractor Data Exchange FTP site within seven days following the end of the month when data were collected. Please note electronic data are the responsibility of

the service provider and any data lost before they have been safely stored in the Shellfish Data Unit will have to be collected again by the service provider.

6. References

Dunham, J.S., Phillips, A., Morrison, J., and Jorgensen, G. 2011. A manual for Dungeness crab surveys in British Columbia. Can. Tech. Rep. Fish. Aquat. Sci. 2964: viii + 68 p.

Fisheries and Oceans Canada. 2026. Pacific Region Integrated Fisheries Management Plan. Crab by Trap. April 1 2026 to March 31, 2027.

7. Appendix 1: Fishing Gear Header Form (Headers in Access)

Vessel – name of the vessel being sampled.
VRN – Vessel Registration Number, aka CFV.
Vessel Master – name.
Observer name or identification – name and contact information.
Source – source of fishing, either commercial vessel or service provider. See listed codes.
Stat Area – Pacific Fishery Management Area (e.g. 17).
Subarea – Pacific Fishery Management Subarea (e.g. 13).
Geographic Location (GeogLoc) – general location where sampling is being conducted (e.g. Departure Bay). Include, if applicable, the index site – a predetermined sampling location based on concentrated commercial fishing effort (e.g. Sidney). Must be a text field.
Set Number – unique identifier for each group of traps. Should start at 01 and be consecutive.
Set Year (e.g. 2026)
Set Month – month when the trap gear was set. Months are numbered 1 to 12 (e.g. 08 would be August).
Set Day – day when the trap gear was set. Days are numbered 1 to 31 (e.g. 22).
Set Time – time when traps entered the water. Use the 24-hour clock (e.g. 10:15).
Haul Year (e.g. 2026).
Haul Month – month when the trap gear was hauled (e.g. 08 would be August).
Haul Day – day when the trap gear was hauled (e.g. 23).
Haul Time – time when traps were hauled. Use the 24-hour clock (e.g. 09:25).
Start Latitude Degrees – GPS position at one end of the string. Record in degrees.
Start Latitude Minutes – GPS position at one end of the string. Record in minutes and thousandths of minutes (e.g. 12.579).
Start Longitude Degrees – GPS position at one end of the string. Record in degrees.

Start Longitude Minutes – GPS position at one end of the string. Record in minutes and thousandths of minutes (42.681).
End Latitude Degrees – GPS position at other end of the string. Record in degrees.
End Latitude Minutes – GPS position at other end of the string. Record in minutes and thousandths of minutes.
End Longitude Degrees – GPS position at other end of the string. Record in degrees.
End Longitude Minutes – GPS position at other end of the string. Record in minutes and thousandths of minutes.
Fix Type – How was position determined? See listed codes.
Min Depth – minimum depth gear fished in a set. Record in meters.
Max Depth – maximum depth gear fished in a set. Record in meters.
Soak Hours – time between the Set Time and Haul Time, rounded to the nearest hour (e.g. 21 hours).
Bait Code – type of bait used in traps. See listed codes.
Fishing Method – are trap gear set on ground lines or as singles? See listed codes.
Number Traps in String – total number of traps fished on the string being sampled (e.g. 15).
Trap Spacing – spacing between traps in meters.
Number Traps Sampled – number of traps sampled from the entire string (e.g. 5).
Gear Code – describes the type of traps being fished. On commercial vessels all samples should come from the same trap type. See listed codes.
Trap Height – height of trap measured in inches.
Trap Dimensions – diameter of trap measured in inches.
Mesh Type – distinguish between stainless and synthetic mesh traps. See listed codes.
Ring Number – number of escape rings on the trap (e.g. 2).
Ring Size 1 – diameter of one escape ring in millimetres.
Ring Size 2 – diameter of the second escape ring in millimetres.
Corresponding page number from Commercial Crab Harvest Log (integer)
Comments – record anything about the set that may influence how someone will interpret the data (e.g. lost 2 traps in the set or lots of juvenile flatfish in the traps, etc.).

Fishing Gear Header Form Codes

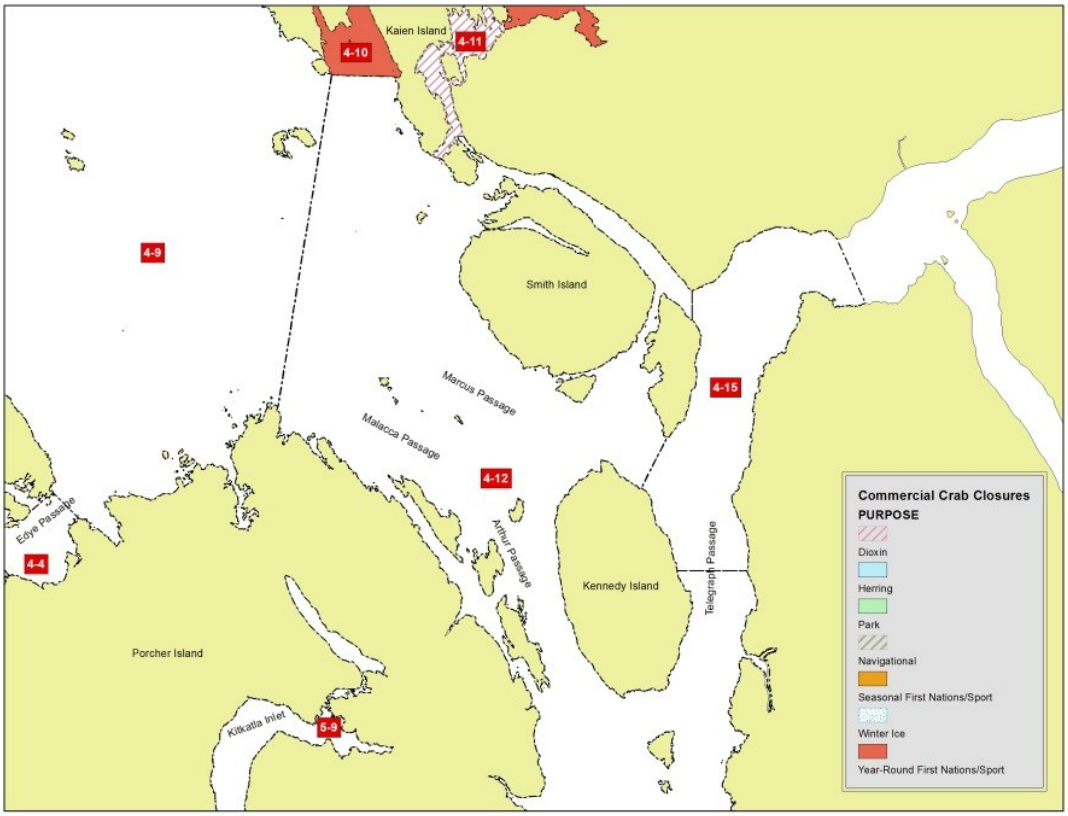
Source

Code	Description
IL	Independent index length
CL	Commercial index length

Index Sites

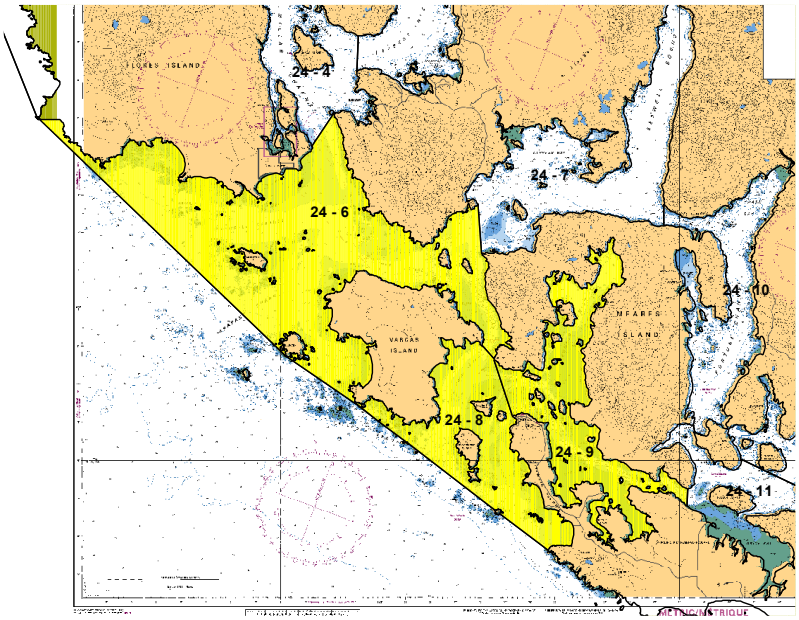
Area B

Skeena River mouth (northern portion of PFMA 4-12 around Smith Island and 4-12, -15 around Kennedy Island).



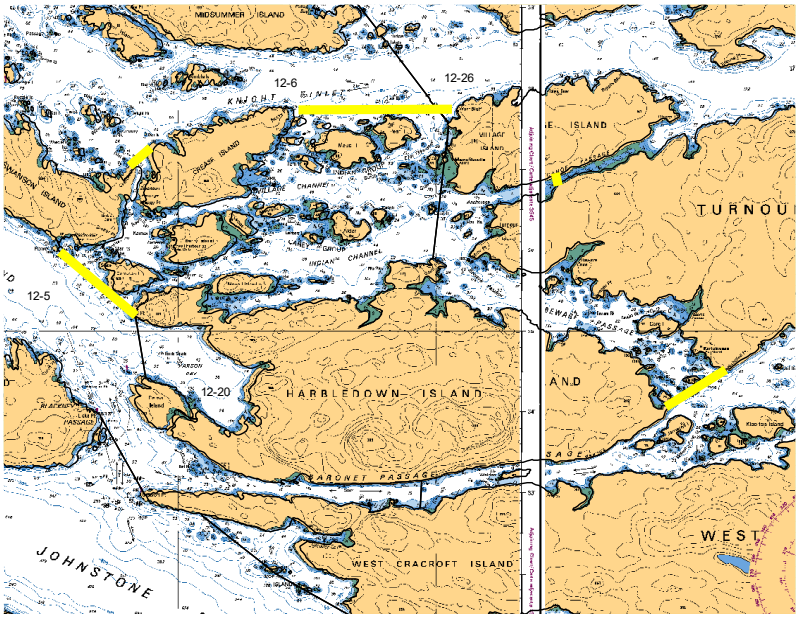
Area E

Tofino (PFMAs 24-6, -8, -9)



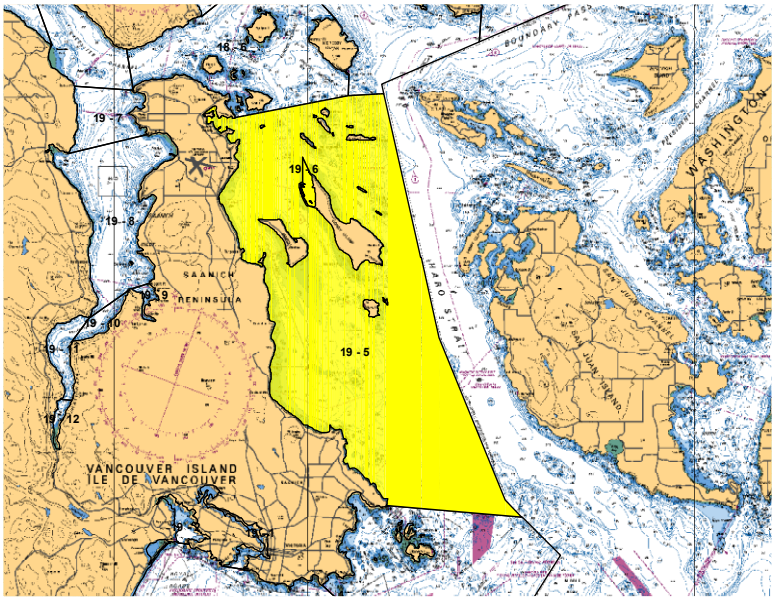
Area G

Village and Indian Channel, and Beware Passage (portions of PFMAs 12-6, -26). Includes Indian and Carey Groups. Enclosed by the following islands: Village, Crease, Swanson, Compton, Harbledown, and Turnour.



Area H

Sidney (PFMAs 19-5, -6)
Please note sampling shall not occur around Sidney Spit (19-6) and a portion of Cordova Channel (19-5) which are closed to commercial fishing.



Fix

Code	Description
C	Chart
D	Differential GPS
G	GPS
L	Loran
W	WAAS

Bait

Code	Description
CLA	Clams
DOG	Dogfish
EUL	Eulachons (not smelt)
XXX	Experimental
FRA	Fish Frames (not salmon)
AST	Fish Paste
GEO	Geoducks
KKK	Hake
HER	Herring
MIX	Mixed Fish Species (and offal and scraps)
OCT	Octopus
YYY	Other
PEL	Pellets
ZOR	Razor Clams
SAL	Salmon (all species and heads and frames)
QID	Squid
TIN	Tinned Fish
UNK	Unknown
ROC	Whole Rockfish

A mixture of two baits listed above can be coded as first code letter (W)ith first code letter. For example, squid and herring would be coded as QWH. A mix of herring and hake would be coded as HWK. For a mixture with more than two types of bait, use the most dominant/common type (if possible) with "mixed fish species (and offal and scraps)" e.g. HWM (see exception codes below).

Additional codes for rarely encountered bait types include:

Code	Description
KOD	Codfish
PIL	Pilchards
TBT	Turbot

These codes should not be used in mixture situations as described in the previous paragraph. In the event these items are indicated as mixed with another bait type, code as "bait type from common list above" (W)ith "Y"(other), e.g. Clam with codfish = CWY.

Exception codes for three way mixtures include:

Code	Description
HCQ	Herring with clams and squid
HDB	Herring with dogfish and gurdy

Fishing Method

Code	Description
S	Single
G	Ground line

Gear Code

Code	Description
70	Commercial Crab Trap with regulation escape ports
71	Circular Crab Traps, 40” × 12” light rubber wrapped steel frame, synthetic mesh, open ports
71A	Circular Crab Traps, 40” × 12” steel rubber wrapped frame, stainless mesh, 2 soft mesh tunnels, no escape ports
72	42” diameter circular Crab Trap, ocean type, Hecate Strait heavy steel frame
73	Tanner Crab Trap, commercial, square pyramidal large top loading traps (with 120 mm escape ring), 2.75” mesh
73H	Tanner Crab Trap, commercial, square pyramidal large top loading traps, 120 mm escape ring mounted HIGH, 2.75” mesh
73L	Tanner Crab Trap, commercial, square pyramidal large top loading traps, 120 mm escape ring mounted LOW, 2.75” mesh
73M	Tanner Crab Trap, commercial, square pyramidal large top loading traps, 120 mm escape ring mounted MIDDLE, 2.75” mesh
74	Tanner Crab Trap, square pyramidal research trap, no escape ring, 2.75” mesh
75	Research Crab Trap, inlet type, 36” diameter, escape ports open, stainless (same as code 76 but with ports open)
76	Research Crab Trap, inlet type, 36” diameter, no escape ports, stainless, regular survey traps used by DFO
80	Crab Ring
82	Conical Nesting Snow Crab Trap, top loading, 48” × 18” with A1 mesh
82A	Conical Nesting Snow Crab trap, side loading, 48” × 18” with 2” synthetic mesh
83	Service Provider Dungeness Crab trap, 36” diameter × 10” high, stainless, no escape ports
99	Unknown or Other

Mesh Type

Code	Description
SS	Stainless
NW	Synthetic

8. Appendix 2: Crab Biological Data Form (LF in Access)

Vessel – name of the vessel being sampled.
VRN – Vessel Registration Number, aka CFV.
Haul Year (e.g. 2026)
Haul Month – month when trap gear was hauled (e.g. 08).
Haul Day – day when trap gear was hauled (e.g. 23). This field relates the Data Form to the Header Form.
Set Number – unique identifier for each group of traps. This field relates the Data Form to the Header Form. Should start at 01 and be consecutive.
Geographic Location (GeogLoc) – general location where sampling is being conducted (e.g. Departure Bay). Include, if applicable, the index site – a predetermined sampling location based on concentrated commercial fishing effort (e.g. Sidney). Must be a text field.
Trap Number – consecutive, starting at 01.
Trap Usability – identifies circumstances that may influence trap catch. See listed codes. Normally the trap usability code = 0 (no problems with the trap).
Species – codes for various crab species captured in the trap. See listed codes (e.g. XKG for Dungeness Crab, or 848 for an empty trap).
Sex – male or female. See listed codes.
Shell Condition – an indicator of shell hardness and age. See listed codes.
Injury – codes for various injuries. See listed codes. Leave blank if no injuries are observed.
Claws Missing – number of missing claws. Note injuries that occur during sampling are not recorded. Can be 1 or 2. Leave blank if claws are intact.
Legs Missing – number of missing legs. Note injuries that occur during sampling are not recorded. Can be 1 to 8. Leave blank if legs are intact.
Marks – mating marks on the insides of the claws on older shell males. See listed codes. Leave blank if no mating marks are observed.
Observation – a list of a variety of observations. See listed codes. Leave blank if not applicable.
Notch Width – width of the crab measured in millimetres, notch-to-notch, excluding the spines (e.g. 158).

Notes

Durometer – a device designed to measure shell hardness (e.g. 70). Only required in the Area A sampling program.

Biological Data Form Codes

Trap Usability

Codes	Description
0	Trap is fishing normally, no problems. This is the default.
1	Hole in trap.
2	Trap malfunction (triggers open, trap upside down, lid sprung, etc.)
3	No bait.
4	Freshly dead fish in trap causes unusual attraction.
5	Trap contents stolen by someone else.
6	Cannibalism event. Crabs in trap have been dismembered and eaten by other crabs. Most common with soft-shell crabs. Shell and body parts show claw marks, meat incompletely extracted. Marked difference from octopus predation.
7	Octopus predation. Remains of dismembered shells present, but some parts may be intact with all the meat gone. Octopus enzymes dissolve all the meat. Few to no live crabs in the trap.
8	Octopus in trap. Usually empty shells and a notable absence of live crabs.
11	Live fish in trap.
12	Starfish in trap. Sometimes starfish, especially sunflower stars, smother the bait and reduce attraction. Crabs may not enter or the starfish kills and eats them. Record this usability code only if there is a noticeable effect in trap catch.
15	Functional trap empty. Nothing wrong with the trap, but no crabs caught. Note when code 15 is used, 848 should be entered as the species code.

Species (crab)

Code	Common Name	Scientific Name
VMI	Brown Box	*Lopholithodes foraminatus*
XKG	Dungeness	*Metacarcinus magister*
VMC	Golden King	*Lithodes aequispinus*
XKE	Graceful	*Cancer gracilis*
ZCA	Graceful Decorator	*Oregonia gracilis*
XMB	Green	*Carcinus maenas*
XAF	Helmet (Horse)	*Telmessus cheiragonus*
VAC	Hermit sp.	Family Paguridae
ZGE	Longhorn Decorator	*Chorilia longipes*
ZDF	Northern Kelp	*Pugettia producta*
ZBA	Pacific Lyre	*Hyas lyratus*
VMJ	Puget Sound King	*Lopholithodes mandtii*
VNI	Red King	*Paralithodes camtschaticus*
XLA	Red Rock	*Cancer productus*
VIF	Scaled	*Placetron wossnessenskii*
ZGC	Sharp Nose	*Scyra acutifrons*
ZAF	Southern Tanner	*Chionoecetes bairdi*
VLC	Spiny Lithode	*Acantholithodes hispidus*
VSA	Squat Lobster	Family Galatheidae
848	Only used with Trap Usability = 15. Signifies no crabs caught.	

Sex

Code	Description
1	Male
3	Female
4	Female with eggs
5	Female spent (eggs hatching)

Shell Condition

Code	Description
1	New hard shell. No deflection on underside of carapace with heavy pressure from thumb. Very little claw wear and tips of claws are sharp and hooked. Few signs of wear or abrasions on carapace. May have barnacles, but these may be small.
2	New springy soft shell. Evident by slight shell deflection with heavy pressure on underside of carapace. Little epiphytic growth, fouling, or abrasion. Barnacles, if present, will be small. Underside of carapace still has dense orange or yellowish hair.
3	New crackly soft shell. Shell is easily deformed by finger pressure. Usually there is bright orange downy hair on underside of carapace.
4	New plastic soft shell. Shell is extremely soft. Crab has moulted within the past few days.
5	Moulting crab. The shell has split at the suture line at the back; however, the crab has not yet exited the old shell. Generally this stage lasts only one day. Shell conditions 4 and 5 indicate a moult is in progress and tend to be rare in data because crabs often avoid traps when moulting. The exception is in abandoned traps which act as a refuge for moulting crabs.
6	Old hard shell. Shows claw wear and often barnacle encrustation or other fouling growth. In exposed conditions the shell may appear clean and bright, but the claws will show signs of wear. Carapace spines will also be blunted as may be tips of walking legs.
7	Very old hard shell. Much claw wear, fouling growth. Males typically show old mating marks which have worn through claw; may have shell disease; tips of walking legs may be black or rotting off. Crab is lethargic and likely will not moult again or may soon die.
8	Between a new (code 1) and old (code 6) hard shell. Shell shows signs of wear, especially on teeth and tips of claws, but the crab is still relatively clean and vigorous. Typically the shell is hard, although prior to a moult the shell will soften slightly. Many crabs with this code indicate a moult is imminent.
9	Carapace in trap. Possible reasons include: a newly moulted crab was so soft it managed to squeeze out of the trap, a crab was cannibalized or devoured by an octopus, or a crab died and washed out of the trap as it was hauled to the surface.

Injuries

Code	Description
1	Deformed shell. Occurs at time of moult. Often misshapen shell or point rounded. Cannot obtain an accurate width measurement and should not be used for shell width analysis.
2	Hole or crack in shell.
3	Torn abdomen.
4	Regenerating claw(s).
5	Regenerating leg(s).
6	Regenerating both claw(s) and leg(s).
7	Multiple injuries. Record when more than one injury code is required.
8	Shell disease. Black spots on legs, claws, and underside of shell.
9	Dead. Crab died in the trap. Likely to occur with moulting, soft-shell, or very old shell crabs. May also be the result of octopus predation or amphipod kill. Even if sex is not apparent (due to missing body) measure the crab anyway. Ensure the shell is actually from a dead crab and not from a new moult. If this were the case, the gills and usually the lower portion of the shell will be attached and there will be a very soft crab of larger size in the sample.

Missing Claw(s) and/or Leg(s)

- Record the number of missing claws and/or legs. Only older injuries, those missing limbs where the stump end has a black sheath covering it, are recorded.

Mating Marks

Code	Description
1	Old (yellow)
2	New (white)

Observations

Code	Description
1	Moulting pair. When a moulted shell and the new crab are linked in the same trap. Data are recorded as if they are two separate crabs. The moulted shell is shell 9, the new crab is shell 4 and a 1 is entered for both crabs in the observation column.
2	Mating pair. Record in similar manner as for a moulting pair.
3	Limb bud. A fleshy miniature limb extruded sometime before a moult takes place. The bud indicates the crab is planning to moult as opposed to skip moulting. Record with the appropriate injury code.
4	Pink joints. Possible indication of microsporidia infection in the musculature.

9. Appendix 3: ByCatch Form (ByCatch in Access)

Vessel – name of the vessel being sampled.
VRN – Vessel Registration Number, aka CFV.
Haul Year (e.g. 2026)
Haul Month – month when trap gear was hauled (e.g. 08).
Haul Day – day when trap gear was hauled (e.g. 23).
Set Number – unique identifier for each group of traps. Should start at 01 and be consecutive. This field relates the By-Catch Form to Header and Data Forms.
Geographic Location (GeogLoc) – general location where sampling is being conducted (e.g. Departure Bay). Include, if applicable, the index site – a predetermined sampling location based on concentrated commercial fishing effort (e.g. Sidney). Must be a text field.
Species – species captured other than crabs. See listed codes. Note this list is not exhaustive. Please contact the Data Unit for questions about bycatch codes.
Number Caught – total number of each species other than crabs collected from the set (all traps pooled).
Weight – collective weight in kilograms of each species other than crabs collected from the set (all traps pooled). Can be estimated if no scale is available.
Weight Estimated? – Is the weight estimated and not measured using a scale? Enter "Y" for yes and "N" for no.

ByCatch Form Codes

Cephalopods	Code	Common Name	Scientific Name
	98E	Pacific Giant Octopus	*Enteroctopus dofleini*
	98D	Octopus	Order Octopoda
	98G	Red Octopus	*Octopus rubescens*
	98F	Smooth Skin Octopus	*Benthoctopus leioderma*
	91G	Stubby Squid	*Rossia pacifica pacifica*
Echinoderms	Code	Common Name	Scientific Name
	4PD	Bat Star	*Asterina miniata*
	4RA	Blood Star	*Henricia leviuscula*
	5HA	Brittle Stars	Class Ophiuroidea
	4XF	Fish-Eating Star	*Stylasterias forreri*
	6BB	Green Urchin	*Strongylocentrotus droebachiensis*
	4OC	Leather Star	*Dermasterias imbricata*
	4GD	Rainbow Star	*Orthasterias koehleri*
	4HC	Mud Star	*Ctenodiscus crispatus*
	4ZC	Giant Pink	*Pisaster brevispinus*
	4ZA	Purple Star	*Pisaster ochraceus*
	4GD	Sand Star	*Luidia foliolata*
	6NA	Sea Cucumbers	Class Holothuroidea
	4AB	Sea Lilies	Class Crinoidea
	4GA	Sea Stars	Class Asteroidea
	4TA	Sun Star	Family Solasteridae
	4XE	Sunflower Star	*Pycnopodia helianthoides*
	4JD	Vermillion Star	*Mediaster aequalis*
Flatfish	Code	Common Name	Scientific Name
	596	Pacific Sanddab	*Citharichthys sordidus*
	625	Slender Sole	*Lyopsetta exilis*
Rockfish	Code	Common Name	Scientific Name
	407	Copper	*Sebastes caurinus*
	410	Darkblotched	*Sebastes crameri*
	414	Greenstriped	*Sebastes elongatus*
	424	Quillback	*Sebastes maliger*
	442	Yelloweye	*Sebastes ruberrimus*

Bycatch Form codes

Roundfish	Code	Common Name	Scientific Name
	455	Sablefish	*Anoplopoma fimbria*
	225	Pacific Hake	*Merluccius productus*
	467	Lingcod	*Ophiodon elongatus*
	319	Northern Ronquil	*Ronquilus jordani*
	222	Pacific Cod	*Gadus macrocephalus*
	228	Pollock Walleye	*Theragra chalcogramma*
	230	Red Brotula	*Brosmophycis marginata*
	461	Kelp Greenling	*Hexagrammos decagrammus*
	466	Whitespotted Greenling	*Hexagrammos stelleri*
Sculpins	Code	Common Name	Scientific Name
	519	Blackfin	*Malacocottus kincaidi*
	499	Buffalo	*Enophrys bison*
	508	Dusky	*Icelinus burchami*
	521	Great	*Myoxocephalus polyacanthocephalus*
	502	Red Irish Lord	*Hemilepidotus hemilepidotus*
	491	Roughback	*Chitonotus pugetensis*
	522	Sailfin	*Nautichthys oculofasciatus*
	472	Sculpins	Family Cottidae
	497	Spinyhead	*Dasycottus setiger*
	513	Spotfin	*Icelinus tenuis*
	518	Pacific Staghorn	*Leptocottus armatus*
	510	Threadfin	*Icelinus filamentosus*
Selachii	Code	Common Name	Scientific Name
	044	Spiny Dogfish	*Squalus acanthias*
	066	Spotted Ratfish	*Hydrolagus colliei*

10. Appendix 4: Data Entry Database Field Descriptions

Sampling data are to be supplied to DFO in an electronic format consisting of a Microsoft Access database file (Version 2010 or earlier) containing at least three tables with the following names (in bold): **Headers** (this is all data collected on the Fishing Gear Header Form; Appendix 1), **LF** (this is all data collected on the Crab Biological Data Form; Appendix 2) and **ByCatch** (this is all data collected on the ByCatch Form; Appendix 3).

Filenames should indicate, at least: sampling year, batch number or ID, and who the Service Provider is.

For compatibility purposes, all fields listed here must be included and named as indicated, whether they contain data or not. Other tables, such as look-up tables, may be included at the service provider's discretion. Additional fields may be added to the three main tables as well at the service provider's discretion.

Sample Tables/Database may be obtained from the Shellfish Data Unit at DFO.

Field Names and Data Typing for Table 'HEADERS' (see Appendix 1)

Item	Field Name	Type	Size
Artificial number, index key and link to Dependent tables LF and ByCatch	**Key**	LongInteger	4
Source of the data (code)	**Source**	Text	2
Set Number, or Sample Number	**SetNum**	Integer	2
Year when gear Hauled.	**Year**	Integer	2
Month when gear Hauled.	**Month**	Byte	1
Day when gear Hauled	**Day**	Byte	1
Trap soak time in hours.	**Soak_hrs**	Integer	2
Soak time days (where applicable).	**Soak_days**	Byte	1
Hours of soak, Same thing as "Soak_hrs", Included for historic compatibility.	**HoursSoak**	Integer	2
Minimum depth in meters.	**MinDepth**	Integer	2
Maximum depth in meters	**MaxDepth**	Integer	2
PFMA Statistical Area,	**StatArea**	Byte	1
PFMA Statistical Sub-Area.	**SubArea**	Byte	1
Sub-Sub-Area (Not Used, included for historic database compatibility only)	**Locality**	Byte	1
Chart Reference for where the Set was Located (for cross-reference purposes)	**GeogLoc**	Text	50
Integer Degree of Latitude at start of string.	**StartLatDeg**	Integer	2
Decimal Minutes of Latitude at start of String (recorded to 3 decimal places, e.g. 23.975)	**StartLatMin**	Single	4
Integer Degree of Longitude at start of string.	**StartLongDeg**	Integer	2
Decimal Minutes of Longitude at start of String (recorded to 3 decimal places e.g. 42.468)	**StartLongMin**	Single	4
Integer Degrees of Latitude, end of string.	**EndLatDeg**	Integer	2
Decimal Minutes of Latitude, end of string.	**EndLatMin**	Single	4
Integer Degrees of Longitude, end of string.	**EndLongDeg**	Integer	2
Decimal Minutes of Longitude, end of string.	**EndLongMin**	Single	4
How position was obtained. G = GPS, etc.	**FixType**	Text	1
Who took the sample and did the measuring.	**SamplerCode**	Byte	1
Who entered this set into the computer form or onto the hardcopy form.	**CoderCode**	Byte	1
Unused – for historic compatibility only.	**VesselCode**	Integer	2
VRN (CFV) of commercial boat sampled (or Vessel ID of service provider boat where doing Independent Lengths)	**CFV**	Long Integer	4
3 character code for type of bait used.	**BaitCode**	Text	3

Item	Field Name	Type	Size
Distance in meters between traps on string.	**TrapSpacing**	Integer	2
Unused – for historic compatibility only.	**FrameType**	Text	2
Code for type of Mesh on the traps.	**MeshType**	Text	2
Unused – for historic compatibility only.	**TrapShape**	Byte	1
Trap diameter (or length of side if square), in Inches.	**TrapDimension**	Byte	1
Trap Height in Inches.	**TrapHeight**	Byte	1
Number of escape port rings (where exist)	**RingNumber**	Byte	1
Size in MM of diameter of escape ports	**RingSize**	Byte	1
Size in MM of diameter of escape ports (if ports exist of different size than RingSize).	**RingSize2**	Byte	1
Unused – for historic compatibility only.	**TriggerNumber**	Byte	1
Code how bait is normally attached	**BaitMethod**	Text	1
Code, Groundlines or Single traps used ?	**FishingMethod**	Text	1
Number of traps in the string (where known)	**NumTrapsInString**	Byte	1
Number of traps Sampled in this set.	**NumTrapsSampled**	Byte	1
Total number of Dungeness crabs sampled in this string.	**NumCrabsSampled**	Integer	2
Number of legal size male Dungeness crabs sampled in this string.	**NumLegalMales**	Integer	2
Number of sub-legal size male Dungeness crabs sampled in this string.	**NumSubLegalMales**	Integer	2
Number of female Dungeness crabs sampled in this string.	**NumFemales**	Integer	2
Unused – for historic compatibility only.	**VaxCode**	Byte	1
Unused – for historic compatibility only.	**CardCode**	Byte	1
Unused – for historic compatibility only.	**YearSet**	Byte	1
Unused – for historic compatibility only.	**MonthSet**	Byte	1
Unused – for historic compatibility only.	**DaySet**	Byte	1
Any relevant Comment noted by Sampler or Coder.	**Comment**	Text	1
Flag whether data has been uploaded to main DFO database (always = NO)	**Uploaded**	Yes/No	1

Field Names and Data Typing for Table 'LF' (see Appendix 2)

Item	Field Name	Type	Size
Link to Header table key field	**Hkey**	Long Integer	4
Counter to create a unique index key with, possibly indicates line number on H/C page.	**Line**	Integer	2
Code Sex of crab sampled	**Sex**	Byte	1
Width measurement type, (should always be N=notch to notch)	**WidthType**	Text	1
Unused – for historic compatibility only.	**WidthSpine**	Byte	1
Width in mm, notch to notch (rounded down to the nearest mm)	**WidthNotch**	Byte	1
Code for Shell Hardness.	**Shell**	Byte	1
Code for Injuries.	**Injury**	Byte	1
Number of Claws missing, (except where caused by sampling)	**ClawsMissing**	Byte	1
Number of Legs Missing, (except where caused by sampling)	**LegsMissing**	Byte	1
Code Mating marks	**Marks**	Byte	1
Code Unusual information about the crab.	**Observation**	Byte	1
Order in which the sampled traps are pulled in the string,'1' is the first trap in string.	**TrapNum**	Byte	1
Code type of Trap being Sampled	**GearCode**	Text	4
Code problems/malfunction with the trap (Default is "0" if trap is OK).	**TrapUsability**	Byte	1
Pacific Region Species Code XKG = Dungeness, XLA = Red Rock, etc.	**Species**	Text	3

Field Names and Data Typing for Table 'ByCatch' (see Appendix 3)

Item	Field Name	Type	Size
Link to Header table key field	**H_key**	Long Integer	4
Counter to create a unique index key with,	**Line**	Integer	2
Pacific Region Species Code	**Species**	Text	3
Weight caught in Kilograms	**Weight**	Single	4
Is the Weight Estimated (Yes) or was it Actually Weighted (No).	**Estimated**	Yes/No	1
Number of individuals of this species	**Num_Caught**	Integer	2
Unused – for historic compatibility only.	**Num_per_kg**	Integer	2

APPENDIX 9.7: CRAB BY TRAP, HAIL REPORT SPECIFICATIONS

Hail Notification (Area A)

This document provides information on the data requirements and specifications for programs collecting data for transfer to Fisheries and Oceans Canada, Pacific Region. The intended audience is both DFO staff and external groups involved in collecting, transferring or managing fisheries data. All data submitted becomes the exclusive property of Fisheries and Oceans Canada

Rationale

The Commercial Crab trip hail program is integral to the following activities:

- Downloading of vessel hard drive data
- Electronic monitoring system maintenance and upgrades
- Immediate information on time, effort, and fleet distribution
- Fishery-dependent biosampling objectives
- Seasonal soft-shell closure decisions

Data Transfer Requirements

- **Format:** Microsoft Access (*.mdb or *.accdb) or Microsoft Excel (*.xls or *.xlsx)
- **Medium:** DFO ftp site or Email to Local Area Crab Manager
- **Timeliness:**
  - The vessel master shall arrange to have a fishing activity report entered into the database:
    (a) prior to leaving port when intending to haul trap gear;
    (b) prior to moving to a new location; and
    (c) as soon as practical once fishing activities have been completed for each fishing trip, and prior to returning to port.
  - All data shall be made available to DFO no more than 24 hours after the data has been received by the service provider.
- **File Naming Conventions:** Area_Hail_2026

The following information shall be recorded for each fishing activity report:

FIELD NAME	DESCRIPTION	FIELD TYPE/SIZE
CONFIRM_NUM	Confirmation Number	Number
TRIP_COMPLETE	Trip completed?	YES OR NO
FISHING_COMPLETE	Fishing completed?	YES OR NO
CALL_DATE	Date call made	Short Date (month/day/year, e.g. 12/31/26)
CALL_TIME	Time call made	Short Time (e.g. 23:59)

CALLER_IDENTIFICATION	Caller's Fisher Identification Number	Integer
VESSEL_NAME	Name of Vessel	Text
VESSEL_VRN	VRN # of Vessel	Text
VESSEL_MASTER_NAME	Vessel Master's Name	Text
VESSEL_MASTER_FIN	Vessel Master's Fisher Identification Number	Integer
TRIP_STATUS	Trip Status[1]	Text
TRIP_TYPE	Type of Trip[2]	Text
PFMA	PFMA[3]	Number
PFM_SUB_AREA	PFM Subarea[3]	Number
COMMENTS	Comments	Memo
HAIL_OP	Hail Operator	Memo

[1] **TRIP STATUS**
START FISHING (FOR THE SEASON)
START TRIP
END TRIP
LOCATION CHANGE
UPDATE
CANCEL END FISHING (FOR THE SEASON)

[2] **TRIP TYPE**
COMMERCIAL
COMMERCIAL W/ SAMPLING
SAMPLING

[3] Areas and Sub Areas are described in the Pacific Fishery Management Area Regulation. The hail operator shall provide additional sub-areas intended to be fished during the same trip.