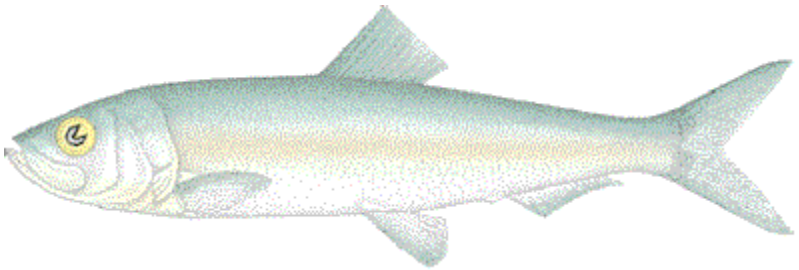
Fisheries and Oceans Canada | Pêches et Océans Canada

PACIFIC REGION INTEGRATED FISHERIES MANAGEMENT PLAN

PACIFIC HERRING

NOVEMBER 7, 2015 TO NOVEMBER 6, 2016



Pacific Herring, Clupea pallasii

Canada

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

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FOREWARD

The purpose of this Integrated Fisheries Management Plan (IFMP) is to identify the main objectives and requirements for the Pacific herring 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, the Department) 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 which can form the basis of a legal challenge. The IFMP can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

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 Pacific herring covers the period from November 7, 2015 to November 6, 2016.

This IFMP provides a broad context to the management of the Pacific herring fishery and the interrelationships of all fishing sectors involved in this fishery. Section 2 considers stock assessment, science and traditional knowledge, while Sections 3 and 4 consider the social, cultural, and economic performance of the fishery and broader management issues. Section 5 describes the objectives to address the issues identified in Section 4. Sections 6 and 7 describe allocation and management procedures.

The Appendices provided with the IFMP provide information that is updated annually, such as the post season review, stock assessment results, expected use table, and fishing plans by sector and by fishery.

1.2 History

The commercial Pacific herring fishery started in British Columbia in the 19th Century for the local food market, and quickly expanded into a dry salt fishery for the orient. In 1937 a reduction fishery was also established to produce fish meal and fish oil (Hourston and Haegele, 1980). After the collapse of the Pacific sardine in the late 1940s, Pacific herring became the major fishery off Canada's Pacific coast, and catches steadily increased to over 200,000 tons in the early 1960s (Beamish *et al*. 2004). This dramatic increase was unsustainable and by 1965 most of the older fish had been removed from the spawning population by a combination of over fishing and a sequence of weak year-classes attributed to unfavourable environmental conditions and a low spawning biomass. As a result, the commercial fishery collapsed in 1967 and was closed by the federal government to rebuild the stock. Following the fishery closure, a series of above average year-classes in the early 1970s quickly rebuilt the stock and the fishery was re-opened in 1973 (DFO 2008).

During the closure from 1967-1971, small fisheries continued locally for food and bait (Hourston and Haegele, 1980). At this time there was a growing interest to harvest roe herring for export to Japan. A small experimental roe harvest began in 1971, and limited entry licences were introduced in 1974. This fishery expanded rapidly, and in 1983 fixed quotas were introduced to regulate the catch (DFO 2008) and to address the difficulty of managing a large fishing fleet. Today most Pacific herring are fished for roe, which is sold in Japan. The remainder of the commercial fisheries is divided between spawn on kelp production and the food and bait market. The recent fishery is small compared to the past, catching between 15% and 30% of historic levels (Beamish *et al*. 2004).

1.3 Type of Fishery and Participants

1.3.1 First Nations

In the 1990 Sparrow decision, the Supreme Court of Canada found that where an Aboriginal group has an Aboriginal right to fish for food, social and ceremonial (FSC) purposes, it takes priority, after conservation, over other uses of the resource. Fisheries are authorized via a Communal Licence issued by the Department under the *Aboriginal Communal Fishing Licences Regulations*.

In addition to fishing opportunities for FSC purposes and domestic purposes for treaty rights for the Maa-nulth First Nation and the Tla'amin First Nation (as of April 5, 2016), DFO acknowledges that in *Ahousaht Indian Band et al. v. Canada and British Columbia*, the courts have found that five Nuu-chah-nulth First Nations located on the West Coast of Vancouver Island—Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht—have what the courts have characterized as "aboriginal rights to fish for any species of fish within their Fishing Territories and to sell that fish, with the exception of geoduck".

The Department is working with the First Nations pursuant to the rights found by the courts to find "the manner in which the plaintiffs' rights can be accommodated and exercised without jeopardizing Canada's legislative objectives and societal interests in regulating the fishery."

In addition, the Heiltsuk Nation has established an Aboriginal right to commercially fish herring spawn on kelp.

Commercial fleets are requested to avoid locations where local First Nations are gathering fish, or fishing for herring spawn on boughs or spawn on kelp. Additionally, the Department works collaboratively with First Nations on communication regarding herring stocks and spawning locations for FSC fishery planning and information on FSC activities. As the fishery season progresses, in some cases, specific requirements to remain out of particular locations to support FSC harvest will be broadcast for adherence by fish harvesters.

1.3.2 Recreational

A recreational fishery also occurs coast wide. While the number of recreational fishers targeting herring is unknown, the fishing effort is minimal.

1.3.3 Commercial

Currently there are four commercial fisheries:

Roe Herring: Licence eligibilities are party based and limited, currently there are 252 seine licences and 1,267 gillnet licences.

Spawn on Kelp: Licence eligibilities are party based and limited, currently there are 46 licences. Sixteen First Nations operate 26 licence eligibilities, while the remainder are held by individual eligibility holders.

Food and Bait herring: Licence eligibilities are party based, and access is provided to roe seine licence holders on an equal share basis for the 2015/2016 season.

Special Use herring: Licence eligibilities are party based, and are open access on a first come first serve basis. There are several fishery participants who hold unique quotas that are for specific purposes.

1.4 Location of Fishery

1.4.1 First Nations

First Nations harvest for FSC occurs coast wide, subject to appropriate licensing and permanent area closures listed in this management plan. There are also treaty and aboriginal commercial fisheries occurring in some management areas.

1.4.2 Recreational

Recreational harvest may also occur subject to appropriate licensing and permanent area closures listed in this management plan.

1.4.3 Commercial

With the exception of permanent closures for various purposes and annual area closures based on advice received from the Canadian Science Advisory Secretariat (CSAS) stock assessment process, the current commercial fisheries occur coast wide in units described as Major Stock Assessment Areas, Minor Stock Assessment Areas, and in other management areas and subareas on a case-by-case basis. Areas and subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing Major Stock Assessment Areas and Minor Stock Assessment Areas.

1.5 Fishery Characteristics

1.5.1 First Nations

First Nations fish for whole herring and herring roe for food, social and ceremonial (FSC) purposes. Whole herring are fished by seine, gillnet, rake, dip net, and jig, and herring eggs are collected as spawn on kelp or other seaweed, or spawn-on-tree boughs. Opportunities for FSC harvest are provided in a manner that allows for harvest activity in all assessment areas. Treaty and aboriginal commercial fisheries occur in some specific management areas.

1.5.2 Recreational

Whole herring may be fished for recreational purposes year round. The daily maximum sport limit for herring is 20 kg, with a two day possession limit of 40 kg. Recreational harvesting may occur by means of dip net, herring jig, herring rake, or cast net.

1.5.3 Commercial

The gear type, commercial licence year, and fishing period varies for each of the four herring fisheries. The specifics on these fisheries are provided in Appendices 7 to 10.

A range of fixed and mobile gear is used, depending on the fishery. All fisheries permit the use of seine nets, and the roe fishery may also use gillnets. The spawn on kelp and special use fisheries may also use enclosures, or ponds, in their operations. Rakes, dip nets, gill nets and hoop nets may also be used in the special use fishery.

All herring licences are party based, and operate under a Total Allowable Catch (TAC) or specific allocations that are distributed across the four commercial fisheries. All commercial fisheries are limited entry except for the special use fishery, which is open access.

1.6 Governance

Management of Pacific herring is directed by the *Fisheries Act* and other acts and regulations including:

- Areas and Subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing Pacific Herring Management Areas;
- The *Fishery (General) Regulations* (i.e. Conditions of Licence) and the *Pacific Fishery Regulations*, 1993 (i.e. open times);
- The *Aboriginal Communal Fishing Licence Regulations*;
- The *Maa-nulth First Nations Final Agreement Act*
- The *Tla'amin Final Agreement Act* (effective date of April 5, 2016)
- The *British Columbia Sport Fishing Regulations*;
- The *Oceans Act*; and,
- The *Species at Risk Act*.

These documents are available on the Internet at: http://www.dfo-mpo.gc.ca/acts-loi-eng.htm

In addition, the new national Sustainable Fisheries Framework contains policies for adopting an ecosystem based approach to fisheries management including:

- A Fishery Decision-Making Framework Incorporating the Precautionary Approach;
- Managing Impacts of Fishing on Benthic Habitat, Communities and Species;
- Policy on New Fisheries for Forage Species.
- Guidance for the Development of Rebuilding Plans under the Precautionary Approach Framework: Growing Stocks out of the Critical Zone
- Policy on Managing Bycatch
- Strategic Framework for Fishery Monitoring and Catch Reporting in the Pacific Fisheries
- Ecological Risk Assessment Framework (ERAF) for Coldwater Corals and Sponge Dominated Communities

Along with existing economic and shared stewardship policies, these will help the Department meet objectives for long-term sustainability, economic prosperity, and improved governance.

For more information on these departmental objectives, please visit: http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm

1.7 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 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 herring, please visit: http://www.pac.dfo-mpo.gc.ca/consultation/pelag/index-eng.html

1.7.1 Integrated Herring Harvest Planning Committee

The Integrated Herring Harvest Planning Committee (IHHPC) is the primary multi-stakeholder body providing input and advice to DFO's decision making processes for Pacific herring fisheries. The IHHPC was established by DFO to promote a more streamlined, representative, cross-sectoral advisory process related to herring harvest planning, management, and post-season review.

The goal of the IHHPC 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, does not have an approval capacity, and does not deal with recommendations on FSC harvest plans.

Participation in advisory processes reflects a broad range of interests in fisheries and oceans issues in the Pacific Region, so that a diversity of perspectives is involved. Membership in the IHHPC is comprised of representatives from First Nations, the spawn on kelp fishery, the Herring Industry Advisory Board (HIAB), the special use fishery, the Marine Conservation Caucus (MCC), the Sport Fishing Advisory Board (SFAB), the Province of BC, and DFO.

For more information on the IHHPC, please visit: http://www.pac.dfo-mpo.gc.ca/consultation/pelag/ihhpc-ccpih/index-eng.html

1.7.2 First Nations

The Department also consults with First Nations when required such as when activities have the potential for an adverse impact on their fisheries, upon request and as part of the bi-lateral and other established consultation processes including, where appropriate, Joint Fisheries Management Committees as established by Treaty.

1.8 Approval Process

This plan is approved by the Regional Director General for the Pacific Region.

2 STOCK ASSESSMENT, SCIENCE AND TRADITIONAL KNOWLEDGE

2.1 Biological Synopsis

Pacific herring (*Clupea pallasii*) is a pelagic species which occurs in inshore and offshore waters of the North Pacific. In the eastern Pacific, herring are found from Baja California to the Beaufort Sea in Alaska.

Herring mature and recruit to the spawning stock primarily between ages three and five. Within this range, age-at-recruitment tends to increase with latitude. Adult males and females migrate from the open ocean to sheltered bays around November or December, although in the far north of the range, these dates may be somewhat later.

Conditions that trigger spawning are not altogether clear, but after spending weeks congregating in the deeper channels, both males and females will begin to enter shallower inter-tidal or sub-tidal waters. Preferred spawning locations are sheltered bays and estuaries, commonly on eelgrass or other submerged vegetation. A single female may produce as many as 20,000 eggs in one spawn, however the juvenile survival rate is only about one resultant adult per ten thousand eggs, due to high predation by numerous other species (Hay 1985).

2.2 Ecosystem Interactions

At this time, there is no information available on the appropriate conservation limits for herring based on ecosystem considerations. It is recognized that herring plays a critical role in the ecosystem and are a food source for a variety of species. The current maximum harvest rate of 20% under the herring management framework is believed to be conservative—most juveniles and a significant proportion of the adult population should remain available to support ecosystem processes. Recent research indicates that the interplay of food supply and predation impacts on herring survival and production is complex and not readily predictable (Schweigert et al. 2010). Research is ongoing to better understand these ecosystem processes and the role herring plays in maintaining the integrity and functioning of the ecosystem.

2.3 Aboriginal Traditional Knowledge/Traditional Ecological Knowledge

2.3.1 Aboriginal Traditional Knowledge

First Nations provide information to DFO on herring behavior, spawn timing, abundance, ecosystem relationships, and fishing methods, based on their historic and cultural knowledge of the species and of their local areas contributing to the base of knowledge regarding herring behavior, spawn timing, and abundance.

2.3.2 Traditional Ecological Knowledge

Traditional ecological knowledge (TEK) in the form of observations and comments provided by commercial fishery participants, local residents, and DFO field staff contributes to the base of knowledge regarding herring behavior, spawn timing, and abundance. Fishery participants provide information to DFO on herring behaviour, spawn timing, abundance, ecosystem relationships and fishing methods, based on their historic and cultural knowledge of the species and of the areas harvested.

2.4 Stock Assessment

2.4.1 Stock Assessment Overview

Pacific herring are currently managed as five major and two minor stock areas. Accordingly, catch and survey information is collected independently for each of these seven areas and science advice is provided on the same scale.

Since the early 1980's, a statistical catch-age model has been used to provide stock assessment advice for the major stock areas (Haist and Stocker 1984). In 2006 the catch-age model was updated in a Bayesian framework as the herring catch age model (HCAM, Haist and Schweigert 2006), used for the 2006 through 2010 stock assessments with additional modifications (Christensen *et al*. 2009, Cleary and Schweigert 2011). A new version of the model was introduced in 2011. This integrated statistical catch age model (ISCAM, Martell et al 2012) has been used for stock assessment since 2011.

The precautionary approach is one component of the Sustainable Fisheries Framework and precautionary limits are established to ensure that harvest proceeds in a sustainable manner and that sufficient biomass is available to replenish the stocks on an ongoing basis. The 20% harvest rate for Pacific herring was introduced in 1983 and commercial fishing thresholds or cut-off levels were added in 1986. The 20% harvest rate is based on an analysis of stock dynamics, which indicates this level will stabilize both catch and spawning biomass while foregoing minimum yield over the long term (Hall et al. 1988, Zheng *et al*. 1993). The commercial cut-off levels are established at 25% of the unfished spawning biomass, as determined by simulation analyses. Stock assessment areas are recommended to be closed to commercial harvest when the stock is forecast to be below the cut-off levels. Cut-off levels, estimated as $0.25SB_{0,}$ have been revised from time to time.

The Centre for Science Advice Pacific (CSAP) has reviewed the biological basis for target exploitation rate, considering both the priority of assuring conservation of the

resource and allowing sustainable harvesting opportunities (Schweigert and Ware 1995). At the time, the review concluded that 20% is an appropriate exploitation rate for those stocks that are well above the cut-off or minimum spawning biomass threshold levels for commercial fisheries. For those stocks which are marginally above cut-off the following reduced catch level is recommended:

catch = forecast run - cut-off

This will provide for smaller fisheries in areas where the 20% harvest rate would bring the escapement down to levels below the cut-off.

DFO Fisheries Management requested Science Branch assess the status of BC herring stocks in 2015 and provide projections of potential herring abundance for 2016 to inform the development of the annual Integrated Fisheries Management Plan (IFMP).

In response to this request, the Science Response (SR) document, *Stock Assessment and Management Advice for BC Pacific Herring: 2015 Status and 2016 Forecast*, was completed in October 2015. The document was developed with input from a Pilot Technical Working Group, including technical representatives from First Nations and industry. The report included abundance forecasts and analysis using both the current (post-2011) and historical (pre-2011) assessment model. Based on this analysis and a range of factors (e.g. current level of uncertainty in herring assessments, ongoing work to renew the management framework), DFO has used the historical assessment model as the basis for fisheries planning for the 2015-16 season, including the management approach and proposed harvest levels outlined in this IFMP.

The full report can be found on the DFO website at the following link:
http://www.dfo-mpo.gc.ca/csas-sccs/publications/scr-rs/2015/2015_038-eng.html

2.4.2 Decision Tables

In September 2013, DFO Science implemented the use of probabilistic decision tables for the provision of science advice. Advice to managers for the major stock areas is presented as a set of decision tables reflecting a range of target harvest rates (e.g., 5%, 10%, 20% for the major stock areas (HG, PRD, CC, SOG, WCVI) for each management procedure being considered. These tables provide probabilities of the projected spawning biomass in 2016 (SB_{2016}) falling below the 0.25 SB_0 level and of the realized harvest rate exceeding the 10% and 20% target rate for a range of constant catch levels. Decision tables for minor stock areas provide probabilities of the realized harvest rate exceeding the 10% target rate for a range of constant catch levels.

Projections of spawning biomass in 2016 (SB_{2016}) were made over a range of yield options from 0 t to a maximum well above recent historical catches in increments that vary depending on the productivity of the stock. Decision tables include catch options corresponding to a 10% and 20% harvest rate, as well as 5% for the CC (only).

2.4.3 Data Sources

The herring assessment model is fitted to three sources of data: commercial catch landings, a spawn survey index and age composition data. Each times series of data represent the collective efforts of the herring industry, First Nations and DFO Science and Fisheries Management. For the purposes of stock assessment, fishery and survey data from 1951 onwards are used in the model.

Catch information is obtained from landing slips or monitoring of plant offload data. Historically, landing slip data were summed by fishery season. Beginning in the 1997/1998 season, catch figures have been based on verified plant offload weights.

Herring spawn surveys have been conducted throughout the B.C. coast since the 1930's. In years prior to 1988, spawn surveys were conducted from the surface either by walking the beach at low tide or using a drag from a skiff to estimate the shoreline length and width of spawn. Herring spawn surveys using SCUBA methods were introduced in 1988 and became coast wide within a couple of years.

Age composition data are obtained from biological samples collected from both the commercial catch and from test fishery charters, which supplement biological samples in areas where catch samples are limited or not representative of the entire stock, or in areas where fisheries are closed. Industry also conducts pre-season test sets for roe quality testing (in open areas only) and supplementary biological samples are provided as part of this program. For each of these samples, fish length, weight, age, sex, and maturity is recorded, information which then becomes input data for the assessment model.

2.5 Precautionary Approach

The precautionary approach in fisheries management is about being cautious when scientific knowledge is uncertain, and not using the absence of adequate scientific information as a reason to postpone or fail to take action to avoid serious harm to fish stocks or their ecosystem. This approach is widely accepted as an essential part of sustainable fisheries management (see http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm.)

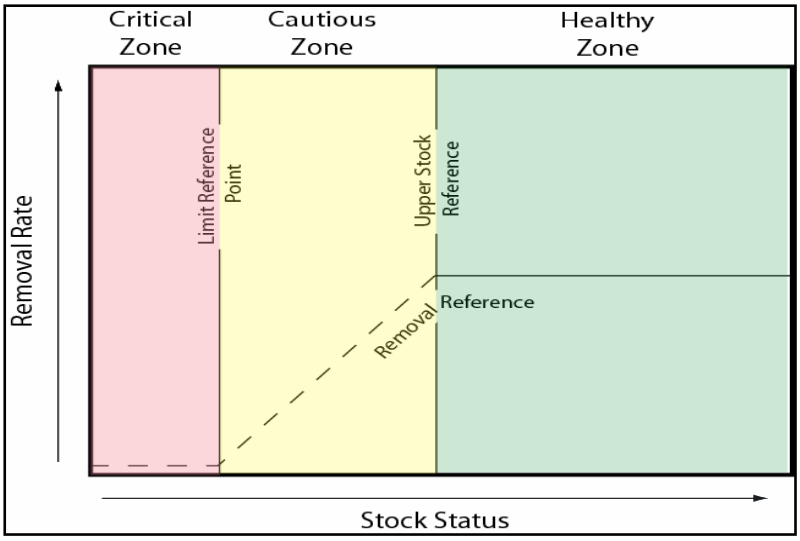
Applying the precautionary approach to fisheries management decisions entails establishing a harvest strategy that:

- identifies three stock status zones (healthy, cautious, and critical) according to upper stock reference points and limit reference points;
- sets the removal rate at which fish may be harvested within each stock status zone; and
- adjusts the removal rate according to fish stock status variations (i.e. spawning stock biomass or another index/metric relevant to population productivity), based on pre-agreed decision rules.

In this figure, the limit reference point separates the critical and cautious stock zones while the upper stock reference point separates the cautious and healthy stock zones. The removal reference (harvest control rule) defines the maximum acceptable removal rate

which is constant in the healthy zone, reduced in the cautious zone and negligible (little or no targeted catch) in the critical zone.

Figure 1: The DFO harvest strategy compliant with the precautionary approach.



A formal harvest control rule has been used to provide advice for the management of major B.C. herring stocks since 1986. The herring harvest control rule has three components: a single reference point; harvest rates; and decision rules. These are the same three components identified within the DFO Harvest Strategy Compliant with the Precautionary Approach (http://www.dfo-mpo.gc.ca/csas/Csas/status/2006/SAR-AS2006_023_E.pdf). However, these components are defined somewhat differently in the case of Pacific herring. For example, in herring management there is only a single reference point, the commercial harvest cut-off. As part of the broader renewal of the management framework for Pacific herring, the Department is currently evaluating the performance of the current herring harvest control rule with the DFO harvest strategy. Preliminary work using a simulation framework assuming a single stock and single gear type reveals similar performance between the DFO harvest strategy and the existing herring harvest control rule (HCR) (Cleary et al. 2010).

2.6 Research and Other Activities

An ongoing survey has examined the fall distribution and relative abundance of juvenile herring in the Strait of Georgia since 1991. Among other things, this survey examines the distribution, abundance, food and feeding of juvenile herring and salmonids to address the role of forage fish in an ecosystem. A similar survey has been conducted in the Central Coast over the last several years.

DFO is committed to renewal of the management framework and evaluation of harvest control rules for Pacific herring stocks. DFO is engaged in a collaborative process with First Nations, commercial harvesters/industry and stakeholders to design a management framework that is better aligned with the Sustainable Fisheries Framework and meets objectives defined through a collaborative process.

DFO Science is conducting several analyses aimed at supporting the renewal of the management framework. In the fall of 2014, DFO Science (with external support) undertook the development of a simulation framework to begin evaluating candidate limit reference points for Pacific Herring. This work was presented, reviewed and accepted by CSAS in May 2015. DFO also participated in a Herring Symposium to synthesize the current understanding of Pacific Herring (e.g. its population structure and dynamics, the natural and anthropogenic factors affecting them, including Traditional Ecological and local knowledge), bringing together experts from California through to Alaska. This symposium occurred in June 2015, co-hosted by DFO and colleagues at NOAA. DFO Science has begun to compile data sources to engage in an ecosystem modeling initiative that will examine how ecological and physical interactions affect herring population dynamics. Finally, in collaboration with DFO, and the Canadian Fisheries Research Network, scientists at the University of British Columbia have initiated the development of an analytical tool to examine herring spatial interactions. Once complete, this tool could be used to assess how the spatial distribution of the stock is affected by harvest. This suite of activities will be a key part of ongoing discussions about renewal of the management framework.

3 SOCIAL, CULTURAL, AND ECONOMIC IMPORTANCE

3.1 Overview

Herring has been an important species for British Columbia's commercial fisheries for over 100 years. They are harvested in the roe, spawn on kelp, food and bait, and special use fisheries, creating employment and contributing significantly to revenue generated from fisheries in BC. The herring fisheries are also extremely important to BC First Nations, both commercially and as traditional food.

BC herring products are predominantly sold to Japan. Other markets of notable significance are China and the US. In recent years, some harvesters have experienced a challenging business environment due to increased competition for export markets and waning international demand. This brief socioeconomic profile will look at viability and market trends, processing and exporting, as well as employment capacity related to herring.

3.2 Viability and Market Trends

Of the four herring fisheries, roe herring is the dominant one (Figure 2). In 2014, the total amount of roe herring landed was approximately 16,529 short tons. This is the highest catch volume recorded in the last 5 years, with a 7% increase from the previous year. Roe herring's share of total herring landed value was 49% in 2014, down from 67% and 65%, in 2012 and 2013, respectively. The primary market for roe products is Japan, where demand has been waning due to economic challenges and changing demographics.

Nearly all of BC's spawn on kelp is exported to Japan. In the past, it was a high value product, but prices have declined significantly from the peak. After many years of steady spawn on kelp production in BC (up to 2004), the volume of landings fell dramatically, hitting a record low of 68 short tons in 2013. However, in 2014, the spawn on kelp harvest level reached 200 short tons, an increase of almost 200% increase, although this remains significantly below the 2003 record of 440 short tons.

Spawn on kelp's share of total herring landed value was 27% in 2014, up from the 20% share in 2013. The price for spawn on kelp peaked in the mid/late 1990s and has been highly variable in recent years. The record low was $4.20/lb in 2010 which recovered to $12.38/lb in 2013, before falling back to $7.99/lb in 2014. BC is also facing significant competition from Alaska. This has created a difficult business environment for BC harvesters and has put pressure on profits.

Since 2011, the food and bait fishery has shown a notable increase in its landed value. Catch volume rose to over 8,000 short tons in 2014, compared to less than 300 short tons in 2010. This has resulted 20% of the total herring landed value being attributed to food and bait, up from a share of less than 1% in the years prior to 2011.

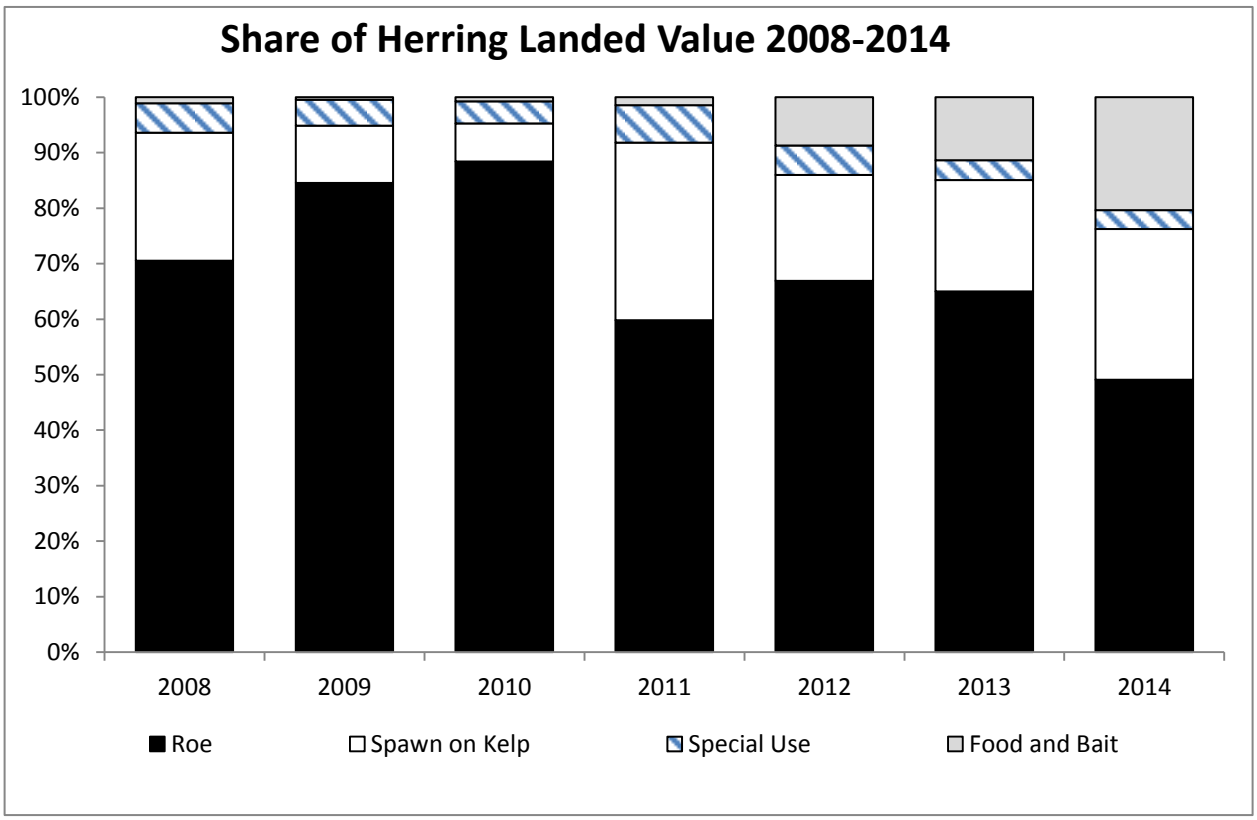


Figure 2: Annual share of herring landed value.

Source: Fisheries and Oceans Canada

3.3 Processing and Exporting

Once processed, herring can be found in many different forms including fresh, spawn on kelp and roe herring. Roe herring, on average, contributes roughly 80% to 90% of the total wholesale value (value after processing, which includes processing of imported raw product).

Nearly all of BC's herring products are sold to Japan, China and the US. Japan is the dominant market, having imported about 65% of BC's herring products, on average, during 2010-2014. Over the same time period, China accounted for approximately 26% and the US held a 6% share. Fiji imported a significant amount of BC herring products in 2014, making up 4% of BC herring total export value in that year. Figure 3 shows BC's export value for herring products by importing country. Total export value has declined since 2009, largely due to lower prices for roe herring. In 2014, BC's exports totaled $ 38 million, up from $34 million in 2013, but a decline of 40% from the real value of $63 million in 2009.

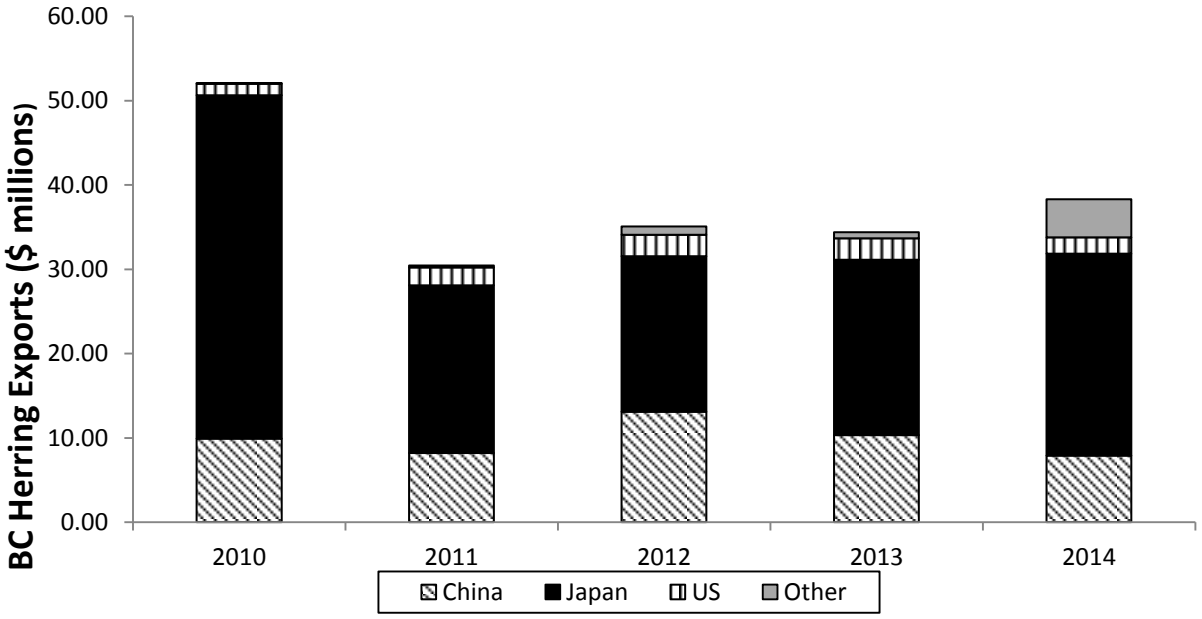


Figure 3: Total herring export value by country adjusted for inflation (2014 dollars).

Source: Statistics Canada

Figure 4 illustrates the total quantity of BC's herring exports for 2010-2014. The volume of exported herring products was 10 million kgs in 2014, up from the 8 million kgs experienced in 2013. This is the highest volume of exported herring since 2005.

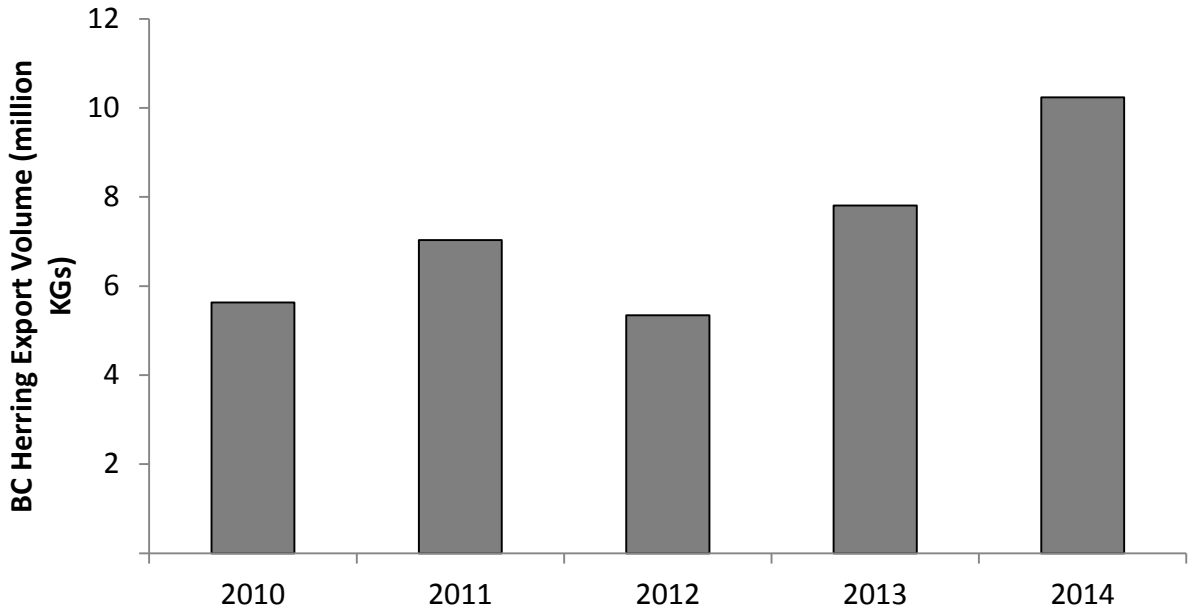


Figure 4: Total quantity of BC domestic herring exports to the world
Source: Industry Canada, online trade information

3.4 Employment Capacity

The latest available data (2011 BC Fish Processing Employment Survey) shows that, on average, an estimated 262 jobs were attributable to the processing of herring[1]. This accounts for approximately 5% of the total annual average fish processing jobs in BC. In comparison to the job estimates in 2008, employment for herring processing has declined about 24% in 2011. Processing operations are primarily focused on the production of roe herring products.

4 MANAGEMENT ISSUES

The following section highlights a number of ongoing, longer-term issues identified with respect to the management of Pacific herring. Shorter-term and/or annual management issues are identified in fishing plans for each fishery (Appendices 7 to 10).

4.1 First Nations

DFO has received reports that some First Nations have been unable to successfully harvest FSC and treaty allocations in their traditional areas. In addition to pre-season and post-season consultation, catch monitoring and co-management programs are being

[1] Ministry of Agriculture 2011 British Columbia Fish processing Employment Survey. Available at: http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/statistics/industry-and-sector-profiles The survey collects the number of employees on the payroll in any given month. The monthly counts were added together and divided by 12 to give an annual average job count. These are not FTE counts as full-time/part-time hours are not part of the survey or calculations.

developed in collaboration with some Aboriginal communities and organizations to improve DFO's understanding of these fisheries and potential barriers to successful FSC and treaty related fisheries.

Some First Nations have also expressed concern regarding the status of herring stocks in their areas. In particular, they have indicated concern that stocks remain at low levels historically and may not be able to support First Nations and commercial fisheries while ensuring long-term conservation and sustainability. In that context, continued efforts to consult and collaborate with First Nations (and others) regarding the management approach for Pacific herring, as well as a broad renewal of the management framework, remain a priority for DFO. For example, the Department has broadened pre-season and post-season consultation with First Nations in order to share science and other information for planning purposes. Technical representatives of three First Nations also participated in a Pilot Technical Working Group which contributed to the *Stock Assessment and Management Advice for BC Pacific Herring: 2015 Status and 2016 Forecast* report for the upcoming season.

4.2 Recreational

There are no identified issues. The harvest and participation rate of recreational fishing for herring is unknown at this time, although it is generally accepted to be minimal. Improvements to catch monitoring programs for recreational fisheries are under development.

4.3 Commercial

4.3.1 Roe Herring

Commercial Fishing Licence Fees: Commercial licence holders and the Herring Industry Advisory Board (HIAB) have identified lowering commercial licence fees for herring as an urgent issue for the fishery. Specifically, licence holders have recommended license fees for BC herring fisheries be adjusted to a more equitable fee structure that aligns with fishing revenue.

Annual fluctuations of coast wide TAC: The roe herring sector requires relatively stable allocation of herring in order to preserve the market from year to year. Global economics and herring catch fluctuations in other countries impact market considerations, and the profitability of the roe herring fishery.

Fishery timing: Ensuring that fisheries are timed to optimize roe quality and that product arrives at processing facilities in a time frame that the offloading and processing of catch does not impact the roe quality is challenging for both industry and DFO Fisheries Management, requiring on-grounds testing and open communication.

In-season management: The dynamic nature of the roe fishery requires extensive in-season management and cooperation from industry to provide opportunity for quotas to be met but not exceeded. Additionally, the Department has no obligation and provides no assurance or guarantee that the maximum or any amount of fish specified in a licence will

be harvested and openings will not be maintained for an indefinite time period. Fishery openings may be spatially and temporally separated to avoid gear conflicts or closed to avoid sensitive areas, for navigational purposes or to provide access to First Nations to harvest fish or spawn for food, social and ceremonial purposes.

4.3.2 Spawn On Kelp

Licence nomination: The restriction on licence nomination (non-transferability) in this fishery has been identified as issue, as some individual fishery participants are no longer able or do not wish to continue to participate in the fishery yet cannot easily exit the fishery.

Herring enclosures: The amount of herring used in a herring enclosure, number of enclosures, disease impacts, mortality estimates, and general management practices for this fishery require further examination to ensure that stock and ecosystem impacts are better understood.

4.3.3 Food and Bait

Weather: The ability to harvest the vessel quotas may be difficult in a given year, due to the timing of this fishery (November to February) to harvest food and bait quality fish.

Management Measures: Based on the scale of the fishery, the Department has implemented enhanced management measures for proper management and control of harvest. The management controls and measures for this fishery will continue to be assessed, and future management adjustments may be made to address emerging fishery developments.

4.3.4 Special Use

Herring enclosures: The amount of herring used in a herring enclosure, number of enclosures, disease impacts, and general management practices for this fishery require further examination to ensure that stock and ecosystem impacts are better understood.

Complexity: The licensing structure for this fishery is complex and requires significant administration by the Department.

Decreasing size-at-age: Decreasing size-at-age presents challenges for a number of markets (e.g. producers of bait, pickled herring food products, zoo and aquarium feed).

4.4 Gear Impacts

Under normal operating circumstances, there is minimal to no environmental impact from gear types used in the Pacific herring fishery. During the roe fishery, efforts are made to conduct fisheries in areas which avoid impact to sensitive spawning habitat, such as eel grass beds. In the spawn on kelp fishery, participants are encouraged to distribute their efforts geographically to avoid local impacts. There is potential for impacts to the benthic habitat in this fishery if poor pond husbandry is exercised and there is large mortality of ponded herring that is not properly disposed.

Abandoned gear (e.g. nets or enclosure webbing) can cause local impacts, and attempts are made in the fishery to remove all such gear once fishing activities have been completed.

There is some ecological impact with respect to marine mammal and sea bird encounters, specifically with ponding operations. Mitigation measures, including use of predator netting, weekly pond inspections, and post-season release of ponded herring, are employed.

4.5 Annual Science Assessment Program

Larocque-relief funding was utilized from 2006 to 2013 to fund the spawn assessment surveys, test fishing and co-management to provide data from spawn measurements and collection of biological samples for stock assessment and forecasting purposes. Amendments to Section 10 of the *Fisheries Act* grant the Minister the authority to allocate fish for the purpose of funding science and fisheries management activities. Fisheries Management and Science will continue to work with partners to assess options for a stock assessment program that is affordable. For 2016, a funding strategy has been identified to support stock assessment activities at similar levels to recent years to support the long-term sustainability of the fishery.

4.6 Aquaculture

On December 19, 2010 DFO assumed the role of lead federal department for sustainable management of fisheries and aquaculture. Under the *Fisheries Act* the *Pacific Aquaculture Regulations* and the *Fishery General Regulations* will govern finfish, shellfish and freshwater aquaculture operations in BC. Cultivation of fish within the province will require a federal aquaculture licence issued under the *Pacific Aquaculture Regulations*, and, where applicable, a federal *Navigable Waters Protection Act* permit and a provincial Crown Lands tenure. Other government agency approvals may also be necessary.

To view the Pacific Aquaculture Regulations: http://laws-lois.justice.gc.ca/eng/regulations/SOR-2010-270/FullText.html

As part of the new aquaculture regulatory framework in British Columbia, DFO is developing Integrated Management of Aquaculture Plans (IMAPs). IMAPs will be modelled after Integrated Fisheries Management Plans, which are used to govern wild harvest fisheries. Consultations with First Nations, interested parties, and stakeholders will be important to the IMAP development 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.htm

Fisheries and Oceans Canada conducts aquaculture assessments on applications for licensing new or significantly amended aquaculture sites. Stakeholders have requested information on the application process as it relates to development of sites in the Baynes Sound area, which is a primary location for herring fisheries. As part of the aquaculture application assessment process, the implications for other existing fisheries, any potential stock conservation concerns and ecosystem impacts will be carefully considered by the department. The Integrated Management of Aquaculture Plans (IMAPs) will help to guide the management of aquaculture in BC. Consultation information relating to these plans is available at: http://www.pac.dfo-mpo.gc.ca/consultation/aquaculture/index-eng.html. It is DFO's intent to move forward with the establishment of Aquaculture Management Advisory Committees, which will provide feedback related to the development of IMAPs

4.7 Depleted Species Concern

Encounters with SARA-listed species (e.g. steller sea lion) and other marine mammals and seabirds occur infrequently in herring fisheries. The Department and the fishing industry collect information on these encounters on behalf of the Species at Risk program and Canadian Wildlife Service of Environment Canada.

4.8 Oceans and Habitat Considerations

4.8.1 International Commitments

Recent commitments to International Agreements such as the Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fishing (FAO 1995), the United Nations Fish Stock Agreement (UN 1996) and the Johannesburg Agreement (UN 2002) have shaped the development of a national Sustainable Fisheries Framework (SFF, DFO 2009) to guide Canada's domestic and international commitments for implementing a precautionary approach into its decision-making framework for fisheries.

4.8.2 Oceans Act

In 1997, the Government of Canada enacted the *Oceans Act*. This legislation provides a foundation for an integrated and balanced national oceans policy framework supported by regional management and implementation strategies. In 2002, Canada's Oceans Strategy was released to provide the policy framework and strategic approach for modern oceans management in estuarine, coastal, and marine ecosystems. As set out in the *Oceans Act*, the strategy is based on the three principles of sustainable development, integrated management, and the precautionary approach.

For more information on the *Oceans Act*, please visit:
http://www.dfo-mpo.gc.ca/oceans/oceans-eng.htm

4.8.3 Sustainable Fisheries Framework

The Sustainable Fisheries Framework is a toolbox of existing and new policies for DFO to sustainably manage Canadian fisheries by conserving fish stocks while supporting the industries that rely on healthy fish populations. The Sustainable Fisheries Framework

provides planning and operational tools that allow these goals to be achieved in a clear, predictable, transparent, and inclusive manner, and provides the foundation for new conservation policies to implement the ecosystem and precautionary approaches to fisheries management. These new policies include:

- Managing the Impacts of Fishing on Sensitive Benthic Areas;
- New Fisheries for Forage Species;
- A Fishery Decision-Making Framework Incorporating the Precautionary Approach;
- Guidance for the Development of Rebuilding Plans under the Precautionary Approach Framework: Growing Stocks out of the Critical Zone;
- Policy on Managing Bycatch; and
- Ecological Risk Assessment Framework (ERAF) for Coldwater Corals and Sponge Dominated Communities.

For more information on the Sustainable Fisheries Framework and its policies, please visit: http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm

Work is progressing on aligning the management of Pacific Herring with the Sustainable Fisheries Framework.

4.8.4 Strategic Framework for Fishery Monitoring and Catch Reporting in Pacific Fisheries

A complete, accurate and verifiable fishery monitoring and catch reporting program is required to successfully balance conservation, ecosystem and socio-economic and other management objectives. Across all fisheries, strategies are being developed to improve catch monitoring programs by clearly identifying information requirements and their supporting rationale for each specific fishery and evaluating the current monitoring programs to identify gaps. Managers and fishery participants will work together to address those gaps over time.

DFO Pacific has released a Strategic Framework for Fishery Monitoring and Catch Reporting in the Pacific Fisheries (April 2012). The purpose of the framework is to provide a common understanding and approach to setting fisheries monitoring and catch reporting standards. The Framework proposes that consistent risk assessment criteria be applied to each fishery to determine the level of monitoring required. To enable consistency, three levels of monitoring have been established, Low, Generic and Enhanced, based on criteria that consider key biological and ecosystem impacts and resource management requirements. Monitoring requirements for the level of information required on catch, effort and ecosystem impacts, as well as statistical quality of catch information and need for independent verification programs are outlined. In general, the principles and strategies within the framework and accompanying monitoring levels focus on the need for verification of catch in all fisheries including, retained target fish stock(s), releases, and bycatch and discards, as well as collecting information on further components of the ecosystem such as habitat impacts. An evaluation of the fishery monitoring program may be used to define and adjust tools to meet specific performance

measures based on the fishery's unique characteristics. In the case of the herring fishery, the risk assessment tool is being used to plan for changes to on-grounds management given the department's resource constraints.

4.8.5 Pacific North Coast Integrated Management Area

As part of Canada's Oceans Strategy, DFO is initiating an integrated management planning process for the Pacific North Coast Integrated Management Area (PNCIMA). The PNCIMA is bounded by the BC-Alaska border, the base of the shelf slope and the mainland, stretching south as far as Campbell River and the Brooks Peninsula, and marks a shift toward a broader ecosystem approach to ocean management.

The PNCIMA initiative will bring stakeholders together to develop an integrated management plan for the region that achieves conservation, sustainable resource use, and economic development goals for oceans and coastal areas, as well as complementing and linking existing processes and tools, including IFMPs.

For more information on PNCIMA, please visit:
http://www.pncima.org

4.8.6 Marine Protected Areas

DFO is responsible for designating Marine Protected Areas (MPAs) under Canada's Oceans Act. Under this authority, DFO has designated two MPAs in the Pacific Region. The Endeavour Hydrothermal Vents, designated in 2003, lie in waters 2,250m deep 250 km southeast of Vancouver Island. The Bowie Seamount, designated in 2008, is 180 km west of Haida Gwaii rising from a depth of over 3,000 m to within 25 m of the sea surface. Work is ongoing to consider MPA designations for other areas along the Pacific Coast, including the Race Rocks area off Rocky Point south of Victoria (currently designated as a Provincial Ecological Reserve) and the Hecate Strait / Queen Charlotte Sound Glass Sponge Reefs.

For more information on marine protected areas, please visit:
http://www.pac.dfo-mpo.gc.ca/oceans/protection/mpa-zpm/index-eng.html

4.8.7 National Marine Conservation Areas (NMCAs):

Gwaii Haanas

Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site (hereafter Gwaii Haanas) is a 5,000 km2 land-and-sea protected area in the southern portion of Haida Gwaii (formerly the Queen Charlotte Islands), approximately 100 kilometres off the north coast of British Columbia. The Haida Nation declared the area a Haida Heritage Site in 1985. The terrestrial part of Gwaii Haanas was designated a National Park Reserve by the Government of Canada soon after, and the two parties have been managing the area cooperatively since 1993. In 2010, following an extensive public consultation process, the marine area of Gwaii Haanas was given the designation of National Marine Conservation Area Reserve.

Gwaii Haanas is managed by the Archipelago Management Board (AMB), a cooperative body made up of equal representation from the Government of Canada (represented by Fisheries and Oceans Canada and Parks Canada) and the Council of the Haida Nation. The Gwaii Haanas marine area is currently managed under the Interim Management Plan and Zoning Plan, which includes “balancing protection and ecologically sustainable use” in its guiding principles. The Zoning Plan identifies six areas, described below, that are closed to commercial and recreational fishing.

Development of a long-term management plan for the Gwaii Haanas marine area is underway and is scheduled to be completed in 2016. This process will take place in consultation with the commercial and recreational fishing sectors through Fisheries and Ocean’s established integrated fisheries planning and advisory processes. Annual fishing plans will be developed in consultation with stakeholders.

Users of the Gwaii Haanas marine area should be aware that adjacent land is managed under the authority of the Canada National Parks Act and its regulations and, as specified in the Gwaii Haanas Agreement (1993), 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). There are specific requirements for visiting the terrestrial portion of Gwaii Haanas, and advanced planning is necessary. Please contact the Gwaii Haanas administration office at 1-877-559-8818 for further information.

Commercial and recreational fishers and harvesters are reminded that extraction of any kind (e.g. fishing, kelp harvest) is not permitted in the areas described below:

(1) Burnaby Narrows
Those waters of Subareas 2-13 and 2-16 inside a line commencing at 52°23.049 minutes N and 131°23.438 minutes W east to 52°23.077 minutes N and 131°22.908 minutes W, following the southern shoreline of Kat island east to 52°23.107 minutes N and 131°22.274 minutes W, then east to 52°23.295 minutes N and 131° 21.34 minutes W, following the western shoreline of Burnaby Island south to 52° 20.951 minutes N and 131°20.509 minutes W, then west to 52°20.733 minutes N and 131°21.072 minutes W, and then north following the eastern shoreline of Moresby Island back to the point of commencement. [Burnaby Narrows]

(2) Louscoone Estuary
Those waters of Subareas 2-33 and 2-34 north of a line drawn from 52°11.836 minutes N and 131°15.658 minutes W east to 52°12.271 minutes N and 131°14.594 minutes W. [Louscoone Estuary]

(3) Flamingo Estuary
Those waters of Subarea 2-37 north of a line drawn from 52°14.456 minutes N and 131°22.234 minutes W southeast to 52°14.246 minutes N and 131°21.489 minutes W. [Flamingo Estuary]

(4) Gowgaia Estuary

Those waters of Subarea 2-41 east of a line drawn from 52°24.944 minutes N and 131°32.138 minutes W southeast to 52°24.238 minutes N and 131°32.024 minutes W. [Gowgaia Estuary]
(5) Cape Saint James
Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line commencing at 51°56.523 minutes N and 131°01.522 minutes W, southwest to 51°55.627 minutes N and 131°02.574 minutes W, then southeast to 51°52.5 minutes N and 130°57.919 minutes W, then south to 51°51.676 minutes N and 130°57.805 minutes W, the southeast to 51°50.349 minutes N and 130°56.442 minutes W, then northeast to 51°51.062 minutes N and 130°54.717 minutes W, then north to 51°53.888 minutes N and 130°55.608 minutes W, then northwest to 51°58.671 minutes N and 130°59.464 minutes W, and then west to 51°58.743 minutes N and 131°00.606 minutes W, and then following the southern shore of Kunghit Island west to the point of commencement. [Cape Saint James]

(6) SGang Gwaay
Those waters of Subareas 2-31 and 142-1 inside a 3km radius from the centre point on Anthony Island located at 52°05.655 minutes N and 131°13.178 minutes W. [SGang Gwaay]

Southern Strait of Georgia

Parks Canada, in partnership with the Government of British Columbia, launched a feasibility assessment for an NMCA reserve in the southern Strait of Georgia in 2004. Since then, consultations with First Nations, key stakeholders, communities and the public have occurred. Informed by those discussions, a proposed boundary for consultation was announced by the provincial and federal Ministers of Environment in 2011. Since 2011, the two governments have been consulting with First Nations, local governments and industry. A preliminary concept is currently being developed to help advance consultations on the feasibility assessment. If the results of the feasibility assessment indicate that establishment of an NMCAR is practical and feasible, an establishment agreement between the Governments of Canada and British Columbia will be negotiated and an interim management plan developed. If the NMCAR is determined to be feasible, further consultations related to establishment agreements and Aboriginal rights will also take place with First Nations. Commercial and recreational fishing sectors, communities, landowners, recreation and environmental organizations and other stakeholders will also have opportunities to provide input to the development of the interim management plan. More information on the proposed National Marine Conservation Area Reserve in the Southern Strait of Georgia is available on the internet at: www.pc.gc.ca/eng/progs/amnc-nmca/dgs-ssg/index.aspx

4.8.8 Species at Risk Act

The *Species at Risk Act* (SARA) came into force in 2003. The purposes of the *Act* are "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."

In addition to the existing prohibitions under the *Fisheries Act*, under the SARA it is illegal 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. 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.

To view the list of endangered, threatened, and special concern species currently listed under Schedule 1 of SARA, please visit:
http://www.sararegistry.gc.ca/species/schedules_e.cfm

The formal SARA legal listing process begins when the Minister of Environment issues a response statement, detailing how he intends to proceed with the COSEWIC species designations. Response statements can be found at:
http://www.sararegistry.gc.ca/sar/listing/response_e.cfm

Future Committee on the Status of Endangered Wildlife Species Assessments
COSEWIC was formed in 1977 to provide Canadians with a single, scientifically sound classification of wildlife species at risk of extinction. COSEWIC began its assessments in 1978 and has met each year since then to assess wildlife species.

With the implementation of SARA, COSEWIC has been established as an independent body of experts responsible for identifying and assessing wildlife species considered to be at risk. This is the first step towards protecting wildlife species at risk. Subsequent steps include COSEWIC reporting its results to the Canadian government and the public, and the Minister of the Environment's official response to the assessment results. Wildlife species that have been designated by COSEWIC may then qualify for legal protection and recovery under SARA.

For a full list of species identified and assessed by COSEWIC, please visit:
http://www.cosewic.gc.ca/eng/sct1/index_e.cfm

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. The primary threats to shark species have been identified as bycatch and entanglement. In order to address the 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 specifies mitigation measures in accordance with SARA permit requirements. Additionally, two 'Code of Conduct for Shark Encounters' documents have been developed to reduce the mortality of Basking Shark, as well as other Canadian Pacific shark species such as

Bluntnose Sixgill and Tope Shark resulting from entanglement and bycatch in commercial, aquaculture, and recreational fisheries. These guidelines include boat handling procedures during visual encounters with Basking Sharks, as well as 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: http://www.pac.dfo-mpo.gc.ca/fm-gp/species-especes/shark-requin/conduct_shark-conduite_requin-eng.html

Code of conduct for Basking Sharks: http://www.pac.dfo-mpo.gc.ca/fm-gp/species-especes/shark-requin/conduct_basking-conduite_pelerin-eng.html

Whale and Leatherback Turtle Sightings
DFO welcomes assistance in the reporting of any whale or leatherback turtle sightings or entanglement. Sightings for leatherback turtles and many whale species are infrequent in Pacific Canadian waters, and the collection of sightings data is very useful to scientists in determining population size and distribution. Establishing this information can in turn help in the recovery planning under SARA.

To report a whale sighting, contact the BC Cetacean Sighting Network or BC Sea Turtle Sighting Network (see Contacts).

4.8.9 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 First Nations' aspirations to be more involved 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. DFO has acquired a total of 129 roe herring gillnet and 7 roe herring seine gillnet licence eligibilities through the PICFI program. The PICFI program has been extended until March 31, 2016 at which time the federal government will have invested $263.5 million in this initiative.

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

5 OBJECTIVES

5.1 National

DFO aims to:

- Meet conservation objectives and ensure healthy and productive fisheries and ecosystems

- Base management decisions on the best available scientific information
- Manage First Nations fisheries for FSC purposes in a manner consistent with the Sparrow Decision (SCC 1990) and other relevant court decisions (*R v. Gladstone 1996 and Ahousaht*) and treaty obligations
- Work collaboratively with commercial and recreational sectors to provide fishing opportunities in a manner that ensures the long term sustainability of the resource
- Provide stability and predictability in fisheries management and improved governance through an open and transparent consultation process
- Foster shared stewardship
- Manage commercial fisheries to improve economic performance, provide certainty for participants and to optimize harvest opportunities

5.2 Pacific Region

The overall goal of Fisheries Management in the Pacific Region is the conservation of Canada's fisheries resources to ensure sustainable resource utilization and generate economic prosperity, accomplished through close collaboration with resource users and stakeholders based on shared stewardship consistent with treaty and Aboriginal rights. Fisheries Management is responsible for management of the Aboriginal, commercial, and recreational fishing in the Pacific Ocean and creating the conditions for a vibrant and innovative aquaculture industry.

Fisheries Management will continue to develop and implement the Sustainable Fisheries Framework by integrating the precautionary and ecosystem approach frameworks into IFMPs with the goal of protecting vulnerable marine and freshwater ecosystems and vulnerable stocks from significant adverse impacts, and to help ensure long term sustainability and support economic prosperity.

A management approach that incorporates elements of the Precautionary Approach is essential to support sustainable management of herring fisheries.

Fisheries Management will continue to work on development of ecosystem objectives for the Gwaii Haanas Management Plan. As part of its integrated fishery planning process, the department has asked First Nations, stakeholders and various groups to discuss their objectives for the herring fishery. This type of information sharing allows the department to gain a better understanding of the various objectives for the fishery and how different groups' objectives align with departmental objectives and are considered in fishery planning.

5.3 Pacific Herring Resource Management

Objectives for management of Pacific herring including stock conservation and sustainable harvest, ecosystem processes, renewal of the management framework, consultation, and social, cultural, and economic considerations are outlined below.

5.3.1 Stock Conservation and Sustainable Harvest

The biological objective is to conserve and protect Pacific herring stocks while providing sustainable harvest opportunities through the application of decision rules and management measures.

5.3.2 Ecosystem Processes

The ecosystem objective is to conserve and protect Pacific herring stocks and their habitat, as well as the management of ecosystem impacts, using the best available science, application of the precautionary approach and through comprehensive monitoring of Pacific herring fisheries.

5.3.3 Renewal of the Management Framework for Pacific Herring

Renewing the current management framework for Pacific herring to better align with the Sustainable Fisheries Framework is a key priority for DFO. In consultation with First Nations, industry and stakeholders, this process will include the identification of new management objectives and reference points for Pacific herring, as well as evaluating the performance of current and alternative decision rules at meeting these management objectives. The renewal process will also look at operational management of the fishery, including commercial licence fees, on-grounds monitoring and the current licensing and quota system.

A Science Advisory Report, *Candidate Limit Reference Points As A Basis For Choosing Among Alternative Harvest Control Rules for Pacific Herring (Clupea pallaii) In British Columbia* was presented at a CSAS meeting in May 2015. At the November 2015 meeting of the IHHPC, it was recommended an integrated steering committee be created to help guide and inform the renewal process, as well as a technical committee to provide technical support (potentially building on the Pilot Technical Working Group created in 2015). IHHPC also recommended establishment of a working group to review and provide advice regarding the coast-wide stock assessment program for Pacific herring.

DFO will be moving forward with Pacific Herring Renewal in 2015-16, including the establishment of new governance processes, in addition to bilateral consultations and engagement with First Nations, industry and stakeholders.

5.3.4 Consultation

An open and transparent consultation process will be maintained for management issues related to Pacific herring fishery, including the annual development of an IFMP, long-term direction of the fishery, and to increase information posted on the DFO consultation website to allow for wide review of all relevant material.

5.3.5 Social, Cultural and Economic Considerations

First Nations

DFO will continue to provide opportunities for First Nations to harvest fish for food, social, and ceremonial (FSC) purposes, in a manner consistent with the *Sparrow* Decision (SCC 1990) and for treaty and aboriginal commercial fisheries.

For more information see Appendix 5 or visit: http://www.pac.dfo-mpo.gc.ca/abor-autoc/index-eng.html

Recreational

DFO will continue to provide opportunities for a recreational fishery for Pacific herring. For more information, see Appendix 6.

Commercial

DFO will work collaboratively with commercial fishery participants to:

- Provide reasonable fishing opportunities in a manner that ensures long-term sustainability of the resource.
- Monitor fish stocks and fish harvest to develop knowledge of the stock.

5.3.6 Compliance

Key priorities for the Pacific herring fishery for DFO Conservation and Protection are:

- Ensure fisheries are promulgated in an orderly manner and in compliance with legislation and licence conditions.
- Ensure compliance with the herring fishery monitoring programs.
- Provide regular reports on enforcement and compliance for this fishery through the Record of Management Strategies report (RMS), the Fisheries Enforcement Activity Tracking System (FEATS), and through the Departmental Violation System (DVS).

For more information, see Appendix 11.

6 ACCESS AND ALLOCATION

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

6.1 First Nations

Aboriginal harvest of herring for FSC purposes may occur coast wide where authorized by a communal licence. DFO will provide First Nations with priority access to the resource for FSC purposes, and FSC allocations for each Major Stock Assessment Area are determined through bilateral discussions.

Fisheries chapters in modern First Nation treaties may articulate a treaty fishing right for FSC purposes that could be protected under Section 35 of the Constitution Act, 1982. Commercial access may be provided either through the general commercial fishery or a Harvest Agreement, which is negotiated at the same time as the treaty and is referenced in the treaty, but is not protected under the Constitution Act.

Four modern treaties (Nisga'a Final Agreement, Tsawwassen First Nation Final Agreement (TFA), Maa-nulth First Nations Final Agreement (MNA) and Tla'amin Final Agreement have been ratified in British Columbia. These agreements articulate a treaty right to food, social and ceremonial harvest of fish and describe the role for First Nations in fisheries management.

The B.C. Supreme Court found that the plaintiffs (five Nuu-chah-nulth First Nations located on the West Coast of Vancouver Island; Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht) have what the Court recognized as "aboriginal rights to fish for any species of fish within their Fishing Territories and to sell that fish." The Department continues to work with the First Nations pursuant to the rights found by the Courts', to find "the manner in which the plaintiffs' rights can be accommodated and exercised without jeopardizing Canada's legislative objectives and societal interests in regulating the fishery."

The Supreme Court of Canada found in its *Gladstone* decision that the Heiltsuk First Nation had an Aboriginal right to commercially fish herring spawn-on-kelp (SOK). The Heiltsuk currently hold nine SOK licences in the Central Coast area, with an annual quota of 240,000 pounds. This SOK is harvested using the preferred means of the Heiltsuk, which is open ponding.

6.2 Recreational

Recreational harvest of herring may occur coast wide, and requires a British Columbia Tidal Waters Sport Fishing licence. Herring may be fished for recreational purposes year-round. The daily maximum sport limit for herring is 20 kg, with a two-day possession limit of 40 kg.

6.3 Commercial

The harvest level for herring in each Major and Minor Stock Assessment Area is based on science advice (provided through the CSAS process) and is derived from estimates of annual stock biomass. After providing for FSC needs, a commercial coast-wide TAC is set and allocations distributed across the four commercial herring fisheries by the Department, and proposed allocations are discussed with commercial fishery representatives through consultation. The annual distribution of TAC is presented as an expected use table, which may be viewed in Appendix 4.

7 MANAGEMENT MEASURES FOR THE DURATION OF THE PLAN

See Appendix 5 to 10 for information regarding the Aboriginal Fishing Plan, Recreational Fishing Plan, and Commercial Fishing Plans for each commercial herring fishery, including:

- Total Allowable Catch (TAC);
- Fishing Seasons/Areas;
- Closed Areas
- Control and Monitoring of Removals;
- Decision Rules;
- Licensing; and
- Fishery Monitoring Programs.

8 SHARED STEWARDSHIP ARRANGEMENTS

Stakeholders and First Nations also work closely with Fisheries Management staff in pre-season, in-season, and post-season processes, providing expert knowledge and specialized experience to inform management decisions and cooperatively develop solutions to management issues. In addition, the Herring Conservation and Research Society (HCRS) plays a strong role in annual management of the roe herring fishery by conducting a roe quality test program and has made significant contributions over time to support research in the area of stock identification.

9 PERFORMANCE / EVALUATION CRITERIA

9.1 National

- Pacific herring conservation objectives are met such that fisheries and ecosystems are healthy and productive.
- Provide harvest opportunities in a manner consistent with the *Sparrow* Decision (SCC 1990) and other relevant court decisions and treaty obligations.
- Reasonable effort has been made to provide opportunities for economic prosperity and still maintain conservation objectives.
- Consultation and management processes are stable, transparent, and predictable.

9.2 Pacific Region

- Execution of the Pacific herring fisheries in accordance with the requirements outlined in the integrated fisheries management plan (IFMP).
- Ensure monitoring program provides accurate information on catch and effort and is designed to provide information necessary for effective management of the herring resource. This includes ensuring the required level of fisheries monitoring to support the fishery and conservation objectives.

- Proper controls in place for management and control of the fisheries and the conservation and protection of fish.
- Stakeholder engagement for informed management decisions and cooperatively developed solutions to issues related to management of Pacific herring fisheries.
- Review of progress on renewal of the herring management framework through a collaborative process.

9.3 Pacific Herring Resource Management

9.3.1 Stock Conservation, Sustainable Harvest, Ecosystem Processes

- Application of a balanced, precautionary approach with a maximum target harvest rate of 20% in the Strait of Georgia and Prince Rupert District, 7% in Central Coast and 10% for the minor stock areas.
- Collection of accurate and timely catch, effort, landings, and other relevant information (e.g. marine mammal and seabird encounters) by geographic location and time period.
- Enact and enforce regulations through licences and licence conditions.
- Monitor compliance of the various herring monitoring programs funded by individual licence eligibility holders.
- Through biological sampling information collect data to assist in management decisions and monitor size and age distribution of herring caught.

9.3.2 Consultation

- Hold pre-season planning meetings and seek stakeholder and First Nations advice on development of the IFMP allowing up to 30 days for review and feedback on IFMP draft content.
- Facilitate consensus building among First Nations and stakeholders on issues related to the management of the fishery.
- Hold post-season meetings to review issues encountered and to develop options for addressing and resolving them.

9.3.3 Social, Cultural, and Economic Considerations

First Nations

- DFO will consult with First Nations through established processes to develop fishing plans to authorize fisheries and conduct post-season reviews.

Commercial

- Through post-season reviews and data analysis, assess catch monitoring, management measures, timing of fishing season, and fishing areas.

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Aboriginal Traditional Knowledge (ATK)	Knowledge that is held by, and unique to Aboriginal peoples. It is a living body of knowledge that is cumulative and dynamic and adapted over time to reflect changes in the social, economic, environmental, spiritual, and political spheres of the Aboriginal knowledge holders. It often includes knowledge about the land and its resources, spiritual beliefs, language, mythology, culture, laws, customs and medicines.
Abundance	Number of individuals in a stock or a population.
Age Composition	Proportion of individuals of different ages in a stock or in the catches.
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 Department's Internet site at: www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap_e.htm
Biomass	Total weight of all individuals in a stock or a population.
By-catch	The unintentional catch of one species when the target is another.
Canadian Science Advice – Pacific (CSAP)	Formerly named PSARC, CSAP is the Pacific Regional body responsible for review and evaluation of scientific information on the status of living aquatic resources, their ecosystems, and on biological aspects of stock management.
Canadian Science Advisory Secretariat (CSAS)	Coordinates the peer review of scientific issues for DFO.
Catch Validation Program	A program designed to monitor, record, and verify catches.
Committee on the Status of Endangered Wildlife in Canada (COSEWIC)	Committee of experts that assess and designate which wild species are in some danger of disappearing from Canada.
Communal Commercial Licence	Issued to First Nation organizations pursuant to the Aboriginal Communal Fishing Licences Regulations for participation in the general commercial fishery. Licences issued are equivalent to the capacity of licences that have been retired under the Treaty and Aboriginal Policy Directorate Licence Retirement/Allocation Transfer Program.
Communal Licence	A licence issued to First Nations organizations under Section 4 of the Aboriginal Communal Fishing Licences Regulations, pursuant to the Fisheries Act, to carry on fishing and related activities.
Container	A bag, box, tray, tote, frozen block or anything that contains fish, but not a herring enclosure.

Cut-off	In Major Stock Assessment areas, the Cut-off levels are established at 25% of the unfished biomass, as determined by simulation analyses. Areas are recommended to be closed to commercial fishing when the stock is forecast to be below the Cut-off.
Designated service provider	A private sector company authorized by the Department to collect and collate information for the purpose of assisting vessel masters in meeting their conditions of licence with regards to reporting of information.
DFO	Department of Fisheries and Oceans (Canada).
Dockside Monitoring Program (DMP)	A monitoring program that is conducted by a company that has been designated by the Department, which verifies the species composition and landed weight of all fish landed from a commercial fishing vessel.
Ecologically and Biologically Significant Area (EBSA)	An EBSA is an area that has particularly high Ecological or Biological Significance, and should receive a greater-than-usual degree of risk aversion in management of activities in order to protect overall ecosystem structure and function within the LOMA.
Ecosystem-Based Management	Taking into account of species interactions and the interdependencies between species and their habitats when making resource management decisions.
Encounter	An interaction between a marine mammal or sea bird and fishing gear (including herring enclosures). Encounters are described as a system breach, accidental drowning, or entanglement and must be reported as soon as an encounter is discovered to the DFO Reporting Hotline (1-800-465-4336).
Entanglement	An entanglement occurs when a marine mammal or sea bird is caught, ensnared in the infrastructure (nets) of a herring enclosure or fishing gear which results in drowning.
Fishing Effort	Quantity of effort using a given fishing gear over a given period of time.
Fishing Mortality	Death caused by fishing, often symbolized by the mathematical symbol F.
Food, Social and Ceremonial (FSC)	A fishery conducted by Aboriginal groups for food, social and ceremonial purposes.
Harvest Quotas	A fixed amount of catch provided as an opportunity for harvest to a licensed party or vessel.
Herring Industry Advisory Board (HIAB)	An advisory body comprised of representatives from the commercial herring sector.

Herring Conservation and Research Society (HCRS)	A non-profit society formed to promote and enhance the conservation of herring stocks on the west coast of Canada.
Integrated Herring Harvest Planning Committee (IHHPC)	A representative cross-sectoral advisory process for integrated harvest planning and post-season review.
Intertidal	The area of the ocean shoreline located between the highest high water and lowest low water tidal levels.
Landed Value	Value of the product when landed by the licensed vessel.
Landing	Quantity of a species caught and landed. Harvested fish transferred from a vessel to land.
Large Ocean Management Area (LOMA)	Integrated management planning in Canada is focused in five high priority LOMAs, these are: Placentia Bay and the Grand Banks, the Gulf of St. Lawrence, the Scotian Shelf, the Beaufort Sea and the Pacific North Coast.
Maximum Sustainable Yield (MSY)	Largest average catch that can continuously be taken from a stock.
MCMC	Markov Chain Monte Carlo
Natural Mortality	Mortality due to natural causes, symbolized by the mathematical symbol M.
National Online Licensing System (NOLS)	The online licensing system that allows harvesters to complete licensing transactions with the Department over the Internet. This includes renewal of licences, payment of fees and printing of licence and licence conditions.
Observer	An individual who has been designated as an Observer by the Regional Director General for the Pacific Region of DFO pursuant to section 39 of the Fishery (General) Regulations and in the employ of a service provider company that has been certified by the Canadian General Standards Board (CGSB) for Dockside Monitoring.
Observer Coverage	When a licence holder is required to carry an officially recognized observer onboard their vessel for a specific period of time to verify the amount of fish caught, the area in which it was caught and the method by which it was caught.
Pacific Fishery Licensing Unit (PFLU)	DFO unit that processes and issues fishery licence applications through the NOLS. For more information on the PFLU, please visit: http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm
Pelagic	Living in the surface or middle depths of the sea.
Population	Group of individuals of the same species, forming a breeding unit, and sharing a habitat.

Precautionary Approach	Set of agreed cost-effective measures and actions, including future courses of action, which ensures prudent foresight, reduces or avoids risk to the resource, the environment, and the people, to the extent possible, taking explicitly into account existing uncertainties and the potential consequences of being wrong.
Recruitment	Amount of individuals becoming part of the exploitable stock e.g. that can be caught in a fishery. The process whereby young animals are added to a fishable stock or population.
Research Survey	Survey at sea, on a research vessel, allowing scientists to obtain information on the abundance and distribution of various species and/or collect oceanographic data. E.g.: bottom trawl survey, plankton survey, hydroacoustic survey, etc.
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.
Spawner	Sexually mature individual.
Spawning Stock	Sexually mature individuals in a stock.
Species at Risk Act (SARA)	The Act is a federal government commitment to prevent wildlife species from becoming extinct and secure the necessary actions 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 Assessment	Scientific evaluation of the status of a species belonging to a same stock within a particular area in a given time period. 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.
Stock Assessment Area	Stock assessment groupings used since 1993 by the PSARC to monitor, assess, forecast and harvest herring.
Substrate	The ground (often the ocean bottom) and its composition, in or on which animals live.
Subtidal	A portion of the bottom of the ocean that is not exposed at low tide stages. The ocean bottom at elevations below low water or chart datum.
Ton	Short ton, 2000 lbs., traditionally used as a unit of measure by fish harvesters in British Columbia.
Tonne	Metric tonne, which is 1000kg or 2204.6 lb.

Total Allowable Catch (TAC)	Total allowable catch: the amount of catch that may be taken from a stock, determined by analytical procedures, to achieve management objectives.
Total Validated Landings	The sum of all landed herring which have been validated by the Validation Program.
Traditional Ecological Knowledge (TEK)	A cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.
Validation	The verification, by an observer, of the weight of fish landed.
Year-class	Individuals of a same stock born in a particular year. Also called "cohort".

APPENDIX 1. POST-SEASON REVIEW

Resource Management Performance Evaluation

Stock Conservation and Ecosystem Processes

Performance Measure	DFO Activity
Application of a conservative harvest rate to a maximum of 20% to each of the available major stock assessment regions in conjunction with a commercial fishing cutoff level of 25% of the unfished biomass and 10% of the predicted spawning stock biomass in minor stock areas	All major stock assessment regions were forecast to be above cutoff with a greater than 50% probability under a zero catch option. The existing herring harvest control rule of a 20% harvest rate when above cutoff was applied to Prince Rupert District and Strait of Georgia and a more precautionary harvest rate of 10% was applied to Haida Gwaii, Central Coast and West Coast of Vancouver Island. A harvest rate of 10% was applied to minor stock areas. (See Table 1.1) Provision of advice for potential harvest levels was in the form of decision tables to accommodate uncertainty in decision making.
Collection of accurate and timely catch, effort, landings, and other relevant information (e.g. marine mammal and seabird encounters) by geographic location and time period.	Each of the four herring fisheries were monitored by an industry-funded monitoring program which collects information on each of the listed metrics and provides regular updates to DFO throughout the fishing season.
Proper management and control of fisheries through legislation and licence conditions.	Management and control of fisheries was achieved by measures such as at sea observers, dockside monitoring, hail requirements and ongrounds management.
Monitor compliance of the herring fisheries with monitoring programs funded by individual licence eligibility holders.	Lead resource managers and C&P staff worked closely with the service provider and industry. Monitoring requirements were tailored to address fishery specific compliance issues and few occurrences were reported.
Through biological sampling information, collect data to assist in management decisions and monitor size and age distribution of herring caught.	Fisheries Management coordinated with Science and industry to collect biological samples through the test-fishing program and other opportunities to augment samples collected through scientific surveys.

Table 1.1: Management decisions for 2014/15 harvest opportunities in major and minor stock assessment areas (short tons)

Area	Forecast	Cut-Off	Harvest Option	Management Decision
2W	3,680	NA	375	Area is open to commercial fishing with a harvest level having a 50% probability of exceeding a 10% target harvest rate
HG	19,053	9,360	1,984	Area is open to commercial fishing with a harvest level having a 50% probability of exceeding a 10% target harvest rate
PRD	28,407	17,030	5,897	Area is open to commercial fishing with a harvest level having a 50% probability of exceeding a 20% target harvest rate
CC	30,573	16,599	3,153	Area is open to commercial fishing with a harvest level having a 50% probability of exceeding a 10% target harvest rate
SOG	192,188	39,065	40,565	Area is open to commercial fishing with a harvest level having a 50% probability of exceeding a 20% target harvest rate
WCVI	34,728	15,913	3,583	Area is open to commercial fishing with a harvest level having a 50% probability of exceeding a 10% target harvest rate
Area 27	1,660	NA	150	Area is open to commercial fishing with a harvest level having a 50% probability of exceeding a 10% target harvest rate

Consultation

Performance Measure	DFO Activity
Seek stakeholder and First Nations advice on development of the IFMP allowing 30 days for review and feedback on IFMP draft content.	The Canadian Science Advisory Pacific (CSAP) held a meeting September 3 and 4, 2014 to peer review the 2014 stock assessment report and forecast advice for 2014/2015 herring fisheries. Meetings were held with the Herring Industry Advisory Board (HIAB) to discuss IFMP development and the roe herring and food and bait fishery catch levels on September 11, September 18 and December 18. Stakeholders and First Nations were consulted through the Integrated Herring Harvest Planning Committee (IHHPC), which was convened on September 19,

Performance Measure	DFO Activity
	2014 for pre-season planning with a teleconference to continue planning and review main elements of the draft IFMP on December 22, 2014. Additional bilateral meetings were held with First Nations throughout the fall and winter to discuss development of the IFMP. Due to challenges with the timing of decisions on harvest levels and the time required to develop fishing plans based on these decisions, the draft consolidated IFMP was made available on January 2, 2015 with the approval of the plan on February 13, 2015.
Facilitate consensus building among stakeholders on issues related to the management of the fishery.	Facilitated through multiple IHHPC meetings in 2014/2015, First Nations and HIAB consultations to collect input for consideration in decision-making. Development and distribution of the expected use table and supporting documents (harvest options table and decision tables) to explain decision making for 2014/2015 season. Formation of the Pilot Technical Working Group comprised of representatives from three First Nations and industry to foster a better understanding of the stock assessment program. An additional CSAS meeting was held in May, 2015 to present a paper on candidate limit reference points and a closed-loop simulation modelling approach and limit reference point workshops were held with some First Nations and industry.
Hold post-season meetings to review issues encountered and to develop options for addressing and resolving them.	On May 8, 2015, the IHHPC convened for a post-season review to examine any issues raised during the fishing season and provide information to outline DFO's approach and to develop options and ideas to resolve any issues in future seasons. The Department shared spawn data and biological information prior to the

Performance Measure	DFO Activity
	November 2015 Pacific Herring Science plenary meeting with First Nations and IHHPC members.
Post meeting notes and meeting presentations as soon as is possible following consultation meetings.	Presentations and other materials were made available to participants via email.

Social, Cultural, and Economic Considerations

First Nations

Performance Measure	DFO Activity
DFO will consult with First Nations in order to determine their FSC requirements. In accordance with the Sparrow Decision (SCC 1990), and other court decisions, First Nations will be authorized to fish for FSC purposes through use of communal licences.	DFO consulted with First Nations in meetings and in bilateral discussions in the fall of 2014. First Nations were issued Communal Fishing Licences to authorize fishing for herring and spawn on kelp or boughs. Meetings were also held in-season and post-season to review and discuss issues and concerns.

Commercial

Performance Measure	DFO Activity
Through post-season reviews and data analysis, assess catch monitoring, management measures, timing of fishing season, and fishing areas.	The IHHPC meets annually post season to conduct a post-season review of the fishery. In addition, DFO meets with HIAB to discuss the roe herring fishery performance in detail, and undertakes further consultations with other industry stakeholders. At this time, a review of the catch monitoring programs is also performed with the Service Provider.

Season Summaries

Roe Herring

	Seine Fishery				
	Strait of Georgia	**Prince Rupert District**	**West Coast Vancouver Island**	**Haida Gwaii**	**Central Coast**
Expected Use	15,440 tons	800 tons	2,000 tons	800 tons	800 tons

Quota Issued	15,440 tons	800 tons	2,000 tons	800 tons	800 tons
Landings	9,278 tons	812 tons	0	0*	689 tons
# Pools	8	1	1	1	1
# Licences	216	8	7	2	9
Tons per licence	71.481 tons	100 tons	285.714. tons	400 tons	88.889 tons
Open	Feb. 24, 2015 17:00	Mar. 21, 2015 07:53	Mar. 8, 2015 16:00	No fishery	Mar. 22, 2015 16:48
Closed	Apr. 9, 2015 16:00	Mar. 23, 2015 21:38	Mar. 9, 2015 10:00		Mar. 23, 2015 11:30

*Herring fisheries in HG remained closed due to an interlocutory injunction.

Gillnet Fishery

	Strait of Georgia	**Prince Rupert District**	**Central Coast**	**WCVI**
Expected Use	13,975 tons	1,200 tons	600 tons	1,000 tons
Quota Issued	13,975 tons	1,200 tons	600 tons	1,000 tons
Landings	4,107 tons	1,092 tons	0	0
# Pools	22	5	3	3
# Licences	1,028	125	60	15
Tons per licence	13.594 tons	9.600 tons	10 tons	66.667 tons
Open	Feb. 28, 2015 14:30	Mar. 22, 2015 08:00	Mar. 31, 2015 12:00	No opening
Closed	Apr. 8, 2015 16:00	Mar. 27, 2015 16:30	Mar. 31, 2015 20:00	

Spawn on Kelp

	Prince Rupert District	**Central Coast**
Quota Issued	137,701 lbs	325,410 lbs
Landings	84,065 lbs	169,470 lbs
# Licences	8	13
Lottery Date	-	-
# of closed ponds	15	7

	Prince Rupert District	Central Coast
# of open ponds	-	N/A
Location(s)	Pearl Harbour, Robert Island, Tugwell, Island Point, Butler Cove	Kitasu Bay, portions of Area 7

Food and Bait

	Strait of Georgia	Prince Rupert District
Quota	9,085 tons	500 tons
Landings	7,931 tons	*N/A
# Licences Available	242/9	10
Tons per licence	35.123/65 tons	50 tons
# Licences Issued	210	10
Location(s)	Qualicum, Stuart Channel, Nanaimo, Lambert Channel, Nanoose	Chatham Sound

* Cannot be displayed for privacy reasons.

Special Use

The Special Use season runs from November 7, 2014 to November 6, 2015, and landings from ponded operations may occur up to December 1, 2015.

Allocation, quota issued, and landings by licence category.

Licence	Category	Area	Expected Use	Quota Issued	Landings
ZX	Personal Use	SOG	25	2	*N/A
		PRD	10	0	0
ZY1	Sport Bait	SOG	517	483	481
		PRD	50	0	0
ZY2	Commercial Bait	PRD	70	0	0
ZY3	Human Food & Bait	SOG	150	150	*N/A
ZY4	Zoo & Aquarium	SOG	110	110	*N/A
TOTAL			932	745	710

* Cannot be displayed due to privacy reasons

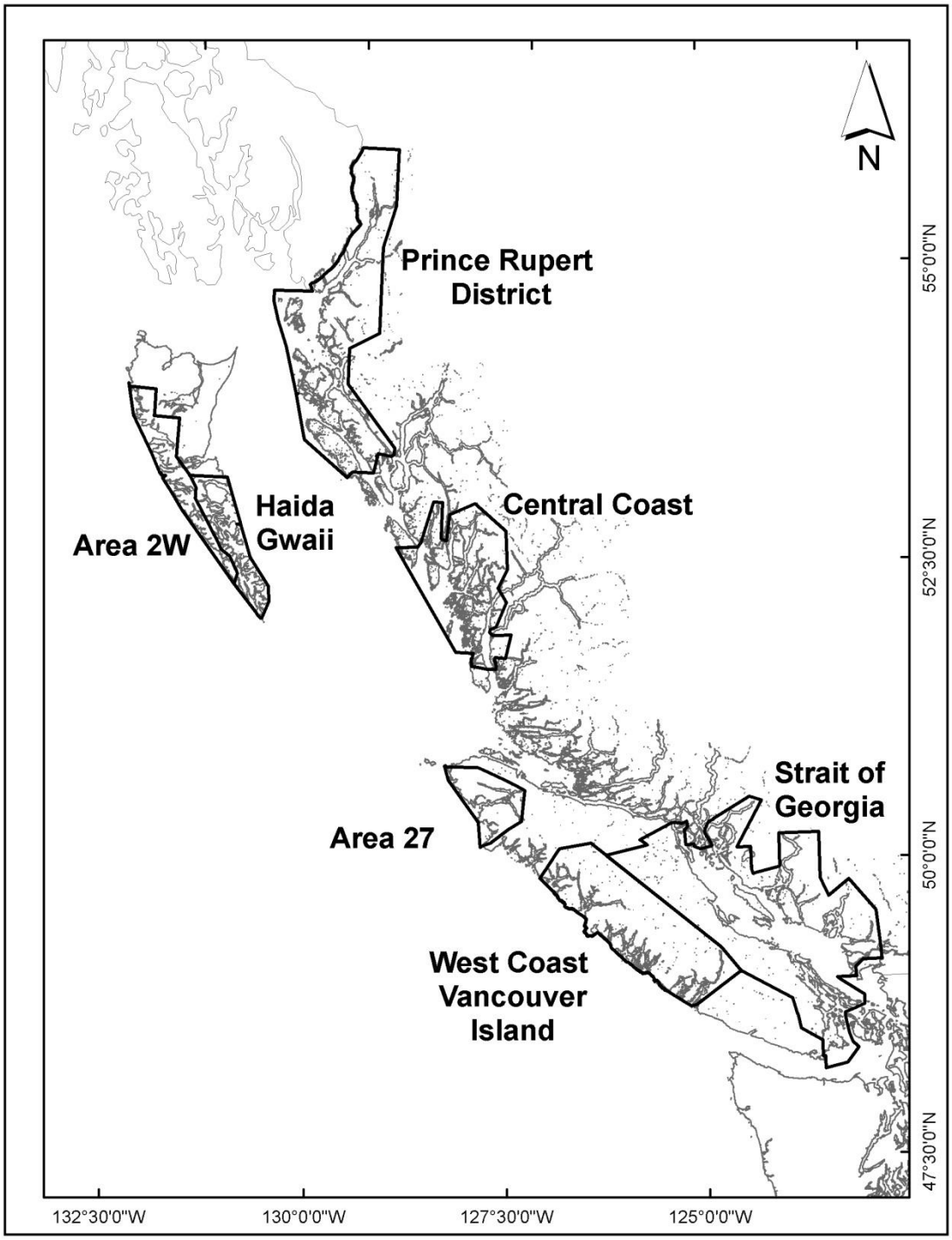
Number and location of ponding operations

	Fresh/Frozen	Live	Total	Comments
# of ponding operations	2	1	3	
Pond locations	Area 13-7 (Deepwater Bay)	Area 16 (Secret Cove)		
# of ponds	12	1	13	
# of ponds per operator	6	1		
Size of Ponds	Large: 100x100x50 feet (500,000 cubic feet) Medium: 50x50x50 feet (125,000 cubic feet)	Small: 10x20x12 feet (2,400 cubic feet) or less		Majority of ponds are medium in size

Number of vessels, licences issued, and licence eligibility holders

Licence	Number of Vessels	Number of Licences	Number of Licence Eligibility Holders
ZX	2	2	2
ZY1	2	58	8
ZY3	1	3	1
ZY4	1	1	1

APPENDIX 2. MAP OF FISHING AREA



APPENDIX 3. STOCK ASSESSMENT RESULTS

Forecasting the potential catch that can be safely removed from our herring stocks requires an assessment of current abundance and an understanding of the factors affecting their dynamics. Herring are strongly affected by annual variations in environmental conditions, which produce large fluctuations in recruitment and subsequent stock abundance. An assessment of current abundance for all stock areas is obtained using an integrated statistical catch-age model (ISCAM). Forecast estimates of spawning biomass are projected based on estimated survival, growth and recruitment, to forecast abundance for 2016. The herring assessment model is driven by four sources of data: commercial catch landings, a spawn survey index, age composition data and weight at age, for the period of 1951-2015.

Stock Assessment Summary for the Current Year

Projected median spawning biomasses assuming zero catch in 2016 and the relative contribution of fish of age-3 and of ages 4-10 are presented in Table 3.1. The provision of harvest advice to managers for 2016 is in the form of decision tables to accommodate uncertainty in decision making. Advice for 2016 for the major stock areas is presented as a set of decision tables that provide probabilities of the projected spawning biomass in 2016 (SB_{2016}) falling below the 0.25 SB_0 level and of the realized harvest rate exceeding 20% and 10% target rates for a range of constant catch levels. Decision tables for minor stock areas provide probabilities of the realized harvest rate exceeding the 10% target rate for a range of constant catch levels. All values reflect application of the historical management procedure (see Science Response, http://www.dfo-mpo.gc.ca/csas-sccs/publications/scr-rs/2015/2015_038-eng.html)

Table 3.1. Estimates of projected spawning biomass in 2016 given zero catch, and predicted proportions of fish of age-3 and of ages 4-10 for all BC herring stocks in metric tonnes.

	Projected proportion age-3 fish in 2016			Projected proportion ages 4-10 fish in 2016			Projected pre-harvest spawning biomass (SB_{2016}) given zero catch		
Stock	5th %ile	Median	95th %ile	5th %ile	Median	95th %ile	5th %ile	Median	95th %ile
HG	0.11	0.20	0.30	0.41	0.65	0.78	5,266	10,450	20,870
PRD	0.28	0.47	0.65	0.28	0.45	0.64	13,439	25,530	48,531
CC	0.09	0.27	0.56	0.37	0.63	0.83	15,310	25,570	42,401
SOG	0.35	0.43	0.52	0.41	0.49	0.56	80,270	123,000	183,405
WCVI	0.40	0.55	0.67	0.19	0.28	0.37	10,040	17,830	32,043
Area2W	0.03	0.06	0.12	0.72	0.90	0.95	253	1,255	4,124
Area27	0.08	0.24	0.55	0.38	0.68	0.87	1,094	1,885	3,288

Commercial harvest is only recommended in areas that are above cut-off. In applying the historical management procedure, for the 2016 fishing year, there is greater than a 50% probability forecast returns are to be above the area-specific fixed cut-off level in three areas only: SOG, PRD and CC, under the zero catch scenario. For all major stock areas, decision tables reflect target harvest rates of 20% and 10% (Table 3.2). Decision tables for the minor stocks (Area 2W, Area 27) do not include biomass performance metrics

because biomass metrics were not historically used and reflect a 10% target harvest rate (Table 3.3).

Table 3.2. Decision tables concerning the harvest and biomass metrics drawn from the herring harvest control rule for projected spawning biomass in 2016 given a range of constant annual catch strategies (in tonnes) for major stock areas HG, PRD, CC, SOG, and WCVI. Decision tables for minor stock areas (Area 2W, Area 27) show harvest metrics only because biomass metrics were not historically used. Values are the probabilities, under each annual catch strategy, of the spawning biomass in 2016 (SB_{2016}) being lower than the stock-specific fixed cut-off level and of the harvest rate being greater than 20% or 10% (or 5% for CC). The probabilities are the proportion of the MCMC samples for which the given criteria hold. One-year projections for HG, PRD, CC and WCVI use catch allocation ratios for each of the three fisheries (food and bait/ special use, seine roe and gillnet roe) based on 20-year historic average catches. The allocation ratio for SOG assumes a 50% allocation of TAC to the food and bait/ special use fisheries, 30% to seine roe, and 20% to gillnet roe.

Haida Gwaii (HG)					
	Biomass metrics – AM2		Harvest metrics – AM2		
TAC (metric tonnes)	Prob (biomass after harvest is below cut-off in 2016 P(SB_{2016} < 10,700 t)	Median ratio of projected post-harvest biomass to cut-off Med (SB_{2016} / 10,700 t)	Prob (removal rate > target HR) P(U'2016 > 20%)	Prob (removal rate > target HR) P(U'2016 > 10%)	Median removal rate Med (U'2016)
0	0.52	0.98	0.00	0.00	0.00
500	0.55	0.94	0.00	0.03	0.05
820	0.57	0.92	0.01	0.25	0.08
1,000	0.58	0.91	0.02	0.42	0.09
1,080	0.58	0.91	0.04	0.50	0.10
1,540	0.61	0.88	0.18	0.80	0.14
1,700	0.62	0.87	0.25	0.87	0.15
2,000	0.64	0.85	0.39	0.93	0.18
2,040	0.64	0.85	0.41	0.94	0.18
2,230	0.65	0.84	0.50	0.96	0.20
3,000	0.69	0.79	0.76	0.99	0.26
3,170	0.69	0.78	0.80	0.99	0.27
4,000	0.73	0.73	0.92	1.00	0.34
4,230	0.74	0.72	0.94	1.00	0.35
6,000	0.79	0.62	0.99	1.00	0.48

Prince Rupert District (PRD)					
Biomass metrics – AM2			**Harvest metrics – AM2**		
TAC (metric tonnes)	Prob (biomass after harvest is below cut-off in 2016) P(SB_{2016} < 12,100 t)	Median ratio of projected post-harvest biomass to cut-off Med (SB_{2016} / 12,100 t)	Prob (removal rate > target HR) P(U'2016 > 20%)	Prob (removal rate > target HR) P(U'2016 > 10%)	Median removal rate Med (U'2016)
0	0.03	2.11	0.00	0.00	0.00
2,010	0.05	1.98	0.01	0.25	0.08
2,090	0.05	1.98	0.01	0.29	0.08
2,500	0.06	1.95	0.02	0.45	0.10
2,610	0.06	1.95	0.03	0.50	0.10
2,700	0.06	1.94	0.04	0.53	0.10
2,725	0.06	1.94	0.04	0.54	0.10
3,000	0.06	1.92	0.06	0.63	0.11
4,125	0.08	1.85	0.25	0.87	0.16
4,300	0.09	1.84	0.28	0.89	0.16
5,000	0.10	1.80	0.43	0.95	0.19
5,400	0.11	1.77	0.50	0.97	0.20
5,600	0.12	1.76	0.54	0.98	0.21
6,000	0.12	1.74	0.61	0.99	0.22
8,000	0.17	1.62	0.83	1.00	0.29

Central Coast (CC-Area 06,07,08)								
Biomass metrics – AM2					**Harvest metrics – AM2**			
TAC (metric tonnes)	Prob (biomass after harvest is below cut-off in 2016) P(SB_{2016} < 17,600 t)	Median ratio of projected post-harvest biomass to cut-off Med (SB_{2016} / 17,600 t)	Prob (biomass after harvest is below 0.60 SB_0 in 2016) P(SB_{2016} < 0.60 SB_0)	Median ratio of projected post-harvest biomass to 0.60 SB_0 Med (SB_{2016} / 0.60 SB_0)	Prob (removal rate > target HR) P(U'2016 > 20%)	Prob (removal rate > target HR) P(U'2016 > 10%)	Prob (removal rate > target HR) P(U'2016 > 5%)	Median removal rate Med (U'2016)
0	0.12	1.45	0.77	0.79	0.00	0.00	0.00	0.00
1,050	0.15	1.41	0.79	0.77	0.00	0.00	0.25	0.04
1,300	0.15	1.40	0.80	0.76	0.00	0.01	0.50	0.05
1,760	0.16	1.38	0.81	0.75	0.00	0.10	0.84	0.07
2,120	0.18	1.36	0.81	0.74	0.00	0.25	0.95	0.08
2,230	0.18	1.36	0.82	0.74	0.00	0.30	0.96	0.09
2,620	0.19	1.34	0.82	0.73	0.01	0.50	0.99	0.10
3,570	0.23	1.30	0.84	0.71	0.09	0.84	1.00	0.13
4,000	0.24	1.29	0.85	0.70	0.16	0.92	1.00	0.15
4,370	0.26	1.27	0.85	0.69	0.25	0.95	1.00	0.16
4,550	0.26	1.26	0.86	0.69	0.29	0.96	1.00	0.17
5,400	0.29	1.23	0.87	0.67	0.50	0.99	1.00	0.20

7,000	0.35	1.16	0.89	0.63	0.80	1.00	1.00	0.26
7,350	0.36	1.15	0.90	0.63	0.84	1.00	1.00	0.27
8,000	0.39	1.12	0.90	0.61	0.90	1.00	1.00	0.29
9300	0.43	1.07	0.92	0.58	0.96	1.00	1.00	0.33
10,000	0.46	1.04	0.92	0.57	0.98	1.00	1.00	0.35
11,000	0.50	1.00	0.93	0.54	0.99	1.00	1.00	0.38

Strait of Georgia (SOG)					
Biomass metrics – AM2			**Harvest metrics – AM2**		
TAC (metric tonnes)	Prob (biomass after harvest is below cut-off in 2016 P(SB_{2016} < 21,200 t)	Median ratio of projected post-harvest biomass to cut-off Med (SB_{2016} / 21,200 t)	Prob (removal rate > target HR) P(U'2016 > 20%)	Prob (removal rate > target HR) P(U'2016 > 10%)	Median removal rate Med (U'2016)
0	0.00	5.80	0.00	0.00	0.00
10,000	0.00	5.45	0.00	0.18	0.08
10,600	0.00	5.43	0.00	0.25	0.08
12,600	0.00	5.36	0.00	0.50	0.10
17,000	0.00	5.21	0.05	0.89	0.13
18,250	0.00	5.16	0.09	0.94	0.14
21,800	0.00	5.04	0.25	0.99	0.17
22,500	0.00	5.01	0.28	1.00	0.17
25,000	0.00	4.92	0.44	1.00	0.19
25,900	0.00	4.89	0.50	1.00	0.20
30,000	0.00	4.75	0.72	1.00	0.23
38,000	0.00	4.48	0.94	1.00	0.29
40,000	0.00	4.41	0.97	1.00	0.30
46,500	0.00	4.19	1.00	1.00	0.34
50,000	0.00	4.07	1.00	1.00	0.37

West Coast Vancouver Island (WCVI)					
	Biomass metrics – AM2		**Harvest metrics – AM2**		
TAC (metric tonnes)	Prob (biomass after harvest is below cut-off in 2016) P(SB_{2016} < 18,800 t)	Median ratio of projected post-harvest biomass to cut-off Med (SB_{2016} / 18,800 t)	Prob (removal rate > target HR) P(U'2016 > 20%)	Prob (removal rate > target HR) P(U'2016 > 10%)	Median removal rate Med (U'2016)
0	0.56	0.95	0.00	0.00	0.00
1,000	0.60	0.92	0.00	0.04	0.05
1,480	0.61	0.90	0.00	0.25	0.08
1,850	0.62	0.89	0.02	0.50	0.10
2,800	0.66	0.86	0.16	0.88	0.15
3,100	0.66	0.85	0.25	0.93	0.16
3,600	0.68	0.83	0.42	0.97	0.19
3,850	0.69	0.82	0.50	0.98	0.20
4,000	0.69	0.82	0.54	0.99	0.21
5,000	0.72	0.79	0.77	1.00	0.25
5,850	0.75	0.76	0.88	1.00	0.29
6,000	0.75	0.75	0.90	1.00	0.30
7,500	0.79	0.71	0.97	1.00	0.36
8,000	0.80	0.69	0.98	1.00	0.38
8,500	0.81	0.68	0.99	1.00	0.40

Table 3.3. Decision tables concerning the harvest and biomass metrics drawn from the herring harvest control rule for projected spawning biomass in 2016 given a range of constant annual catch strategies (in tonnes) for minor stock areas (Area 2W, Area 27). Decision tables for minor stocks show harvest metrics only because biomass metrics were not historically used. Values are the probabilities, under each annual catch strategy, of the harvest rate being greater than 10%.

Area 2W – AM2		
TAC (metric tonnes)	Prob (removal rate > target HR) P(U'2016 > 10%)	Median removal rate Med (U'2016)
0	0.00	0.00
50	0.16	0.04
70	0.25	0.06
100	0.38	0.08
127	0.50	0.10
164	0.62	0.13
200	0.71	0.15
290	0.86	0.22
300	0.87	0.23
400	0.94	0.30
500	0.98	0.37
600	0.99	0.44

Area 27 – AM2		
TAC (metric tonnes)	Prob (removal rate > target HR) P(U'2016 > 10%)	Median removal rate Med (U'2016)
0	0.00	0.00
100	0.03	0.05
150	0.22	0.08
155	0.25	0.08
160	0.28	0.08
170	0.35	0.09
180	0.41	0.09
192	0.50	0.10
200	0.55	0.10
210	0.61	0.11
220	0.66	0.11
230	0.70	0.12
240	0.75	0.12
250	0.78	0.13

APPENDIX 4. EXPECTED USE TABLE

The expected use of herring for 2015/16 in short tons is as follows for each of the stock assessment areas and fisheries (for Roe Herring as Total Allowable Catch –TAC):

Table 4.1: Fisheries Management Expected Use Table for 2015/16 (short tons).

2015 / 2016 EXPECTED HERRING USE BY FISHERY AND AREA

Values In Short Tons (T)

AREA	[3]Harvest Option at 50% P (removal rate > target HR)	FSC	SOK		ROE-HERRING		[5]WINTER FOOD & BAIT (ZM)	SPECIAL USE					TOTAL
			ABORIG COMML	J - LICENCE	[5]SEINE	GILLNET		PERS'L USE BAIT (ZX)	SPORT BAIT (ZY1)	COMML BAIT (ZY2)	HUMAN FOOD (ZY3)	ZOO & AQUAR (ZY4)	
[1]Area 2W	140			100									100
HG		150											150
[2]PRD	5,952	600		1,000	1,000	1,500	500	10	50	70			4,730
Area 10				35									35
[4]CC	1,940	600	525	600	215								1,940
Area 12				100									100
[2]SOG	28,550	35			8,374	11,571	7,768	25	517		150	110	28,550
[1]Area 27	212			105									105
WCVI		150											150
TOTAL	**36,794**	**1,535**	**525**	**1,905**	**9,589**	**13,071**	**8,268**	**35**	**567**	**70**	**150**	**110**	**35,860**

1. Target Harvest Rate (HR) of 10%

2. Target Harvest Rate (HR) of 20%

3. CSAP provided harvest option at the 50% probability of exceeding the target rate

4. The harvest rate presented for Central Coast in this table is 7%

5. The food and bait and roe seine quotas were adjusted based on 40 licences selecting the SOG food and bait option during area selection

Areas shaded in grey are minor stock assessment areas

1 metric tonne = 1.10231131 short ton

APPENDIX 5. ABORIGINAL FISHING PLAN

DFO is committed to improving its relationship with Aboriginal people. Aboriginal fisheries play an important role in this relationship and, therefore, are an integral part of fisheries resource management in the Pacific Region.

Through the Aboriginal Fisheries Strategy, DFO seeks to negotiate with Aboriginal organizations access for Food, Social, and Ceremonial (FSC) purposes. Subject to conservation, FSC has priority over access for commercial and recreational purposes. FSC fisheries are managed through communal licences that are issued to First Nations organizations. The Department consults with First Nations organizations to determine appropriate levels of access. In some cases, a portion of a PFMA may be closed to fishing except for FSC fishing by a First Nation organization. These closures may be for the season or for specified times. Whenever possible, the appropriate annual fishing plan will identify such closures. It is possible that situations may arise in the implementation of the plan where in season closure adjustments will be required to ensure access to the fishery by First Nations organizations for FSC purposes.

For additional information on DFO's Treaty and Aboriginal Fisheries programs, please visit: http://www.pac.dfo-mpo.gc.ca/abor-autoc/index-eng.html

Maa-nulth First Nations Domestic Fishery

The Maa-nulth First Nations Domestic Fishery (for food, social and ceremonial purposes) under the Maa-nulth First Nations Final Agreement (MFA) came into effect on April 1, 2011.

A Joint Fisheries Committee (JFC), established under the MFA, is made up of representatives of Canada (DFO), the Maa-nulth First Nations and British Columbia. Maa-nulth Fisheries Operation Guidelines will set out the operational principles, procedures and guidelines regarding the implementation of the provisions of the Fisheries Chapter of the MFA. The JFC may discuss possible provisions for an Annual Fishing Plan (AFP) before the Maa-nulth First Nations develop an AFP and possible provisions for Maa-nulth Harvest Documents.

Each year, the Maa-nulth First Nations will develop an AFP for the harvest of fish under the MFA. The AFP will set out the preferences of the Maa-nulth First Nations as to: stocks and species to be harvested, location and timing of harvest, method of harvest, monitoring and reporting of harvest, enforcement measures, and other matters. The AFP is submitted to the JFC for review. On receipt of an AFP, the JFC will review and make recommendations to the Minister and the Maa-nulth First Nations in respect of provisions that the Minister should put in a Maa-nulth Harvest Document.

Where the Minister issues a Maa-nulth Harvest Document, the Minister will take into account: conservation measures and the availability of fisheries resources; the recommendations of the JFC; utilization of the fisheries resources; efficient and effective harvesting of fisheries resources; requirements for integration and efficient management of all resources; accepted scientific procedures for management for fisheries resources; and any other matters that the Minister considers relevant; harvest opportunities for domestic purposes under treaty rights managed to an equal priority as those opportunities for FSC requirements.

The Domestic Allocation for herring under the Maa-nulth First Nations Final Agreement is:

Each year the Maa-nulth Fish Allocation for whole herring is 90 short tons or a corresponding amount of herring spawn on kelp or herring spawn on boughs in accordance with the conversion rates for whole herring to herring spawn on kelp or herring spawn on bough as described in the Maa-nulth Fisheries Operational Guidelines.

More information on the MFA can be found at: http://www.bctreaty.net/

Tla'amin Final Agreement (TFA)

In any year, the Tla'amin Fish Allocation for herring is a maximum of 62,600 lbs of whole herring or a corresponding amount of herring spawn on kelp or of herring spawn on boughs, in accordance with the conversion rates for whole herring to herring spawn on kelp or herring spawn on boughs as described in the Tla'amin Fisheries Operational Guidelines. The TFA effective date is April 5, 2016.

T'aaq-wiihak Nations (*Ahousaht et al* Plaintiffs) In addition to fishing opportunities for FSC purposes (or domestic purposes for treaty First Nations), DFO acknowledges that in *Ahousaht Indian Band et al. v. Canada and British Columbia*, the courts have found that five Nuu-chah-nulth First Nations located on the West Coast of Vancouver Island - Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht - have what the courts have characterized as "aboriginal rights to fish for any species of fish within their Fishing Territories and to sell that fish, with the exception of geoduck."

The Department is working with the First Nations pursuant to the rights found by the courts, to find "the manner in which the plaintiffs' rights can be accommodated and exercised without jeopardizing Canada's legislative objectives and societal interests in regulating the fishery."

Heiltsuk Communal Commercial Spawn On Kelp Fishery

In 1996, the Supreme Court of Canada found in its *Gladstone* decision that the Heiltsuk First Nation had an Aboriginal right to commercially fish herring spawn-on-kelp (SOK). The Heiltsuk currently hold nine SOK licences in the Central Coast area, with an annual quota of 240,000 pounds. This SOK is harvested using the preferred means of the Heiltsuk, which is open ponding.

On March 31, 2015, a Letter of Understanding between the Heiltsuk Tribal Council and the Department of Fisheries and Oceans was signed by HTC Chief Councillor, Marilyn Slett and DFO Regional Director General, Susan Farlinger where the Parties agreed to begin operational planning for the purposes of a joint management plan on the herring fishery for 2016 and beyond. Discussions have taken place over the summer and fall of 2015 and are ongoing.

APPENDIX 6. RECREATIONAL FISHING PLAN

The recreational harvest of various fish and invertebrate species in BC 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. The daily maximum sport limit for herring is 20 kg, with a two-day possession limit of 40 kg. Recreational harvesting may occur by means of dip net, herring jig, herring rake, or cast net. Harvesting of herring spawn-on-kelp is prohibited.

The regulations for recreational fishing of finfish are summarized in the British Columbia Tidal Waters Sport Fishing Guide which lists closed times, bag limits, size limits (where applicable) and closed areas. When required, Fishery Notices are issued to advise of changes to this guide. For more information on the recreational fishery refer to the following web link:
http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.htm

The primary consultative body for the recreational fishing community is the Sport Fishing Advisory Board (SFAB). The SFAB has representatives from all parts of the community including the British Columbia Wildlife Federation and the Sport Fishing Institute of British Columbia. If you have any questions or need further information, please contact a recreational fisheries co-coordinator or a local DFO office (see Contacts).

APPENDIX 7. COMMERCIAL FISHING PLAN FOR ROE HERRING

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1 PURPOSE

This document is a Commercial Fishing Plan for roe herring in British Columbia, for the period from February 10, 2016 to April 30, 2016.

2 OVERVIEW

Commercial roe herring are fished for the roe (eggs), which is a highly valued delicacy in Japan. The fisheries take place as the herring move into the shallow inland waters to spawn from late February to mid-April. Herring spawn earliest in southern BC, and progressively later at higher latitudes. Opening dates and times for the commercial fisheries are announced on the fishing grounds once the roe has matured to optimum quality. The commercial roe herring fisheries may occur in five areas which correspond to the major stock assessment regions: Haida Gwaii (HG, previously Queen Charlotte Islands), Prince Rupert (PRD), Central Coast (CC) Strait of Georgia (SOG) and the west coast of Vancouver Island (WCVI). Commercial roe herring fisheries are only planned in areas where the stocks are forecast to be above the commercial fishing cutoff, and depend on available abundance. Stock forecasts are provided on an annual basis by the Centre for Scientific Advice – Pacific (CSAP). Specific fishing timing and locations are determined by major concentrations of fish and the potential for the highest roe yield.

A roe herring seine license (category HS or FHS) or herring gill net license (category HG or FH) is required to participate in the commercial roe herring fishery. Licence eligibilities are party-based and are limited to 252 seine and 1,267 gill net licences. For each area where there will be a fishery in a given year, the licences are grouped into pools by gear type, for management purposes. This pool fishery structure was established in 1998 to address fishery concerns and improve fishery quota compliance.

3 HERRING FISHERY REPRESENTATION

The Herring Industry Advisory Board (HIAB) provides advice regarding commercial Roe Herring, and Food and Bait herring fisheries. This role includes submitting recommendations for Roe Herring harvesting plans for all areas with a Roe Herring TAC. The HIAB's advice on harvest levels is reviewed with the Integrated Herring Harvest Planning Committee (IHHPC). The HIAB has ten seats on the IHHPC. The ten participants are selected by the Roe Herring sector from a pool of: (a) 10 individuals elected by Roe Herring Licence holders (5 seine and 5 gill net); (b) 4 appointed processors; and (c) 5 appointed individuals representing: the United Fishermen and Allied Workers Union; the Native Brotherhood of BC; the Aboriginal Fishing Vessel Owners Association; the Fishing Vessel Owners Association, and the Herring Conservation and Research Society (HCRS).

4 FINANCIAL RESPONSIBILITIES

4.1 Fishery Monitoring Program

Commercial roe herring licence holders fund the fishery monitoring program which consists of hails and 100% dockside weight validation of all roe herring landings. This program is administered by the HCRS. In recent years this service has been provided by J.O. Thomas and Associates (Telephone: 604 291-6340). At sea observers may be required in season in order to provide for data collection in some areas.

4.2 Roe Quality Testing Program

Since 2008, the roe herring sector through the HCRS has planned and delivered an on grounds roe herring quality assessment program, and it is anticipated that this program will continue.

5 MANAGEMENT MEASURES FOR THE DURATION OF THE PLAN

5.1 Changes from Previous Seasons

For this season, roe seine licence holders will have the option to select in the SOG or PRD food and bait fisheries instead of the roe seine fishery during the roe herring area selection process. The initial SOG and PRD food and bait allocations will increase if roe seine licence holders select to transfer quota to the food and bait fishery. The SOG and PRD roe fishery quotas will be reduced by the same amount of quota which has been selected into the food and bait fishery. (see Section 4.4.1 and 4.4.2 of Appendix 9: Commercial Fishing Plan for Food and Bait Herring). Roe seine licences that have selected the food and bait fishery option will not have roe herring quota associated with their licence.

5.2 Allocation, Harvest Levels, and Fishing Areas

The Department will attempt to provide reasonable fishing opportunities for seines and gillnets in each management area where fishing opportunities have been identified. Fishery openings will be focused on the major bodies of fish or significant spawn events in the areas. Fishery openings will not be undertaken in sensitive areas, or maintained for an indefinite time period. Once an area is open, closures may be implemented if fish of unacceptable quality are prevalent. The Department has no obligation and provides no assurance or guarantee to participants that the maximum or any amount of fish specified in a licence will be harvested.

Aboriginal harvest of herring for FSC purposes occurs coast wide where authorized by a communal licence. DFO will provide First Nations with priority access to the resource for FSC purposes.

The coast wide total allowable catch (TAC) for the roe herring fishery will be 24,428 short tons, but may be decreased depending on the number of roe seine licence holders that opt to harvest in the food and bait fishery. The quotas are allocated between seine

and gillnet gear types based on recommendations from HIAB on a 55:45 coast wide basis.

5.2.1 Haida Gwaii (formerly Queen Charlotte Islands)

Closed to commercial roe fisheries in 2015-16.

5.2.2 West Coast Vancouver Island

Closed to commercial roe fisheries in 2015-16.

5.2.3 Central Coast

Stock assessment has shown that forecasted estimates of median herring stock abundance will be above 25% of the estimated unfished biomass (the cut-off) in 2016, resulting in commercial harvest opportunities for the 2015-16 season. The Department has proposed a precautionary harvest rate of 7% (rather than the 20% harvest rate identified in the harvest control rule for major stock areas) for 2016, which would provide for overall harvest opportunities of up to 1,940 short tons (including FSC, spawn on kelp and roe fisheries) and a total allowable catch for the commercial roe fishery of up to 215 short tons. For the purposes of the draft Pacific Herring IFMP, the 215 short ton CC quota has been allocated to seine gear and remains unchanged in the final IFMP.

5.2.4 Prince Rupert

Stock assessment has shown that forecasted estimates of median herring stock abundance will be above 25% of the estimated unfished biomass (the cut-off), resulting in commercial harvest opportunities for 2015-16. Application of the 20% harvest rate (identified in the management procedure) results in overall potential harvest of up to 5,952 short tons and a commercial roe opportunity of up to 3,722 short tons. Based on advice from HIAB, the maximum total allowable catch for roe herring in PRD will be 2,500 short tons. The total allowable catch may be decreased depending on the number of roe herring seine licence holders that opt to select the PRD food and bait herring fishery, with an associated quota of 44.2 tons per licence.

5.2.5 Strait of Georgia

Stock assessment has shown that forecasted estimates of median herring stock abundance will be above 25% of the estimated unfished biomass (the cut-off), resulting in commercial harvest opportunities for 2015-16. Application of the 20% harvest rate (identified in the management procedure) will result in overall potential harvest of up to 28,550 short tons and a corresponding potential roe harvest of up to 21,713 short tons. Based on advice from HIAB, the maximum total allowable catch for commercial roe herring in SOG will be 21,713 short tons. The total allowable catch will be decreased depending on the number of roe herring seine licence holders that opt to select the SOG food and bait herring fishery, with an associated quota of 44.2 tons per licence.

5.3 Catch target, licence distribution, and quota table

The expected use of herring for commercial roe herring fisheries for each of the stock assessment areas is described in the following table. Also provided is the number of tons per licence and gear type, provided the areas selected by licence holders matches the ideal number, which is an equitable proportion of the licences per area based on the 55:45 gear split and quota for the area. The actual licence quota will be based on the number of licences that select to fish in a specific area. The quota and ideal numbers will be adjusted based on the actual numbers of commercial seine and gillnet licences that will be available for issuance, and may not include all licences held by DFO in PICFI or ATP inventories. The quota amount per gear allocation, the final number of licences, ideal distribution, and quotas by gear type will be provided by way of Fishery Notice prior to the licence area selection deadline. The SOG and PRD roe seine catch targets are reduced by the number of tons based on the number of licences (44.2 tons per licence) selected to harvest in the SOG or PRD food and bait fishery

Table 7.1: Roe herring catch targets (short tons) and proportional licence distribution by gear type and area

		Seine			Gill Net		
Licence Area	**Total Roe Quota**	**Catch Target (Tons)**	**Fishing Area**	**Ideal # Licences**	**Catch Target (Tons)**	**Fishing Area**	**Ideal # Licences**
Haida Gwaii (HG)	closed						
Prince Rupert (PRD)	2,500	1,000	5	22	1,500	3 and 4	145
Central Coast (CC)	215	215	6,7,8	5		6,7,8	
Strait of Georgia (SOG)	21,713	8,374*	14 to 18	185*	11,571	14 to 18	1,122
SOG Food & Bait				40			
West Coast Van. Is. (WCVI)	closed						
TOTAL	**24,428**	**9,589**		**252**	**13,071**		**1,267**
Tons/Licence		45.067			10.316		

*** Initial SOG seine catch target of 10,142 tons reduced by 40 licences that selected Food and Bait fishery at 44.2 tons per licence.**

5.4 Open Times

The commercial fishing plan for roe herring is in effect from February 10, 2016 to April 30, 2016. Fisheries will be timed to coincide with major bodies of fish that are acceptable to industry in terms of roe maturity and fish size. Areas will be opened to seine or gillnet gear in specific areas and at specific times by way of Variation Order made under the authority of the *Fishery (General) Regulations*. Historically, fishing begins in late February and finishes by early April. DFO will continue to provide the commercial sector opportunity to achieve optimum roe quality within the bounds of maintaining management control, coordination with other fisheries and sound conservation principles. It is the intention of DFO to open roe herring fisheries in consultation with the on-grounds industry advisors to provide reasonable fishing opportunities. Safety of the fleet,

roe quality, gear compatibility, FSC access, and weather conditions will be taken into consideration in the conduct of fisheries, including the determination of a fishery opening.

5.5 Fishery Openings

5.5.1 Areas

The following areas are identified as fishing areas:

1. Haida Gwaii: Closed
2. Prince Rupert: PFMA 3, 4, and 5
3. West Coast Vancouver Island: Closed
4. Strait of Georgia: PFMA 14 to 18
5. Central Coast: 6,7,8

Actual open areas for each fishery will be subject to in season decisions and opened by Variation Order. Potential fishing areas will be subject to the permanent area closures detailed in the following section.

Fishery managers will endeavor to ensure that sensitive herring spawning areas are protected from gear damage by establishing shallow water net boundaries inside which no fishing shall take place. Herring spawning grounds may be designated under Section 41(1) of the Pacific Fishery Regulations, 1993. Vessels shall not anchor or transfer herring within a designated herring spawning ground.

The fleet is requested to avoid excessive disturbance of herring caused by vessels running back and forth over schools prior to openings.

Commercial fleets are also requested to avoid locations where local First Nations are gathering fish, or fishing for herring spawn on boughs or spawn on kelp. Additionally, the Department works collaboratively with First Nations on communication regarding herring stocks and spawning locations for FSC fishery planning and information on FSC activities. As the fishery season progresses, in some cases, specific requirements to remain out of particular locations to support FSC harvest will be broadcast for adherence by fish harvesters.

5.5.2 Decision Rules for Opening Seine Fisheries

Strait of Georgia: The opening time and location for seines will be decided by the DFO fishery managers in consultation with pools. If necessary, an opening will be determined by polling each pool captain. In this situation, each pool carries the weight of the number of licences in the pool.

Prince Rupert, Central Coast: Single seine pool in each of these areas. The opening time and location for seines will be determined by the DFO fishery managers in consultation with pool representatives.

5.5.3 Decision Rules for Opening Gill Net Fisheries

Strait of Georgia: The designated representative of HIAB will contact the nine gill net advisors identified by the roe herring sector. The opening of the fishery will be based on the advice received from the advisors through the designated representative of HIAB to the gill net fishery manager.

Prince Rupert: The gill net fishery manager will attempt to contact the nine gill net advisors identified by HIAB, and will open the area based on the advice received from the advisors that were contacted. If a gill net fishing opportunity presents itself at a time when the majority of the fleet is not in the area, the Department will, if practical, seek the advice of as many of the nine gill net representatives they are able to contact before deciding whether to open the area. Notice of closures will be announced promptly, as required for conservation purposes. Notice will be sufficient to provide a reasonable opportunity for fish harvesters to remove their fishing gear from the water.

5.6 Closed Areas

Haida Gwaii – Area Closed 2016 Season

Prince Rupert - None identified preseason.

West Coast Vancouver Island – Area Closed 2016 Season

Strait of Georgia

Area closures are detailed below. These areas are closed due to navigation concerns, sensitive fish habitat, or concerns regarding bycatch of other species. There may be additional closures in season by Variation Order and fishery notice depending on the circumstances.

PFMA 14-14: Comox Harbour
PFMA 17-14: Nanaimo Harbour
PFMA 17-20: Nanoose Harbour

Other area closures may be identified in season to address specific management concerns such as providing access to First Nations to harvest fish or spawn for food, social, and ceremonial purposes (FSC) or vessel navigation.

Central Coast

Some areas will remain closed to allow for adequate and orderly food, social and ceremonial (FSC) and/or spawn on kelp (SOK) harvests. For 2015/16, the Department has agreed that Spiller Channel, Reid Pass and Powell Anchorage will be closed to commercial roe harvest in order to provide for adequate and orderly FSC and SOK harvest opportunities. Portions of Kitasu Bay will also be closed to commercial roe harvest in 2015/16. As in past years, DFO will work with Heiltsuk, Kitasoo/Xaixais, other First Nations and industry in-season to identify whether any additional closures

may be required due to variability in spawn timing and distribution, and to ensure reasonable opportunities for all fisheries.

5.7 Gear

This section is a general description of gear used in fishing for roe herring. Please refer to the license conditions for specifics on eligible gear for each license. In the case of a discrepancy between this document and the licence condition, the licence conditions prevail.

The licence condition restricting the number of gillnets that may be used under authority of a gillnet licence to one (1) net was removed in 2015. This change allowed for fishing vessel efficiencies. All fishing gear must be marked in accordance with the Licence Conditions.

The restriction of a maximum of two seine (category HS or FHS) licences which may be placed on a single seine vessel was removed in 2013, and there is no maximum number of licences that may be placed on a vessel.

Industry across Canada is responsible to obtain and pay for any gear tags or tabs used in commercial fisheries which beginning after March 31, 2013.

5.7.1 Seine

A herring purse seine shall not be greater than 411.48 metres (225 fathoms) in length, and a minimum mesh size of 25 millimetres (one inch) extension measure.

Vessels should have a full sized herring seine, along with all the associated gear (i.e. pumps, winches, power skiffs), to fish and haul the gear, as well as adequate electronic equipment for locating and estimating herring schools.

A properly functioning chilled seawater (C.S.W.), or refrigerated seawater (R.S.W.), system is required for all vessels participating in the fishery.

5.7.2 Gill Net

The effort restriction of fishing a single gillnet per licence has been removed as of the 2015 season. The gear that is permitted to be used (as per the Licence Conditions) is:

(1) herring gill nets with:
(a) a maximum length of 135 m;
(b) a maximum depth of 100 meshes; and
(c) a maximum mesh size of 64 mm.

The maximum mesh size of 64 mm does not apply in respect of a gill net that contains a single portion of netting that is not more than 2 m in depth and that has a mesh size of at least 150 mm.

Each herring gillnet shall be marked with the unique licence gillnet number and licence year on a small marker float that is affixed to one end of the gill net, adjacent to one of the large marker buoys. A 2005 study of the use of "Sharpie" brand markers on fishing floats indicates that this can provide a low cost and minimal failure rate net marking methodology. Nets tagged with buoys marked in this manner were tested over a 23 day period and showed no degradation in the marking readability. These floats can be replaced at low cost each year to accommodate annual gillnet licence number changes. The following is detailed in the licence conditions:

1. A buoy floating on the surface of the water shall be attached to each end of every gill net that is not attached to the vessel.
2. The buoys shall be at least 125 cm in circumference.
3. All buoys attached to the gill net shall be of the same colour.
4. A net float marked with the licence year and gillnet licence number shall be attached to a buoy that is attached to one end of the gill net.
5. The net float referred to in 4 shall be marked in solid block Arabic numerals and letters
(a) without ornamentation;
(b) not less than 25 mm in height; and 7mm in width
(c) in a colour that contrasts with their background.

In addition, no person shall use or carry on board a gill net that is more than 100 meshes in depth in a hung position or is of a greater length than 135 metres. The gill net mesh size shall not be greater than 64 mm (2.5 inches). Shaker panels shall not exceed a depth of 2 m with a mesh size no less than 150 mm (6 inches). Gill nets must be marked on both ends with buoys of similar colour, no less than 125 cm in circumference. No person shall leave any anchors, buoys or lines in the water during any closed time.

5.7.3 Vessel Master Responsibility

The maximum quantity of Roe Herring authorized to be taken under a roe herring licence by the licence holder shall not exceed the landed weight set out under "Quota" in the licence. The landed weight shall be determined at the port of landing.

The Pool captain has been identified as the person who may communicate with the fishery manager for the licensed pool and is responsible for documenting fishing locations, the number of nets fishing, estimated catch, and the list of packing vessels for the pool; however the vessel master who is conducting the fishing activity is responsible for not exceeding the weight of fish set out in the quota for the licence.

5.8 Herring Licence Pools

DFO supports the licence pooling structure established in 1998, to ensure the proper management and control of the roe herring fishery. To this end, DFO will support the integrity of the pooling system while managing to the overall fishery quota of an area.

Catch in excess of pool quotas are not permitted and therefore the DFO's on-grounds precautionary strategy is to estimate catch during the fishery opening based on hails and validated landings, and to close the fishery based on estimates of when the allocation for a gear type will be achieved.

All licence holders are advised that they must ensure catch does not exceed the amount they are licensed to harvest. Any pool that lands catch in excess of its identified allocation is subject to investigation for the violation.

5.8.1 Guidelines for Herring Licence Pools

1. Licence selection for the fishing areas will be on an open basis. This means that the average for each pool would depend on the total number of licences choosing the area. The quota for each pool equates to the licence share for the area chosen multiplied by the number of licences in a pool.

2. Seine roe licences which select into the Strait of Georgia or Prince Rupert Food and Bait fishery may do so on a one-way basis for 2016, and will not be part of the roe herring licence pool process for that year.

3. All roe herring licences, except those that select into the Food and Bait fishery, must be associated with a pool prior to licence issuance. Licences not associated with a pool will not be issued.

4. In areas that there is an identified roe fishing opportunity, individual seine and gillnet licence quotas are determined by the number of licences that select an area. The quota for each pool is determined by the number of licences in that pool. The individual licence quotas are added together, to calculate the pool quota.

5. Each pool designates a pool captain to act a liaison between the pool and the Department.

6. Fish caught by a pool in one licence area cannot be transferred to pools with an underage in another licence area, or to a different gear type in the same or another area.

7. Within each area, each gear type will be managed to an overall quota. Each pool may fish until they have reached their quota, the overall fishery quota is achieved, or until the fishery is closed.

8. There will be no quota carry over from one year to the next.

9. If there are fish from seine and gillnet gear placed on the same packing vessel, fish from each gear type must be kept in separate holds.

5.8.2 Seine licence pool fishery guidelines

1. The minimum number of seine licences required to form a pool in the Strait of Georgia seine fishery is eight.

2. Seine fisheries in Prince Rupert and Central Coast will be managed as a single pool in each area.

3. Each pool will designate one representative (pool captain) to work with the on-grounds fishery manager.

4. Once DFO, in conjunction with the pool representatives, has agreed that the fish in an area are harvestable, final details of the fishing plan will be discussed with industry participants. This will include fishing boundaries, setting order, hail-in procedures, etc. Ideally target size of sets should be 200 tons maximum to facilitate capture and reduce the possibility of exceeding target catch.

5. Seine vessels must have set approval from an on grounds fishery manager prior to setting, unless the At Sea Observer (ASO) program is in place and the vessel has an at sea observer on board the vessel.

6. Fish captured by seine net may be released if the roe maturity of the set is not representative of the fish in the area. Once the fish have been dried up all fish must be pumped, and fish may not be released once pumping of the set has commenced. The sorting of fish captured in the seine is not allowed. Approval from a DFO representative must be received before any fish are released.

7. The fishery manager will evaluate the catch on an ongoing basis so that new sets can be approved in order to complete the fishery.

8. If a pool exceeds their quota, arrangements should be made to have another pool take the excess on the grounds.

9. All packers and fishing vessels leaving the grounds must hail prior to leaving the fishing grounds, regardless of whether they have fish on board or not.

10. Daylight openings are preferred but if required the decision to fish at night will be made on grounds.

5.8.3 Gill net licence pool fishery guidelines

1. For all gill net area selections, a minimum pool of four gill net licences must be submitted to a PFLU. Larger pools are permitted.

2. Only a licensed punt may be used for all catching, carrying and offloading of catch on the fishing grounds.

3. Each fishing pool must designate one person to act as a representative for that pool to co-ordinate with DFO prior to and during the season. The pool coordinator will be the liaison between the pool and the fishery manager. They will be responsible for keeping a running tally of the catch, documenting fishing locations, number of nets fishing and a list of packing vessels for the pool.

4. Timing of gill net openings will be determined by a process for each fishing area.

5. A successful fishery requires that harvesters are present in the area with the appropriate gear, crews, vessel support, and packing capacity when the opening occurs.

6. The Department, in consultation with the pool representatives, will agree to the fishing areas.

7. Each pool will be required to weigh their catch on the grounds, using current government inspected scales. Validated weights at point of landing will be used to calculate the final weight against the individual pool quota.

8. All fish caught must be retained and validated.

9. In the Strait of Georgia, there will be a maximum number of 20 reporting relationships (gillnet pool fishery contacts), as managers will not be in a position to receive information from each of the pool coordinators.

10. In the Strait of Georgia, industry is advised that spawning periods have been compressed in recent years. It is suggested that fish harvesters consider this, as well as the size of the quota, when planning their area selections.

11. Where specified vessels leaving the fishing grounds, regardless of whether they have fish on board or not, must hail into the manager prior to leaving the fishing grounds.

5.9 Fishery implementation

The following fisheries are planned based on the available quota and on recommendations from and consultation with HIAB and the IHHPC:

5.9.1 Seine

Haida Gwaii
Area closed for the 2015-16 season.

Prince Rupert
The seine fishery area is Kitkatla (PFMA 5) in a single industry pool.

Central Coast
The seine fishery areas are PFMAs 6, 7 and 8 in a single industry pool.

West Coast Vancouver Island
Area closed for the 2015-16 season.

Strait of Georgia
DFO will work with the roe herring sector preseason and in season to develop a fishing plan that minimizes the number of seine pools in the Strait of Georgia. The Department has established a maximum of eight seine pools for management purposes, and the flexibility to consolidate pools in season if required to take advantage of fishing opportunities.

5.9.2 Gill Net

Haida Gwaii
Area closed for the 2015-16 season.

Prince Rupert
The gill net fishery generally takes place in Big Bay, PFMA 3 and 4.

Central Coast
No gill net fishery 2015-2016 season.

West Coast Vancouver Island
Area closed for the 2015-16 season

Strait of Georgia
Delivery of the management of the gill net fishery in the Strait of Georgia will be similar to recent years. Vessels leaving the grounds with gill net catch are not required to hail into the gill net manager, but are required to hail to the service provider. Vessel masters will be able to access catch information from the service provider.

6 FISHERY MONITORING PROGRAM

An industry funded Fishery Monitoring Program will be used to ensure accurate and timely catch reporting.

1. To ensure full accounting of catch, a Dockside Monitoring Program funded by the licence holders will be required to validate the weight of all catch from the fishery. The monitoring program will record all landings and provide a final report documenting all catch. All costs incurred for plant validation of the catch is the responsibility of the licence holder.

2. Confirmation of the service provider shall be provided to the Department each year.

3. The vessel master is required to make oral reports (hails) regarding weight of catch prior to leaving the fishing grounds, as specified in the Conditions of the roe herring seine or roe herring gillnet licence.

4. To ensure the timely deployment of a port monitor to the landing stations, each vessel leaving the grounds with fish onboard must notify the designated service provider prior to leaving the fishing grounds in order to receive a validation number. There will be a unique number assigned for each hail in. This number must be written on the plant validation slip and provided upon request to a fishery officer or designate.

5. Weights validated at point of landing will be used to calculate the final validated weight against the individual pool quota. There will be no allowances made for ice and/or water in the tote at time of weighing. It is the responsibility of the licence holder to ensure that fish are being weighed accurately.

6. Approved landing stations for roe herring dockside validation will be provided by fishery notice prior to the season.

At Sea Observer Coverage Pilot Option

The use of at sea observers (ASO's) to supplement the on grounds management may be utilized this season. The purpose of the pilot program to is to provide fishing opportunities at times when on grounds management staff and oversight are not available, and to test the utility for ASOs in the roe herring fishery. The parameters of the pilot program are as follows:

- Specific areas will be opened, and only for vessels with an ASO on board.
- The program is bounded by the availability of ASO staff (2-3 at a time).
- There must be sufficient packing capacity to ensure all catch is retained, and vessels should fish in a minimum of pairs.
- ASO must be on board the vessel until all fishing activity ceased (all pumping completed and gear is out of the water).
- Set releases will be photographed by ASO, and approval from fishery manager provided prior to release.
- ASO will collect data in the form of an At Sea Observer record.
- Hail requirements and all other requirements of Licence Conditions must be adhered to.

7 LICENSING

7.1 Fisher Identification Number

Since 2006, unique Fisher Identification Numbers (FIN) have been assigned to all Pacific commercial harvesters. The FIN allows for identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN is assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors; for example filling in the FIN field on logbooks, noting the FIN when hailing, landing catch, etc. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

7.2 Licence Categories

A roe herring seine (category HS, FHS) or gill net licence (category HG or FH) is required to commercially fish for roe herring. Roe herring licence eligibilities are limited entry and are party based.

7.3 Licence Fees

Roe herring licence fees are available at full or reduced rates. Reduced fee licence eligibilities are eligibilities held by parties who have status under the Indian Act and who elect to pay a reduced fee for the roe herring licence eligibility. This election may be made at any time and is irreversible. Fees are not applicable to communal commercial licenses.

Gear	Full Fee	Reduced Fee
Gill Net	$200.00	$100.00
Seine	$3,980.00	$1,990.00

7.4 Licence Issuance

The licence issuance process changed in 2014 to accommodate new service delivery standards implemented with the introduction of the National Online Licensing System (NOLS). Licence Renewal Applications will not be mailed.

The licence process and deadlines outlined below may be adjusted as required to accommodate fishery planning deadlines. If adjustments are made, the revised process will be provided by way of fishery notice.

DFO will be issuing licences and conditions based on the information provided by submission of the Area Selection Request or any later area re-selection. The steps to the issuance of the commercial licence and quotas are detailed below. All deadlines are for 4 pm on the deadline date. The key dates are as follows:

- Jan 24, 2016: Seine NOLS fees payment deadline.
- Jan 28, 2016: Gill net NOLS fees payment deadline.
- Jan 31, 2016: Seine area selection deadline

- Jan 31, 2016 Gill net area selection deadline
- Jan 31, 2016 Seine selection into Food and Bait PRD or SOG deadline
- Feb 12, 2016: Area Reselection both gear types– if area by gear types are over or under subscribed there may be an area reselection.
- Feb 15, 2016: Deadline for receipt of gill net and seine pool designation lists.
- Feb 18, 2016: Target release date for Conditions of Licence & Quota Addenda, will be available for printing in NOLS.

7.5 NOLS Licence Process

7.5.1 Register in NOLS & Payment Deadline

a) Most licence holders have already registered in NOLS and will use their Username and Password to access their NOLS account.
b) Others may use the mailed passcode to register at https://fishing-peche.dfo-mpo.gc.ca – call 1-877-535-7307 for assistance.
c) You may choose to designate a representative in NOLS who may access the system on your behalf, however please keep your passcode confidential.
d) Log into NOLS and pay the 2016 (HG/HS) licence fee prior to the fees payment deadline:
e) When the payment fee is processed, a licence document is sent to your NOLS account.
f) Print the licence document ('Print Documents' tab in NOLS) – page 1 & page 2.
g) The licence document does not authorize fishing without appropriate conditions of licence being attached (to be provided in February)
h) Page 2 of the licence document (Area Selection Request) shall be completed and submitted to DFO as the area and pool captain election form.

7.5.2 Area Selection deadline - Return of Forms

Deadline: Seines Jan 31, and gill nets Jan 31, 2016. Complete page 2 of the licence document (Area Selection Request) with the appropriate area and pool captain election information;

a) Submit page 2 of the licence document (Area Selection Request) to DFO
    i. Fax: 604-666-5855
    ii. E-mail: LC-CL@DFO-MPO.GC.CA
b) Area counts will be posted by fishery notice on a regular basis.
c) Provide a copy of your Area Selection Request to your pool captain.
d) DFO will issue licence conditions in February 2015 based on the information provided by submission of the Area Selection Request, or any later area re-selection.

Please call 1-877-535-7307 for assistance.

7.5.3 Area Re-selection Option

Area re-selection will be held on Feb 12, 2016; deadline is 16:00 hours for receipt of forms; applications are accepted on a first-come first-served basis. This may be

conducted if areas or gear types are over or under subscribed, and will be announced by Fishery Notice. Licences will only be able to move to another area until the ideal number for that area has been reached. Licences holders who wish to change areas may request an Area Re-selection request form from the Licensing Coordinator - Herring.

a) Submit the amended Area Selection Request to the Licensing Coordinator - Herring
b) Fax: 604-666-5855
c) E-mail: LC-CL@DFO-MPO.GC.CA

The contact person for this process may be reached at: 604-666-9832.

If an area is not selected for a licence that licence will be by default be "inactive" for the 2016 roe herring fishery.

Inactive licences will not be participating and will not be allocated any portion of the allowable catch for any area.

Any licence fee payments or area selections submitted after 16:00 February 1, 2016 will not be accepted for participation in the 2016 roe herring fishery and will be inactive (with the licence fee still required by December 31, 2016 to retain licence eligibility).

7.5.4 Pool Designation Lists

a) Gill net: Submission deadline – February 15, 2016
    (i) A pool list shall be submitted for each pool after final area selection has been completed.
    (ii) The pool list shall have the printed copies of all licences for that pool attached.
    (iii) There is a minimum of four (4) gillnet licences per pool.
b) Seine: Submission deadline – February 15, 2016
    (i) A pool list shall be submitted for each pool after final area selection has been completed.
    (ii) The pool list shall have the printed copies of all licences for that pool attached. The pool list is enclosed in this mailing.
    (iii) There is a minimum of eight (8) seine licences per pool and no more than ten pools permitted for the Strait of Georgia area.
c) All licences - Submit pool lists by the submission deadlines via:
    (i) Fax: 604-666-5855
    (ii) E-mail: LC-CL@DFO-MPO.GC.CA
    (iii) Courier or drop-off by personal appointment:
    Fisheries and Oceans Canada,
    200 – 401 Burrard St, Vancouver BC V6C 3S4

To ensure proper management and control of the fishery, any licences that have selected an area, but who have not "pooled" as required will not be eligible to participate in the fishery (see section 5.8 of Appendix 7: Commercial Fishing Plan for Roe Herring).

The individual gear and area share quota that would have been allocated to licences that have paid the annual licence fee and selected an area but that have not "pooled" by the dead line date will remain out of the overall total allowable catch for that gear type and area.

7.5.5 Licence, Conditions of Licence, and Quota Addendum in NOLS

Licence conditions and quotas are expected to be available for printing in NOLS Feb 18, 2016

b) Once areas and pools are finalised, there will be a fishery notice released to this effect when the documents are available for printing – target date Feb 18, 2016.
c) Licence holders or their representatives will then be able to print the conditions of licence, AND quota addendum from their NOLS 'Print Documents' tab.
d) The licence does not authorize fishing for roe herring until the conditions of licence and quota addendum are printed and attached to the licence.

Vessel masters are reminded that under the Canada Shipping Act, all vessels fishing herring or capelin are required to have a valid stability certificate/booklet on board the vessel. Skiffs used in the Gill Net Fishery: Skiffs must be registered/licensed by D.O.T and display a D.O.T. number and meet all fish hold inspection standards.

7.6 Licence Documents

7.6.1 Valid Period

Roe herring licence documents are valid from the date of issue to December 31, 2016.

7.6.2 Replacements

Replacement for lost or destroyed licence documents may be obtained by re-printing from your NOLS account.

7.6.3 Seine Vessel Re-designation

Roe herring seine licences may be re-designated upon receipt of a written request prior to when issuance of the conditions of licence and quota addendum for that pool has commenced. The application and pool sheet must be amended. On grounds re-designation requests will not be considered where a vessel is licensed in another area and unable to arrive in time for a fishery in a second area. After licence issue, vessel re-designation may occur on grounds on the approval of a fishery officer. On grounds requests are considered only if the vessel is disabled (lost, damaged or mechanical breakdown) and prior to the fishery openings in the area. Changes in area will not be permitted.

7.7 Transporting herring

Packing vessels are used in the herring fishery to transport herring harvested during commercial fishing to landing locations. Transporting fish is not permitted unless the vessel is registered and licensed to be used in commercial fishing or a transporting (category D) licence has been issued in respect of the vessel. Any limited entry vessel based licence (i.e. salmon, schedule II species, geoduck, sablefish, halibut, crab, shrimp trawl, groundfish trawl or prawn and shrimp by trap) allows the transport of roe herring caught by other vessels.

7.8 Licence Eligibility Nomination

Roe herring licence eligibilities, categories HG or HS may be nominated from one party to another. Nomination forms are available at a PFLU or through the following Internet site: www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm

Nomination applications are accepted annually from April 1 to October 31. Forms must be received at a PFLU by close of business on October 31. Postmarks will not be accepted.

There are no restrictions as to who can be nominated for a full fee roe herring licence, however only First Nation individuals may be nominated for a reduced fee roe herring licence. Communal commercial roe herring licences, categories FH (gillnet) or FHS (seine) are issued to First Nation groups and the eligibility for such licences cannot be nominated.

The nomination form must be signed by the licence eligibility holder on record; if the licence eligibility holder on record is a company or Aboriginal group, the PFLU must have on record a current BC Company Summary and a copy of either the Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities form, advising who the signing authorities are.

Only one nominee (i.e. an individual or company) may be nominated. Multiple nominees will not be accepted. All current licence documents and decals must be returned with the nomination form.

8 PUBLIC HEALTH

Commercial fleets that are staging in an area awaiting fishery openings are requested not to discharge waste water in such a manner that may impact water quality in areas where shellstock are harvested for human consumption.

The Canadian Food Inspection Agency regulations require:

1. All herring gill net skiffs to have areas where the fish harvester can stand without standing on or in herring. Fuel and hydraulic oil pump reservoir areas must be separate from fish holding areas. Skiffs should have self-bailing systems for fish

holds and standing areas separate from oil contaminated areas. No unpainted wood may come in contact with fish. Random inspections will be conducted on the fishing grounds.

2. All herring seine vessels to have valid fish hold inspection certificates. Licensing seine vessels for catching/carrying fish requires that the vessel and fish holds comply with rigid inspection criteria. Deck loads are not permitted.

3. That processing of herring in B.C. is conducted at inspected processing plants. Processing of herring for human consumption requires handling and preservation "to a degree which ensures maximum quality of the end product", (Schedule B - Part 4 Section 12 *British Columbia Fish Inspection Regulations*).

9 COMPLIANCE WITH OTHER FEDERAL AND PROVINCIAL LEGISLATION

Fish harvesters are responsible for compliance with all federal and provincial laws and regulations pertaining to fishing operations.

10 HISTORIC FISHERY DATES AND CATCH TARGETS

Table 7.2: Roe Herring Catch Targets (Tons) by Area, 2006 to 2015 *

	2006*	2007	2008	2009	2010	2011	2012	2013	2014	2015
HG	closed	closed	closed	closed	closed	closed	closed	closed	1,200	800
PR	4,172	1,067	1700	2,000	1,537	2,346	1,500	2,100	2,000	2,000
CC	3,373	770	closed	closed	closed	closed	closed	closed	750	1,400
SOG	17,717	10,086	10,800	9,750	8,500	13,500	11,500	13,805	13,633	29,415
WCVI	closed	closed	closed	closed	closed	closed	closed	closed	2,117	3,000
Coast wide	25,064	11,592	12,500	11,750	10,037	15,846	13,000	15,905	19,700	37,200

*2006 target include roe herring plus Herring Conservation Research Society (HCRS) allocation.

Table 7.3: Roe Catches (Tons) by Gear and Roe Herring Area - 2015

Roe Herring Area	Seine	Number of Licences ^	Gill Net	Number of Licences ^	Total Catch
HG	0	2	0	0	0
PR	812	8	1,093	125	**1,905**
CC	690	9	0	59	**690**
SOG	9,278	216	4,107	1,027	**13,385**
WCVI	0*	7	0*	15	0
Inactive		1		41	
Food and Bait SOG		9			
Total	10,780	252	5,119	1,267	15,980

*see Table 7.4 below

Table 7.4: Dates, Locations and Catch of Roe Herring Fisheries - 1980 to 2015

Haida Gwaii (Queen Charlotte Islands) (Areas 1, 2E and 2W)

Year	Seine	Location	Total Seine Catch	Gill Net	Location	Total Gill Net Catch
1980	Mar 23	Skincuttle Inlet	2,321	Feb. 12-14, 17-20	Naden Harbour	1,334
	Mar 19-21	Louscoone Inlet		Mar 19-21	Louscoone Inlet	
1981	Mar 17	Skincuttle Inlet	4,281	Mar 18-20	Skincuttle Inlet	1,879
	Mar 21	Inskip Inlet		Mar 24-30	Atli Inlet	
	Mar 24	Atli Inlet				
	Mar 25	Rennel Sound				
1982	Mar 14	Lower Juan Perez	2,594	Mar 20-22	Inner Skincuttle Inlet	1,551
	Mar 20	Inskip Channel				
	Mar 22	Atli Inlet				
1983	Mar 09	Lower Juan Perez	5,071	Mar 15	Outside Poole Inlet	1,024
	Mar 21	Inskip Channel				
1984	Mar 2	Lower Juan Perez	4,427	Mar 14	Poole Inlet	589
1985	Mar 11	Skincuttle Inlet	4,832	Mar 25-26	Inner Skincuttle Inlet	1,644
1986	Mar 23	Skincuttle Inlet	2,720	Apr 7	Juan Perez Sd.	981
1987	Mar 20	Juan Perez Sound	1,896	No fishery		
1988	No fishery			No fishery		
1989	Mar 28	Louscoone Inlet	1,211	No fishery		
1990	Mar 18	Port Louis	5,787	Apr 8	Burnaby Strait	1,290
	Mar 26	Louscoone Inlet				
1991	Mar 23	Rennell Sound	6,367	Apr 8	Section Cove	598
	Mar 31	Burnaby Strait				
1992	Mar 16	Louscoone Inlet	3,650	No fishery		
	Mar 18	Rennell Sound		No fishery		
1993	Mar 25	Skincuttle	3,470	No fishery		

Year	Seine	Location	Total Seine Catch	Gill Net	Location	Total Gill Net Catch
		Inlet				
	Mar 28	Port Louis				
	Mar 29-30	Rennell Sound				
	Mar31-Apr 1	Inskip Inlet				
1994	No fishery			No fishery		
1995	No fishery			No fishery		
1996	No fishery			No fishery		
1997	No fishery			No fishery		
1998	Mar 14 -	Huston Inlet	1,512	No fishery		
	Mar 15-16	Huston Inlet				
	Mar 15-17	Lower Juan Perez				
	Mar 25	Skincuttle Inlet				
1999	Mar 10	Skaat Harbour	2,484	Mar 25-27	Lower Juan Perez / Skincuttle Inlet	521
2000	Mar 15	Island Bay / Skaat Harbour	1,640	No fishery		
	Mar 16	Skaat Harbour / Skincuttle Inlet				
2001	No Fishery			No Fishery		
2002	Mar 22	Juan Perez	502	No Fishery		
2003 to 2015	No Fishery			No Fishery		

Prince Rupert District (Areas 3, 4 and 5)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1980	Mar 29-31	Kitkatla Inlet	1,809	Mar 29-31	Kitkatla Inlet	1,153
1981	Mar 27	Kitkatla Inlet	1,159	Apr 3	Kitkatla Inlet	392
1982	No fishery			No fishery		
1983	No fishery			No fishery		
1984	Mar 21	Kitkatla Inlet	1,822	Mar 26	Big Bay	2,072
1985	Mar 28	Kitkatla Inlet	3,086	Mar 26-28	Big Bay	3,831
1986	Apr 2	Kitkatla Inlet	3,796	Apr 12-13	Big Bay	5,039
1987	Mar 31 Apr 1	Kitkatla Inlet	1,918	Mar 24,25,29 Apr 2	Big Bay	4,485
1988	Apr 4	Kitkatla Inlet	3,585	Apr 2,3,4,6	Big Bay	4,781
1989	Apr 2, 3	Kitkatla Inlet	3,805	Apr 2, 3, 4	Big Bay	5,231
1990	Apr 3, 4	Kitkatla Inlet	2,224	Mar 28	Big Bay	2,603
1991	Apr 6	Kitkatla Inlet		Mar 25, 27	Big Bay	
1992	Mar 30	Kitkatla Inlet	1,230	Mar 26	Big Bay	3,912
1993	Apr 1	Kitkatla Inlet	2,000	Mar 31	Big Bay	4,155
1994	Apr 2, 3	Kitkatla Inlet	2,017	Apr 2, 3	Big Bay	2,530
1995	Apr 4, 5	Kitkatla Inlet	797	Mar 27	Big Bay	1,522
1996	No fishery			Mar 27	Big Bay	3,075
1997	No fishery			Apr 5	Big Bay	6,007
1998	No fishery			Mar 21-23	Big Bay	3,501
1999	No Fishery			Mar 20-25	Big Bay	2,028
2000	Mar 27-28	Kitkatla Inlet	1,366	Mar 29-Apr 1	Big Bay	3,308
2001	Mar 23	Kitkatla Inlet	839	Apr 1 – 4	Big Bay – Venn Pass	2,100
2002	Apr 3-6	Kitkatla Inlet	2,059	Mar 25-29	Big Bay	2,681
2003	Mar 23	Kitkatla Inlet	1,383	Mar 28-30	Big Bay	2,706
2004	Mar 27; 29	Kitkatla Inlet	1,646 *	Mar 19 – 25	Big Bay	2,330
2005	Mar 18 – 20	Kitkatla Inlet	1,567 *	Mar 19 – 21	Big Bay	2,142 *
2006	Mar 23, 24	Kitkatla Inlet	820*	Mar 26-29	Big Bay	1,697*
2007		No Fishery		Apr 3 to 4	Big Bay	1,067
2008	Mar 15-18	Kitkatla Inlet	566	Apr 2 to 4	Slippery Rock Big Bay	1,266
2009	Apr 7,8	Kitkatla Inlet	786	Apr 7,8	Big Bay	1,418
2010	Mar 25-26	Kitkatla Inlet	523	Mar 29- Mar 31	Big Bay	1,113
2011	Mar 25-27	Kitkatla Inlet	973	Mar 26-29	Big Bay	1,346
2012	Mar 30	Kitkatla Inlet	514	Mar 24-27	Big Bay	1,010
2013	Mar 19 and 22	Kitkatla Inlet	818	Mar 20-22	Big Bay	1,415
2014	Mar 22-24	Kitkatla Inlet	791	Mar 30-Apr 1	Big Bay	1,223
2015	Mar 21-23	Kitkatla Inlet	812	Mar 22-27	Big Bay	1,092

Central Coast (Areas 6, 7, 8)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1982	Mar 15	Stryker Bay	2,489	Mar 18-19 Mar 21-22	Cape Mark-Thompson Bay Kitasu Bay-Higgins Pass	4,488
1983	Mar 15	East Houghton Islands	2,272	Mar 21 Mar 23	West Coast Price Island Houghton Islands, Thompson Stryker, Cecilia Island	3,945
1984	Mar 16-17	East Higgins Pass	3,955	Mar 27-29	Kitasu Bay, Powell Anchorage S.E. Princess Alice Island	3,949
1985	Mar 11	Spiller Channel	2,993	Mar 31-Apr 1	Weeteeam Bay, Kitasu Bay, Powell Anchorage, Spiller Dundivan, Thompson Waskesiu Houghton Islands, Kwakshua Channel	2,529
1986	Mar 29	E. Higgins Pass	2,224	Apr 5	Kitasu Bay, Powell Anchorage, Spiller Channel, Thompson	1,296
1987	Mar 29	Seaforth Channel Spiller Channel	2,583	Mar 30	Powell Anchorage, Stryker Kitasu Bay	1,014
1988	Mar 19	Stryker Bay	3,490	Mar 28-30	Kitasu Bay, Thompson Bay	1,069
1989	Mar 24 Mar 25	Thompson Bay Kitasu Bay E. Higgins	6,796	Mar 30, 31 Apr 1, 3, 4	Raymond Pass E. Higgins Pass Kitasu, Thompson & Stryker Boddy/Joassa Channel Norman Morrison Bay	3,209
1990	Mar 19	Spiller Channel	5,336	Mar 28	Kitasu Bay &	3,357

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
	Mar 24	Spiller Channel		Mar 29	Stryker Bay Kitasu Bay, Stryker Bay, Thompson Bay	
1991	Mar 23	Spiller Channel	7,300	Mar 31	Thompson Bay, Powell Anchorage	1,915
1992	Mar 19	Seaforth / Spiller	6,913	Mar 24	Seaforth/ Powell Anchorage/ Thompson Bay	1,085
1993	Mar 24	Seaforth / Spiller	8,655	Mar 28-29	Seaforth, Thompson Bay, Boddy Pass	2,007
1994	Mar 26, 27	Seaforth / Spiller	10,036	Mar 28	Kitasu, Thompson Bay, Powell Anchorage	2,406
1995	Mar 18	Kitasu Bay	8,406	Mar 22	Kitasu Bay Moss Pass	1,581
	Mar 22, 23	Spiller Channel		Mar 29	Cecilia Island, Spiller Ch, Thompson Seaforth Channel	
1996	Mar 20	Seaforth / Spiller	3,900	Mar 23	Powell Anchorage, Berry Inlet, Seaforth Channel	369
1997	Mar 25	Spiller Channel	2,805	Mar 29	Powell Anchorage	33
1998	Mar 16-18	Spiller Channel	7,919	Mar 20-23	Seaforth Ch, Mathieson Ch Powell Anch, E Higgins Pass	498
1999	Mar 16-17	Spiller Channel	5,967	Mar 19-24	West Price Is.	1,558
2000	Mar 17-19	Spiller Channel	6,513	Mar 28-30	East Higgins Pass	1,021
2001	Mar 18-21	Spiller Channel	5,665	Mar 26	East Higgins Pass	509
2002	Mar 27-29	Spiller Channel East Higgins Pass	2,636	Apr 2-5	Laredo Snd, E Higgins Pass Matheson Ch	440
2003	Mar 23-24	East Higgins Pass	2,054	Apr 2-3	Laredo Snd, E Higgins Pass	319
2004	Mar 24-25	Seaforth / Spiller	2,559 *	No Fishery		
2005	Mar 22- 24	Seaforth / Spiller	3,618 *	No Fishery		
2006	Mar 21 -25	Lambard Inlet,	2,710*	No Fishery		

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
2007	Mar 26-28 Mar 27-28 Mar 15 –Apr 3	Neekas Inlet E. Higgins Pass Seaforth/Spiller Clifford Bay, Waskesui Pass/East Higgins Pass/Kitasu Bay	439	No Fishery		
2008-2013	No Fishery			No Fishery		
2014	No Fishery			Apr 1-4	Clifford Bay and Weeteeam Bay	757
2015	Mar 22,23	Spiller Channel	690	No fishery		

Strait of Georgia (SOG) (Areas 12 to 18)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1980	Mar 6	Lambert Channel		Mar 5-6	Hornby - Denman	3,502
	Mar 6			Mar 9-12	Northwest Bay	
1981	Mar 7-8	Hornby - Denman	2,294	Mar 5-7	Hornby - Denman	5,584
1982	Mar 7-8	Pylades Channel	3,651	Mar 5-7	Hornby - Denman	6,154
1983	February 27	Cape Lazo	8,576	Feb. 27-Mar 1	Hornby - Denman	9,495
	Mar 4-5	Powell River				
	Mar 2	Nanoose Bay				
1984	Mar 2, 4	Powell River	4,548	Mar 9-11	Cape Lazo, Nanoose Bay	6,657
1985	Mar 6	Hornby - Denman .	2,915	Mar 8-9	Hornby - Denman	3,852
1986	No Fishery			No Fishery		
1987	Mar 6, 7	Powell River	3,429	Mar 7, 8	Lambert Channel	6,612
				Mar 17, 18	Yellow Point	
1988	Mar 3	Baynes Sound	1,621	Mar 12	Hornby - Denman	6,601
1989	Mar 11, 12	Pylades & Stuart Channel	1,562	Mar 15	Cape Lazo - French Creek	6,525
1990	No Fishery			Mar 14	Cape Lazo	8,693
					Hornby - Denman	
				Mar 22-24	Hornby - Denman	
					French Creek	
					Stuart Channel	
1991	Mar 2	Baynes Sound	1,020	Mar 17	Hornby - Denman	9,844
				Mar 18-19	Hornby - Denman	
1992	Mar 4	Baynes Sound	3,430	Mar 14-15	Cape Lazo - Lambert Channel	9,393
1993	Mar 2	Baynes Sound	4,383	Mar 6	Upper Denman - Hornby	9,948
					Baynes Sound - Lambert Channel	
1994	Mar 10	Baynes Sound	4,902	Mar 14, 15	Shelter Point to Dorcus Point	12,249
1995	Mar 4, 5	Baynes Sound	4,209	Mar 12	Upper Baynes Sd-Hornby Is.	9,112
					Lambert Channel	
1996	Mar 7, 8	Baynes Sound	6,995	Mar 15	Baynes Sd-Hornby Is.	6,528

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1997	Mar 4	Baynes Sound	9,410	Mar 19	Lambert Channel Qualicum Baynes Sd-Hornby Is.	6,294
1998	Mar 8,9	Baynes Sound	6,259	Mar 12, 13	Lambert Channel Baynes Sound - French Creek	7,343
1999	Mar 5	Baynes Sound	5,104	Mar 18 Mar 4-7	Nanaimo Baynes Sound-Lambert Channel French Creek	7,296
2000	Mar 2-4	Lower Baynes Sound	6,689	Mar 4-7	Lower Baynes, East Coast Denman Island, Qualicum	8,155
2001	Mar 4	Baynes Sound	7,358	Mar 6-9	Cape Lazo to Thames Creek	8,281
2002	Mar 7-8	Baynes Sound	9,685	Mar 17-20	Cape Lazo to Nanaimo	8,640
2003	Mar 14	Baynes Sound	10,897	Mar 16-23	Cape Lazo to Nanaimo	8,707
2004	Mar 10-13	Nanoose Bay & Northumberland	7,737	Mar 10-15 Mar 20-29	Cape Lazo - Valdes Island	5,637
2005	Feb 28 – Mar 2	Baynes Sound	7,710 *	Feb 28 – Mar 4	Cape Lazo to Nanaimo	9,657 *
2006	Mar 6-10	Baynes Sound	9,060*	Mar 4 Mar 13-15	Cape Lazo to Nanaimo Stuart Channel, Valdes Island	7,698*
2007	Mar 12-14	French Creek/Chrome Island/Baynes Sound	4,260	Mar 4-14	Hornby Island/Denman Island to Parksville	5,826
2008	Mar 1,2, 4, 5	French Creek/Qualicum Beach	6,664	February 26 – Mar 24	Cape Lazo – Nanaimo, Dodd Narrows	3,033
2009	Mar 4	Baynes Sound	6,265	Mar 6-8	Cape Lazo to Nanaimo	4,340
2010	Feb 28	Neck Point/Blunden	5,004	Feb 26-Mar 3	Cape Lazo to Nanaimo	3,576
2011	No fishery			Mar 13 – 22	Cape Lazo to Nanaimo	4,686

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
2012	Mar 4,6,7,17	Henry Bay, Comox Bar, Yellow Pt	3,494	Mar 4 to Apr 2	Cape Lazo to Nanaimo	4,496
2013	Mar 3 to 10	Baynes, Qualicum,	6,723	Mar 2-6	Cape Lazo to Nanaimo	6,509
2014	March 3 to 8, Mar 10	Baynes	7,583	Mar 5-11	Cape Lazo to Nanaimo	6,167
2015	Feb 24 and 28; Mar 1, 2, 3, 4, 12, 13, 18, 26, 30; April 2 and 6	Baynes, FCreek, NW Bay, Nanaimo	9,278	Feb 28 – Apr 8	Cape Lazo to Nanaimo	4,107

WCVI (Areas 23 to 27)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1980	March 7-8	Clayoquot Sound	1,854	March 8	Clayoquot Sound	2,536
				March 2-5	Esperanza Nuchatlitz Pt. Langford	
				March 3-9	Winter Harbour	
1981	March 11	Barkley Sound	5,521	March 15-16	Barkley Sound	3,395
				March 2-5	Esperanza / Nuchatlitz, P. Langford	
				March 6-13	Winter Harbour	
1982	March 17, 18	Barkley Sound	2,613	March 8-9	Clayquot Sound	3,433
	March 8	Clayoquot Sound		March 7-12	Esperanza / Nuchatlitz, Pt. Langford	
	March 7, 8	Winter Harbour		March 8-14	Winter Harbour	
1983	March 1	Barkley Sound	6,769	March 3	Esperanza, Nuchatlitz	2,684
				Feb. 28-March 4	Winter Harbour	
1984	March 8	Barkley Sound	6,303	March 5	Esperanza / Nuchatlitz	946
				March 3-6	Winter Harbour	
1985	No Fishery			No Fishery		
1986	No Fishery			No Fishery		
1987	Area 23 March 12	Barkley Sound	14,438	Area 25 March 12	Esperanza / Port Langford Nuchatlitz	2,724
1988	Area 23	Barkley Sound	8,375			1,596
	March 11					
	Area 24	Clayoquot Sound		Area 24	Clayoquot Sound	
	March 11	Cypress Bay		March 23		
1989	March 13, 17	Barkley Sound	9,825	March 23	Hand / Pinkerton / Turtle Island	3,874
1990	March 11, 12	Barkley Sound	7,819	March 21	Yellow / Elbow Banks	2,160
1991	March 10	Cook Channel	6,145	March 21	Macoah / Toquart	2,062
	March 12	Barkley Sound				
1992	March 6-8	Stopper	3,123	March 8	Maggie	618

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
		Island / Toquart Bay			River/ Macoah Pass	
1993	March 11	Barkley Sound	5,775	March 10	Winter Harbour	369
1994	March 7	Barkley Sound	6,022	March 9	Winter Harbour Esperanza Inlet	1,020
1995	March 3	Barkley Sound	1,629	No Fishery		
1996	March 14-16 March 16	Barkley Sound Tofino	793	No Fishery		
1997	March 4	Barkley Sound	6,893	No Fishery		
1998	March 9	Barkley Sound	5,377	March 17 March 7,8 March 18	Barkley Sound Esperanza Inlet Sydney Inlet	1,640
1999	March 10	Barkley Sound	3,210	March 4-7 April 1	Esperanza Inlet Sydney Inlet	1,062
2000	March 8-9	Barkley Sound	547	March 21-24	Esperanza Inlet	772
2001	No Fishery			No Fishery		
2002	No Fishery			March 26-28	Esperanza Inlet	428
2003	March 10-14	Barkley Sound	2,285	March 24-27	Esperanza Inlet	1,042
2004	March 14-15	Rosa Harbour	3,689 *	March 14-19	Inner and Outer Nuchatlitz; Rosa Harbour	654
2005	March 7 - 8	Esperanza Inlet	3,257 *	March 7 - 12	Esperanza Inlet	988
2006-2013	No fishery			No fishery		
2014	Remained closed – due to interlocutory injunction			Remained closed – due to interlocutory injunction		
2015		No catch			No catch	

*Includes portion of HCRS allocation.

APPENDIX 8. COMMERCIAL FISHING PLAN FOR SPAWN ON KELP

TABLE OF CONTENTS

1 PURPOSE

This document is a Commercial Fishing Plan for spawn on kelp in British Columbia, for the period from February 1, 2016 to June 30, 2016.

2 COMMERCIAL FISHERY OVERVIEW

The spawn on kelp fishery traditionally occurs in four of the five Pacific herring major stock assessment areas: Haida Gwaii (HG), Prince Rupert District (PRD), Central Coast (CC), and the west coast of Vancouver Island (WCVI). It does not occur in the Strait of Georgia (SOG) because of the lack of suitable kelp. The fishery also has activity in the minor stock assessment areas (Area 2W and 27), and in Areas 10 and 12.

Spawn on kelp is a traditional food of B.C. coastal First Nations. First Nations communities harvest herring spawn-on-kelp for food, social and ceremonial purposes (FSC) under the authority of communal licences. First Nations coastal communities traditionally harvest herring spawn naturally on several different types of kelp, eel grass and tree branches.

The spawn on kelp fishery provides the opportunity to harvest herring eggs which have adhered to blades of kelp after herring have spawned. Commercial production of spawn on kelp was initiated in 1975 with the issuance of permits to 13 individuals, and developed in a gradual fashion. Selection of permit holders was based on remoteness of operation site and experience in catching, holding and handling live herring. Permits were issued only if adequate supplies of herring and kelp were available in the area being considered.

Between 1975 and 1983, additional permits were granted, increasing the number of permit holders to 29. In 1983, the permits formally became limited entry category J licences. In 1989, ten new licences were granted to First Nations subject to retirement or rendering temporarily inactive a set number of roe herring seine or gillnet licences from the herring roe fishery**.** In 1996, the Supreme Court of Canada found in its *Gladstone* decision that the Heiltsuk First Nation had an Aboriginal right to commercially fish herring spawn-on-kelp (SOK). As a result, seven new communal commercial licence eligibilities were negotiated with the Heiltsuk First Nation and the Heiltsuk currently hold nine SOK licences in Central Coast area, with an annual quota of 240,000 pounds. This SOK is harvested using the preferred means of the Heiltsuk, which is open ponding.

In total, there are 46 spawn on kelp licence eligibilities. Twelve of these are communal commercial, category “FJ” licence eligibilities held by First Nations (three as a result of relinquishment through ATP and re-issuance as communal commercial, and nine are unique Heiltsuk communal commercial licences), while the remainder are category ‘J’ commercial licence eligibilities issued to individual parties, which include First Nations individuals and bands.

3 MANAGEMENT MEASURES FOR THE DURATION OF THIS PLAN

3.1 Changes from Previous Seasons

- Central Coast will have a management approach of a reduced harvest rate of 7%.

3.2 Events Calendar

Table 8.2: Events Calendar for 2015 and 2016 seasons.

MONTH	DAY	EVENT
		2015
October	1	Provincial Marine Plant Harvest Permit Application Deadline
		2016
January	15	Release of Draft IFMP to Public
	22	Deadline for spawn-on-kelp license eligibility holder consensus proposal (if required)
	22	Deadline for Area 2W spawn on kelp lottery submissions if no consensus proposal.
	22	Spawn-on-kelp lottery at PR Licensing (if required)
	29	Deadline to designate 2016 roe herring licences as inactive for 2016
February	1	Deadline to enroll with spawn on kelp monitoring program
	1	Spawn on kelp fishing season anticipated to open
April	15	Closure of Island Point to seining operations for spawn on kelp purposes
May	31	Spawn on kelp fishing closes
June	30	All spawn on kelp fishing gear removed from water
December	31	License Eligibility must be completed with Licensing

3.3 Open Times

The spawn on kelp commercial fishing plan is in effect from 00:01h February 1, 2016 to 23:59h June 30, 2016. The actual opening of the fishery will be through a Variation Order and fishery notice. Application to extend the open time for late season harvest must be made to the Regional SOK Coordinator before May 24, 2016 in order to allow for consultation and discussions with all participants. Extensions to the season are not automatically approved; a precautionary plan may be required for herring conservation.

3.4 Open Areas

The following areas are identified as fishing areas, subject to in season decisions on specific areas that will be opened by Variation Order and to the permanent area closures detailed in the following section (Table 8.3).

Table 8.3: Open areas for the 2016 season.

Major Stock Assessment Areas		
	Prince Rupert District	3, 4*, 5
	Central Coast	6, 7, 8
	Area 2W	2-49 through 2-100
Minor Stock Assessment Areas	Area 27	27-1 through 27-10
Other Stock Areas	Area 10	
	Area 12	

*Island Point is located on the North side of Porcher Island in the Prince Rupert Stock Assessment Area and Butler Cove is located on the west side of Stephens Island in the Prince Rupert Stock Assessment Area. These are alternate sites for spawn on kelp operations in Area 4 which usually account for only a small portion of the Area 4 harvest. If more than two operators are interested in harvesting herring in these areas, a precautionary plan with pooling will be implemented to minimize herring usage when fishing.

Island Point closes to seining for herring on April 15th. Operators wishing to fish beyond the April 15th closure may contact their local Resource Manager (see Contacts). Please see your spawn on kelp licence conditions for details.

Estimates of spawning biomass for Area 10 have remained low since 2006. In 2007 and 2008, SOK fisheries were significantly under quota and the area has been closed to commercial harvest from 2010-2015. Spawn reconnaissance and dive or surface surveys have been conducted in Area 10 by the Gwa'sala-Nakaxda'xw First Nation since 2009, and prior to 2009 through the coastwide survey program. Consultations with the Gwa'sala-Nakaxda'xw and the license holders are ongoing, and it is expected that 2016 will include an agreement for provisions to open Area 10 for one open pond operation. The presence of a commercial SOK operation in Area 10 will support the data collection program for the area-- increased personnel in Area 10 will lead to increased soundings

and spawn monitoring. If more than one operator wishes to fish, then a pooled arrangement or lottery will occur.

Commercial fleets are requested to avoid locations where local First Nations are gathering fish, or fishing for herring spawn on boughs or spawn on kelp. Additionally, the Department works collaboratively with First Nations on communication regarding herring stocks and spawning locations for FSC fishery planning and information on FSC activities. As the fishery season progresses, in some cases, specific requirements to remain out of particular locations to support FSC harvest will be broadcast for adherence by fish harvesters.

3.5 Precautionary Closures

DFO is recommending a precautionary regime for the 2016 season with no commercial harvesting in the following area(s) (Table 8.4):

Table 8.4: Pre-cautionary closures for the 2016 season.

Major Stock Areas	HG West Coast Vancouver Island (Areas 23 to 25)

HG and WCVI are closed due to herring biomass forecasts below the commercial fishery cut-offs for 2016.

Note that there may be additional closures in season by Variation Order and Fishery Notice. Refer to your license and the Fishery Notices before fishing in an area.

3.6 Haida Gwaii (2E and lower 2W) Closed Areas

The Gwaii Haanas Marine Area was established to protect and conserve ecosystems in the southern portion of Haida Gwaii. The Marine Area comprises 3,500km^2 of water and seabed adjacent to the existing Gwaii Haanas National Park Reserve and Haida Heritage Site.

Areas closed are the tidal waters of Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site described below:

(1) Burnaby Narrows
Those waters of Subareas 2-13 and 2-16 inside a line commencing at 52°23.049 minutes N and 131°23.438 minutes W east to 52°23.077 minutes N and 131°22.908 minutes W, following the southern shoreline of Kat island east to 52°23.107 minutes N and 131°22.274 minutes W, then east to 52°23.295 minutes N and 131° 21.34 minutes W, following the western shoreline of Burnaby Island south to 52° 20.951 minutes N and 131°20.509 minutes W, then west to 52°20.733 minutes N and 131°21.072 minutes W, and then north following the eastern shoreline of Moresby Island back to the point of commencement. [Burnaby Narrows]

(2) Louscoone Estuary
Those waters of Subareas 2-33 and 2-34 north of a line drawn from 52°11.836 minutes N and 131°15.658 minutes W east to 52°12.271 minutes N and 131°14.594 minutes W. [Louscoone Estuary]

(3) Flamingo Estuary
Those waters of Subarea 2-37 north of a line drawn from 52°14.456 minutes N and 131°22.234 minutes W southeast to 52°14.246 minutes N and 131°21.489 minutes W. [Flamingo Estuary]

(4) Gowgaia Estuary
Those waters of Subarea 2-41 east of a line drawn from 52°24.944 minutes N and 131°32.138 minutes W southeast to 52°24.238 minutes N and 131°32.024 minutes W. [Gowgaia Estuary]

(5) Cape Saint James
Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line commencing at 51°56.523 minutes N and 131°01.522 minutes W, southwest to 51°55.627 minutes N and 131°02.574 minutes W, then southeast to 51°52.5 minutes N and 130°57.919 minutes W, then south to 51°51.676 minutes N and 130°57.805 minutes W, the southeast to 51°50.349 minutes N and 130°56.442 minutes W, then northeast to 51°51.062 minutes N and 130°54.717 minutes W, then north to 51°53.888 minutes N and 130°55.608 minutes W, then northwest to 51°58.671 minutes N and 130°59.464 minutes W, and then west to 51°58.743 minutes N and 131°00.606 minutes W, and then following the southern shore of Kunghit Island west to the point of commencement. [Cape Saint James]

(6) SGang Gwaay
Those waters of Subareas 2-31 and 142-1 inside a 3km radius from the centre point on Anthony Island located at 52°05.655 minutes N and 131°13.178 minutes W. [SGang Gwaay] Participation Requirements

The spawn on kelp fishery is a limited entry fishery, open to those licence eligibility holders who meet the specific licence requirements described in Section 6.6.

A valid spawn on kelp licence is required prior to any spawn on kelp activity, including the setting of any spawn on kelp enclosures (i.e. floating frame with web).

3.7 Allocation and Harvest Levels

A guideline for determining spawn on kelp harvest allocations has been implemented by the Department to avoid the issuance of partial quotas based on the CSAP provided harvest options. Where the CSAP provided harvest option is not evenly divisible by 100 short tons for a closed pond operation or 35 tons for an open pond operation, the harvest option will be rounded up or down to the nearest evenly divisible yield.

3.7.1 Haida Gwaii (Area 2E)

Haida Gwaii major stock assessment area is closed in 2016.

3.7.2 Area 2W

Area 2W (west coast of Haida Gwaii) has a maximum expected use of 100 short tons for the 2016 spawn on kelp season. The CSAP provided harvest option of 127 tons, based on the round up, round-down guideline the yield will be rounded down to 100 tons to accommodate one license with a full quota.

3.7.3 Prince Rupert

The Prince Rupert District has an expected use of 1,000 short tons to accommodate all 10 licences at full quota for the 2016 spawn on kelp season.

3.7.4 Central Coast

Areas 6, 7, 8 has an expected use of 1,125 short tons for the 2016 spawn on kelp season which provides a harvest option for all operations at full quotas.

3.7.5 Area 12

Area 12 has an expected use of 100 short tons for one closed pond operation.

3.7.6 Area 23, 24, 25

The West coast of Vancouver Island is closed in 2016.

3.7.7 Area 27

Area 27 (North West coast of Vancouver Island) has an expected use of 105 short tons for the 2016 spawn on kelp season which provides a harvest option for all 3 open pond operations at full quotas.

3.8 Quota Allocations

The majority of J and FJ licences have an individual quota of 16,000 pounds of drained product, adjusted annually based on the previous year for overages and underages. The Heiltsuk First Nation holds nine licence eligibilities with a total quota of 240,000 pounds.

3.9 Catch in Excess of Quota (Overage)

Operators must operate in a manner that ensures that over-harvest does not occur. Any licence holder landing spawn on kelp product in excess of the licensed amount may be subject to prosecution and seizure of the overage as a violation of their conditions of licence.

No person who is fishing under the authority of a licence issued for the purpose of commercial fishing shall dump from a vessel any fish that has been caught in accordance with the *Fisheries Act* and the *Regulations* made thereunder.

3.9.1 Carry Over of Quota Overage and Underage

The carry-over program for quota overages or quota underages will continue in 2016. First introduced in 1996, this program allows the spawn on kelp licence holder to carry over reasonable quota overages or quota underages from one year to the next.

The Rules for Carry-Over of Individual Quota Underages
Licence holders whose product weight is under their quota by 2000 pounds or less, at the end of the season, will have the equivalent weight of the underage added to their individual quota in the next year the license is active.

Licence holders whose product weight is under the quota by more than 2000 pounds, at the end of the season, will have only 2000 pounds added to their individual quota in the following season and will forego the remainder.

The Rules for Carry-Over of Individual Quota Overages
Licence holders, whose product weight is over their quota by as much as 1000 pounds at the end of the season, may retain the overage. Any product landed in excess of 1000 lbs will be seized and charges may result. The equivalent weight of any overage will be subtracted from the quota for that licence in the next year it is active.

3.10 Compliance with other Federal and Provincial Legislation and Regulations

3.10.1 Gwaii Haanas National Marine Conservation Areas and Haida Heritage Site

The Gwaii Haanas Agreement (1993) specifies "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). Log harvesting for SOK pond frames is not permitted within the boundaries of the Gwaii Haanas National Park Reserve.

3.10.2 Province of BC Kelp Harvest Requirements

The BC Ministry of Agriculture and Lands licence and enforce the harvesting of Marine Plants. The harvest of *Macrocystis integrifolia* kelp used in spawn on kelp operations is carried out under the authority of a Marine Plant Harvest Licence issued by the BC Ministry of Agriculture and Lands. Conditions of licence include area of harvest, quantity of kelp that may be harvested, harvesting equipment, harvesting techniques, and harvest log and royalty submission.

The Ministry of Agriculture and Lands is obliged to consult with First Nations prior to the issuance of the Marine Plant Harvesting Licence. Licencees can assist the Ministry in this process in a number of ways, including:

- participating directly with the First Nations in the consultation process;
- providing direct support to the First Nations in the consultation process; and
- building new or maintaining any existing relationships with First Nations;
- providing the BC Ministry of Agriculture and Lands with any further information that you think could assist in our consultation process.

The following application requirements apply:

- Application deadline is October 1 for harvest proposed for the following year;
- Each application must include the relevant J licence holder information;
- The applicable licence fee payable to the provincial Minister of Finance is $110;
- As per the *BC Fisheries Act*, the person harvesting the kelp must have a valid licence. It is the responsibility of the J licence holder to ensure the product received was legally harvested.

For information regarding kelp harvesting, licensing and First Nation consultation contact:

Gary Caine
BC Ministry of Agriculture and Lands
2500 Cliffe Avenue
Courtenay, BC V9N 5M6
Phone: (250) 897-7545

Fish Inspectors may conduct checks for proof of a valid Marine Plant Harvest Licence and may conduct audits at processing facilities to ensure compliance with the *BC Fisheries Act*

http://www2.gov.bc.ca/gov/services/detail?desc=Marine%20Plant%20Harvest%20Licence

3.10.3 Public Health

To ensure product quality, all herring spawn on kelp harvesters and companies processing spawn on kelp must adhere to the following requirements:

- All herring spawn on kelp must be shipped to, graded, packed, labeled and exported from establishments possessing valid Federal Certificates of Registration as fish processing plants. The plant's Quality Management Program must include controls for the processing of herring spawn on kelp.
- Containers must be used to collect and hold spawn on kelp during harvesting and for transporting to the processing plants. These must be constructed of approved materials, as per the Canadian Food Inspection Agency Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products. They must also be fitted with rigid covers when holding product to protect it from weather and contamination.
- During the holding and transporting period, the product should be kept chilled to prevent quality loss.

For export of the product from registered processing plants, rectangular plastic pails with tight fitting lids are the most acceptable. These particular pails cause minimal damage to the product.

Export containers (pails), must be properly labeled to show the name of the product, the weight, a list of ingredients and the name and address of the processor or distributor. If a

distributor's name and address is used, the processor's registration number must be on the label as well. The containers must also indicate the date on which the product was packed so that if there are any problems the product can be segregated into lots without having to hold or delay the entire shipment. Grades are not allowed unless provided for in regulations. The licence number and a decal numbered sequentially, as issued by Fisheries and Oceans Canada must also appear on each container.

Product certification for export will be carried out upon request. The product must be available for inspection at a federally registered fish processing plant at time of request. Requests for certification must be made four working days prior to last date available for inspection.

When the lot is ready for inspection, application in writing must be made to any of the following:

Canadian Food Inspection Agency
4250 Commerce Circle
Victoria, B.C. V8Z 4M2
Phone: (250) 363-3455
Fax: (250) 363-0336

Prince Rupert Inspector: (250) 627-3439
2250 Boundary Road
Burnaby, B.C. V5M 4L9
Phone: (604) 666-4427
Fax: (604) 666-3650

To issue the export certificate, the following information will need to be included, and so applicants should include this in their application:

- Product description.
- Lot number or day code.
- Number of buckets.
- Weight per bucket and total weight.
- Sequential numbers (from stickers issued by Fisheries and Oceans Canada).
- Permit number (if more than one permit number, the amount for each).
- Consignee.
- Consignor.
- Identifying marks (unique to shipment).
- Date of shipment or last date available for inspection.
- Method of shipment. (Specific vessel or flight must be stated).
- Location of product.
- Processor and registration number.
- Country for export.

3.11 Best Practices

- Operators are encouraged to conserve and minimize herring handling and usage during the fishery. DFO would like to improve estimates of herring mortality associated with spawn on kelp ponding operations. In order to minimize impact, a number of measures are recommended :

3.11.1 Herring Capture

- During the seining of herring for closed pond operations there are a number of measures that may be taken to minimize impacts:
    a. Sets should be as close to the intended ponding amount as possible
    b. Jigging herring prior to making a set may provide an indication of maturity.
    c. Drying up of sets to the point of causing fish to boil may result in undue stress and mortality.
    d. Nets should be drummed slowly to reduce fish stress.

3.11.2 Towing

- Slow towing speeds are better for fish health. The maximum towing speed recommended is 0.3knots. This rate maintains the shape of the net, and reduces the occurrence of folding or "bagging" of the net, which tends to trap fish against the web causing increased scale loss, bruising and other injuries. The maximum towing distance is recommended to be 3nm.

3.11.3 Density

- Density is an important aspect to herring mortality. Gillis et al. (1982) found that herring should not be impounded at loading densities exceeding 1.0 lb/ft3 for 4 or 5 days. So for a 50x50x50 ft pond, the maximum loading density is 60 tons. Retaining herring to the maximum of 7 days means operators should reduce the herring in the pond proportionally. The behavior of the fish in the higher density ponds includes undefined schooling and continual boiling over the entire surface and in the pond web.

3.11.4 Predator Deterrence

- Herring enclosures should deploy a predator deterrence system that meets one or more of the following conditions:
    - Attended continually by the operator.
    - A 1m or higher fence attached vertically to the frame to deter seals and sea lions.
    - Contiguous webbing pulled tight across the impoundment above the surface of the water to deter bird predation.
    - A predator net consisting of contiguous netting with a maximum mesh size of 35 mm (1 5/16 inches). The predator net must surround the webbing of the impoundment completely, maintain a space of at least 30 cm (12 inches) between the predator net and the webbing, and not exceed the requirements set out in section 4.2.1

4 GEAR

This section is a general description of gear used in both closed and open pond operations. Please refer to the license conditions for specifics on eligible gear for each license.

4.1 Seine

- A herring purse seine shall not be greater than 410 m (225 fathoms) in length, and mesh size not less than 25 mm (1 inch) extension measure.
- The bunt of the seine net must be knotless web and a minimum of 40 metres (20 fathoms) in length.

4.2 Closed Ponds (Herring Enclosures)

- Note that a valid J or FJ licence is required before putting any webbing in the water for use as a herring enclosure. All captured or impounded herring must be released following harvest of the spawn on kelp product, except where specific arrangements have been made with the Department.
- A maximum of two (2) enclosures may contain herring at one time for the production of spawn-on-kelp unless each enclosure is attended continually. If attended continually, a maximum of three (3) ponds with herring can be maintained.
- Herring are to be released following the harvest of the spawn-on-kelp or after a maximum of 7 impoundment days beginning when the first herring is added to the enclosure.

4.2.1 Enclosure Construction

- Enclosures must be constructed so that the floating frame can support the weight of an impoundment net and enclosed herring without collapsing.
- The maximum area of a closed pond enclosure frame is 3600 ft^2 (334 m^2) or approximately 60ft x 60ft (18.3m).
- The bottom of the herring enclosure net must be maintained so that the bottom of the net is a minimum of 3 m (9 feet) above the substrate under the enclosure at all times.

4.2.2 Enclosure Marking

- Every individual herring enclosure (i.e. floating frame with impoundment net) must be marked with the Category J licence number under the authority of which it is operated, in accordance with the licence conditions. Enclosures must also be numbered in a sequential fashion (i.e. Pond 1, Pond 2, etc.) This numbering requirement also applies to single enclosures (i.e. Pond 1).

4.2.3 Webbing

- Any net used in a herring enclosure must be made of knotless web with a mesh size not greater than 25 mm (1 inch).

- Any net used to impound herring for spawn on kelp production must remain suspended and stationary in the water column for a minimum of 21 days or until all of the eggs have hatched following the release of the impounded herring.

4.3 Open Ponds (No Herring Enclosures or Seine Nets)

- Note that a valid J or FJ licence is required before putting any webbing or other device in the water for use to direct herring towards suspended kelp. Herring may not be enclosed or otherwise impounded in any manner.
- Nets may be suspended in the water to direct herring towards the suspended kelp, but may not impound or trap herring. Suspended nets must meet the following specifications:
- Any net used must be of a knotless web with a mesh size not greater than 25 mm (1 inch).
- Floating frames, used to suspend the nets, must be capable of supporting the weight of the net without collapsing.
- The bottom of any nets must be a minimum of 3 m (9 feet) above the substrate at all times.
- The net must remain in the water a minimum of 21 days following the most recent herring spawn deposition
- Each net must be marked with the Category J licence number under the authority of which it is operated, in accordance with the licence conditions.

5 MONITORING PROGRAM

Timely and accurate information on harvest and harvesting practices is essential to assess the status of fish stocks and to ensure the conservation and the long term sustainability of fish resources. Effective monitoring and accurate catch reporting in the spawn on kelp herring fishery is integral to the effective management of the fishery and herring resource.

The spawn on kelp Fishery Monitoring Program is industry funded and has been in place since 1996. This program provides dockside validation of landed and processed spawn on kelp by port monitors. In season, all monitoring activities are directed by an independent program coordinator or by a DFO representative.

When the Central Coast is open for harvest of spawn on kelp, the Heiltsuk First Nation participates in an alternative monitoring program that provides coverage on-grounds, at the landing station and the processing plant.

Additional information on the monitoring program will be provided at the time of licence issuance. Please note that compliance with the monitoring program is a condition of licence. Proof of monitoring via a letter from the service provider will be required prior to licence issuance.

5.1 Service Provider

J.O. Thomas and Associates Ltd. is the industry selected service provider for the spawn on kelp fishery. Contact information may be found in the Contacts section.

5.2 Letter of Agreement

Prior to licence issuance, proof of monitoring will be required via a letter of agreement from the service provider verifying their agreement with the delivery of a fishery monitoring program. Upon receipt of payment for services, the service provider will provide the PFLU with the required letter of agreement.

The intention to participate in the spawn on kelp fishery must be made to the service provider before February 1, 2016, in order for monitoring fees to be calculated. Failure to meet this deadline may result in increased monitoring fees or an inability for the service provider to arrange an approved monitoring program.

5.3 Hail Reports

In 2006, a program of hailing information from the grounds was initiated. This program involves regular and frequent communications with the service provider at each stage of the spawn on kelp operations.

All operators will require a method of reliable communication to ensure their hail requirements are met. Operators may use whatever communication device that they have available (e.g. landline, cell-phone, sat. phone or email). Though it is acceptable for operators in the same area to use a common communication device (such as a sat phone or email etc.) or a 3rd party that relays hails to the service provider, each operator ultimately is required to ensure their hails are current and meet their license conditions.

Each stage of the spawn on kelp operation will need to be hailed to the service provider during weekday office hours (08:00 to 16:00). Confirmation numbers will be provided with each hail (coded for activity type), as proof of hail and for review at point of landing. If an operator is open ponding some of the hail-in points may not apply. Operators are requested to refer to their Conditions of Licence for their specific hailing requirements.

An enhanced protocol for identifying and reporting occurrences of non-compliance with licence conditions was implemented in 2015 and will continue. Failure to meet conditions of licence may result in enforcement action.

5.4 Reporting and Notification Requirements

5.4.1 General

When harvesting under a category J or FJ licence, the vessel master shall report all required information to the designated service provider as detailed in the spawn on kelp operator's logbook and conditions of licence.

5.4.2 Importing Product from Alaska

In the past, spawn on kelp product from outside Canada, mainly Alaska, was imported without notification or validation requirements for transport vessels. As of 2006, the conditions for importing spawn on kelp include notification to the spawn on kelp Coordinator in the North Coast office, and validation of the offload weight by a qualified third party service provider. An information package has been developed for importers and can be obtained from the spawn on kelp Coordinator.

5.4.3 Marine Mammal and Seabird Incidence Reports

All ponding operations are to complete an incident report for each encounter with a seabird or marine mammal that results in mammal mortality. Incident reports are to be faxed to the DFO Reporting Hotline as soon as a mortality is discovered (see Contacts). An incident report form will be provided at the time of licence issuance.

5.4.4 Logbooks

Logbooks are available from the service provider. The vessel master is responsible for the provision and maintenance of an accurate record of daily harvest operations. Catch information must be recorded in the harvest log by midnight of the day in which the activity occurred. The logbook must be kept aboard the licensed vessel, and must be produced for examination on demand of a fishery officer, fishery guardian, or port monitor.

These books must be submitted to the service provider within one week of final validation for the season. The logbooks will have double copies, so that a copy of the pages can be distributed to the licence holder, the service provider and the Department.

5.5 Catch Validation and Fishery Validation Form

To ensure the continuity of catch information from the time of spawn on kelp harvest to delivery and processing, a Herring Spawn on Kelp Fishery Validation Form must be completed for each harvest operation. The operator will be responsible for documenting spawn on kelp harvest on the Validation Form and in the Logbook.

The original copy of the Herring Spawn on Kelp Fishery Validation Form must accompany the spawn on kelp product to the landing port and to the processing plant, where the port monitor will record the landed weight and processed weight on the Validation form.

A port monitor will monitor all spawn on kelp harvested and landed. The total drained weight of spawn on kelp product validated at the landing port will be applied against an individual quota. A salt allowance, equal to five percent of the total drained weight, shall be subtracted to compensate for salt and entrained water (i.e. the total validated weight will equal the drained weight minus five percent of the drained weight).

5.6 Transfer of Product

Transfer of product between licence holders is permitted to allow the flexibility of licence holders to harvest their quota and to facilitate other licences to achieve their licensed quota with minimal herring usage. This ability does not authorize a licence holder to exceed their licensed quota.

On-grounds and in-plant transfers may occur between operating spawn on kelp licence holders licensed for the same management and stock assessment area. Operators licensed for the same fishery management area may consolidate fishing operations; however, they must identify their pooling relationship to the service provider prior to initiating fishing activities.

In-plant transfers of product between licence holders from different management areas, but the same stock assessment area are subject to the prior approval of a Fisheries and Oceans Canada representative. In such cases, a completed Herring Spawn on Kelp Product Transfer Document will be required.

In-plant transfers will only be allowed to a licence that has made a significant fishing effort to achieve their quota but has been unsuccessful. Priority of spawn on kelp product transfers will be to the operators licensed within the same Fishery Management Area(s) and secondly to other operators located within the same stock assessment area.

5.7 Containers Used For Export of Product

To facilitate control of spawn on kelp product processed for transport to the Japanese market, a plastic container has been developed for use in the industry. The dimensions of the container are approximately 50cm x 35cm x 20cm, and product capacity is approximately 14 kg (30 pounds). A limited number of containers (600) are available for issuance to each licence holder. The service provider will maintain an inventory of containers from year to year and control the release and recovery of buckets.

In season, the port monitors will monitor containers used in processing plants and ensure their appropriate disposition utilizing the Herring Spawn on Kelp Pail Transfer Document. Fisheries and Oceans Canada will audit the quantities utilized by each licence holder.

5.8 Sales Report

It is the responsibility of the licence holder to complete an accurate sales report after the spawn on kelp product has been sold. Licence holders are required to submit the form to Fisheries and Oceans Canada Regional Data Unit no later than September 15, 2016 at the following address:

Fisheries and Oceans Canada
Regional Data Unit
#200 - 401 Burrard St

Vancouver, B.C. V6C 3S4
Fax: (604) 666-9008

6 LICENSING

6.1 Fisher Identification Number

In 2006 and 2007 DFO introduced unique Fisher Identification Numbers (FIN) that have been assigned to all Pacific commercial harvesters. The FIN allows for fast, easy, and reliable on-grounds identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN is assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors; for example filling in the FIN field on logbooks, noting the FIN when hailing, landing catch, etc. As the FIN is now used during normal business interactions with DFO and contractors, fish harvesters will no longer need to provide detailed personal information identifying such items as gender or date of birth. Once the FIN is issued to a fisher, it will not change from year to year. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

6.2 Licence Categories

A spawn on kelp category J or a communal commercial category FJ licence is required to participate in this fishery. Spawn on kelp category J or FJ licence eligibilities are limited entry and party-based.

6.2.1 Number of Licences by Area

See Table 8.5 for details on how many licences are assigned to each area.

Table 8.5: Number of Licences Assigned by Area

Stock Assessment Area	Area	Number of Licences	
		All Licenses	Licences in Open Areas
HG	Area 2 East - closed	10	0
PRD	Area 3/4	7	7
	Area 5	3	3
CC	Area 6	2	2
	Area 7	10	10
	Area7/8 (Illahie Inlet)	3	3
WCVI	Area 23/24/25 - closed	4	0
Minor Areas	Area 27	3	3

Stock Assessment Area	Area	Number of Licences	
		All Licenses	Licences in Open Areas
	Area 2 West*	(10**)	1
Other	Area 12	1	1
	Area 10	3	1
Total		46	34

**The number of opportunities may change each year and are available to Haida Gwaii Area licence eligibility holders only. See Sections 3.7.1 and 3.7.2 for more detail.*
*** The eligibilities are the same licenses as Area 2E*

6.3 Licence Fees

The annual spawn on kelp licence fee for a category J licence is $10,009.59 and is not affected by overages and underages from the previous year. Licence fees for communal commercial licences are collected through the Aboriginal Fisheries Strategy Comprehensive Fisheries Agreement.

6.3.1 Zero Quota - Zero Fee Option

Spawn on kelp licence eligibility holders have the option of electing a zero quota option for the 2016 season. The licence fee associated with this option is zero.

Spawn on kelp licence eligibility holders electing a zero quota are still required to submit a licence application in order to maintain the licence eligibility. An application form for the zero quota - zero fee option may be obtained by contacting the Prince Rupert Pacific Fishery Licence Unit (PFLU).

6.4 Licence Application

Spawn on kelp licence eligibility holders must submit an application with the required fees to the National Online Licensing Service (NOLS), by December 31 of the fishing year in order to maintain their eligibility, whether harvesting will take place or not.

Where the licence eligibility holder is a company or a First Nations group, only the authorized signatory(s) on record may authorize the application. The NOLS must have on record a current BC Company Summary and a copy of either a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities identifying the signing authorities for a company or First Nations group.

For spawn on kelp licences introduced for First Nations groups in 1991 and 1992, where all roe herring gill net retirement obligations have not yet been met, the annual requirement to designate roe herring licences as inactive must be met by January 20, 2016. This deadline must be adhered to for both inactive and/or any roe herring gill net

retirements as they may have an impact on quota allocations for the remainder of the roe herring gill net fleet.

6.5 Licence Requirements

Prior to licence issue, the licence eligibility holder must ensure that:

- A registered commercial fishing vessel is designated as the operating vessel (a maximum of three operating vessels may be designated). Designated vessels must be registered as a commercial vessel with the PFLU although vessels do not have to hold a vessel based licence eligibility.
- Proof of participation in a DFO approved spawn on kelp port monitoring program.
- If an operating vessel is not currently a registered Canadian commercial fishing vessel, details on registration can be obtained by contacting a PFLU or are available online at: http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/forms/comm-vess-bat-en-reg-eng.htm

Note that pond set up or harvesting is not permitted prior to licence issue.

6.6 Area 2W Licensing Process

DFO currently provides opportunities for Haida Gwaii licence eligibility holders to harvest a small harvestable quota in Area 2 West. A maximum expected use of 100 tons in this area is available allowing a maximum of 1 of the 10 eligible licences to operate in this area. As a first priority, DFO will accept a consensus-based proposal for the selection of participants to harvest the expected use for the area be submitted to the Spawn on Kelp Coordinator (See Contacts).

In the absence of an acceptable consensus proposal, a lottery process will be used to select the appropriate number of participants for the licences being allocated. In the event a lottery is held, a lottery application will be sent to the ten Haida Gwaii licence eligibility holders. Completed applications must be received at the Prince Rupert Pacific Fishery Licence Unit (PFLU) by January 22, 2016.

License holders selecting to fish in Area 2W may not fish in Haida Gwaii (closed area for 2016)..

6.7 Licence Documents

6.7.1 Valid Period

Spawn on kelp licence documents are valid from the date of issue to December 31 of each calendar year. Licenses that are not renewed by December 31 will be deemed to have expired and will not be renewed without receiving a written request by the eligibility holder and successful completion of the licensing review board hearing.

6.7.2 Replacements

Replacement for lost or destroyed licence documents may be obtained by completing a Declaration Concerning Licence Document form. Contact a PFLU for further details.

6.7.3 Vessel Redesignation

Vessel redesignation after licence issuance is permitted. An Application for Vessel Redesignation must be completed and submitted to a PFLU for approval. The application form may be found online at:
http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/licence-commercial-eng.html
Licence holders must:

- Ensure all requirements for licence issuance, detailed above are met with regard to the replacement vessel.
- Return the current year licence documents with the redesignation application

APPENDIX 9. COMMERCIAL FISHING PLAN FOR FOOD & BAIT HERRING

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1 PURPOSE

This document is a Commercial Fishing Plan for Food and Bait herring in British Columbia, for the period from November 7, 2015 to February 25, 2016.

2 COMMERCIAL FISHERY OVERVIEW

The Pacific commercial herring fishery began in 1877 with the first commercial harvest taken by beach seine. Between 1877 and 1906, annual harvest increased to 500 tons, with the majority of fishing occurring near Vancouver and on the east coast of Vancouver Island. In 1906 the dry salt market developed in China and demand for herring increased dramatically. By 1909 the annual harvest rose to 30,000 tons and between 1909 and 1919 ranged from 15,000 to 35,000 tons. During World War I the dry salt market decreased but the demand for canned herring increased, and between 1919 and 1927 85,000 tons were harvested. The dry salt market began declining by the mid-1930s while the reduction fishery developed. Between 1968 and 1971 the reduction fishery was shut down due to a collapse of the B.C. herring stocks. During this period the Food and Bait fishery continued with harvests in the range of 5,000 tons, primarily for use as halibut bait.

In the mid-1970s, the European herring stocks collapsed and a European market for British Columbia herring developed. As a result, harvest increased to a peak of 20,000 tons in 1977. In 1988, a 50 ton individual vessel quota system was implemented with a coast-wide quota limited to 1,500 tons due to concerns that large catches in this fishery were impacting development of the higher value roe fishery. Since that time, quotas for Food and Bait herring have fluctuated from 500 to 9,585 tons annually. A Food and Bait herring (Category ZM) licence is required to participate in this fishery. Food and Bait herring licences are party based and are not limited.

3 FOOD AND BAIT HERRING FISHERY REPRESENTATION

The Herring Industry Advisory Board (HIAB) provides advice to the Department on issues affecting commercial Roe Herring and Food and Bait fisheries; this includes providing recommendations for Food and Bait Herring and Roe Herring harvesting plans for all areas with available commercial quota. HIAB's advice on harvest levels is reviewed at the Integrated Herring Harvest Planning Committee (IHHPC). HIAB has 10 seats on the IHHPC. The 10 participants are selected by the Roe Herring sector from a pool of: individuals elected by Roe Herring Licence holders (5 seine and 5 gill net); 4 appointed processors; and 5 appointed individuals representing: the United Fishermen and Allied Workers Union; the Native Brotherhood of BC; the Aboriginal Fishing Vessel Owners Association; the Fishing Vessel Owners Association, and the Herring Conservation & Research Society (HCRS).

4 MANAGEMENT MEASURES FOR THE DURATION OF THIS PLAN

4.1 Highlights for this Season

HIAB has recommended continuation of ZM licence access based on an equal share by roe herring seine licence eligibility holders, which was initially implemented in advance of the 2014/15 season. This approach is designed to provide stability for fisheries planning, as well as an equitable method for providing access, consistent with party-based licensing of herring fisheries. No increase in fishery effort is anticipated as a result in this change.

Equal Share Criteria: Licences available for application by each of the parties who hold a valid roe herring seine licence.

Previous Criteria: Lottery applicants must be the owner of a vessel that was designated for a herring seine (HS) or licensed catcher vessel for a spawn on kelp (J licence) within the past five years.

Holders of 2015 roe herring seine licences (HS and FHS) will be able to select Prince Rupert District (PRD) up to the ideal distribution number or until the deadline time and date is reached. The quota on each licence will be an equal share of the available quota for the area divided by the number of licences for the area. ZM licences for parties who have not selected PRD by the deadline date will default to the Strait of Georgia (SOG) area.

The initial coast-wide quota for the Food and Bait fishery was 4,500 tons: 4,000 tons in the SOG and 500 tons in PRD. This initial allocation was based on HIAB's recommendation of an initial quota in the range of 4,000-5,200 tons in SOG and 500 tons in PRD. Quotas for the Food and Bait fishery were amended in season and announced via Fishery Notice. This two stage approach was designed to provide sufficient access for the Food and Bait fishery pending a decision on the overall harvest levels and development of the Integrated Fisheries Management Plan (IFMP) for Pacific herring in 2015/16.

For 2015/2016, roe seine licence holders will have the option to select harvest in the SOG and PRD Food and Bait fisheries instead of the roe seine fishery during the roe herring area selection process. The SOG and PRD Food and Bait allocations may increase after the roe seine licence holders have completed their applications and area selections and opt to harvest in the Food and Bait fishery. The SOG and PRD roe fishery allocations will be reduced by the same amount that the Food and Bait fisheries are increased (see Section 4.4.1 and 4.4.2). Roe seine licence holders who choose the Food and Bait fishery option will not be eligible to participate in the 2015/2016 roe herring fishery.

4.2 Current Management Issues

Allocation for the Food and Bait fishery has fluctuated based on market requirements over time. As a result of increased interest in this fishery and the development of global

markets, HIAB recommended an initial allocation between 4,000 and 5,200 tons in SOG, and 500 tons for PRD.

The initial allocation was then adjusted following the release of herring stock assessment, stock forecasts, and maximum total allowable catches for the upcoming season. This information is normally available in September of each year; however, additional work was undertaken to inform the Pacific herring stock assessment and abundance forecast this year. On December 3, 2016, the SOG quota was amended upwards 2,000 additional tons to 6,000 tons. In addition, roe herring seine licence holders may also selected to fish in the Food and Bait fishery (rather than the roe herring fishery) at the time of roe herring area selection in January.

In advance of the 2014/2015 season, HIAB requested DFO consider the expansion of the Food and Bait fishery to a total of four management areas (beyond SOG and PRD). The industry continues to have an interest in diversifying fishery access to explore alternative markets. While this proposal to expand the Food and Bait fishery was not approved for the 2015/16 season, the Department is undertaking broader efforts to renew the current management framework for Pacific herring and will continue to consult and consider potential changes to the Food and Bait fishery moving forward.

Catch monitoring and safe fishing practices continue to be important to all fisheries in the Pacific Region. In order to monitor and address potential issues in the Food and Bait fishery, there is 100% at sea observer coverage. In addition, fishing hails, vessel logbooks, and 100% dockside weight validation are required. The Food and Bait fishery is conducted with seine gear only. To reduce the impacts of fish loss from compression in the net during the pumping process, there is a licence condition in place that requires all herring from a set to be retained, unless the set has to be released due to vessel safety concerns. The monitoring program is provided by an independent, third party service provider. The management controls and measures for this fishery will be assessed, and future management adjustments may be made to address emerging fishery developments.

In order to address identified issues regarding the difficulty of achieving the precise catch amounts with seine gear, a process to allow reallocation of unfished quota assigned to another ZM designated vessel will be continued. The transfer documents and procedures are available from the lead Resource Manager as described in Section 4.10 of this Plan. Multiple licences may be designated to a single vessel, including ZY3 and ZY4 special use herring licences, and there is no restriction on the number of licences which may be placed on a vessel.

Fish harvesters are requested to operate cooperatively in this fishery both to increase safety for all vessels, and work within licence quotas while minimizing impact on the herring resource. HIAB in conjunction with Fish Safe, the department, and the industry selected service provider have developed a Food and Bait Best Practices booklet to highlight fishing practices to address safety considerations for this fishery. Pre and in season meetings will be conducted as required to address management and safety issues.

4.3 Financial Responsibilities

All eligible parties are responsible for ensuring they are compliant with all DFO monitoring requirements for this fishery, including all associated monitoring costs.

4.4 Allocation and Harvest Levels

Each eligible applicant will have an equal share of the quota in the area. Quota adjustments will be provided by way of Fishery Notice and will be in effect at the times, areas, and levels specific in the fishery notice.

4.4.1 Prince Rupert

A total of 500 tons has been allocated for the Prince Rupert District (PRD) area. In addition, roe seine licence holders may select to harvest in the PRD Food and Bait fishery during the roe herring licence area selection process. This was not utilized in the 2015/2016 season, and the quota remained at 500 tons.

4.4.2 Strait of Georgia

A total of 6,000 tons was allocated for the Strait of Georgia (SOG) area. In addition, roe seine licence holders selected to harvest in the SOG Food and Bait fishery during the roe herring licence area selection process. 40 licences selected this option at 44.2 tons per licence, for an additional 1,768 tons and final total quota of 7,768 tons in the fishery.

4.5 Open Times

The IFMP is in effect from November 7, 2015 to February 25, 2016. The fishing season closure was extended starting in 2012/2013 from February 9, to accommodate fishing late in the season. Prince Rupert District was extended from February 15 to February 25 to accommodate fish distribution and timing in that area.

Fishing will be permitted to eligible vessels designated with a ZM licence from:
November 7, 2015 to February 12, 2016 in Strait of Georgia;
November 7, 2015 to February 25, 2016 in Prince Rupert District.

4.6 Open Areas

The following areas are identified as fishing areas, subject to in season decisions on specific areas that will be opened by Variation Order following the process as described by gear type and area, and subject to the permanent area closures detailed in the following section. Areas may be closed in the event that small or unsuitable fish are being released, or if substantial incidental bycatch occurs. If stock concerns are identified, some Areas or Subareas may close on short notice.

Vessel masters are advised to check the DFO fishery notice internet site, prior to commencing fishing, at:

http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial

Fishing will be permitted by eligible vessels in SOG and PRD in the following Areas and Subareas, with the exception of the closures noted in the Permanent Area Closures, and subject to Conditions of Licence, and in season fishery notices.

Commercial fleets are requested to avoid locations where local First Nations are gathering fish, or fishing for herring spawn on boughs or spawn on kelp. Additionally, the Department works collaboratively with First Nations on communication regarding herring stocks and spawning locations for FSC fishery planning and information on FSC activities. As the fishery season progresses, in some cases, specific requirements to remain out of particular locations to support FSC harvest will be broadcast for adherence by fish harvesters.

4.6.1 Prince Rupert District

Area 3: Subareas 3-1 to 3-3, and portions of Subarea 3-4 inside a line commencing at Sarah Point northward to a red can buoy located at Inskip Passage, thence easterly to the northernmost point of the estuary of Neaxtoalk Lake, thence northward along shore to the markers in Dudevoir Pass, thence along the shore of Maskelyne Island to a marker approximately one half mile southerly of Maskelyne Point, thence to Pointer Rocks light thence southward to Gordon Point on Finlayson Island, thence southward along the shore to Sarah Point. Subarea 3-4 will also be open south of a line from Sarah Point to Hook Point, Subarea 3-7

Area 4: All Subareas will be open. The Harbour Authority of Prince Rupert and Port Edward must be notified prior to any fishing activity within harbour limits as shown on chart No. 3957 published by the Canadian Hydrographic Service.

Area 5: Subareas 5-1, 5-2, 5-3 and 5-10.

4.6.2 Strait of Georgia

Area 13: Subareas 13-7 to 13-10, excluding that portion of Subarea 13-7 inside a line from a fishing boundary sign at Separation Head to a fishing boundary sign at the north-westerly entrance to Deepwater Bay.

Area 14: Subareas Area 14-1 to 14-13, and 14-15

Area 17: Subareas 17-1 to 17-3 excluding that portion north-easterly of a line from Cayetano Point on Valdes Island to Alcala Point on Galiano Island, 17-4 to 17-6, 17-8 to 17-13 and 17-15 to 17-19, 17-21.

Area 18: Subareas 18-1, 18-2 excluding that portion north-easterly of a line from Collinson Point on Galiano Island to Enterprise Reef Buoy to Crane Point on Mayne Island, 18-3, 18-4, 18-5, 18-6, 18-9, 18-11.

Area 29: Subarea 29-5 only.

4.7 Permanent Area Closures

4.7.1 Strait of Georgia

Area closures are detailed below. These areas are closed due to navigation concerns, sensitive fish habitat, or concerns regarding bycatch of other species or other management considerations. There may be additional closures in season by Variation Order and fishery notice.

Area 13:
Deepwater Bay: That portion of Subarea 13-7 easterly of a line from a fishing boundary sign at Separation Head across to a fishing boundary sign at the northwestern entrance to Deepwater Bay.

Area 14:
14-14 (Comox Harbour)

Area 17:
Porlier Pass: A portion of Subarea 17-3 north-easterly of a line from Cayetano Point on Valdes Island to Alcala Point on Galiano Island.
Ladysmith Harbour: Subarea 17-7.
Nanaimo Harbour: Subarea 17-14.
Nanoose Harbour: Subarea 17-20.
Kulleet Bay: A portion of Subarea 17-5 westerly of a line from Coffin Point on Vancouver Island to Yellow Point on Vancouver Island.
Gabriola Pass: The waters of Gabriola Pass described as portions of Subareas 17-10 and 17-17 bounded by a line from Dibuxante Point on Valdez Island, thence following the northerly shore of Valdez Island to Cordero Point on Valdez Island, thence to the most southerly tip of Breakwater Island, thence following the westerly shore of Breakwater Island to the most northerly point on Breakwater Island, thence due west to Gabriola Island, thence following the southerly shore of Gabriola Island to the point of land located at 49 07.777 N 123 43.045 W, thence in a straight line southerly to the point of commencement at Dibuxante Point.

Area 18:
Maple Bay: Subarea 18-7.
Cowichan Bay: Subarea 18-8.
Fulford Harbour: Subarea 18-10.
Active Pass: That portion of Subarea 18-2 north-easterly of a line from Collinson Point to Enterprise Reef Buoy to Crane Point on Mayne Island.

Area 29:
Fraser River: All subareas with the exception of 29-5 are closed.

4.7.2 Prince Rupert

No closed areas identified.

4.8 Participation Requirements - Gear

A herring purse seine must not exceed 410m (225 fathoms) in length, and the mesh size shall not be less than 25mm (1 inch) extension measure.

Vessels should have a full sized herring seine, along with all the associated gear (i.e. pumps, winches, power skiffs), to fish and haul the gear, as well as adequate electronic equipment for locating and estimating herring schools.

A properly functioning chilled seawater (C.S.W.), or refrigerated seawater (R.S.W.), system is required for all vessels participating in the fishery.

To maintain manageability and safety in this fishery, vessels will be requested to operate in a minimum of pairs during fishing operations.

Under the Canada Shipping Act, all vessels fishing or packing herring or capelin are required to have a valid stability certificate/booklet on board the vessel.

4.9 Harvest Practices

Once the pumping of herring from the seine net has commenced, all herring from that set shall be retained, unless the set must be released due to vessel safety concerns.

4.10 Catch in Excess of Quota

Vessel masters must operate in a manner that ensures that over harvest does not occur. The licensed vessel is permitted to catch and retain a maximum of tonnage of herring per license based on the share. The program to allow for reallocation of unfished quota assigned to another vessel will be continued. The quota reallocation documents and procedures will be available to eligible applicants by contacting the lead Resource Manager at Brenda.Spence@dfo-mpo.gc.ca.

5 LICENSING

5.1 Fisher Identification Numbers

Unique Fisher Identification Numbers (FIN) have been assigned to all Pacific commercial harvesters. The FIN allows identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN has been assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors; for example filling in the FIN field on logbooks, noting the FIN when hailing, landing catch, etc. Once the FIN is issued to a fisher, it will not change from year to year. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

5.2 Licence Category

A Food and Bait herring, category ZM licence is required to participate in this fishery. Food and Bait herring licences are party based.

5.3 Licence Application and Issuance

LICENSING SERVICE INFORMATION:

Fisheries and Oceans Canada's licensing services are available using the National Online Licensing System located at https://fishing-peche.dfo-mpo.gc.ca. The National Online Licensing System enables secure and reliable online service delivery to both commercial and communal commercial users. Fish harvesters are now able to access licensing services using the system. Services include:

- .renewing licences and paying licence fees, as well as renewing vessel registrations;
- .submitting licensing requests (such as vessel transfers) and checking the status of requests;
- .submitting electronic documents in support of licensing requests;
- .printing licences, licence conditions, receipts, and other licensing documents; and
- .appointing representatives to perform licensing transactions on a user's behalf.

The system provides fish harvesters with the ability to view their account information and manage their licensing requirements online, replacing traditional services previously offered over-the-counter or by regular mail. For instance, licence renewal notices are no longer sent by mail; rather, clients are now notified via email that a licence fee is available to be paid. Payment of a licence fee is your request for issuance of that licence.

Upon the Department receiving the required payment, and the appropriate information (e.g. designated vessel) and any required documentation, the licence will be issued and notification will be sent via email to advise licence holders/vessel owners that a document has been made available in their online account. The licence documents, licence conditions and receipts may be downloaded and printed at that time.

As part of the roe herring area selection process, roe seine licence holders may select the option to harvest in the SOG or PRD Food and Bait fisheries. The maximum number of roe seine licences for each area will be provided following the determination of fishery quotas for each area. Roe seine licence holders who select the Food and Bait fishery option will be required to also pay their 2015/2016 roe herring licence fees to maintain that/those licence eligibilities.

CLIENT SUPPORT:

Training materials, including step-by-step guides and a detailed user training manual, are available online (http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-

peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website at www.dfo-mpo.gc.ca, or contact our client support.

LICENCE ISSUANCE:

For each of the areas where there is quota, the available quota will be shared on a percentage basis by the 252 roe herring seine licence eligibility holders who have selected or defaulted to that area.

Area selection will be permitted until the ideal number for an area is reached, or the deadline date and time, whichever comes first. If an area selection is not made by the deadline date, the eligibility will default to the SOG area. This is to ensure that eligibility holders which have not participated in the area selection process do not delay the issuance of other licences for the fishery.

Roe seine licence holders have the option to select harvest in the SOG and PRD Food and Bait fisheries instead of the roe seine fishery during the roe herring area selection process. Roe seine licence holders who choose the Food and Bait fishery option will not be eligible to participate in the 2015/2016 roe herring fishery, and revised licence conditions will be issued with the share and fixed quota amounts specified. The fixed quota is 44.2 tons per roe herring seine licence that has selected food and bait herring.

The licence application and issuance process, target dates, and deadline dates will be provided by way of Fishery Notice prior to the fishery opening date of November 7, 2015.

Prior to licence issuance, eligible applicants must designate a registered vessel, in Canada, in accordance with the provisions set forth in Part 2 of the Canada Shipping Act.

5.4 Licence Documents

Food and Bait herring licences are valid from the date of issuance to February 12th, 2016 in SOG, and February 25, 2016 in PRD.

Replacements for lost or destroyed licence documents may be obtained by logging into the National Online Licensing System and reprinting the licence documents.

For those roe seine applicants who select the Food and Bait option during the roe seine area selection process, they will be issued amended Food and Bait licence conditions with an additional fixed quota amount dependent on roe seine herring allocations. The timelines and process are provided in Section 7 of the Roe Herring Commercial Plan (Appendix 7) and will be announced by way of Fishery Notice.

6 FISHERY MONITORING REQUIREMENTS

The fishery monitoring requirements for this fishery include fishing hails, at sea observers, harvest logs and dockside weight validation. These components are an integral part of the sustainable management of this fishery, and ensure alignment with the DFO monitoring policy.

6.1 Harvest log

Harvest set logs are available from the service provider. The vessel master is responsible for the provision and maintenance of an accurate record of daily harvest operations. Catch information must be recorded in the harvest log by midnight of the day in which the activity occurred, or prior to the at sea observer disembarking the vessel, whichever occurs first. The log must be kept aboard the licensed vessel, and must be produced for examination on demand of a fishery officer or fishery guardian.

The original white page copy of the log must be received by the designated service provider no later than 14 days following the last active fishing day by the licensed vessel for the season.

6.2 Hails

Telephone hails to the Service Provider must be made between the hours of 0800 to 1600 hours, Monday to Friday, but not on statutory holidays. Upon failure to arrive at the fishing location within 48 hours of the hail out time, the vessel master shall hail the vessel name, VRN, and details of the change in fishing plans.

The vessel master shall be responsible for making an oral report (hail) to the service provider to report events and information required by the licence conditions.

Each hail will be documented with a unique Hail Confirmation Number in the appropriate location in the Harvest Log as detailed in the licence conditions and information sheets provided with the logbooks from the service provider.

6.2.1 Notification of Fishing (Hail Out)

The master of a vessel participating in the Food and Bait fishery will be required to notify the monitoring program service provider, a minimum of 24 hours prior to the intended fishing date. The information that shall be provided is detailed in the Licence Conditions issued with the ZM licence, and includes:

- Vessel Master name
- Vessel Master FIN
- Vessel name
- Vessel registration number (VRN)
- Onboard Observer name
- The subarea (s) to be fished
- The anticipated date and time fishing will begin

6.2.2 Notification of Fishing (Hail In)

The master of a vessel participating in the Food and Bait fishery will be required to notify the monitoring program service provider, a minimum of 12 hours prior to the intended landing time. The information that shall be provided is detailed in the Licence Conditions issued with the ZM licence, and includes:

- Vessel master name
- Vessel Master FIN
- Vessel name
- Vessel registration number (VRN)
- Onboard Observer name
- Catch Location
- Catch estimate
- Anticipated landing time
- Landing Location

6.3 At Sea Observers

Fishing vessels will be required to have at-sea observer coverage by a DFO designated observer while carrying out fishing operations. An observer must be on board prior to the vessel making a seine set. An observer may transfer to another vessel at sea, once the observer duties for the first vessel have been completed, and at the discretion of the observer.

6.4 Landing

All herring shall be delivered to a British Columbia port and must be offloaded within 18 hours of capture. A certified observer must validate the weight of all herring offloaded. Vessel masters are required to make offloading arrangements with the designated service provider. The following landing locations may be used:

- Metro Vancouver
- French Creek
- Prince Rupert
- Quadra Island

To land at another location other than those listed above, contact the Service Provider. It is possible that a surcharge will be charged and additional costs for port monitoring. **Please contact the service provider well ahead of fishing if there is an intention of fishing in Prince Rupert, or plans to land at another port.**

Schedule B (Part I Section 11.1) of the B.C. Fish Inspection Regulations states: “Where fresh herring is for human consumption, its processing, except icing or chilling, must commence within 24 hours of delivery at the processing establishment and must not be discontinued until the herring is preserved to a degree that assures maximum quality of the product.”

6.5 Dockside Validation

All landed fish must be verified by a dockside observer provided by the service provider. All herring harvested under the authority of this licence must be validated at the point and time of landing. The landing of any fish is not permitted unless an observer is present to authorize the commencement of weight verification. All weights must be determined using a scale approved by Industry Canada.

The observer may inspect fish holds, freezers and other areas where fish may be stored. It is the responsibility of the vessel owner or master to provide safe access to the vessel holds for inspection and to ensure that the vessel does not leave the offloading site prior to completion of the fish hold inspection by the observer.

6.6 Fish Slip Requirements

It is a Condition of Licence that an accurate written report shall be furnished on a fish slip of all herring caught and retained under the authority of this licence. The report shall be mailed within seven days of off-loading to:
Fisheries and Oceans Canada
Regional Data Unit
200 - 401 Burrard Street
Vancouver, B.C. V6C 3S4

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

6.7 Compliance with other Federal and Provincial Legislation and Regulations

Fish harvesters are responsible for compliance with all federal and provincial laws and regulations pertaining to fishing operations.

APPENDIX 10. COMMERCIAL FISHING PLAN FOR SPECIAL USE HERRING

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1 PURPOSE

The purpose of the special use herring fishery is to provide opportunities to harvest herring for a variety of different uses such as bait, food, and feed for zoo and aquarium animals. These opportunities are not available during other herring fisheries such as the roe herring fishery.

2 COMMERCIAL FISHERY OVERVIEW

While small, the special use herring fishery has a complicated and varied history, due to the evolution of its complex licensing structure, which was originally developed to track the end use of herring.

In 1995, DFO replaced the use of locally issued permits with centrally issued licences. The specific end uses of the permits were retained as licence purposes, which directed how the harvested fish was to be used. While there have been as many as seven licence categories in this fishery, there are currently five categories remaining; the Sport Bait (ZY1), Commercial Bait (ZY2), Human Food and Bait (ZY3), Zoo and Aquarium (ZY4), and Personal Bait (ZX) categories. The specific histories of the active ZY licence categories follow.

2.1 Sport Bait Herring (ZY1)

In the late 1970s and through the 1980s there were strong recreational fisheries. To supply bait to these fisheries, 3 ton impoundment permits were issued to the small live bait operations that had become prolific throughout the Strait of Georgia, with scattered operations into the North Coast area. These permits were to be used in conjunction with fishing permits which permitted harvest of herring for personal use or for the delivery of herring to a processor or operator possessing a valid impoundment permit.

As the recreational fisheries declined, the number of live bait operators also declined. While some interest remained in small live bait operations, other parties became interested in increasing the scale of their operations and producing fresh and frozen bait. In the majority of cases, this increase was, and is, accomplished by using the ability to stack multiple licences on one vessel to harvest herring for one individual or company's operations, as opposed to the original intent of harvesting for multiple operations worked by multiple licence holders. In 2007, the number of licences that could be held on a vessel was increased from one to five at one time (licence stacking). There are also unique quotas in this category (See Section. 7.3.1)

2.2 Commercial Bait Herring (ZY2)

The ZY2 licence category was developed in 1995 as a means of providing quota for the purpose of producing bait to be used in commercial fisheries such as halibut. Prior to this date, fishing activity for commercial bait had been underway for many years, especially in the Prince Rupert District, and was managed through the issuance of permits. The

ZY2 category is operationally the same as the ZY1 category, permitting the ponding of herring using 3 ton licences.

2.3 Human Food and Bait (ZY3)

In the early 1980s, opportunity to harvest herring for human food was provided through the issuance of 3 ton permits for fresh, local sales only, although four 50 ton permits were made available to Fjord Pacific Marine Industries Ltd. (Fjord) for more industrialized food processing as a unique quota.

When the ZY3 licence category was introduced in 1995, the 3 ton and four 50 ton quotas continued to be issued through licences. The 3 ton licences were made available until 2006/07; although they were not accounted for in the ZY3 expected use allocation. In 2007/08, these 3 ton licences were discontinued, and in 2009 the allocation for ZY3 was reduced to 150 tons, distributed across three 50 ton licences as a unique quota to one applicant.

2.4 Zoo and Aquarium (ZY4)

Historically the quota in this licence category was available to any zoo or aquarium operating in Canada or the United States, upon request to DFO Fisheries Management. Successive management decisions were made that first restricted the eligibility to Canadian operations only, and then to BC operations only. Currently the ZY4 quota is available only to the Vancouver Aquarium, as a unique quota. Should a future request be made by a zoo or aquarium other than the current participant it would not be granted, as there is no additional allocation for the ZY4 licence category. There is also a unique quota in this category (See Section. 7.3.1)

2.5 Personal Bait (ZX)

This licence category provides commercial fishers with the opportunity to harvest up to 1 ton of herring for personal (non-sale) use.

3 MANAGEMENT MEASURES FOR THE DURATION OF THIS PLAN

3.1 Changes from Previous Season

- There are no changes from the previous season.

3.2 Events Calendar

Table 10.1: Events calendar for 2015/16 season.

Month	Date	Event
		2015
November	6	Special Use 2014/15 fishery closes at 23:59h.
	7	Special Use 2015/16 fishery opens at 00:01h.
	15	ZX Landing Report for 2014/15 required.

December	1	Release or validation of ponded herring from 2014/15 by 23:59 hours as required by conditions of licence.
	15	Original white page copy of logbook from 2014/15 to service provider (ZY only).
		2016
January		
February	15	Special Use fishery closes at 23:59h. All herring must be ponded or landed by this time.
March	1	Release or validation of ponded herring by 23:59 hours as required by conditions of licence (herring ponded in Areas 14 and 17 which must be released or validated by February 15)
May	1	Special Use fishery re-opens at 00:01h.
May		IHHPC Post-Season Review meeting.
June		
July		
August		
September		CSAP Stock Assessment Results meeting.
		IHHPC Fisheries Management Planning meeting. Draft Special Use Commercial Plan presented for comment.
October		Target date to for draft 2016/2017 IFMP public release for review and feedback.
		Target date for final 2016/2017 IFMP public release.
		2016/17 Special Use applications available (through National Online Licensing System)
November	6	Special Use 2015/2016 fishery closes at 23:59h. All herring must be ponded or landed by this time.

3.3 Open Times

Fishing for special use herring is permitted from 00:01 hours November 7, 2015 until 23:59 hours February 15, 2016, and 00:01 hours May 1, 2016 to 23:59 hours November 6, 2016.

3.4 Open Areas

The following areas are identified as fishing areas, subject to in season decisions on specific areas that will be opened by Variation Order following the process as described by gear type and area, and subject to the permanent area closures detailed in Section 3.5:

Table 10.2: Open areas for the 2015/16 season.

Major Stock Assessment Areas	**Strait of Georgia**	**13-1 through -11, 14 through 19, 29**
	Prince Rupert District	**3, 4, 5**

Note that these areas may be closed in season in the event that small or unsuitable fish are being released, or if substantial incidental bycatch occurs. If stock concerns are identified, some Areas or Subareas may close on short notice.

Note that requests to harvest in regions outside the major stock assessment areas or areas with limited assessment information will require additional consideration and may not be approved.

Vessel masters are advised to check the DFO fishery notice internet site, prior to commencing fishing, at: http://notices.dfo-mpo.gc.ca/fns-sap/index-eng.cfm

Commercial fleets are requested to avoid locations where local First Nations are gathering fish, or fishing for herring spawn on boughs or spawn on kelp. Additionally, the Department works collaboratively with First Nations on communication regarding herring stocks and spawning locations for FSC fishery planning and information on FSC activities. As the fishery season progresses, in some cases, specific requirements to remain out of particular locations to support FSC harvest will be broadcast for adherence by fish harvesters.

3.5 Permanent Area Closures

The following areas are permanently closed to the special use fishery. Note that there may be additional closures in-season by Variation Order and Fishery Notice. Consult with the local fisheries office before fishing in an area.

Where a major stock assessment area is closed for conservation concerns, the permanent closures of specific Subareas are not listed. To obtain a detailed list of all permanent Subarea closures, contact your local Area Resource Manager (see Contacts).

3.5.1 Strait of Georgia

Table 10.3: Subarea closures in the Strait of Georgia.

Area 13 That portion of Subarea 13-7 easterly of a line from a boundary sign at Separation Head to a fishing boundary sign at the northwestern entrance to Deepwater Bay [Deepwater Bay]

Area 14 Subarea 14-14 [Comox Harbour]

Area 16	**Subarea 16-3 [Bargain Bay]** **Subarea 16-4 [Pender Harbour]** **Subarea 16-5 [portion of Sechelt Inlet]** **That portion of Subarea 16-10 within a radius of 0.3 nautical miles from the mouth of Sakinaw River**
Area 17	**A portion of Subarea 17-3 northeasterly of a line from Cayetano Point on Valdes Island to Alcala Point on Galiano Island [Porlier Pass]** **Kulleet Bay: A portion of Subarea 17-5 westerly of a line from Coffin Point on Vancouver Island to Yellow Point on Vancouver Island.** **Gabriola Pass: The waters of Gabriola Pass described as portions of Subareas 17-10 and 17-17 bounded by a line from Dibuxante Point on Valdez Island, thence following the northerly shore of Valdez Island to Cordero Point on Valdez Island, thence to the most southerly tip of Breakwater Island, thence following the westerly shore of Breakwater Island to the most northerly point on Breakwater Island, thence due west to Gabriola Island, thence following the southerly shore of Gabriola Island to the point of land located at 49 07.777 N 123 43.045 W, thence in a strait line southerly to the point of commencement at Dibuxante Point.** **Subarea 17-7 [Ladysmith Harbour]** **Subarea 17-14 [Nanaimo Harbour]** **Subarea 17-20 [Nanoose Harbour]**
Area 18	**That portion of Subarea 18-2 northeasterly of a line from Collinson Point to Enterprise Reef Buoy to Crane Point on Mayne Island [Active Pass]** **Subarea 18-7 [Maple Bay]** **Subarea 18-8 [Cowichan Bay]** **Subarea 18-10 [Fulford Harbour]**
Area 19	**Subarea 19-1 [Victoria Harbour]** **Subarea 19-2 [Esquimalt Harbour]** **Subarea 19-6 [Sidney Spit Marine Park]** **Subareas 19-7 to 19-12 [Saanich Inlet]**
Area 28	**All Subareas**

Area 29	**29-7 to 29-17 [Fraser River]**

3.5.2 Prince Rupert District

No Subarea closures for this Area.

3.5.3 Other Areas

Area 12	**That portion of Subarea 12-4 inside a line running from Lewis Point to Ella Point [Beaver Cove]** **Subarea 12-20 [Parsons Bay]** **Subarea 12-3 (portion). From a point on shore due north to a point at 50°30.33' N and 126°37.47' W then east to a point at 50°29.65' N and 126°30.23' W then due south to the shoreline [Robson Bight - Michael Bigg Ecological Reserve]**

3.6 Participation Requirements

The special use herring fishery is an unlimited fishery, licences are not limited entry and eligibility to obtain licence issuance is not carried forward from one year to the next. Licences for participation in the special use herring fishery are open to any interested party provided that the specific licence requirements and eligibility criteria described in Section 7.6 and 7.7 have been met. Unique quotas for specific parties for specific purposes are described in Section 7.3.1.

A valid special use herring licence is required prior to any special use fishing activity, including the set-up of any herring enclosure (i.e. floating frame with web).

3.7 Allocation and Harvest Levels

Over the years DFO has adopted a practice of providing a stable allocation to unique quotas and the special use herring fishery overall, after conservation and Food, Social, and Ceremonial (FSC) allocation objectives have been met. However, this stable allocation does not infer priority allocation.

Specific quotas allocated to each special use licence category are found in Table 10.4:

Table 10.4: Special use allocation by licence category.

Licence Type	Area	Allocation (tons)	Available Licences
ZX – Personal Use	**SOG**	**25**	**25**

Licence Type	Area	Allocation (tons)	Available Licences
	PRD	**10**	**10**
ZY1 – Sport Bait	**SOG**	**517**	**67***
	PRD	**50**	**16**
ZY2 – Commercial Bait	**PRD**	**70**	**23**
ZY3 – Human Food and Bait	**SOG**	**150**	**3***
ZY4 – Zoo and Aquarium	**SOG**	**110**	**1***
Grand Total		**932**	**140**

*****Includes unique quotas. See section 7.3.1

3.8 Catch in Excess of Quota (Overage)

Vessel masters must operate in a manner that ensures that over harvest does not occur. The harvest of fish in excess of the licensed amount is unlawful.

Small amounts of catch in excess of licensed quota amounts for ZY3 and ZY4 licenses against ZY3, ZY4 and ZM licenses may be designated to other vessels. This will be assessed post-season for continuation or modification in subsequent years.

No person who is fishing under the authority of a licence issued for the purpose of commercial fishing shall dump from a vessel any fish that has been caught in accordance with the Fisheries Act and the Regulations made thereunder.

3.9 Compliance with other Federal and Provincial Legislation and Regulations

Fish harvesters are responsible for compliance with all federal and provincial laws and regulations pertaining to fishing operations. This includes compliance with the Navigable Waters Protection Act for any structures related to fishing operations.

4 GEAR

This section is a general description of gear used in fishing for special use herring. Please refer to the license conditions for specifics on eligible gear for each license.

4.1 Gill Net

- Gill nets are permitted for use by ZX licence eligibility holders only.
- No person shall use more than one section of herring gill net. No person shall use a herring gill net that exceeds 135 m in length.
- No person shall have a gill net that is more than 100 meshes in depth. The gill net mesh size shall not be greater than 64 mm (2.5 inches).
- Shaker panels shall not exceed a depth of 2 m with a mesh size no less than 150 mm (6 inches).
- Gill nets must be marked on both ends with buoys of similar colour, no less than 125 cm in circumference.

4.2 Seine

- Seine nets are permitted for use by ZY licence eligibility holders only.
- A herring purse seine shall not be greater than 410 m (225 fathoms) in length, and mesh size not less than 25 mm (1 inch) extension measure.
- When herring are caught for holding in a herring enclosure, the bunt of the seine net must be knotless web. Web used in the construction of impoundments must also be knotless.

4.3 Hoop Nets and Dip Nets

- A bag-shaped net that is hung on a frame to which a line (hoop net) or a handle (dip net) is attached.

4.4 Herring Enclosures (ponds)

Note that a valid ZY1 or ZY2 licence is required before putting any webbing in the water for use as a herring enclosure.

4.4.1 Enclosure Construction

- Enclosures must be constructed so that the floating frame can support the weight of an impoundment net and enclosed herring without collapsing.
- The bottom of the herring enclosure net must be maintained so that the bottom of the net is a minimum of 3 m (9 feet) above the substrate under the enclosure at all times.

4.4.2 Enclosure Marking

- Every individual herring enclosure (i.e. floating frame with web) must be marked with the vessel registration number and vessel name in accordance with the licence conditions. Enclosures must also be numbered in a sequential fashion (i.e. Pond 1, Pond 2, etc.) This numbering requirement also applies to single enclosures (i.e. Pond 1).

4.4.3 Webbing

- Any net used in a herring enclosure must be made of knotless web.

- When impounding herring the mesh size of the enclosure shall not be greater than 25 mm.
- Herring impoundments which will not be used within 14 days of cessation of fishing activities (indicated by date of hail) must have all web pulled up or removed.

4.4.4 Predator Deterrence

- Impoundments that employ a predator deterrence system must meet the following conditions:
- A bird net consisting of contiguous netting with a maximum mesh size of 50 mm by 50 mm (2 inch by 2 inch). The bird net must be pulled tight across the frame of the impoundment.
- A predator net consisting of contiguous netting with a maximum mesh size of 25 mm. The predator net must surround the webbing of the impoundment completely, maintain a space of at least 30 cm (12 inches) between the predator net and the webbing, and maintain a minimum distance of 3 m (9 feet) above the substrate under the enclosure at all times.

5 MONITORING PROGRAM

Timely and accurate information on harvest and harvesting practices is essential to assess the status of fish stocks and to ensure the conservation and the long-term sustainability of fish resources. Effective monitoring and accurate catch reporting in the special use herring fishery is integral to the effective management of the fishery and herring resource.

The ZY Special Use Herring Fishery Monitoring Program is industry-funded and has been in place since 2007. The program is comprised of a telephone hail in system, vessel harvest logbooks, and dockside weight verification. ZX licences do not participate in the commercial fishery monitoring program, but do submit a landing report at the end of the season.

Additional information on the monitoring program will be provided at the time of licence issuance. Please note that compliance with the monitoring program is a condition of licence. Proof of monitoring via a letter from the service provider will be required prior to licence issuance.

5.1 Service Provider

J.O. Thomas and Associates Ltd. is the industry selected service provider for the special use fishery. Contact information may be found in the Contacts section or at:

Website: http://www.jothomas.com

J.O. Thomas and Associates
1370 Kootenay Street
Vancouver BC..... .....Tel: (604) 291-6340
V5K 4R1 ....Fax: (604) 291-6496

5.2 Letter of Agreement

Prior to ZY licence issuance, proof of monitoring will be required via a letter of agreement from the service provider verifying their agreement with the delivery of a fishery monitoring program.

5.3 Hail Reports

Each vessel master shall be responsible for making an oral report (hail) to the service provider to report events and information required by the licence conditions. The vessel master may designate a person to make hails on his/her behalf, but retains accountability for hails to be performed.

Each hail will be documented with a unique Hail Confirmation Number in the appropriate location in the Special Use Herring Fishery Log Book as detailed in the licence conditions and information sheets provided with the logbooks from the service provider.

Hail Reports provide DFO Resource Management with key information required for timely in-season management and are therefore a priority requirement of the Special Use Fishery Monitoring Program.

5.4 Reporting and Notification Requirements

5.4.1 General

When fishing under a category ZY licence, the vessel master shall report all required information to the designated service provider as detailed in the log books and licence conditions.

No notification is required for category ZX fishing.

5.4.2 Marine Mammal and Seabird Incident Reports

All ponding operations are to complete an incident report for each encounter with a marine mammal or seabird. An incident refers to the types of activities that occur between marine mammals and herring enclosure facilities. This includes system breaches, accidental drowning, and entanglements.

Incident reports are to be faxed to the DFO Reporting Hotline (1-800-465-4336) as soon as an incident is discovered. An incident report form will be provided at the time of licence issuance.

5.4.3 Logbooks

Logbooks are available from the service provider. The vessel master is responsible for the provision and maintenance of an accurate record of daily harvest operations. Catch information must be recorded in the harvest log by midnight of the day in which the activity occurred. The logbook must be kept aboard the licensed vessel, and must be produced for examination on demand of a fishery officer or fishery guardian.

The original white page copy of the log must be received by the designated service provider by December 15, 2016.

5.5 Dockside Monitoring

All landed fish must be verified by a dockside observer and coordinated through the service provider.

Live herring in a quantity less than 500 pieces that are not landed but are removed from the enclosure and sold directly to the public do not require weight verification. However, on the last day of each month, DFO requires the provision of a report via email or fax to the service provider that provides the quantity of individual herring removed from the enclosure. In addition, the number of pieces removed must be recorded in the vessel logbook.

5.6 At-Sea Observers

In the ZY3 and ZY4 licence categories, and for ZY1 category licences with quotas of 50 tons or more for deliveries of non-ponded herring, fishing vessels will be required to have at sea observer coverage by a DFO designated observer while carrying out fishing operations. An observer must be on board prior to the vessel making a seine set. An observer may transfer to another vessel at sea, once the observer duties for the first vessel have been completed, and at the discretion of the observer.

6 LANDING

6.1 Landing and Herring Release Times

All herring caught and retained under the authority of this licence from November 7, 2015 to February 15, 2016, shall be ponded no later than 23:59 hours February 15, 2016. Release or validation of all ponded herring must be completed by 23:59 hours March 1, 2016, except for herring that are ponded in Areas 14 or 17 where release or validation of all ponded herring must be completed by 23:59 hours February 15, 2016 to minimize coincident timing with the roe season in these areas.

All herring caught and retained under the authority of this licence from May 1, 2016 to November 6, 2016, shall be ponded no later than 23:59 hours November 6, 2016. Release or validation of all ponded herring must be completed by 23:59 hours December 1, 2016.

Ponding activity is permitted for this short period as defined above after the February 15 or the November 6 end date of the special use herring fishery harvesting periods. An end of season ponding completion date is required to ensure catch validation occurs within a reasonable time frame after the close of the fishery.

Operations with a maximum annual quota of 3 tons do not need to release herring on the above dates, provided the conditions of licence are met.

6.2 Offloading Regulations

Schedule B (Part I Section 11.1) of the B.C. Fish Inspection Regulations states: "Where fresh herring is for human consumption, its processing, except icing or chilling, must commence within 24 hours of delivery at the processing establishment and must not be discontinued until the herring is preserved to a degree that assures maximum quality of the product."

6.3 Designated Landing Ports

Special Use Herring may be landed at ports that meet the following requirements:

- Is a Designated Landing Station as per Section 17 of the Pacific Fisheries Regulations[2];
- Has an Industry Canada Approved weigh scale (valid for duration of fishing season); and,
- Is provincially licensed as a Fish Buying Station or Fish Processing Plant for Roe Herring or for Finfish other than Salmon (valid for duration of fishing season)

OR

Is a Federal Government dock registered with the Harbour Authority Association of BC.

The following landing ports may be used:

- Metro Vancouver
- French Creek
- Prince Rupert
- Quadra Island
- Nanaimo
- Campbell River

To land at another port other than those listed above, contact the Service Provider. It is possible that a surcharge will be charged to the operator for travel costs of the port monitor. Alternative landing ports must meet the criteria for a designated landing port.

[2] A Landing Station is a building or barge permanently affixed to the shore, provincially licensed as a Fish Buying Station or a Fish Processing Plant.

7 LICENCING

7.1 Fisher Identification Number

The FIN allows for fast, easy, and reliable on-grounds identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN is assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors. As the FIN is now used during normal business interactions with DFO and contractors, fish harvesters will no longer need to provide detailed personal information identifying such items as gender or date of birth.

Once the FIN is issued to a fish harvester, it will not change from year to year. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

7.2 Licence Categories

The special use fishery is organized into five licence types, to accommodate for specific needs of the products of this fishery. All bait herring licences are party based, and must be designated to a registered Canadian commercial fishing vessel that is eligible for a vessel based commercial licence.

A review as to whether the Department should continue to use licence purposes in the Special Use fishery may be undertaken in consultation with First Nations and stakeholders during the 2015/16 season. In keeping with existing co-management processes, DFO Fisheries Management would also consult regarding any proposed changes which may impact unique quotas (described in section 7.3.1).

7.2.1 ZX – Personal Use Herring

- Licence purpose: Fish caught under the authority of this licence cannot be sold and are for the sole use of the licence holder.
- 1 ton licences issued to anyone that owns or operates a licensed commercial vessel.
- Licences issued on a first come, first served basis, until the allocation for ZX licences has been reached.

7.2.2 ZY1 – Sport Bait

- Licence purpose: Fish caught under the authority of this licence may only be sold as live bait to sport fishers or frozen for domestic or export sport bait.
- 3 ton licences issued to anyone that owns or operates a licensed commercial vessel.
- Three unique quotas exist for this licence type. These licences are for larger tonnages and as such are restricted to fishing between the dates of November 7, 2015 (00:01h) to February 15, 2016 (23:59h); and October 1, 2016 (00:01h) to November 6, 2016 (23:59h).

- In the Strait of Georgia, multiple 3 ton ZY1 licences (up to five per vessel) will only be issued between November 7, 2015 to February 15, 2016, and October 1, 2016 to November 6, 2016. Vessels with ZY1 licences may not stack licences from other herring licence categories at the same time. Licences will be issued on a first come, first served basis, until the allocation for ZY1 licenses has been reached.

7.2.3 ZY2 – Commercial Bait

- Licence purpose: Fish caught under authority of this licence may be sold only as fresh or frozen bait for commercial use to commercial fishers.
- 3 ton licences issued to anyone that owns or operates a licensed commercial vessel.
- Licences will be issued on a first come, first served basis, until the allocation for ZY2 licenses has been reached.
- Vessels with a ZY2 licence may not stack licences from other herring licence categories at the same time.

7.2.4 ZY3 – Domestic Food and Bait Herring

- Licence purpose: Fish caught under authority of this licence may only be sold fresh for non-commercial or non-sport use.
- DFO will be providing the ZY3 allocation for the 2015/16 season.
- Three 50 ton licences are available for the 2015/2016 season as a 150 ton unique quota. These licences are for larger tonnages and as such are restricted to fishing between the dates of November 7, 2015 (00:01h) to February 15, 2016 (23:59h); and October 1, 2016 (00:01h) and November 6, 2016 (23:59h).
- Up to three ZY3 licences may be stacked on a vessel. Vessels may also stack licences from the ZY4 and ZM licence categories at the same time. The vessels(s) must be a licensed commercial fishing vessel that meets the criteria for licence issuance.

7.2.5 ZY4 – Zoo and Aquarium Animal Food

- Fish caught under authority of this licence may only be used to feed animals resident at the zoo or aquarium of the named licence holder.
- One 110 ton licence issued as a unique quota to the Vancouver Aquarium to a licensed commercial fishing vessel that meets the criteria for licence issuance. The vessel may also stack licences from the ZY3 and ZM licence categories at the same time.
- This unique quota is for a larger tonnage and as such is restricted to fishing between the dates of November 7, 2015 (00:01h) to February 15, 2016 (23:59h) and October 1, 2016 (00:01h) to November 6, 2016 (23:59h).

7.3 Licence Type

The special use fishery is not a limited entry fishery. Therefore licence eligibilities are not carried forward from one year to the next based on an established eligibility criteria.

When licences were introduced to the special use fishery in 1995, they were developed with specific licence purposes that dictated the end use of the fish for that licence. These licence purposes are described for each licence category in Section 7.2.

7.3.1 Unique Quotas

As the special use fishery was developed, there arose a practice of providing unique quotas (previously referred to as "grandfathered licences") to specific parties for specific purposes within different licence categories. While DFO will no longer provide for the development of new unique quotas, due to historical participation, the existing unique quotas will continue to be made available to the past participants subject to the conditions described in this section. There are currently five unique quotas in the special use fishery.

Minister's Discretion under the *Fisheries Act*
Previously called "grandfathered" or "historical" licences, these allocations are more accurately called "unique quotas". In the context of the development of the Special Use Fishery, the technical definition of "grandfathering"[3] does not apply as it implies that there is an eligibility for access to these allocations and implies there is a statutory or regulatory clause that describes how allocations must be made (or that "grandfathers" certain licence holders). On the contrary, the Minister has absolute discretion regarding the issuance of fishing licences as per the *Fisheries Act* S7.

Expected Use of Fish
The unique quotas are issued to specific parties for specific purposes, as described below:

- ZY1 Sport Bait
    - Fish caught under authority of this licence may be sold only as live bait to sport fishers or frozen for domestic or export sport bait.
    - Issued to:
        - Walcan Seafood Ltd (300 tons, SOG)
        - Charlie's Live Bait (15 tons, SOG)
        - Martin Lowe (9 tons, SOG)

- ZY3 Human Food and Bait
    - Fish caught under authority of this licence may only be sold fresh for non-commercial or non-sport use
    - Issued to:
        - Seven Seas Fish Co. Ltd. (150 tons, SOG)

- ZY4 Zoo and Aquarium Food
    - Fish caught under authority of this licence may be used only to feed animals resident at the zoo or aquarium of the named licence holder.

[3] To be "grandfathered" means that one benefits from a grandfather clause, which is a statutory or regulatory clause that exempts a class of persons or transactions because of circumstances existing before the new rule or regulation takes effect.

- Issued to:
  - Vancouver Aquarium (110 tons, SOG)

7.4 Licence Stacking

In the Strait of Georgia, designated vessels may fish a maximum of five category ZY1 licences at one time. Designated vessels may fish a maximum of three category ZY3 licences at one time. A vessel may not stack licences from more than one category at a time except for ZY3, ZY4 and ZM category licences.

7.5 Licence Renewal Fees

The licence fee is $30.00 per licence.

7.6 Licence Application and Issuance Information

Special use herring licence application forms are available from the Special Use herring manager:

Roger Kanno
Tel: (604) 666-7851
Fax: (604) 666-3341
Email: roger.kanno@dfo-mpo.gc.ca

Or, 'Submit a Request' (Request type: Application for New Licence: Bait – Herring/Mackeral) through your NOLS account. You can download and print the application by checking your request 'Request Status'. Follow the instructions found at the link below:

http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm

Eligible applicants must submit a completed Application for Special Use Herring Licence and pay the required fee of $30.00 through the NOLS. A separate application must be submitted for each special use herring licence.

The applicant must sign the application form. Where the applicant is a company, a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities, is required to be submitted and kept on record by the PFLU. This must correspond with the information on the current BC Company Summary on record with the PFLU.

The applicant must designate a Canadian commercial fishing vessel, registered in the Department's Commercial Fishing Vessel Registry, that is eligible for any limited vessel based licence (i.e. salmon, schedule II, geoduck, sablefish, halibut, crab, shrimp by trawl, groundfish trawl and shrimp and prawn by trap), a valid communal commercial licence or a valid salmon category N licence.

The application must list the name of the vessel master; however, the applicant is not required to be the owner of the designated vessel. Licences may be issued to the applicant who is intending to use or receive the herring. If the herring is to be impounded, then the applicant can be the impoundment operator.

No party may hold more than one special use herring licence at a time (except in the ZY3 licence category). Where a special use herring licence has been landed and validated and all conditions have been met, the licence holder may apply for another special use herring licence.

No fishing may commence until the licence is received and is on board the vessel.

7.7 Licence Requirements

The following requirements must be met prior to the issue of a special use herring licence:

- Prior to licence issuance, proof of monitoring will be required via a letter from the service provider verifying their agreement with the delivery of a fishery monitoring and catch reporting program as outlined in this IFMP.
- Designated vessels may fish a maximum of five category ZY1 licences at one time, designated vessels may not stack licences from other herring licence categories at the same time with ZY1 or ZY2 licences, designated vessels may stack and fish any combination of ZY3, ZY4 and ZM licences and all catch landings must be validated against an issued licence.

7.8 Licence Documents

7.8.1 Valid Period

Special use herring (category ZX or ZY) licences are valid from the date of issue to November 6 of the next calendar year, unless otherwise specified on the licence conditions. The special use fishery is closed from 00:01 hours February 16, 2016 to 23:59 hours April 30, 2016 for the roe herring season.

Licences that have been obtained prior to the February 15 closure but have remaining quota may be used after the fishery re-opens May 1.

7.8.2 Vessel Re-designation

Vessel re-designation requests are submitted via the Applicant's NOLS account by logging onto the NOLS and navigating to 'Submit a Request' Type: Vessel Transaction, Sub-Type: Attach/detach Vessel to/from Vessel.

http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm

Vessel re-designation after licence issuance is permitted for the ZY3 and ZY4 licence categories only, or at the discretion of the lead resource manager. Vessel re-designation is completed by submitting another vessel designation request via the applicant's NOLS account.

All vessel designation requirements must be met by the replacing designated vessel.

National Online Licensing System (NOLS) Client Support:

Training materials, including step-by-step guides and a detailed user training manual, are available online (http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website at address above, or contact our client support.

APPENDIX 11. COMPLIANCE PLAN

Conservation and Protection Program Description

Fisheries and Oceans Canada (DFO's) Conservation and Protection (C & P) program is responsible for enforcing the *Fisheries Act* and pursuant regulations and related legislation. Enforcement activities are carried out by Fishery Officers across Canada who conduct patrols on land, at sea and in the air.

The Department promotes compliance with the law through a range of activities from education and awareness activities that encourage Canadians to protect fishery resources and habitats, patrol activities to detect violations, and major case management. These activities are further outlined in the C & P National Compliance Framework.

There are approximately 173 fishery officers stationed in the Pacific Region, which encompasses British Columbia and Yukon. They are designated as "Fishery Officers" under Section 5 of the *Fisheries Act*. The *Fisheries Act* and the *Criminal Code of Canad*a are the primary pieces of legislation outlining the powers and responsibilities of Fishery Officers. Officers are designated under other Acts as well, such as the *Coastal Fisheries Protection Act* and *Species at Risk Act*.

Users of the resource have a responsibility to report violations. Any suspected or actual fisheries, wildlife or pollution violations can be quickly and discretely reported to the appropriate enforcement officer by using the toll free observe, record and report hotline. This toll free number is available 24 hours a day.

OBSERVE, RECORD AND REPORT 1-800-465-4DFO (1-800-465-4336)

Regional Compliance Program Delivery

Enforcement of the herring fishery will be tempered by commitments to higher priority issues, such as species at risk, CSSP and fisheries that have conservation concerns. C&P staff will pursue opportunities to monitor and enforce issues and problems related to the herring fishery in conjunction with the monitoring and enforcement activities dedicated to the identified priority fisheries in the Pacific Region.

Fishery Officers conduct a range of activities to promote compliance during herring fisheries. These activities include attending industry and herring working group meetings, defining key enforcement concerns with Fisheries Management prior to the commercial fishery, conducting patrols, at sea boardings and plant inspections during the fishery, and detailed post season reporting.

Dockside validation is a key component of the management of the herring fishery. C & P supports dockside validation by checking in with validators, attending offloads and monitoring offloading practices.

Air surveillance resources may be utilized to patrol boundaries and conduct gear and vessel counts. Charter aircraft as well as DFO aircraft may be utilized for these activities.

Consultation

C & P strives to meet with First Nations groups to build relationships. C & P seeks to conduct joint patrols with First Nations fisheries representatives and strives to complete enforcement protocols to better define our working relationship.

C & P attends industry meetings with Fisheries Management. These meetings occur in several geographic areas and are important to exchange information and share concerns.

Compliance Performance

Roe Herring

Compliance during the 2015 roe herring fishery was very good. Four occurrences were recorded for the season all were failure to have an FRC while onboard a fishing vessel.

C & P conducted patrols of the fishery, inspected plants and monitored validations,

During the Strait of Georgia fishery, Fishery Officers were deployed to patrol fishing activity. There was a decline in patrol effort due to higher priority enforcement issues.

In the Prince Rupert area, C & P conducted patrols by program vessel. Patrol effort was divided between on water patrols of Big Bay and Kitkatla and the offloads occurring at plants within Prince Rupert and Port Edward.

Spawn on Kelp

There is continued concern with non-compliance of hail requirements, as hails do not always reflect up to date activities on the grounds. Only one occurrence was reported with no charges being laid.

Food and Bait and Special Use

Six occurrence reports were received relating to the release of herring after pumping commenced.

Current Compliance Issues

Key priorities for the Pacific herring fishery for DFO Conservation and Protection are to ensure fisheries are promulgated in an orderly manner and in compliance with legislation and license conditions, ensure compliance with the herring fishery monitoring programs and to provide regular reports on enforcement and compliance for this fishery through the Record of Management Strategies report (RMS) and Fisheries Enforcement Activity Tracking System (FEATS).

With the introduction of a “pooled” style herring fishery the requirements for compliance and enforcement effort have changed. Officers attend openings and conduct regulatory monitoring activities throughout the fishery. Compliance monitoring activities will be conducted during offloads and after the fishery is over, While conducting their compliance and other enforcement activities, Fishery Officers work closely with Resource Managers and their other partners to assist them where possible. Overall effort is small and not a Regional priority.

APPENDIX 12: FISHING VESSEL SAFETY

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 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 Transport Canada (TC); emergency response with the Canadian Coast Guard (CCG) and DFO has responsibility for management of the fisheries resources. In BC, WorkSafeBC also regulates health and safety issues in commercial fishing. This includes requirements to ensure the health and safety of the crew and safe operation of the vessel. DFO (Fisheries and Aquaculture Management (FAM) and CCG) and TC through an MOU have formalized cooperation to establish, maintain and promote a safety culture within the fishing industry.

Before departing on a voyage the owner, master or operator 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, vessel stability, having the required personal protective and life-saving equipment in good working order, crew training, and knowledge of current and forecasted weather conditions. As safety requirements and guidelines may change, the vessel owner, 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
- Fish Safe – Stability Education Course
- Fish Safe – Safe on the Wheel Course
- Fish Safe – Safest Catch Program
- First Aid
- Radio Operators Course
- Fishing Masters Certificate
- Small Vessel Operators Certificate

Publications:

- 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
- Gearing Up for Safety – WorkSafeBC

- Safe At Sea DVD Series – Fish Safe
- Stability Handbook – Safe at Sea and Safest Catch – DVD Series
- Safest Catch Log Book
- Safety Quick

For further information see:

www.tc.gc.ca/eng/marinesafety/menu.htm
www.fishsafebc.com
www.worksafebc.com

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 drills 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 also to correct ballasting. Fish harvesters must be familiar with their vessel's centre of gravity, the effect of liquid free surfaces on stability, loose water or fish on deck, loading and unloading operations and the vessel's freeboard. Know the limitations of your vessel; if you are unsure contact a reputable naval architect, marine surveyor or the local Transport Canada Marine Safety Office.

Fishing vessel owners are required to develop detailed instructions addressing the limits of stability for each of their vessels. The instructions need to be based on a formal assessment of the vessel by a qualified naval architect and include detailed safe operation documentation kept on board the vessel. Examples of detailed documentation include engine room procedures, maintenance schedules to ensure watertight integrity, and instructions for regular practice of emergency drills.

The Small Fishing Vessel Inspection Regulations currently require, with certain exceptions, a full stability assessment for vessels between 15 and 150 gross tons that do not exceed 24.4 metres in length and are used in the herring or capelin fisheries. Once the proposed new Fishing Vessel Safety Regulations take effect, more vessels will be required to have a stability booklet.

In 2006, Transport Canada Marine Safety (TC) issued Ship Safety Bulletin (SSB) 04/2006 ("Safety of Small Fishing Vessels: Information to Owners/Masters About Stability Booklets"), which provides a standard interpretation of the discretionary power available under Section 48 and the interim requirements prior to the implementation of the proposed Fishing Vessel Safety Regulations. The bulletin calls for vessels more than 15 gross tons to have a stability booklet where risk factors that negatively affect stability are present. The bulletin also suggests vessels less than 15 gross tons assess their risk

factors. Every fishing vessel above 15 GRT built or converted to herring or capelin after 06 July 1977 and engaged in fishing herring or capelin must have an approved stability book. Additionally, Transport Canada has published a Stability Questionnaire (SSB 04/2006) and Fishing Vessel Modifications Form which enable operators to identify the criteria which will trigger a stability assessment. A stability assessment is achieved by means of an inclining experiment which has to be conducted by a naval architect. Please contact the nearest Transport Canada office if you need to determine whether your vessel requires one.

In 2008, TC issued SSB 01/2008, 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 2002 and found that vessel modifications and loading of traps have been identified as contributing factors in vessels capsizing, such as: M02W0102 - Fritzi-Ann, M05W0110 - Morning Sunrise, M07M0088 - Big Sisters, M08W0189 - Love and Anarchy, M09L0074 – Le Marsouin I, M10M0014 - Craig and Justin, M12W0054 – Jessie G and M12W0062 - Pacific Siren.

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.

In 2013, Fish Safe developed a code of best practices for the food and bait herring fishery and the prawn fishery: 'Food and Bait – Best Practice Reminders'; 'Prawn Industry - Best Industry Recommended Practices.' Please contact Ryan Ford at Fish Safe for a copy of the program materials they developed to address safety and vessel stability in these fisheries. Ryan Ford – Cell phone: 604-739-0540 - Email: fishsafe@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.

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.

2.3 Cold Water Immersion

Drowning is the number one cause of death in BC's fishing industry. Cold water is defined as water below 25 degrees Celsius, but the greatest effects occur below 15 degrees. BC waters are usually below 15 degrees. 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 WorkSafe Bulletin Cold Water Immersion (available from the WorkSafeBC website at www.worksafebc.com) where the need to don PFD's while working in or near the water during fishing operations is clearly emphasized.

2.4 Other Issues

2.4.1 Weather

Vessel owners and masters are reminded of the importance of paying close attention to current weather treads 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: http://www.weatheroffice.gc.ca/marine/index_e.html

2.4.2 Emergency Radio Procedures

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) It is strongly recommended that all fish harvesters carry a registered 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). These beacons should be registered with the National Search and Rescue secretariat. 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.

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.

Since August 1, 2003 all commercial vessels greater than 20 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: http://www.ccg-gcc.gc.ca/eng/CCG/Home 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 MCTS and DSC can be obtained by contacting a local Coast Guard MCTS centre (located in Vancouver, Victoria, Prince Rupert, Comox and Tofino) or from the Coast Guard website: www.ccg-gcc.gc.ca/Pacific

2.4.3 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:

- every ship twenty metres or more in length,
- every ship engaged in towing or pushing any vessel or object, other than fishing gear,
- 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
- 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 ship towing or pushing inside a log booming ground,
- a pleasure yacht less than 30 metres in length, and
- 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 (250) 363 8904 or from the Coast Guard website: http://www.ccg-gcc.gc.ca/eng/CCG/Home

2.4.4 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 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

Commercial fishing is legislated by the requirements of the Workers Compensation Act (WCA) and for diving, fishing and other marine operations Part 24 of the Occupational Health and Safety Regulation (OHSR) applies. Many general hazard sections of the OHSR also apply to commercial fishing and other marine operations. For example, Part 8: Personal Protective Clothing and Equipment addresses issues related to safety headgear, safety foot wear and personal floatation devices. Part 15 addresses issues on rigging, Part 5 addresses issues of exposure to chemical and biological substances, and Part 3 addresses training of young and new workers, first aid, and accident investigations. Part 3 of the WCA also defines the roles and responsibilities of owners, employers, supervisors and workers. The OHSR and the WCA are available from the Provincial Crown Printers or by visiting the WorkSafeBC website: www.worksafebc.com

For further information, contact an Occupational Safety Officer:

Bruce Logan	Lower Mainland	(604) 244-6477
Mark Lunny	Courtenay	(250) 334-8732
Jessie Kunce	Victoria	(250) 881-3461

or the Manager of Interest for Marine and Fishing, Pat Olsen (250) 334-8777

For information on projects related to commercial fishing contact Lisa Houle (604) 214-6922 or Toll Free 1-888-621-6922 or by email: Lisa.Houle@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 fishermen in this goal. The Fish Safe Stability Education Course is available

to all fishermen who want to improve their understanding of stability and find practical application to their vessel's operation. The Safe on the Wheel Course is designed to equip crewmen with the skills they need to safely navigate during their wheel watch. The Safest Catch Program along with fishermen trained Safety Advisors is designed to give fishermen the tools they need to create a vessel specific safety management system.

Fish Safe is managed by Ryan Ford, Program Coordinator John Krgovich, Project Manager Connor Radil, Program Assistant Stephanie Nguyen and fishermen 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). The advisory committee meets quarterly 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:

Ryan Ford
Program Manager
Fish Safe
#100, 12051 Horseshoe Way
Richmond, BC V7A 4V4

Cell: 604-739-0540
Fax: 604-275-7140
Email: fishsafe@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 Advisors. It is not the function of the Board to assign fault or determine civil or criminal liability. Under the TSB Act, all information collected during an investigation is completely confidential.

In 2014 the TSB released three 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.

For more information about the TSB, visit the website at www.tsb.gc.ca
For information about the TSB's investigation into fishing safety, or to view a brief video, visit http://www.tsb.gc.ca/eng/medias-media/videos/marine/m09z0001/index.asp

To view a brief video about some of the issues on the TSB's recent safety Watchlist, visit: http://www.tsb.gc.ca/eng/medias-media/photos/index.asp

Reporting an Occurrence - www.tsb.gc.ca/eng/incidents-occurrence/marine/
After a reportable occurrence happens, you can fill out the TSB 1808 form or call the TSB at the contact information below.

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