

**REPORT OF THE INTERNATIONAL FISHERIES
COMMISSION**

**APPOINTED UNDER THE TREATY BETWEEN THE UNITED STATES
AND CANADA FOR THE PRESERVATION OF THE
NORTHERN PACIFIC HALIBUT FISHERY**

NUMBER 14

**REGULATION AND INVESTIGATION
OF THE PACIFIC HALIBUT
FISHERY IN 1948**

Commissioners:

**EDWARD W. ALLEN
MILTON C. JAMES**

**STEWART BATES
GEORGE W. NICKERSON**

**SEATTLE, WASHINGTON
1949**



FOREWORD

The present is the fourteenth report published by the International Fisheries Commission under the terms of the Conventions of 1923, 1930 and 1937 between the United States and Canada for the preservation of the halibut fishery of the Northern Pacific Ocean and Bering Sea.

It continues a series of annual reports commenced in 1947 to provide a brief review of the Commission's administrative and investigational activities, and to present information of interest to the fishing industry and the general public regarding the halibut fishery.

Some background material is included for the benefit of persons not familiar with the halibut fishery and the past work of the Commission.



REGULATION AND INVESTIGATION OF THE PACIFIC HALIBUT FISHERY IN 1948

CONTENTS

Introduction.....	7
Regulation of the halibut fishery.....	9
Length of season.....	11
The fishery south of Willapa Harbor, in Areas 1A and 1B.....	12
The fishery between Willapa Harbor and Cape Spencer, in Area 2.....	13
The fishery west of Cape Spencer to Unimak Pass, in Area 3.....	15
Landings of incidentally caught halibut.....	17
Condition of the halibut stocks in Areas 2 and 3.....	18
Changes in composition of stocks.....	18
Marking experiments.....	20
Appendix I. Convention between Canada and the United States of America for the preservation of the halibut fishery of the northern Pacific Ocean and Bering Sea signed at Ottawa, January 29th, 1937	23
Appendix II. Pacific Halibut Fishery Regulations, effective March 6, 1948	25



INTRODUCTION

The Pacific halibut fishery, from its inception in 1888 off Cape Flattery, has been jointly engaged in by the nationals of Canada and of the United States. Over 90 per cent of the catch originates outside of territorial waters.

To meet the demands of growing markets and to counteract the decline in productivity of the early fished grounds, a growing and more efficient fleet by 1910 had extended its operations as far north as Cape Spencer, Alaska. The next 15 years found the entire distribution range of the halibut brought under tribute. Grounds from northern California along 2,000 miles of coast to Unimak Pass in the Aleutian Islands were being fished by 1925.

At the outset no particular concern was felt regarding the declining yields from the older grounds, as the over-all production was being maintained. However, investigations in 1913 and 1914, under the auspices of the Fisheries Department of British Columbia, emphasized the severity of the decline on the older banks and pointed to the fallacy of expecting to sustain the yield indefinitely by expansion to new grounds.

Annual production declined by 1915 in spite of the enlarged fleets and more extended operations. The industry and fisheries administrators urged joint action by the Governments of Canada and the United States. After some delay, occasioned by World War I, a treaty for the preservation and development of the halibut fishery was signed in 1923 and ratified in 1924.

The Treaty established the International Fisheries Commission of four non-salaried members, two from each country. It empowered the Commission to investigate and recommend measures for the preservation and development of the fishery. A three-month closed winter season was also provided.

The Treaty had the distinction of being the first signed by Canada as a member nation of the British Commonwealth, and of being the first convention ever concluded for the purpose of jointly conserving a deep-sea fishery.

A practical program of investigation was instituted by a staff of fishery biologists. Fundamental studies of the life of the halibut, the history of the fishery and the condition of the available stocks provided a rational and factual approach to the problem. The investigations indicated clearly that prompt action was necessary to halt the decline.

In 1928 the Commission recommended to the two Governments the application of specific regulatory measures. This led to the new Convention of 1930 which continued the functions of a 1923 treaty, and provided the necessary regulatory authority for: changing or suspending the closed season; dividing the convention waters into areas and limiting the catch of halibut to be taken from each; regulating the licensing and departure of vessels; collecting the statistics necessary for administering catch limits and for determining the condition of the fishery; fixing the type of gear to be used; and, closing grounds found to be populated by small immature halibut.

A new treaty in 1937, under which the Commission now functions, expanded its regulatory authority to provide for the control of the capture of halibut caught incidentally to fishing for other species in an area closed to halibut fishing by reason of attainment of its catch limit of halibut.

Each year, starting in 1932, the Commission has prepared and, upon approval by the President of the United States and the Governor General of Canada, has issued regulations governing halibut fishing off the Pacific coast of the United States, Canada and Alaska. Enforcement of the regulations is the duty of the Coast Guard, the Customs Service and the Fish and Wildlife Service in the United States and of the federal Department of Fisheries, with particular assistance from the Customs Division of the Department of National Revenue, in Canada.

The ensuing 18 years of the Commission's management has resulted in a great increase in the abundance of the halibut on the grounds. The improved condition of the stocks has permitted much larger annual yields to be taken than in the years immediately preceding regulation.

The abundance of halibut on the coast as a whole has increased about 150 per cent and the total catch during the past four years has averaged over 56 million pounds annually, 13 million pounds greater annually than in 1931. This additional poundage with the associated vitamin-bearing livers and viscera has added over \$3,000,000 annually to the fleets' earnings. In spite of the larger catches permitted each year the increased abundance has resulted in a 35 per cent reduction in the amount of fishing required to secure the catch.

These changes in the fishery have been directly and indirectly responsible for pronounced changes in the size and character of the halibut fishing fleet, in the rate at which halibut are landed, and in the length of the fishing season.

The success of the Commission in its restoration of the Pacific Coast halibut stocks has been frequently commented upon and the methods by which this success has been accomplished have served as models for many recent fishery conservation plans.

During 1948 the International Fisheries Commission continued the biological and statistical studies upon which regulation depends.

Throughout the year the Commission maintained close contact with all branches of the industry and with its investigational staff. The latter occupies laboratory quarters provided by the University of Washington in Fisheries Hall No. 2 on the university campus in Seattle, Washington.

Mr. A. J. Whitmore of the Department of Fisheries, Canada, who had served as a Canadian member of the Commission since 1936, resigned in April. Mr. Stewart Bates, Deputy Minister of Fisheries, Ottawa, was appointed by the Governor General of Canada to fill the vacancy.

Meetings of the Commission were held at Seattle, Washington, on January 8, 9 and 10 and at Ottawa, Ontario, on June 21, 22 and 23 in 1948.

The Seattle meetings were the regular annual conferences. The past season's fishery and investigations were reviewed and the program for the 1948 season was discussed with the investigational staff. On the second day, a meeting was held with the Halibut Conference Board composed of representatives from the fishermen's and vessel owners' organizations in the major halibut ports of Seattle, Vancouver, Prince Rupert, Ketchikan, Petersburg and Juneau. The fleets' representatives were informed as to the results of the past season's fishery and as to the current findings of the Commission. They presented proposals regarding next season's regulations. The Commission, in executive session on the third day, reviewed the fleet's proposals in conjunction with its scientific findings and decided upon the regulations for 1948.

The Ottawa meetings were noteworthy for the broad representation of the participants. For the first time the International Fisheries Commission and International Pacific Salmon Fisheries Commission met jointly with representatives of the two governments to discuss administrative and fiscal problems common to both Commissions.

The International Fisheries Commission also met independently with representatives of the United States Department of State, the United States Fish and Wildlife Service, and the Canadian Department of Fisheries. Matters relating to the treaty changes recommended by the Commission to the two governments in 1946 were discussed. Re-examination of the applicability of the powers provided under the present treaty to current problems was deemed necessary. To this end, the Commission was requested to prepare sample regulations that would provide for a lengthening of the fishing season and for more flexible control of halibut caught incidentally to fishing for other species, and to present them for consideration by the two governments.

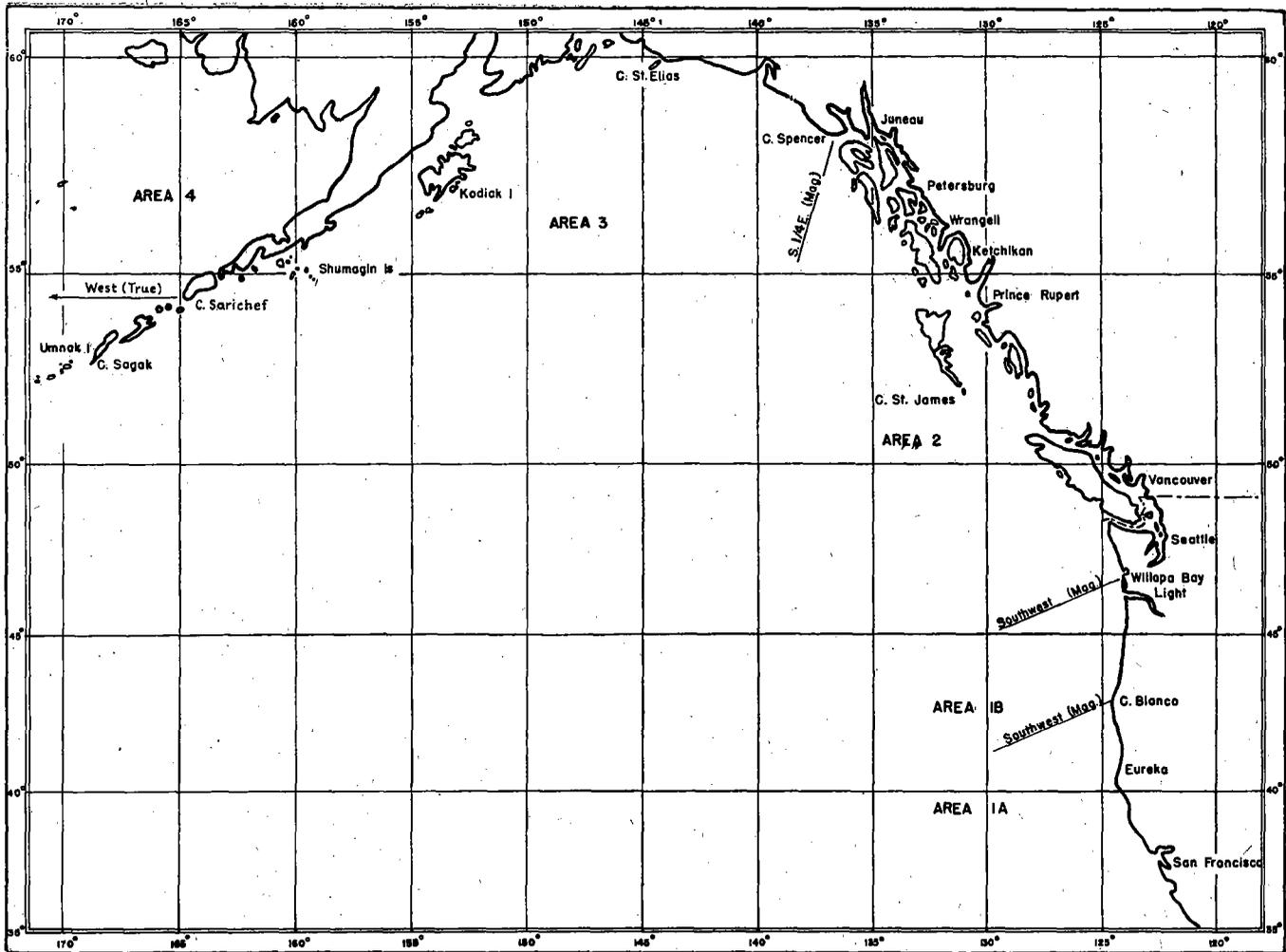
REGULATION OF THE HALIBUT FISHERY

The Pacific Halibut Fishery Regulations for 1948 were approved by the President of the United States on February 27 and by the Governor General of Canada in Council on March 6 and became effective as of the latter date. Copies of the 1948 regulations and of the 1937 Convention are appended.

Changes in the regulations in 1948 were as follows:

(a) The catch limit for Area 2 which includes the waters off the coasts of Washington, British Columbia and Southeastern Alaska was increased from 24,500,000 to 25,500,000 pounds. The annual catch limits for Areas 3 and 4 remained the same as in 1947, namely 28,000,000 and 500,000 pounds respectively.

(b) The description of the nursery area off the northern coast of Graham Island was amplified to include the waters of the contiguous Masset Inlet. This was done to remove any possible doubt as to the inclusion of those waters in the closed area.



Pacific Coast of North America, showing the regulatory areas defined by the International Fisheries Commission in 1948.

The regulations continued to provide for the division of the Convention waters into five areas: Area 1A, the waters off the southern Oregon and northern California coast south of Cape Blanco, Oregon; Area 1B, lying off the Washington and Oregon coasts between Cape Blanco and Willapa Bay; Area 2, between Willapa Bay and Cape Spencer, Alaska; Area 3, between Cape Spencer and a line running true west from Cape Sarichef on Unimak Island; Area 4, the Bering Sea north of the above Cape Sarichef line.

Catch limits of 25,500,000 pounds, 28,000,000 pounds and 500,000 pounds were provided for Areas 2, 3 and 4 respectively. Areas 1A and 1B, where the catch of halibut is relatively inconsequential, were allowed to continue without catch limits.

Provision was again made for the opening of the fishing season in all areas on May 1, and for the subsequent closure of each. The closure dates of Areas 2, 3 and 4 were again contingent upon the attainment of their catch limits, or in the case of Area 4, upon the earlier closure of Area 3 to eliminate opportunities for illegal post-season fishing in Area 3. The closure date of Area 2 was applied to Area 1B and that of Area 2 or 3, whichever was later, was applied to Area 1A.

Other regulatory provisions were continued, including: a minimum size limit of 26 inches heads-on or five pounds heads-off for halibut; the closure of two nursery areas, one off Masset in northern British Columbia and one off Timbered Islet in southwestern Alaska; the prohibition of the use of dory gear and of nets of any kind for the capture of halibut; the termination of permits for the retention of halibut caught incidentally during fishing for other species in closed areas after November 15; and the beginning of the winter closed season after November 30, if it had not previously begun through the earlier attainment of the catch limits.

Areas 2 and 1B were closed at midnight of June 1, and Areas 3, 4 and 1A were closed at midnight July 11. The closure dates of Areas 2 and 3 were announced in advance on May 20 and June 17 respectively, on the basis of the estimated dates of attainment of their catch limits.

LENGTH OF SEASON

The greater abundance of halibut with larger trips and the increased fleet attracted to the fishery thereby have brought about a sharp decline in the length of the fishing season.

On account of the profound economic and biological effect that the short season has had upon the fishery, considerable interest attaches to Table 1 showing the dates of opening and closing and the length of the season in Areas 2 and 3.

Unless some measures can be taken to extend the period of fishing, the season will soon reach what is believed to be the operational minimum for the two areas, about 25 days in Area 2 and about 50 days in Area 3.

Such short seasons are considered biologically unsound by the Commission because they do not allow the taking of the maximum yields from the stocks. They are objected to by the halibut fleet on account of the market gluts that have resulted from them.

TABLE 1.—Length of halibut fishing season in Areas 2 and 3.

	Legal Opening Date All Areas	Closing Dates		Length of Fishing Season†			
		Area 2	Area 3	Area 2 Mos. Days		Area 3 Mos. Days	
1929	Feb. 16	Nov. 15	Nov. 15	9	0	9	0
1930*	Feb. 16	Nov. 15	Nov. 15	8	15	8	15
1931*	Feb. 16	Oct. 31	Oct. 31	8	0	8	0
1932	Feb. 16	Oct. 22	Oct. 30	8	6	8	15
1933	Feb. 1	Aug. 25	Oct. 26	6	25	8	26
1934	Mar. 1	Aug. 19	Oct. 27	5	19	7	27
1935*	Mar. 1	Sept. 6	Dec. 26	5	6	8	26
1936	Mar. 16	Aug. 10	Nov. 3	4	24	7	19
1937	Mar. 16	July 28	Oct. 19	4	12	7	4
1938	April 1	July 29	Oct. 29	3	29	6	29
1939	April 1	July 29	Oct. 28	3	29	6	28
1940	April 1	July 13	Sept. 26	3	13	5	26
1941	April 1	June 30	Sept. 14	3	0	5	14
1942	April 16	June 29	Sept. 25	2	13	5	9
1943	April 16	June 20	Sept. 28 ^{1/2}	2	4	4	23
1944*	April 16	July 9	Nov. 30	1	18	6	10
1945	May 1	June 15	Sept. 24	1	15	4	24
1946	May 1	June 11	Aug. 19	1	11	3	19
1947*	May 1	June 8	Aug. 17	1	8	3	17
1948	May 1	June 1	July 11	1	1	2	11

†Length of Fishing Season is the legal season less the pre-season tie-up periods noted for 1930, 1931, 1935 and 1944.

*1930—Fleet voluntarily tied up until March 1.

*1931—Strike and tied up until about first week in March.

*1935—Fleet voluntarily tied up until April 1.

*1944—Fleet tied up to about May 20 due to maximum wartime price dispute.

*1947—Seattle fleet largely tied up until July 1 due to owner and crew share dispute.

THE FISHERY SOUTH OF WILLAPA HARBOR, IN AREAS 1A AND 1B

Area 1A includes the Convention waters south of Cape Blanco Light which is located on the Oregon coast about 75 miles north of California. Area 1B lies between Cape Blanco and Willapa Harbor on the Washington coast, including about 250 miles of the coast line. Prior to 1946 these areas formed a single unit, Area 1, which was closed with Area 2. With the continued shortening of the Area 2 season Area 1 was divided into the present areas in 1946, to permit the southern section to remain open after the closure of Area 2 and thus allow greater utilization of the halibut stocks in that region.

The stocks of halibut in both these areas are relatively limited, particu-

larly in Area 1A, and no catch limits have been imposed upon them. Production from the two areas combined has seldom exceeded one-half million pounds annually in recent years. Preliminary catch figures indicate that landings may not have exceeded one quarter million pounds in 1948 due to the greater interest of the local fleet in fishing for albacore.

The 1948 regulations provided for the concurrent closure of Area 1B with Area 2 and of Area 1A with Areas 3 and 4. The closure of Area 1B with Area 2, as in the case of Area 4 with Area 3, is necessary for enforcement purposes. Experience has shown that without such a provision vessels would fish in Area 2 after closure and declare their catches from the adjoining Area 1B. With the greater remoteness of Area 1A, such a practice is less likely. It is further discouraged by requiring vessels fishing in Area 1A after closure of Areas 1B and 2 to have their licenses validated at a port in Area 1A prior to each trip.

Principal landing places for halibut from these areas are Eureka in California and Coos Bay, Newport and Astoria in Oregon. At the latter port, however, 95 per cent of the halibut receipts are from grounds in Area 2.

In California, about 90 per cent of the landed total was made by less than 20 small boats fishing with regular longline gear. The remaining 10 per cent was landed by nearly 200 smaller boats, such as salmon trollers and small vessels using other than regular longline gear and primarily interested in the capture of other species.

Most of the Coos Bay and Newport landings are accounted for by a few regular longline halibut boats. In Astoria on the other hand there is a regular halibut fleet consisting of about 12 four to six man boats, which fish principally in Area 2 and only occasionally in Area 1B. In some years one or two fares are landed in Astoria from Area 3.

THE FISHERY BETWEEN WILLAPA HARBOR AND CAPE SPENCER, IN AREA 2

Area 2 extends from Willapa Harbor, Washington, to Cape Spencer, Alaska, and includes about 850 miles along the coasts of Washington, British Columbia and Southeastern Alaska.

This area appears to have been the center of maximum primitive abundance for the Pacific halibut. It embraces the most productive halibut grounds on the coast. The 300 miles of coast off British Columbia between the northern end of Vancouver Island and Dixon Entrance produces more halibut than any other section of the coast of comparable length.

Landings declared from Area 2 in 1948 amounted to 27,606,000 pounds, including 829,000 pounds caught incidentally while fishing for other species under permit in the area after its closure. The latter poundage is not included in the catch limit set in the regulations for the area. The Area 2 catches of the Canadian and United States fleets in 1946, 1947 and 1948 were as follows:

	CANADIAN FLEET		UNITED STATES FLEET		U.S. AND CAN.
	Pounds	Per Cent of Total	Pounds	Per Cent of Total	Pounds
1946	14,451,000	51	14,068,000	49	28,519,000
1947	17,175,000	62	10,387,000	38	27,562,000
1948	14,501,000	53	13,105,000	47	27,606,000

The reduction in the United States catch and the increase in the Canadian share in 1947 resulted from the almost complete absence of the Seattle Area 2 fleet from the fishery. This was occasioned by a dispute over the sharing of earnings between Seattle vessel owners and fishermen that continued throughout the Area 2 season.

The 1948 halibut fishing season in Area 2 lasted 32 days, from May 1 to June 1 inclusive, seven days less than in 1947. The season has declined from 238 days in 1931 to sixty-six days in 1943 and to the thirty-two days in 1948. This concentration of fishing leads to landings being made at the rate of over a million pounds each landing day from Area 2 alone. Furthermore, many grounds on which the most favorable fishing formerly occurred later than the present early closure may well be under-exploited, at least insofar as the non-migratory elements of their halibut stocks are concerned.

In Area 2 lie the major halibut landing ports, these being either population centers or railheads. The production from Area 2, exclusive of a small amount landed at Astoria, and most of the production from Area 3, is landed at these ports.

The 1948 landings in pounds by United States and Canadian boats from Areas 2 and 3 at ports in Areas 2 and 3 and at Astoria, Oregon, are shown in Table 2.

TABLE 2.—Halibut landings in pounds from Area 2 and Area 3 by United States and Canadian fleets in 1948.

PORT OF LANDING	UNITED STATES		CANADIAN		TOTALS U. S. & CANADA	
	Area 2	Area 3	Area 2	Area 3	Area 2	Area 3
Oregon.....	342,000	21,000	.....	.....	342,000	21,000
Seattle.....	2,823,000	6,234,000	.....	.....	2,823,000	6,234,000
Misc. Wash. Ports.....	711,000	222,000	.....	.....	711,000	222,000
Vancouver.....	.....	.....	1,649,000	288,000	1,649,000	288,000
Vancouver Island.....	.....	.....	2,439,000	.....	2,439,000	.....
Butedale.Namu and Klemtu.....	.....	.....	1,971,000	.....	1,971,000	.....
Prince Rupert.....	502,000	1,977,000	8,427,000	4,083,000	8,929,000	6,060,000
Ketchikan.....	2,820,000	4,684,000	.....	.....	2,820,000	4,684,000
Petersburg.....	2,040,000	454,000	.....	.....	2,040,000	454,000
Wrangell.....	541,000	177,000	.....	.....	541,000	177,000
Juneau.....	1,754,000	1,066,000	.....	.....	1,754,000	1,066,000
Pelican City.....	775,000	1,626,000	.....	.....	775,000	1,626,000
Sitka.....	684,000	2,125,000	16,000	142,000	700,000	2,267,000
Misc. S.E. Alaska.....	113,000	.....	.....	.....	113,000	.....
Sub Totals.....	13,105,000	18,586,000	14,502,000	4,513,000	27,607,000	23,099,000
Area 3 Ports.....	.....	4,797,000	.....	21,000	.....	4,818,000
GRAND TOTAL.....	13,105,000	23,383,000	14,502,000	4,534,000	27,607,000	27,917,000

During the past ten years the landing of halibut from Area 2 by small boats, not belonging to the regular halibut fleet, has increased markedly. Most of their catches are landed at places known as camps, usually located at otherwise uninhabited locations in close proximity to the fishing grounds and receiving both halibut and troll-caught salmon. These camps are serviced by collecting boats operating out of the regular halibut ports. In 1948, there were about 60 camps between Cape Flattery and Cape Spencer, where halibut was landed in significant amounts.

Approximately 650 small one-man to three-man boats primarily fishing for halibut and using a wide variety of gear landed approximately 4,250,000 pounds of halibut in 1948. About 3,300,000 pounds or 78 per cent of this total was landed at camps and the remaining 950,000 pounds at the regular halibut ports. Vessels of the regular Area 2 halibut fleet also landed approximately 1,150,000 pounds at places best designated as camps.

THE FISHERY WEST OF CAPE SPENCER TO UNIMAK PASS, IN AREA 3

Extending westward from Cape Spencer about 1,000 miles to Unimak Pass and continuing thence along both the north and south side of the Aleutian Island chain, Area 3 is the most extensive of the regulatory areas. However, the stocks in this area do not have the productive potentialities of those in Area 2. The annual catch has not exceeded 31 million pounds at any time in the history of the Area 3 fishery whereas the grounds in Area 2 have produced more than 50 million pounds during several years in the past.

Landings from Area 3 by the United States and Canadian fleets for the past three seasons were as follows:

	United States	Canadian	Total
1946	27,067,000	4,058,000	31,125,000
1947	20,869,000	7,081,000	27,950,000
1948	23,383,000	4,534,000	27,917,000

Due to the cessation of improvement in the condition of the Area 3 stocks, the 1947 and 1948 catches were held down by making only minimum allowances for unfavorable contingencies when estimating and announcing in advance the date of attainment of the catch limit. In 1947 the larger vessels of the United States fleet did not commence fishing until the end of June due to the dispute between vessel owners and fishermen in Seattle over the sharing of the proceeds from their catches. This accounts for the lowered United States' share that year.

From time to time in the past one or two cold storages operated in western Alaska and their receipts of halibut consisted principally of 'broken trips', namely partly completed fares resulting from bad weather, breakdown or other circumstances. The recent war years and those immediately preceding them saw the expansion of such facilities. By 1947, quantities of

halibut were being landed at Cordova, Latouche, Seldovia, Anchorage and Port Williams. The combined total landed at such western Alaska ports in 1947 amounted to 3,493,000 pounds. The trend toward landing at strategically located cold storages in western Alaska was furthered in 1948 by the establishment of a new plant in the Shumagin Islands area. This development contributed to the landing of nearly 5,000,000 pounds in the western Alaska ports.

The growth of these landing facilities has changed the character of the Area 3 fishery. It has encouraged the development of a small boat fishery. This small boat fleet consists of vessels that fish the whole season in Area 3 and transient vessels that fish in Area 2 until its closure and then go to Area 3. Landings in western Alaska by different classes of boats were as follows:

	Traditional Area 3 Fleet	Area 2 Vessels	Local Area 3 Vessels	Total Landings In Western Alaska
1944	1,809,000	91,000	671,000	2,571,000
1945	1,543,000	6,000	673,000	2,222,000
1946	883,000	279,000	1,119,000	2,281,000
1947	487,000	1,304,000	1,702,000	3,493,000
1948	2,359,000	527,000	1,932,000	4,818,000

The landings of the local Area 3 fleet have tripled in the past five years and are expected to continue to increase. Landings in Area 3 ports by Area 2 vessels have also increased but their total in 1947 was abnormally high due to the effort of Seattle boats to recoup their losses resulting from their tie-up during the Area 2 season. Landings of the traditional Area 3 vessels declined steadily to 1947. The opening of the new cold storage plant in the Shumagin Islands and the interruption of their last trip by unusually bad weather greatly stimulated their western Alaska landings in 1948.

In addition to their landings of 527,000 pounds in western Alaska ports, the Area 2 class of vessel landed 6,945,000 pounds from Area 3 at Area 2 ports chiefly after the closure of that area.

A number of factors have led to this increasing diversion of traditionally Area 2 vessels to Area 3, the primary one being the longer season in Area 3. The present early closure of Area 2 allows for operations in Area 3 during summer months by less seaworthy vessels. It also leaves an interval of time for such fishing before the beginning of the salmon and tuna seasons.

There has also developed, particularly in the Canadian fleet, a class of large seaworthy vessels operated by men who traditionally fished in Area 2. They first fish in Area 2 and then repair to Area 3 until the beginning of the salmon and other fisheries. These vessels are capable of operating in even the most remote parts of Area 3 at any season. They have all but invalidated the formerly clear-cut classification of the fleets into typical Area 3 and Area 2 components.

LANDINGS OF INCIDENTALLY CAUGHT HALIBUT

The regulations provide that setline boats, fishing for other species in areas which have been closed to halibut fishing by reason of the attainment of their catch limits, may obtain permits to retain for sale one pound of incidentally caught halibut for each seven pounds of other salable species. This provision, authorized by the 1937 Treaty, was adopted to avoid wastage of small quantities of halibut which are unavoidably caught while fishing for blackcod, lingcod or rockfish. In 1948, permits to retain such halibut became invalid after November 15, five and one-half months after Area 2 was closed to halibut fishing.

Consideration of the extension of the permit provision to vessels fishing with trawl gear has been deferred until more flexible treaty authority is provided. To be able to deal with the trawl capture of halibut, it would be necessary for the Commission to have authority to control the incidental capture of halibut at all seasons of the year rather than only during the closed season. Regulation would also need to be applied by individual grounds within the larger regulatory area.

The granting of permits to retain incidentally caught halibut to boats trolling primarily for salmon on grounds closed to halibut fishing is not at present possible from an enforcement and administrative standpoint. The large number of such boats and their landing of small but exceedingly numerous landings at many isolated unsupervised places greatly exceeds the control and supervisory facilities that the enforcement agencies of both governments could provide. Such personnel are necessary to assure reasonable compliance with the regulations.

Halibut landed in 1948 under the permit provision from Areas 2 and 3 amount to 896,000 pounds, of which 67,000 pounds were landed from both close-in and distant portions of Area 3. This was the first time that any significant number of permit trips were made to grounds as remote as Kodiak Island. Permit landings from Areas 1A and 1B, chiefly off Oregon and northern California, amounted to 66,000 pounds.

The number of boats securing permits, the number of trips made and the amount of halibut landed by the Canadian and United States fleets from Areas 2 and 3 in 1946, 1947 and 1948 were as follows:

	1946			1947			1948		
	Can.	U.S.	Total	Can.	U.S.	Total	Can.	U.S.	Total
No. Boats fishing.....	71	201	272	29	123	152	55	156	211
No. of Trips Landed.....	215	744	959	63	324	387	167	572	739
Landings in 1000's of pounds.....	325	902	1227	95	297	392	279	617	896

The growth of the permit fishing is shown by the fact that in 1937, the first season during which permit fishing was allowed, 96 Canadian and United States boats made 225 permit trips and landed 250,000 pounds of halibut.

THE CONDITION OF THE HALIBUT STOCKS IN AREAS 2 AND 3

The relative abundance of the commercially available stocks of halibut is measured from year to year by determining the catch per standard unit of gear or fishing effort. All vessels of five net tons and over are required to keep a log record of their fishing operations showing the date, fishing locations, amount of gear fished and estimated catch. About 95 per cent of these vessels keep a useable and reliable record of their fishing operations. Boats under five net tons for the most part do not keep useable records of the amount of gear fished. Approximately 40 million pounds of the Areas 2 and 3 total landings are represented by satisfactory records.

Preliminary analysis of Area 2 fishing records indicate that the abundance of halibut continued to increase in 1948 and was 7 per cent above the 1947 level. The catch per unit of effort was 167 per cent greater than in 1930, the lowest level reached prior to the beginning of control by the Commission.

In Area 3 the condition of the stocks is more difficult to determine on account of marked changes in the character of the fleets and the seasonal distribution of fishing in recent years. Preliminary analysis of the log records of all vessels indicates that the abundance of halibut there was the same as in 1947.

More detailed studies in which allowances are made for changes in the fleet, the gear, the operating personnel, the seasonal and geographical distribution of the fishery indicate that the catch per unit of effort in Area 3 has increased 137 per cent from 1930 to 1948.

CHANGES IN COMPOSITION OF STOCKS

Detailed information regarding the changes in the composition of the stocks, resulting from fluctuations in the numbers of young entering the fishery and from changes in the intensity of fishing, are necessary for a correct interpretation of the more general data on changes in abundance. These two types of information together show the effects of past regulations upon the stocks and provide a basis for estimating the effects of regulations that are contemplated.

Such information is collected currently by the Commission, insofar as conditions within the fishery and the size of the staff permit. Length-composition data are secured by the measurement of fish in the commercial landings. Age-composition data are derived from these measurements and concurrently collected samples of otoliths or earstones by which ages can be determined. Similar length data and age materials are also collected on the fishing grounds whenever possible. Size-composition statistics of a

more general and less accurate type are also secured by analysis of dealers' records of landings according to trade weight categories.

The collection of market measurement data and age materials in 1948 was limited by various circumstances to catches made between the north end of Vancouver Island and Dixon Entrance, the most productive part of Area 2. A total of 11,800 fish were measured from 14 trips from the important Goose Island grounds, from which come about 85 per cent of the Seattle Area 2 landings and 70 per cent of the Vancouver Area 2 landings. Otoliths for the determination of age-composition were taken at the same time from 2400 of the fish measured.

Measurements of 8000 fish were also secured from the landings of numerous small boats at camps in upper Hecate Strait. These small boats operated in the same general region as most of the Prince Rupert Area 2 fleet. This material was collected in conjunction with studies of the characteristics of the catches made by the various types of fishing gear used by the small boats fishing out of camps. The conditions under which these fish were landed made it impossible to secure adequate samples of otoliths.

Analysis of the measurements made in 1948 from the Goose Island catches, which have in the past reflected the changes in composition of the stock throughout most of Area 2, showed no significant change in the contribution of chickens, mediums and large.¹ The abundant groups of young which began to enter the fishery in 1943 and 1944 were still present in abundance, as large chickens and small mediums, and made up the greater part of the catch. Small chickens were less numerous than in the preceding five years, indicating a reduction in the number of entering young.

The age-composition of these samples followed the customary pattern. Six-year-olds were the youngest and the twelve-year-olds the oldest age group to appear in significant numbers. The numbers and weights increased progressively from the sixth to the eighth and ninth age-groups, respectively, and thereafter decreased gradually. Halibut of the seven, eight, nine and ten age-groups were about equal to or slightly greater in number and weight than the corresponding age-groups in 1947, and together constituted about three-quarters of the catch. However, the six, eleven and twelve-year-olds were present in reduced abundance. In 1946, 1947 and 1948, six-year-olds entered the fishery in much lower abundance than they did in 1943, 1944 and 1945. With the survivors from the latter entrants in the declining phase of their presence in the catch, prospects for the 1949 fishing season appeared less favorable than they did a year earlier for 1948.

A change in the distribution of landings from Area 3, during and since the war, interrupted the taking of market measurements and the collection of age materials from catches made in that area. To bridge, insofar as

¹Trade categories of halibut are: "baby chickens" or "babies", weighing less than 5 pounds; "chickens", from 5 to 10 pounds; "mediums", from 10 to 60 pounds; and "large", over 60 pounds, all weights being with heads off and entrails removed.

possible, this lack of knowledge regarding the changes in the composition of the Area 3 stock, an analysis of the changes in the landings according to the trade categories was undertaken and has been carried forward as other work permitted.

A sample of the results from this incomplete study shows that a marked change has occurred in the size composition of the commercial catch from Area 3 during the past 17 years since 1931. The proportion of the different trade categories in the catches from the Kodiak Island region and from the Trinity Island and westward region at intervals during this period were as follows:

	PER CENT CHICKENS 5-10 pounds		PER CENT MEDIUMS 10-60 pounds		PER CENT LARGE Over 60 pounds	
	Kodiak	Trinity	Kodiak	Trinity	Kodiak	Trinity
1931.....	18.5	23.4	68.1	71.6	13.4	5.0
1936.....	15.6	14.6	61.6	71.4	22.8	14.0
1942.....	8.4	6.4	66.2	71.9	25.4	21.7
1947.....	7.6	8.4	57.9	59.2	34.5	32.4

The increase in the proportion of large fish, over 60 pounds, is very pronounced. However, before such figures may be used in assessing the condition of the Area 3 stock, allowances must yet be made for the effects of selection of sizes and of grounds within these areas and for other basic factors.

MARKING EXPERIMENTS

Since the outset of the Commission's investigations in 1925, a total of 21,247 halibut have been tagged. They were caught and marked during fishing conducted by the staff on vessels chartered for the purpose by the Commission. In order to tag such a number, over 575,000 pounds of halibut were caught. The principal objectives of the experiments have been to determine the extent of interchange between the stocks on the different banks and the rate at which the fish are removed by the fishery in the different areas.

In Report Number 2 of the Commission, a comprehensive analysis was presented on marking experiments from which reasonably complete recoveries had been made up to and including 1928. Since that time a number of additional experiments have been carried out. Returns to December, 1948, from some of these experiments are summarized below:

Year	Month	Area of Tagging	No. Tagged	Per cent Recovered to Date
1935-36	May, June.....	Cape Scott - Goose Island.....	1058	43
1939-40	Dec., Jan.....	Cape St. James.....	857	22
1940	Jan., Feb., Nov., Dec.....	Dixon Entrance - Cape Spencer.....	944	11
1946*	July.....	Rosespit.....	83	4
1946	July, Aug., Sept.....	Middle Hecate Strait.....	1563	13
1946	Aug., Sept.....	Goose Island.....	242	2
1947	May, June.....	Goose Island.....	2333	14
1947	June.....	Masset.....	619	3
1947	June.....	Rosespit.....	282	9
1947	June.....	Cape Scott.....	308	16

*Recoveries from the 1946 and 1947 experiments are incomplete and not comparable with recoveries from the earlier experiments.

No marking experiments were undertaken in 1948 as other problems engaged members of the staff and available part-time assistants, leaving insufficient experienced personnel to operate a chartered vessel.

The Cape Scott and Goose Island 1935 and 1936 experiments, involving 1058 tagged fish of which 459 were recovered, gives a gross recovery rate of 43 per cent. This is somewhat lower than was shown by the 1926 experiments in the same region. In general, however, these 1935 and 1936 experiments corroborate the earlier studies, both as to the rate of removal and as to the limited movements shown by the returns.

The Cape St. James experiment in the winter of 1939-1940 yielded 184 recoveries, or 21 per cent of the 857 fish tagged. The experiment was for the most part conducted upon stocks of halibut on their winter spawning grounds. The recoveries were made over a wide range of Area 2, from Cape Flattery to Cape Spencer. The experiment corroborated the belief that Cape St. James was a spawning congregation point for the Area 2 stock as a whole. The low rate of return of these spawning ground experiments, compared to that from experiments conducted on summer fishing grounds such as Goose Island, indicates that the rate of return from tagging on spawning congregations is not representative of the population as a whole.

Similar winter tagging, early and late in 1940, on grounds between Hippa Island on the west coast of Queen Charlotte Islands and Cape Spencer, Alaska, show a combined total of 944 fish tagged with 106 fish or 11 per cent recovered. This recovery rate, though lower than that for the winter tagging at Cape St. James, seems to be typical of experiments conducted on spawning aggregations. As in the case of the Cape St. James experiment, recoveries were made throughout Area 2.

In 1946 and 1947, a total of 5,430 halibut were tagged on grounds between Cape Scott and Dixon Entrance and to date 621 recoveries have been received. Preliminary analysis of the rate of recovery from the 1946 July to September marking in the middle Hecate Strait area suggests that the

stock in this area is not utilized to the same extent as is the Goose Island stock. Furthermore, the low recoveries from the small experiment on Goose Island in August and September, 1946, may justify the tentative conclusion that the present May 1 to June 1 fishing season results in an under-utilization of the stock available on those grounds later in the season. Comparable conclusions may also be justified by the low return from the small July, 1946, marking in the Rosespit area, a region that is intensively fished in the present May season.

Conversely, the relatively high rate of return from the 1947 May and June marking on Goose Island grounds suggests that the present concentrated season of fishing in May may result in an undesirably high utilization of the part of the stock available at that time.

The low recovery from June, 1947, Masset tagging is to be expected as the tagging was conducted on small fish in the closed nursery area at this point. Recoveries in subsequent years will indicate the rate at which the present small fish may emigrate off the area as they reach a larger size.

APPENDIX I**Convention Between Canada and the United States of America for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea signed at Ottawa, January 29th, 1937.**

His Majesty the King of Great Britain, Ireland, and the British dominions beyond the Seas, Emperor of India, in respect of the Dominion of Canada,

And the President of the United States of America,

Desiring to provide more effectively for the preservation of the halibut fishery of the northern Pacific Ocean and Bering Sea, have resolved to conclude a convention revising the convention for the preservation of that fishery signed on their behalf at Ottawa on May 9, 1930, and have named as their plenipotentiaries for that purpose,

His Majesty, for the Dominion of Canada:

The Right Honourable William Lyon Mackenzie King, Prime Minister and Secretary of State for External Affairs; and

The President of the United States of America:

Norman Armour, Envoy Extraordinary and Minister Plenipotentiary of the United States of America to Canada;

Who, after having communicated to each other their respective full powers, found in good and due form, have agreed upon the following articles:—

Article I

The nationals and inhabitants and fishing vessels and boats of the United States of America and of Canada, respectively, are hereby prohibited from fishing for halibut (*Hippoglossus*) both in the territorial waters and in the high seas off the western coasts of the United States of America, including the southern as well as the western coasts of Alaska, and of Canada, from the first day of November next after the date of the exchange of ratifications of this Convention to the fifteenth day of the following February, both days inclusive, and within the same period yearly thereafter.

The International Fisheries Commission provided for by Article III is hereby empowered, subject to the approval of the President of the United States of America and of the Governor General of Canada, to suspend or change the closed season provided for by this Article, as to part or all of the convention waters, when it finds after investigation such suspensions or changes are necessary, and to permit, limit, regulate and prohibit in any area or at any time when fishing for halibut is prohibited, the taking, retention and landing of halibut caught incidentally to fishing for other species of fish, and the possession during such fishing of halibut of any origin.

It is understood that nothing contained in this Convention shall prohibit the nationals or inhabitants or the fishing vessels or boats of the United States of America or of Canada, from fishing in the waters hereinbefore specified for other species of fish during the season when fishing for halibut in such waters is prohibited by this Convention or by any regulations adopted in pursuance of its provisions.

It is further understood that nothing contained in this Convention shall prohibit the International Fisheries Commission from conducting fishing operations for investigation purposes at any time.

Article II.

Every national or inhabitant, vessel or boat of the United States of America or of Canada engaged in halibut fishing on the high seas in violation of this Convention or of any regulation adopted under the provisions thereof may be seized by the duly authorized officers of either High Contracting Party and detained by the officers making such seizure and delivered as soon as practicable to an authorized official of the country to which such person, vessel or boat belongs, at the nearest point to the place of seizure, or elsewhere, as may be agreed upon. The authorities of the nation to which such person, vessel or boat belongs alone shall have jurisdiction to conduct prosecutions for the violation of the provisions of this Convention, or any regulations which may be adopted in pursuance of its provisions, and to impose penalties for such violations; and the witnesses and proofs necessary for such prosecutions, so far as such witnesses or proofs are under the control of the other High Contracting Party, shall be furnished with all reasonable promptitude to the authorities having jurisdiction to conduct the prosecutions.

Each High Contracting Party shall be responsible for the proper observance of this Convention, or of any regulation adopted under the provisions thereof, in the portion of its waters covered thereby.

Article III.

The High Contracting Parties agree to continue under this Convention the Commission as at present constituted and known as the International Fisheries Commission, established by the Convention for the preservation of the halibut fishery, signed at Washington, March 2, 1923, and continued under the Convention signed at Ottawa, May 9, 1930, consisting of four members, two appointed by each Party, which Commission shall make such investigations as are necessary into the life history of the halibut in the convention waters and shall publish a report of its activities from time to time. Each of the High Contracting Parties shall have power to fill, and shall fill from time to time, vacancies which may occur in its representation on the Commission. Each of the High Contracting Parties shall pay the salaries and expenses of its own members, and joint expenses incurred by the Commission shall be paid by the two High Contracting Parties in equal moieties.

The High Contracting Parties agree that for the purposes of protecting and conserving the halibut fishery of the Northern Pacific Ocean and Bering Sea, the International Fisheries Commission, with the approval of the President of the United States of America and of the Governor General of Canada, may, in respect of the nationals and inhabitants and fishing vessels and boats of the United States of America and of Canada, from time to time,

- (a) divide the convention waters into areas;
- (b) limit the catch of halibut to be taken from each area within the season during which fishing for halibut is allowed;
- (c) prohibit departure of vessels from any port or place, or from any receiving vessel or station, to any area for halibut fishing, after any date when in the judgment of the International Fisheries Commission the vessels which have departed for that area prior to that date or which are known to be fishing in that area shall suffice to catch the limit which shall have been set for that area under section (b) of this paragraph;
- (d) fix the size and character of halibut fishing appliances to be used in any area;
- (e) make such regulations for the licensing and departure of vessels and for the collection of statistics of the catch of halibut as it shall find necessary to determine the condition and trend of the halibut fishery and to carry out the other provisions of this Convention;
- (f) close to all halibut fishing such portion or portions of an area or areas, as the International Fisheries Commission find to be populated by small, immature halibut.

Article IV.

The High Contracting Parties agree to enact and enforce such legislation as may be necessary to make effective the provisions of this Convention and any regulations adopted thereunder, with appropriate penalties for violations thereof.

Article V.

The present Convention shall remain in force for a period of five years and thereafter until two years from the date when either of the High Contracting Parties shall give notice to the other of its desire to terminate it.

This Convention shall, from the date of the exchange of ratifications be deemed to supplant the convention for the preservation of the halibut fishery signed at Ottawa, May 9, 1930.

Article VI.

This Convention shall be ratified in accordance with the constitutional methods of the High Contracting Parties. The ratifications shall be exchanged at Ottawa as soon as practicable, and the Convention shall come into force on the day of the exchange of ratifications.

In faith whereof, the respective plenipotentiaries have signed the present Convention in duplicate, and have hereunto affixed their seals.

Done at Ottawa on the twenty-ninth day of January, in the year one thousand nine hundred and thirty-seven.

(L.S.) W. L. MACKENZIE KING

(L.S.) NORMAN ARMOUR

APPENDIX II
PACIFIC HALIBUT FISHERY REGULATIONS,
EFFECTIVE MARCH 6, 1948

**Regulations of the International Fisheries Commission Adopted Pursuant to
the Pacific Halibut Fishery Convention between the United States of
America and the Dominion of Canada, Signed January 29, 1937.**

REGULATORY AREAS

1. (a) Convention waters which include the territorial waters and the high seas off the western coasts of Canada and the United States of America including the southern as well as the western coasts of Alaska, shall be divided into the following areas, all directions given being magnetic unless otherwise stated.

(b) Area 1A shall include all convention waters southeast of a line running northeast and southwest through Cape Blanco Light, as shown on Chart 5952, published in February, 1935, by the United States Coast and Geodetic Survey, which light is approximately latitude $42^{\circ} 50' 14''$ N., longitude $124^{\circ} 33' 45''$ W.

(c) Area 1B shall include all convention waters between Area 1A and a line running northeast and southwest through Willapa Bay Light on Cape Shoalwater, as shown on Chart 6185, published in July, 1939, by the United States Coast and Geodetic Survey, which light is approximately in latitude $46^{\circ} 43' 17''$ N., longitude $124^{\circ} 04' 15''$ W.

(d) Area 2 shall include all convention waters off the coasts of the United States of America and of Alaska and of the Dominion of Canada between Area 1B and a line running through the most westerly point of Glacier Bay, Alaska, to Cape Spencer Light as shown on Chart 8304, published in June, 1940, by the United States Coast and Geodetic Survey, which light is approximately latitude $58^{\circ} 11' 57''$ N., longitude $136^{\circ} 38' 18''$ W., thence south one-quarter east and is exclusive of the areas closed to all halibut fishing in Section 9 of these regulations.

(e) Area 3 shall include all the convention waters off the coast of Alaska that are between Area 2 and a straight line running from the light on Cape Kabuch at the head of Ikatan Bay as shown on Chart 8701 published in February, 1943, by the United States Coast and Geodetic Survey which light is approximately latitude $53^{\circ} 49' 03''$ N., longitude $163^{\circ} 21' 42''$ W., thence to Cape Sarichef Light at the western end of Unimak Island as shown on Chart 8860 published in December, 1942, (12th Edition) by the United States Coast and Geodetic Survey which light is approximately latitude $54^{\circ} 36' 00''$ N., longitude $164^{\circ} 55' 45''$ W., thence true west.

(f) Area 4 shall include all convention waters in Bering Sea which are not included in Area 3.

LIMIT OF CATCH IN EACH AREA

2. (a) The catch of halibut to be taken during the halibut fishing season of the year 1948 from Area 2 shall be limited to approximately 25,500,000 pounds of salable halibut, and from Area 3 to approximately 28,000,000 pounds of salable halibut, and from Area 4 to approximately 500,000 pounds of salable halibut, the weights in each or any such limit to be computed as with heads off and entrails removed.

(b) The catch of halibut to be taken from each area during the halibut fishing season of the year 1948 shall also be limited to halibut which with the head on are 26 inches or more in length as measured from the tip of the lower jaw to the extreme end of the middle of the tail or to halibut which with the head off and entrails removed are 5 pounds or more in weight, and the possession of any halibut of less than the above length or the above weight, according to whether the head is on or off, by any vessel or by any master or operator of any vessel or by any person, firm or corporation, is prohibited.

(c) The International Fisheries Commission shall as early in the said year as is practicable determine the date on which it deems each limit of catch defined in paragraph (a) of this section will be attained, and the limit of each such catch shall then be that which shall be taken prior to said date, and fishing for or catching of halibut in the area or areas to which such limit applies shall at that date be prohibited until after the end of the closed season as defined and modified in Section 3 of these regulations, except as provided in Section 5 thereof and in Article I of the Convention, and provided that if it shall at any time become evident to the International Fisheries Commission that the limit will not be reached by such date, it may substitute another date.

LENGTH OF CLOSED SEASON

3. (a) Under the authority of Article I of the aforesaid Convention the closed season as therein defined shall be modified so as to end at 12 midnight of the 30th day of April of the year 1948 and of each year thereafter and shall begin at 12 midnight of the 30th day of November of each year unless an earlier date is determined upon for any area under the provisions of paragraph (b) of this section of these regulations.

(b) Under authority of Article I of the Convention, the closed season as therein defined shall begin in each area on the date on which the limit is reached as provided in paragraph (c) of Section 2 of these regulations and the closing of such area or areas shall be taken to have been duly approved unless before the said date either the President of the United States of America or the Governor General of Canada shall have signified his disapproval, (the burden of proving any such signification being upon the person alleging it) and provided that the closing date of Area 2 or of Area 3, whichever shall be later, shall apply to Areas 1A and 4, unless Area 4 shall have been previously closed under this section of these regulations, and that the closing date of Area 2 shall apply to Area 1B.

(c) Nothing contained in these regulations shall prohibit the fishing for species of fish other than halibut or prohibit the International Fisheries Commission from conducting fishing operations as provided for in Article I of the Convention.

ISSUANCE OF LICENSES AND CONDITIONS LIMITING THEIR VALIDITY

4. (a) All vessels of any tonnage which shall fish for halibut in any manner or hold halibut in possession in any area, or which shall transport halibut otherwise than as a common carrier documented by the Government of the United States or of Canada for the carriage of freight, must be licensed by the International Fisheries Commission, provided that vessels of less than five net tons or vessels which do not use set lines need not be licensed unless they shall require a permit as provided in Section 5 of these regulations.

(b) Each vessel licensed by the International Fisheries Commission shall carry on board at all times while at sea the halibut license thus secured whether it is validated for halibut fishing or endorsed with a permit as provided in Section 6 of these regulations and this license shall at all times be subject to inspection by authorized officers of either of said Governments or by representatives of the International Fisheries Commission.

(c) The halibut license shall be issued without fee by the customs officers of either of said Governments or by representatives of the International Fisheries Commission or by fishery officers of either of said Governments at places where there are neither customs officers nor representatives of the International Fisheries Commission. A new license may be issued by the officer accepting statistical return at any time to vessels which have furnished proof of loss of the license form previously issued, or when there shall be no further space for record thereon, providing the receipt of statistical return shall be shown on the new form for any halibut or other species taken during or after the voyage upon which loss occurred. The old license form shall be forwarded in each case to the International Fisheries Commission.

(d) The halibut license of any vessel shall be validated before departure from port for each halibut fishing operation for which statistical returns are required. This validation of a license shall be by customs officers or by fishery officers of either of said Governments when available at places where there are no customs officers and shall not be made unless the area in which the vessel will fish is entered on the license form and unless the provisions of Section 7 of these regulations have been complied with for all landings and all fishing operations since issue of the license, provided that if the master or operator of any vessel shall fail to comply with the provisions of Section 7 of these regulations, the halibut license of such vessel may be validated by customs officers upon evidence either that there has been a judicial determination of the offense or that the laws prescribing penalties therefor have been complied with, or that the said master or operator is no longer responsible for, nor sharing in, the operations of said vessel.

(e) The halibut license of any vessel fishing for halibut in Area 1A as defined in Section 1 of these regulations after the closure of Areas 1B and 2 must be validated at a port or place within Area 1A prior to each such fishing operation.

(f) No halibut license shall be validated for departure for halibut fishing in Areas 1A or 1B or 2 more than three days, and in Areas 3 or 4 more than five days before the end of the closed season as defined in Section 3(a) of these regulations.

(g) No halibut license shall be valid for halibut fishing in more than one area, as defined in Section 1 of these regulations, during any one trip nor shall it be revalidated for halibut fishing in another such area while the vessel has any halibut on board.

(h) The halibut license shall not be valid for halibut fishing in any area closed to halibut fishing or for the possession of halibut in any area closed to halibut fishing except while in actual transit to or within a port of sale.

(i) The halibut license shall not be valid for halibut fishing in any area while a permit endorsed thereon is in effect, nor shall it be validated while halibut taken under such permit is on board.

(j) The halibut license of any vessel shall not be valid for the possession of any halibut in any area other than that for which validated, if such vessel is in possession of baited gear, except in those waters included within a twenty-five mile radius of Cape Spencer Light, Alaska.

RETENTION OF HALIBUT TAKEN WITH OTHER FISH UNDER PERMIT

5. (a) There may be retained for sale on any vessel which shall have a permit as provided in Section 6 of these regulations such halibut as is caught incidentally to fishing by that vessel in any area that is closed to halibut fishing under Section 2 of these regulations with set lines (of the type commonly used in the Pacific coast halibut fishery) for other species, not to exceed at any time one pound of halibut for each seven pounds of salable fish, actually utilized, of other species not including salmon or tuna, and such halibut may be sold as the catch of said vessel, the weight of all fish to be computed as with heads off and entrails removed, provided that it shall not be a violation of this regulation for any such vessel to have in possession halibut in addition to the amount herein allowed to be sold if such additional halibut shall not exceed thirty per cent of such amount and shall be forfeited and surrendered at the time of landing as provided in paragraph (d) of this section.

(b) The catch of halibut taken and retained under such permit shall be limited to halibut which with the head on are 26 inches or more in length as measured from the tip of the lower jaw to the extreme end of the middle of the tail or to halibut which with the head off and entrails removed are 5 pounds or more in weight, and the possession of any halibut of less than the above length or the above weight, according to whether the head is on or off, by any vessel or by any master or operator of any vessel or by any person, firm or corporation, is prohibited.

(c) Halibut retained under such permit shall not be landed or otherwise removed or be received by any person, firm or corporation from the catching vessel until all halibut on board shall have been reported to a customs, fishery or other authorized enforcement officer of either of said Governments by the captain or operator of said vessel and also by the person, firm or corporation receiving the halibut, and no halibut or other fish shall be landed or removed or be received from the catching vessel except with the permission of said officer and under such supervision as the said officer may deem advisable.

(d) Halibut retained under such permit shall not be purchased or held in possession by any person other than the master, operator or crew of the catching vessel in excess of the proportion allowed in paragraph (a) of this section of these regulations until such excess whatever its origin shall have been forfeited and surrendered to the customs, fishery or other authorized officers of either of said Governments. In forfeiting such excess, the vessel shall be permitted to surrender any part of its catch of halibut, provided that the amount retained shall not exceed the proportion herein allowed.

(e) Permits for the retention and landing of halibut in the year 1948 shall become invalid at 12 midnight of the 15th day of November of said year or at such earlier date as the International Fisheries Commission shall determine.

ISSUANCE OF PERMITS AND CONDITIONS LIMITING THEIR VALIDITY

6. (a) Any vessel which shall be used in fishing for other species than halibut in any area closed to halibut fishing under Section 2 of these regulations must have a halibut license and a permit if it shall retain, land or sell any halibut caught incidentally to such fishing or possess any halibut of any origin during such fishing, as provided in Section 5 of these regulations.

(b) The permit shall be shown by endorsement of the issuing officer on the face of the halibut license form held by said vessel and shall show the area for which the permit is issued.

(c) The permit shall terminate at the time of first landing thereafter of fish of any species and a new permit shall be secured before any subsequent fishing operation for which a permit is required.

(d) A permit shall not be issued to any vessel which shall have halibut on board taken while said vessel was licensed to fish in an open area unless such halibut shall

be considered as taken under the issued permit and is thereby subject to forfeiture when landed if in excess of the proportion permitted in paragraph (a) of Section 5 of these regulations.

(e) A permit shall not be issued to, or be valid if held by, any vessel which shall fish with other than set lines of the type commonly used in the Pacific coast halibut fishery.

(f) The permit of any vessel shall not be valid unless the permit is granted before departure from port for each fishing operation for which statistical returns are required. This granting of a permit shall be by customs officers or by fishery officers of either of said Governments when available at places where there are no customs officers and shall not be made unless the area in which the vessel will fish is entered on the halibut license form and unless the provisions of Section 7 of these regulations have been complied with for all landings and all fishing operations since issue of the license or permit, provided that if the master or operator of any vessel shall fail to comply with the provisions of Section 7 of these regulations, the permit of such vessel may be granted by customs officers upon evidence either that there has been a judicial determination of the offense or that the laws prescribing penalties therefor have been complied with, or that the said master or operator is no longer responsible for, nor sharing in, the operations of said vessel.

(g) The permit of any vessel shall not be valid if said vessel shall have in its possession at any time halibut in excess of the amount allowed under paragraph (a) of Section 5.

STATISTICAL RETURN BY VESSELS

7. (a) Statistical return as to the amount of halibut taken during fishing operations must be made by the master or operator of any vessel licensed under these regulations and as to the amount of halibut and other species by the master or operator of any vessel operating under permit as provided for in Sections 5 and 6 of these regulations, within 48 hours of landing, sale or transfer of halibut or of first entry thereafter into a port where there is an officer authorized to receive such return.

(b) The statistical return must state the port of landing and the amount of each species taken within the area defined in these regulations, for which the vessel's license is validated.

(c) The statistical return must include all halibut landed or transferred to other vessels and all halibut held in possession on board and must be full, true and correct in all respects herein required. A copy of such return must be forwarded to the International Fisheries Commission at such times as the latter shall require.

(d) The master or operator and/or any person engaged on shares in the operation of any vessel licensed or holding a permit under these regulations may be required by the International Fisheries Commission or by any officer of either of said Governments authorized to receive such return to certify to its correctness to the best of his information and belief and to support the certificate by a sworn statement. Validation of a halibut license or issuance of a permit after such sworn return is made shall be provisional and shall not render the license or permit valid in case the return shall later be shown to be false or fraudulently made.

(e) The master or operator of any vessel holding a license or permit under these regulations shall keep an accurate log of all fishing operations including therein date, locality, amount of gear used, and the amount of halibut taken daily in each such locality. This log record shall be open to inspection of representatives of the International Fisheries Commission authorized for this purpose.

(f) The master, operator and/or any other person engaged on shares in the operation of any vessel licensed under these regulations may be required by the International Fisheries Commission or by any officer of either of said Governments to certify to the correctness of such log record to the best of his information and belief and to support the certificate by a sworn statement.

STATISTICAL RETURN BY DEALERS

8. (a) All persons, firms or corporations that shall buy halibut or receive halibut for any purpose from fishing or transporting vessels or other carrier shall keep and on request furnish to customs officers or to any enforcing officer of either of said Governments or to representatives of the International Fisheries Commission, records of each purchase or receipt of halibut, showing date, locality, name of vessel, person, firm or corporation purchased or received from and the amount in pounds according to trade categories of the halibut and other species landed with the halibut.

(b) All persons, firms or corporations receiving fish from a vessel fishing under permit as provided in Section 5 of these regulations shall within 48 hours make to an authorized enforcing officer of either of said Governments a signed statistical return showing the

date, locality, name of vessel received from and the amount of halibut and of other species landed with the halibut and certifying that permission to receive such fish was secured in accordance with paragraph (c) of Section 5 of these regulations. Such persons, firms or corporations may be required by any officer of either of said Governments to support the accuracy of the above signed statistical return with a sworn statement.

(c) All records of all persons, firms or corporations concerning the landing, purchase, receipt and sale of halibut and other species landed therewith shall be open at all times to inspection of any enforcement officer of either of said Governments or of any authorized representative of the International Fisheries Commission. Such persons, firms or corporations may be required to certify to the correctness of such records and to support the certificate by a sworn statement.

(d) The possession by any person, firm or corporation of halibut which such person, firm or corporation knows to have been taken by a vessel without a valid halibut license or a vessel without a permit when such license or permit is required, is prohibited.

CLOSED SMALL HALIBUT GROUNDS

9. (a) The following areas have been found to be populated by small, immature halibut and are hereby closed to all halibut fishing and the possession of halibut of any origin is prohibited therein during fishing for other species:

(b) First, that area in the waters off the coast of Alaska within the following boundary as stated in terms of the magnetic compass unless otherwise indicated: from the north extremity of Cape Ulitka, Noyes Island, approximately latitude $50^{\circ} 33' 48''$ N., longitude $133^{\circ} 43' 35''$ W., to the south extremity of Wood Island, approximately latitude $55^{\circ} 39' 44''$ N., longitude $133^{\circ} 42' 29''$ W.; thence to the east extremity of Timbered Islet, approximately latitude $55^{\circ} 41' 47''$ N., longitude $133^{\circ} 47' 42''$ W.; thence to the true west extremity of Timbered Islet, approximately latitude $55^{\circ} 41' 46''$ N., longitude $133^{\circ} 48' 01''$ W.; thence southwest three-quarters south sixteen and five-eighths miles to a point approximately latitude $55^{\circ} 34' 46''$ N., longitude $134^{\circ} 14' 40''$ W.; thence southeast by south twelve and one-half miles to a point approximately latitude $55^{\circ} 22' 23''$ N., longitude $134^{\circ} 12' 48''$ W.; thence northeast thirteen and seven-eighths miles to the southern extremity of Cape Addington, Noyes Island, latitude $55^{\circ} 26' 11''$ N., longitude $133^{\circ} 49' 12''$ W.; and to the point of origin on Cape Ulitka. The boundary lines herein indicated shall be determined from Chart 8157, as published by the United States Coast and Geodetic Survey at Washington, D. C., in June, 1929, and Chart 8152, as published by the United States Coast and Geodetic Survey at Washington, D. C., in March, 1933, and reissued March, 1939, except for the point of Cape Addington which shall be determined from Chart 8158, as published by the United States Coast and Geodetic Survey in December, 1923, provided that the duly authorized officers of the United States of America may at any time place a plainly visible mark or marks at any point or points as nearly as practicable on the boundary line defined herein, and such mark or marks shall thereafter be considered as correctly defining said boundary:

(c) Second, that area lying in the waters off the northern coast of Graham Island, British Columbia, within the following boundary, and including the waters of Sturgess Bay, Masset Sound, Masset Inlet, and bays and inlets thereof: from the northwest extremity of Wiah Point, latitude $54^{\circ} 06' 50''$ N., longitude $132^{\circ} 19' 18''$ W., true north five and one-half miles to a point approximately latitude $54^{\circ} 12' 20''$ N., longitude $132^{\circ} 19' 18''$ W.; thence true east approximately sixteen and three-tenths miles to a point which shall lie northwest (according to magnetic compass at any time) of the highest point of Tow Hill, Graham Island, latitude $54^{\circ} 04' 24''$ N., longitude $131^{\circ} 48' 00''$ W.; thence southeast to the said highest point of Tow Hill. The points on the shoreline of the above mentioned island shall be determined from Chart 3754, published at the Admiralty, London, April 11, 1911, provided that the duly authorized officers of the Dominion of Canada may at any time place a plainly visible mark or marks at any point or points as nearly as practicable on the boundary line defined herein, and such marks shall thereafter be considered as correctly defining said boundary.

DORY GEAR PROHIBITED

10. The use of any hand gurdy or other appliance in hauling halibut gear by hand power in any dory or small boat operated from a vessel licensed under the provisions of these regulations is prohibited in all convention waters.

NETS PROHIBITED

11. It is prohibited to retain halibut taken with a net of any kind or to have in possession any halibut while using any net or nets other than bait nets for the capture

of other species of fish, nor shall any license or permit held by any vessel under these regulations be valid during the use or possession on board of any net or nets other than bait nets which are utilized for no other purpose than the capture of bait for said vessel.

RETENTION OF TAGGED HALIBUT

12. Nothing contained in these regulations shall prohibit any vessel at any time from retaining and landing any halibut which bears an International Fisheries Commission tag at the time of capture, provided that such halibut with the tag still attached is reported at the time of landing to representatives of the International Fisheries Commission or to enforcement officers of either of said Governments and is made available to them for examination.

RESPONSIBILITY OF MASTER

13. Wherever in these regulations any duty is laid upon any vessel, it shall be the personal responsibility of the master or operator of said vessel to see that said duty is performed and he shall personally be responsible for the performance of said duty. This provision shall not be construed to relieve any member of the crew of any responsibility with which he would otherwise be chargeable.

SUPERVISION OF UNLOADING AND WEIGHING

14. The unloading and weighing of the halibut of any vessel licensed or holding a permit under these regulations shall be under such supervision as the customs or other authorized officer may deem advisable in order to assure the fulfilment of the provisions of these regulations.

PREVIOUS REGULATIONS SUPERSEDED

15. These regulations shall supersede all previous regulations adopted pursuant to the Convention between the United States of America and the Dominion of Canada for preservation of the halibut fishery of the northern Pacific Ocean and Bering Sea, signed January 29, 1937, except as to offenses occurring prior to the approval of these regulations. These regulations shall be effective as to each succeeding year, with the dates herein specified changed accordingly, until superseded by subsequently approved regulations. Any determination made by the International Fisheries Commission pursuant to these regulations shall become effective immediately.

A. J. WHITMORE, Chairman
EDWARD W. ALLEN
G. W. NICKERSON
MILTON C. JAMES, Secretary

Approved by THE PRESIDENT OF THE UNITED STATES OF AMERICA,
February 27, 1948.

Approved by THE GOVERNOR GENERAL OF THE DOMINION OF CANADA,
by Order in Council of March 6, 1948, P. C. 293.