



Fisheries Data Overview (2021)

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PURPOSE

To provide an overview of the key fisheries data regarding Pacific halibut removals from fisheries catching Pacific halibut during 2021, including the status of landings compared to fishery limits implemented by the Contracting Parties to the Commission.

BACKGROUND

The International Pacific Halibut Commission (IPHC) estimates all Pacific halibut (*Hippoglossus stenolepis*) removals taken in the IPHC Convention Area and uses this information in its yearly stock assessment (see [IPHC-2021-AM098-10](#)) and other analyses. The data are compiled by the IPHC Secretariat and include data from Federal and State agencies of each Contracting Party. All 2021 data are in net weight (head-off, dressed, ice and slime deducted) and are considered preliminary at this time.

This paper includes Pacific halibut removals for:

- Directed commercial fisheries, including landings and discard mortality
- Recreational fisheries, including landings and discard mortality
- Subsistence fisheries
- Non-directed commercial discard mortality (e.g. trawl, pot, longline)
- IPHC Fishery-Independent Setline Survey (FISS) and other research

[Figure 1](#) shows the distribution of Pacific halibut removals (mortality) by these fishery sources in 2021. [Table 1](#) and [Table 2](#) provide estimates of total removals by IPHC Regulatory Area ([Figure 2](#)).

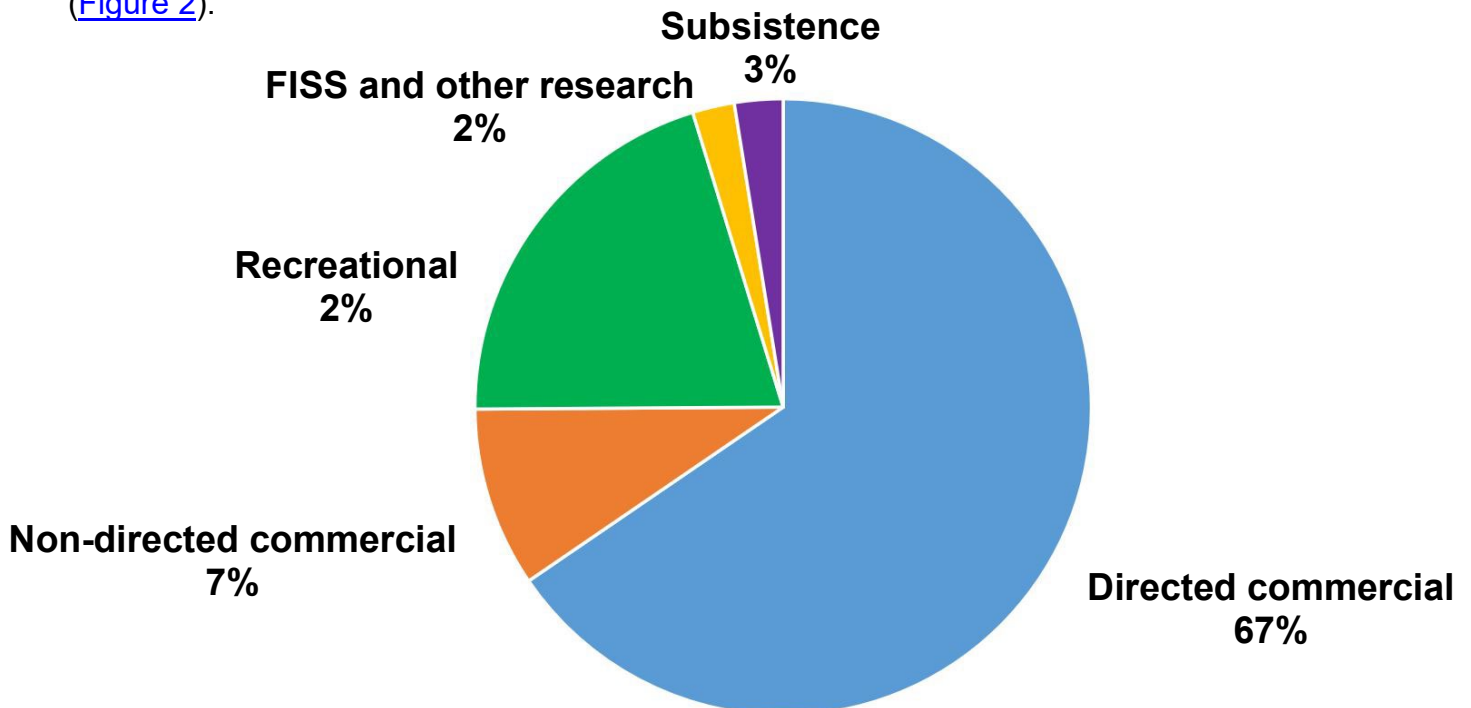


Figure 1. Distribution of Pacific halibut mortality by source in 2021.

Table 1. 2021 Mortality limits (TCEYs) and estimates (TCEYs and U26) by Contracting Party.

Contracting Party	Mortality limits (net weight)		Mortality (net weight)		Percent %
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	
Canada	3,175	7,000,000	3,134	6,909,511	99
United States of America	14,515	32,000,000	13,396	30,225,682	92
IPHC Regulatory Area 2A	748	1,650,000	655	1,445,042	88
IPHC Regulatory Area 2C	2,631	5,800,000	2,841	6,264,364	108
IPHC Regulatory Area 3A	6,350	14,000,000	6,313	13,917,384	99
IPHC Regulatory Area 3B	1,415	3,120,000	1,328	2,928,737	94
IPHC Regulatory Area 4A	930	2,050,000	804	1,771,799	86
IPHC Regulatory Area 4B	635	1,400,000	370	815,294	58
IPHC Regulatory Area 4CDE and Closed Area	1,805	3,980,000	1,084	2,390,810	60
IPHC Regulatory Area 4BCDE ¹	(467)	(1,030,400)	314	692,252	67
Subtotal (TCEY)	17,690	39,000,000	16,844	37,134,193	95
Non-directed commercial discard mortality (U26)	567	1,250,000	462	1,019,000	82
Total	18,257	40,250,000	17,306	38,153,193	95

¹ Area 4BCDE mortality limits included separately in Areas 4B and 4CDE limits

Table 2. 2021 estimates of total removals (net weight), including fishery limits and mortality projections of Pacific halibut by IPHC Regulatory Area.

IPHC Regulatory Area	Fishery limit or Mortality projection		Mortality (net weight)		Percent %
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	
Canada – Area 2B (British Columbia)	3,175	7,000,000	3,134	6,909,511	99
Directed commercial fishery landings	2,372	5,230,000	2,321	5,118,017	98
Directed commercial discard mortality	77	170,000	82	181,000	106
Recreational fishery	417	920,000	366	806,000	88
Recreational discard mortality ¹	18	40,000	11	25,024	63
Recreational - XRQ	n/a	n/a	7	15,000	n/a
Subsistence ¹	186	410,000	184	405,000	99
Non-directed commercial discard mortality (O26) ¹	104	230,000	98	216,000	94
IPHC fishery-independent setline survey and research ²	n/a	n/a	65	143,470	n/a
Non-directed commercial discard mortality (U26)	14	30,000	14	31,000	103
USA – 2A (California, Oregon, and Washington)	748	1,650,000	655	1,445,042	88
Non-treaty directed commercial	116	256,122	110	242,997	95
Non-treaty incidental to salmon troll fishery	21	45,198	8	18,562	41
Non-treaty incidental to sablefish fishery	32	70,000	31	69,081	99
Treaty Indian directed commercial	225	496,300	224	494,139	100
Directed commercial discard mortality	14	30,000	32	71,000	237
Recreational – Washington	127	279,414	114	250,286	90
Recreational – Oregon	132	291,506	59	129,805	45
Recreational – California	18	39,260	12	25,778	66
Recreational discard mortality	n/a	n/a	3	5,891	n/a
Subsistence ¹	15	32,200	15	32,200	100
Non-directed commercial discard mortality (O26) ¹	45	100,000	42	93,000	93
IPHC fishery-independent setline survey and research ²	n/a	n/a	6	12,303	n/a
Non-directed commercial discard mortality (U26)	0	0	2	4,000	n/a

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Table 2 continued. 2021 estimates of total removals (net weight), including fishery limits and mortality projections of Pacific halibut by IPHC Regulatory Area.

IPHC Regulatory Area	Fishery limit or Mortality projection		Mortality (net weight)		Percent
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	%
USA – Area 2C (southeastern Alaska)	2,631	5,800,000	2,841	6,264,364	108
Directed commercial fishery landings	1,601	3,530,000	1,492	3,290,345	93
Directed commercial discard mortality	32	70,000	61	135,000	193
Metlakatla (Annette Island Reserve)	n/a	n/a	12	27,391	n/a
Guided recreational fishery	367	810,000	508	1,119,116	142
Guided recreational discard mortality ³	n/a	n/a	16	34,746	n/a
Guided recreational fishery (GAF) ¹	n/a	n/a	35	76,529	n/a
Unguided recreational fishery ¹	426	940,000	486	1,071,000	116
Unguided recreational discard mortality ³	n/a	n/a	8	17,653	n/a
Subsistence ¹	168	370,000	132	290,137	78
Non-directed commercial discard mortality (O26) ¹	41	90,000	28	61,000	68
IPHC fishery-independent setline survey and research ²	n/a	n/a	64	141,447	n/a
Non-directed commercial discard mortality (U26)	0	0	0	0	n/a
USA – Area 3A (central Gulf of Alaska)	6,350	14,000,000	6,313	13,917,384	99
Directed commercial fishery landings	4,060	8,950,000	3,936	8,677,885	97
Directed commercial discard mortality	109	240,000	176	387,000	161
Guided recreational fishery	885	1,950,000	1,105	2,436,437	126
Guided recreational discard mortality ³	n/a	n/a	8	17,608	n/a
Guided recreational fishery (GAF)	n/a	n/a	2	3,377	n/a
Unguided recreational fishery ¹	694	1,530,000	704	1,552,032	103
Unguided recreational discard mortality ³	n/a	n/a	11	25,061	n/a
Subsistence ¹	86	190,000	80	176,993	93
Non-directed commercial discard mortality (O26) ¹	517	1,140,000	122	270,000	24
IPHC fishery-independent setline survey and research ²	n/a	n/a	168	370,991	n/a
Non-directed commercial discard mortality (U26)	132	290,000	70	154,000	53
USA – Area 3B (western Gulf of Alaska)	1,415	3,120,000	1,328	2,928,737	94
Directed commercial fishery landings	1,161	2,560,000	1,093	2,410,299	94
Directed commercial discard mortality ¹	50	110,000	63	139,000	126
Recreational fishery ¹	5	10,000	3	6,432	64
Recreational discard mortality	n/a	n/a	0	0	n/a
Subsistence ¹	9	20,000	6	13,861	69
Non-directed commercial discard mortality (O26) ¹	191	420,000	121	266,000	63
IPHC fishery-independent setline survey and research ²	n/a	n/a	42	93,145	n/a
Non-directed commercial discard mortality (U26)	27	60,000	32	70,000	117
USA – Area 4A (eastern Aleutians)	930	2,050,000	804	1,771,799	86
Directed commercial fishery landings	753	1,660,000	649	1,430,595	86
Directed commercial discard mortality ¹	54	120,000	24	53,000	44
Recreational fishery ¹	9	20,000	5	10,829	54
Recreational discard mortality	n/a	n/a	0	0	n/a
Subsistence ¹	5	10,000	5	12,118	121
Non-directed commercial discard mortality (O26) ¹	109	240,000	107	235,000	98
IPHC fishery-independent setline survey and research ²	n/a	n/a	14	30,257	n/a
Non-directed commercial discard mortality (U26)	36	80,000	44	97,000	121

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Table 2 continued. 2021 estimates of total removals (net weight), including fishery limits and mortality projections of Pacific halibut by IPHC Regulatory Area.

IPHC Regulatory Area	Fishery limit or Mortality projection		Mortality (net weight)		Percent %
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	
USA – Area 4B (central/western Aleutians)⁴	635	1,400,000	370	815,294	58
Directed commercial fishery landings (IFQ)	446	984,000	283	624,186	63
Directed commercial fishery landings (CDQ)	112	246,000	n/a	n/a	n/a
Directed commercial discard mortality ¹	23	50,000	15	32,000	64
Recreational fishery ¹	0	0	0	0	n/a
Recreational discard mortality	0	0	0	0	n/a
Subsistence ¹	0	0	<1	987	n/a
Non-directed commercial discard mortality (O26) ¹	54	120,000	61	134,000	112
IPHC fishery-independent setline survey and research ²	n/a	n/a	11	24,121	n/a
Non-directed commercial discard mortality (U26)	5	10,000	6	14,000	140
USA – Area 4CDE and Closed (Bering Sea)⁴	1,805	3,980,000	1,084	2,390,810	60
Directed commercial fishery landings (IFQ)	402	885,600	372	819,798	93
Directed commercial fishery landings (CDQ)	356	784,400	n/a	n/a	n/a
Directed commercial discard mortality ¹	36	80,000	11	25,000	31
Recreational fishery ¹	0	0	0	0	n/a
Recreational discard mortality	0	0	0	0	n/a
Subsistence ¹	14	30,000	18	38,830	129
Non-directed commercial discard mortality (O26) ¹	998	2,200,000	680	1,500,000	68
IPHC fishery-independent setline survey and research ²	n/a	n/a	3	7,182	n/a
Non-directed commercial discard mortality (U26)	354	780,000	294	648,000	83
USA – Area 4BCDE Directed commercial (CDQ) ⁴	(467)	(1,030,400)	314	692,252	67
Totals (TCEY)	17,690	39,000,000	16,844	37,134,193	95
Directed commercial fishery landings	12,052	26,570,000	11,312	24,938,547	94
Recreational fishery	3,098	6,830,000	3,460	7,628,604	112
Subsistence ¹	476	1,050,000	440	970,126	92
Non-directed commercial discard mortality (O26) ¹	2,059	4,540,000	1,259	2,774,000	61
IPHC fishery-independent setline survey and research ²	n/a	n/a	373	822,916	n/a
Non-directed commercial discard mortality (U26)	567	1,250,000	462	1,019,000	82

¹ 'Fishery projection' is value from 2020 estimates which were used in setting the TCEY for each IPHC Regulatory Area.

² Includes U32 Pacific halibut landed during FISS.

³ Limit included in limit listed above.

⁴ Areas 4B and 4CDE totals include CDQ fishery limits, but do not include CDQ mortality, for confidentiality reasons. CDQ mortality is listed on a separate Area 4BCDE line.

n/a = not available

XRQ = Experimental Quota leased from commercial quota.

GAF = Guided Angler Fish leased from commercial quota.

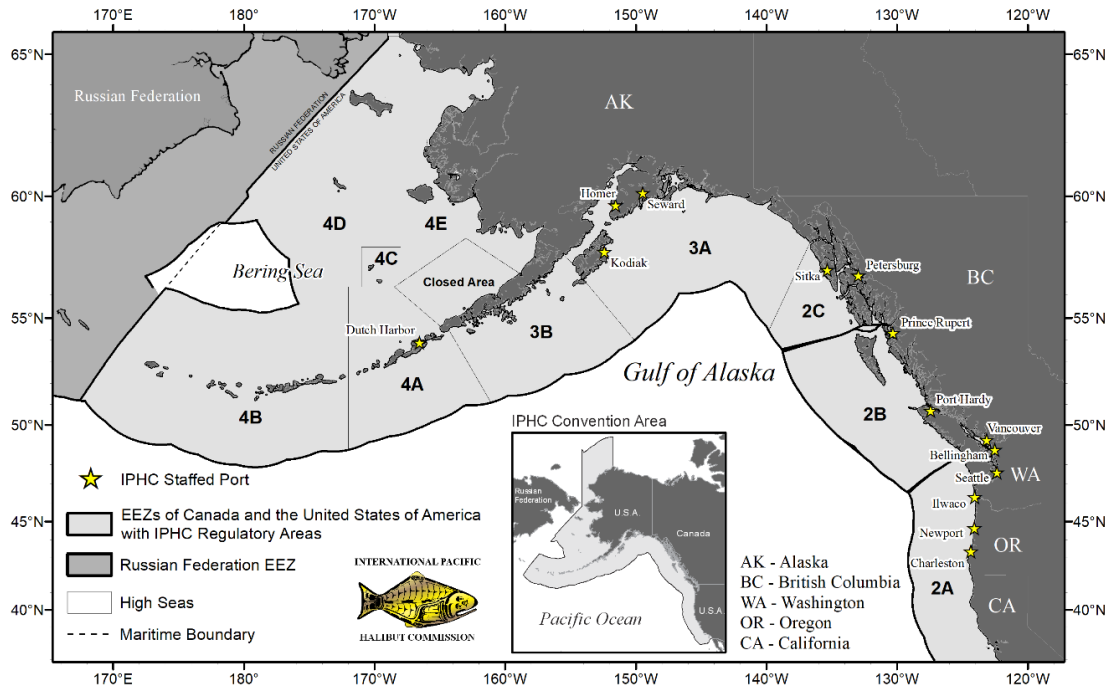


Figure 2. Map of the IPHC Convention Area (insert) and IPHC Regulatory Areas.

DEFINITIONS

Directed commercial fisheries: include commercial landings and discard mortality. Directed commercial discard mortality continues to include estimates of sub-legal Pacific halibut (under 81.3 cm (32 inches), also called U32), fish that die on lost or abandoned fishing gear, and fish discarded for regulatory compliance reasons.

Recreational fisheries: include recreational landings (including landings from commercial leasing) and discard mortality.

Subsistence fisheries: (formerly called personal use/subsistence) are non-commercial, customary, and traditional use of Pacific halibut for direct personal, family, or community consumption or sharing as food, or customary trade. Subsistence fisheries include:

- i) ceremonial and subsistence (C&S) removals in the IPHC Regulatory Area 2A treaty Indian fishery,
- ii) the sanctioned First Nations Food, Social, and Ceremonial (FSC) fishery conducted in British Columbia,
- iii) federal subsistence fishery in Alaska, USA that uses Alaska Subsistence Halibut Registration Certificate (SHARC), and
- iv) U32 Pacific halibut retained in IPHC Regulatory Areas 4D and 4E by the CDQ fishery for personal use.

Non-directed commercial discard mortality: incidentally caught Pacific halibut by fisheries targeting other species and that cannot legally be retained, e.g. by the trawl fleet. Refers only to those Pacific halibut that subsequently die due to capture.

IPHC FISS and Research: includes Pacific halibut landings and removals as a result of the IPHC Fishery-Independent Setline Survey (FISS) and other research.

DIRECTED COMMERCIAL FISHERIES

The IPHC's directed commercial fisheries span from northern California through to northern and western Alaska in USA and Canadian waters of the northeastern Pacific Ocean. The IPHC sets annual limits for the retention of Pacific halibut in each IPHC Regulatory Area. Participants in

these commercial fisheries use longline and pot gear to catch Pacific halibut for sale. The directed commercial Pacific halibut fisheries in IPHC Regulatory Area 2A consisted of the directed commercial fishery with fishing period limits, the incidental Pacific halibut catch during the salmon troll and limited-entry sablefish (*Anoplopoma fimbria*) fisheries, and the treaty Indian fisheries. Farther north, the directed commercial fisheries consisted of the Individual Vessel Quota (IVQ) fishery in IPHC Regulatory Area 2B in British Columbia, Canada; the Individual Fishing Quota (IFQ) system in Alaska, USA; the Community Development Quota (CDQ) fisheries in IPHC Regulatory Areas 4B and 4CDE; and the Metlakatla fishery in IPHC Regulatory Area 2C. All 2021 landing and discard mortality data presented in this document are preliminary.

Directed Commercial Fishing Periods

The Canadian IVQ fishery in IPHC Regulatory Area 2B and the USA IFQ and CDQ fisheries in IPHC Regulatory Areas 2C, 3A, 3B, 4A, 4B, 4C, 4D, and 4E commenced at 12 noon local time on 6 March and closed at 12 noon local time on 7 December ([Table 3](#)). The IPHC Regulatory Area 2A directed commercial fisheries, including the treaty Indian commercial fisheries, occurred during the same calendar period (6 March to 7 December 2021). For IPHC Regulatory Area 2A, the potential of 58-hour fishing periods every two weeks beginning on the fourth Tuesday in June for the non-treaty directed commercial fishery were adopted. Fishing periods began on the Tuesday at 0800 and ended on the Thursday at 1800 local time (58-hours), were further restricted by fishing period limits, and closed for the remainder of the year after the third opening on 22 July, when the IPHC Regulatory Area 2A directed commercial non-treaty fishery allocation was estimated to have been reached.

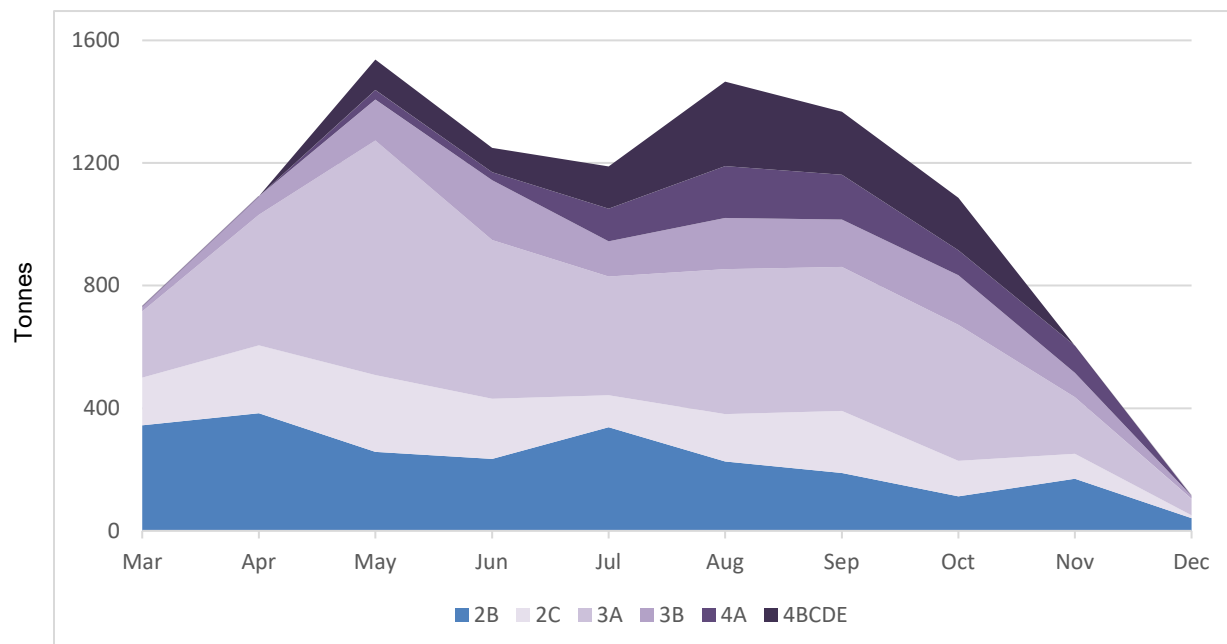
Table 3. Fishing periods for directed commercial Pacific halibut fisheries by IPHC Regulatory Area, 2012-21.

IPHC Regulatory Area	Year									
	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Canada: 2B	6 Mar– 7 Dec (276)	14 Mar– 7 Dec (268)	15 Mar– 14 Nov (244)	24 Mar– 7 Nov (228)	11 Mar– 7 Nov (241)	19 Mar– 7 Nov (233)	14 Mar–7 Nov (238)	8 Mar–7 Nov (244)	23 Mar–7 Nov (230)	17 Mar–7 Nov (236)
USA: 2A Treaty Indian	6 Mar-16 May (55 h) (Unrestricted) 6 Mar-16 May (102 h) (Restricted) 16 May-20 Jun (24 h)	14 Mar-30 Sept (55 h) (Unrestricted) 14 Mar-30 Sep (222 h) (Restricted) 5 Oct -18 Oct (800 lb per calendar day per vessel)	15 Mar-15 May (55 h) (Unrestricted) 15 Mar-15 May (84 h) 20 May-15 Jun (72 h) (Restricted) 11 Jun-24 Jul (~327 lb per tribe)	24 Mar – 28 Apr (36 h) 24 Mar – 28 Apr (37 h) 4 May – 23 May (30 h)	20 Mar, 15-16 Apr 1-2 May 19-20 May, 22-23 May 18-19 Jun 21-22 Jul	19-21 Mar, 20-21 Mar, 21- 23 Mar 1-2 Apr 1-2, 11-12 May, 18 May-15 Aug, 25 Jul-2 Aug, 12 Sep-7 Nov	16-18 Mar (48 h) 1-2 Apr 8 May	11-13 Mar (48 h) 20-21Mar, 8May 8 May	23-25 Mar (48 h) 2-4 Apr, 15-16 Apr, 8 May, 6 Jun, 13 Jul, 20 Jul, 3 Aug	24-26 Mar (2) 1 May (13 h) 17-19 Mar (55 h)
USA: 2A Commercial Directed	22-24 Jun 6-8 Jul 20-22 Jul (58 h each)	22-24 Jun 6-8 Jul 20-22 Jul 3-5 Aug 17-19 Aug (58 h each)	26 Jun 10 Jul 24 Jul (10 h each)	27 Jun 11 Jul 25 Jul (10 h each)	28 Jun 12 Jul 26 Jul (10 h each)	22 Jun 6 Jul 20 Jul (10 h each)	24 Jun 8 Jul (10 h each)	25 Jun 9 Jul (10 h each)	26 Jun 10 Jul (10 h each)	27 Jun 11 Jul (10 h each)
USA: 2A Commercial Incidental	Salmon 1 Apr – 7 Dec (250) Sablefish 1 Apr – 7 Dec (250)	Salmon 15 Apr–30 Sep (WA – 168) 15 Apr–31 Oct (OR - 199) 1 Aug–30 Sep (CA - 60) Sablefish 1 Apr – 15 Nov (228)	Salmon 20 Apr - 30 Sep (WA, CA - 163) 20 Apr - 31 Oct (OR - 194) Sablefish 1 Apr- 31 Oct (213)	Salmon 24 Mar - 8 Aug (137) Sablefish 24 Mar – 7 Nov (228)	Salmon 1 Apr–3 Aug (124) Sablefish 1 Apr– 31 Oct (213)	Salmon 1 Apr – 31 Oct (213) Sablefish 1 Apr – 31 Oct (213)	Salmon 1 Apr–21 Aug (142) Sablefish 1 Apr– 31 Aug (152)	Salmon 1 Apr–11 Sep (163) Sablefish 1 Apr– 31 Oct (213)	Salmon 1 May–10 Aug (101) Sablefish 1 May– 31 Oct (184)	Salmon 1 May – 3 Jul (64) Sablefish 1 May– 31 Oct (184)
USA: Alaska (2C, 3A, 3B, 4A, 4B, 4CDE)	6 Mar– 7 Dec (276)	14 Mar– 15 Nov (246)	15 Mar– 14 Nov (244)	24 Mar– 7 Nov (228)	11 Mar– 7 Nov (241)	19 Mar–7 Nov (233)	14 Mar–7 Nov (238)	8 Mar–7 Nov (244)	23 Mar–7 Nov (230)	17 Mar–7 Nov (236)

Directed Commercial Landings

Directed commercial landings and fishery limits by IPHC Regulatory Area for the 2021 fishing season are shown in [Table 2](#). Directed commercial fishery limit, as referred to here, is the IPHC commercial fishery limit set by the Contracting Parties following the IPHC Annual Meeting. The fishery limits with adjustments from the underage and overage programs from the previous year's quota share programs and, in IPHC Regulatory Area 2B, the Use of Fish allocation are not presented. Historical landings and fishery limits are available on the IPHC website (<https://www.iphc.int/data>).

The 2021 directed commercial fishery landings were spread over ten months of the year in Canada and the USA ([Figure 3](#)). On a month-to-month comparison, April took the lead as the busiest month for total poundage (17%) landed from IPHC Regulatory Area 2B. On a month-to-month comparison, May was the busiest month for total poundage (16%) from Alaska, USA. A year-to-date visualization is also available on the IPHC website: <https://www.iphc.int/data/year-to-date-directed-commercial-landing-patterns-ak-and-bc>



Regulatory Area 2B landings from DFO Fishery Operations System (FOS).

Regulatory Areas 2C, 3, and 4 landings from NOAA Fisheries Restricted Access Management (RAM) Program.

Regulatory Area 4A Mar-May and Nov-Dec combined for confidentiality reasons.

Regulatory Area 4BCDE Apr-May and Oct-Nov combined for confidentiality reasons.

Figure 3. 2021 directed commercial landings (tonnes, net weight, preliminary) of Pacific halibut for Alaska, USA and British Columbia, Canada by IQ fisheries, IPHC Regulatory Area and month.

Canada – IPHC Regulatory Area 2B (British Columbia)

Under the IVQ fishery in British Columbia, Canada, the number of active Pacific halibut licences (L licences), and First Nations communal commercial licences (FL licences) was 150 in 2021. In addition, Pacific halibut can be landed as incidental catch in other licensed groundfish fisheries. Therefore, Pacific halibut was landed from a total of 221 active licences in 2021, with 71 of these licences from other fisheries. The 2021 directed commercial landings represented 2,321 tonnes (5,118,017 pounds) of Pacific halibut ([Table 2](#)).

Directed commercial trips from IPHC Regulatory Area 2B were delivered into 11 different ports in 2021. The ports of Port Hardy (including Coal Harbour and Port McNeill) and Prince Rupert/Port Edward were the major landing locations, receiving 95% of the commercial landings. Port Hardy received 48% while Prince Rupert received 46% of the directed commercial landings. All of the IVQ landings were landed in IPHC Regulatory Area 2B. Only Canadian vessels landed frozen, head-off Pacific halibut in 2021: 47 landings (27 tonnes; 61,365 net lb) reported frozen-at-sea head-off product from 20 vessels.

According to logbook data, less than 0.03% by weight of Pacific halibut were caught with pot gear and landed within the directed commercial fishery in IPHC Regulatory Area 2B.

USA – IPHC Regulatory Area 2A (Washington, Oregon, California)

The 2021 IPHC Regulatory Area 2A fisheries and respective fishery limits are listed in [Table 2](#). The total IPHC Regulatory Area 2A directed commercial landings of 374 tonnes (825,000 pounds) are 5% below the fishery limit. The total non-treaty directed commercial landings of 110 tonnes (242,997 pounds) were 5% under the fishery limit of 116 tonnes (256,122 pounds) after three 58-hour openers. The fishing period limits by vessel size class for each opening in 2021 are listed in [Table 5](#).

The salmon troll fishery season began on 1 April with an allowable incidental landing ratio of one Pacific halibut per two Chinook (*Oncorhynchus tshawytscha*), plus an “extra” Pacific halibut per landing, and a vessel trip limit of 35 fish. On 1 July, the fishery was extended at the same ratio and landing limit. Total landings of 8 tonnes (18,562 pounds) were 59% under the fishery limit (21 tonnes (45,198 pounds)).

Incidental Pacific halibut retention during the limited-entry sablefish (*Anoplopoma fimbria*) fishery was open from 1 April to 7 December. Beginning 1 April, the allowable landing ratio was 0.11 tonnes (250 pounds) (net weight) of Pacific halibut to 0.45 tonnes (1,000 pounds) (net weight) of sablefish, and up to two additional Pacific halibut in excess of the ratio limit. Beginning 1 June, the allowable landing ratio was 0.10 tonnes (225 pounds) (net weight) of Pacific halibut to 0.45 tonnes (1,000 pounds) (net weight) of sablefish, and up to two additional Pacific halibut in excess of the ratio limit. The total landings of 31 tonnes (69,081 pounds) were 1% under the fishery limit (32 tonnes (70,000 pounds)).

In IPHC Regulatory Area 2A, north of Point Chehalis (46°53.30' N. latitude), the treaty Indian tribes manage the directed commercial landings for three fisheries under a Memorandum of Understanding among the 13 tribes. These consist of an unrestricted fishery, a restricted fishery with trip limits, and a late season fishery. These fisheries are subject to in-season management. There was one unrestricted, open access fishery, not to exceed 55 hours from 6 March to 16 May and one restricted fishery not to exceed 102 hours and 5 total calendar days of fishing, including a vessel per day limit of 0.23 tonnes (500 pounds) from 6 March to 16 May. A final fishery not to exceed 24 hours was open from 19 May to 20 June. Estimated total landings of 224 tonnes (494,139 pounds) were at the fishery limit (225 tonnes (496,300 pounds)).

Table 5. The fishing periods and limits (tonnes, dressed, head-on with ice/slime) by vessel class used in the 2021 directed commercial fishery in IPHC Regulatory Area 2A.

Vessel Class		Fishing Period (dates) & Limits (t)		
Letter	Feet	22-24 June	6-8 July	20-22 July
A, B and C	1-35	1.03	1.03	1.03
D and E	36-45	1.55	1.55	1.55
F and G	46-55	2.06	2.06	2.06
H	56+	2.32	2.32	2.32

USA – IPHC Regulatory Areas 2C, 3, and 4 (Alaska)

In Alaska, USA, the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) Restricted Access Management (RAM) Program allocated Pacific halibut quota share (QS) to recipients by IPHC Regulatory Area. Quota share transfers were permitted with restrictions on the amount of QS a person could hold and the amount that could be fished per vessel. In 2021, RAM reported that 2,279 persons/entities held QS.

The total 2021 landings from the IFQ/CDQ Pacific halibut fishery for the waters off Alaska, USA were 8,140 tonnes (17,945,000 pounds), 8% under the fishery limit ([Table 2](#)). By IPHC Regulatory Area, the landings were under the fishery limit by 7% for Area 2C, 3% for Area 3A, 6% for Area 3B, 14% for Area 4A, 36% for Area 4B (IFQ), 7% for 4CDE/Closed (IFQ), and 33% for Areas 4B and 4CDE CDQ combined. ([Table 2](#)).

Homer received approximately 17% (1,478 tonnes (3,258,000 pounds)) of the directed commercial landings of Alaskan catch making it the port that received the greatest number of pounds in 2021. Seward received the second and Kodiak the third largest landing volume at 10% (912 tonnes (2,008,000 pounds)) and 10% (852 tonnes (1,879,000 pounds)) of the Alaskan commercial landings, respectively. In Southeast Alaska, the two largest landing volumes were received in Juneau (619 tonnes (1,364,000 pounds)) and Sitka (577 tonnes (1,273,000 pounds)), and their combined landings represented 13% of the directed commercial Alaskan landings. The Alaskan QS catch that was landed outside of Alaska, USA was 2%.

In Alaska, 41 tonnes (90,000 pounds) of Pacific halibut were caught with pot gear and landed within the directed commercial fishery representing 0.5% of the total Alaska landings.

The Metlakatla Indian Community (within IPHC Regulatory Area 2C) was authorized by the United States government to conduct a commercial Pacific halibut fishery within the Annette Islands Reserve. There were 14 two-day openings between 12 March and 26 September for total landings of 12 tonnes (27,391 pounds). The fishery closed on 30 September.

Directed Commercial Discard Mortality

Incidental mortality of Pacific halibut in the directed commercial Pacific halibut fishery is the mortality of all Pacific halibut that do not become part of the landed catch. The three main sources of discard mortality estimate include: 1) fish that are captured and discarded because they are below the legal-size limit of 81.3 cm (32 inches), 2) fish that are estimated to die on lost or abandoned fishing gear, and 3) fish that are discarded for regulatory reasons (e.g. the vessels trip limit has been exceeded). The methods that are applied to produce each of these estimates differ due to the amount and quality of information available. Information on lost gear and regulatory discards is collected through logbook interviews and fishing logs received by mail. The ratio of U32 to O32 Pacific halibut (>81.3 cm or 32 inches in length) is determined from the IPHC Fishery-Independent Setline Survey in most areas and by direct observation in the IPHC Regulatory Area 2B fishery. Different mortality rates are applied to each category: released Pacific halibut have a 16% mortality rate and Pacific halibut mortality from lost gear is 100%.

Pacific halibut discard mortality estimates from the commercial Pacific halibut fishery are summarized by IPHC Regulatory Area in [Table 2](#).

RECREATIONAL FISHERIES

The 2021 recreational removals of Pacific halibut, including discard mortality, was estimated at 3,460 tonnes (7,628,604 pounds). Changes in harvests varied across areas; in some cases, in response to changes in size restrictions. Recreational fishery limits and landings are detailed by IPHC Regulatory Area in [Table 2](#). Historical recreational removals are also available at the IPHC website: <https://www.iphc.int/data/datatest/pacific-halibut-recreational-fisheries-data>

Recreational Landings

Canada – IPHC Regulatory Area 2B (British Columbia)

IPHC Regulatory Area 2B operated under a 126 cm (49.6 inch) maximum size limit and one Pacific halibut had to be between 90 – 126 cm (35.4 - 49.6 inches) or both under 90 cm (35.4 inch) when attaining the two fish possession limit, with an annual limit of six per licence holder. On 1 April, the maximum size limit was increased to 133 cm (53.4 inch) and one Pacific halibut to be between 90 – 133 cm (35.4 – 53.4 inches) or both under 90 cm (35.4 inch) when attaining the two fish possession limit, with an annual limit of ten per licence holder. The IPHC Regulatory Area 2B recreational harvest was 12% under the recreational fishery limit at 366 tonnes (806,000 pounds).

USA – IPHC Regulatory Area 2A (Washington, Oregon, California)

The 2021 IPHC Regulatory Area 2A recreational allocation was 277 tonnes (610,180 pounds) net weight and based on the Pacific Fishery Management Council's Catch Sharing Plan formula, which divides the overall fishery limit among all sectors. The recreational allocation was further subdivided to seven subareas, after 32 tonnes (70,000 pounds) were allocated to the incidental Pacific halibut catch in the commercial sablefish fishery in Washington. This subdivision resulted in 127 tonnes (279,414 pounds) being allocated to Washington subareas and 132 tonnes (291,506 pounds) to Oregon subareas. In addition, California received an allocation of 18 tonnes (39,260 pounds). The IPHC Regulatory Area 2A recreational harvest totaled 184 tonnes (405,869 pounds), 33% under the recreational fishery limit. Recreational fishery harvest seasons by subareas varied and were managed in season with fisheries opening on 1 May.

IPHC Regulatory Areas 2C, 3, and 4 (USA: Alaska)

A reverse slot limit allowing for the retention of Pacific halibut, if ≤ 127.0 cm (50 inches) or ≥ 182.9 cm (72 inches) in total length, was in place for the charter fishery in IPHC Regulatory Area 2C. In IPHC Regulatory Area 3A, charter anglers were allowed to retain two fish per day, but only one could exceed 81.3 cm (32 inches) in length, with a recording requirement. A possession limit equaled to 2 daily bag limits with no annual limit. One trip per calendar day per charter permit was allowed, with no charter retention of Pacific halibut on Wednesdays.

The Contracting Party agencies in Alaska (USA) have a program that allow recreational harvesters to land fish that is leased from commercial fishery quota shareholders for the current season.

Recreational Discard Mortality

Pacific halibut discarded for any reason suffer some degree of discard mortality, and impacts more of the stock with the increasing use of size restrictions, such as reverse slot limits. Current year estimates from Contracting Parties' agencies of recreational discard mortality have been received from both Contracting Parties and are provided in [Table 2](#).

SUBSISTENCE FISHERIES

Pacific halibut is taken throughout its range as subsistence harvest by several fisheries. Subsistence fisheries are non-commercial, customary, and traditional use of Pacific halibut for direct personal, family, or community consumption or sharing as food, or customary trade. The primary subsistence fisheries are the treaty Indian Ceremonial and Subsistence fishery in IPHC Regulatory Area 2A off northwest Washington State (USA), the First Nations Food, Social, and Ceremonial (FSC) fishery in British Columbia (Canada), and the subsistence fishery by rural residents and federally recognized native tribes in Alaska (USA) documented via Subsistence Halibut Registration Certificates (SHARC).

The coastwide subsistence estimate for 2021 was 440 tonnes (970,126 pounds) ([Table 2](#)). Historical subsistence removals are also available at the IPHC website: <https://www.iphc.int/datatest/subsistence-fisheries>

Estimated subsistence harvests by area

In the commercial Pacific halibut fisheries coastwide, the state and federal regulations require that take-home Pacific halibut caught during commercial fishing be recorded as part of the commercial fishery on the landing records (i.e., State fish tickets or Canadian validation records). This is consistent across areas, including the quota share fisheries in Canada and USA, and as part of fishing period limits and Pacific halibut ratios in the incidental fisheries in IPHC Regulatory Area 2A. Therefore, personal use fish or take-home fish within the commercial fisheries are accounted for as commercial catch and are not included here.

IPHC Regulatory Area 2A (USA: Washington, Oregon, California)

The Pacific Fishery Management Council's Catch Sharing Plan allocates the Pacific halibut fishery limit to commercial, recreational, and treaty Indian users in IPHC Regulatory Area 2A. The treaty tribal fishery limit is further sub-divided into commercial and ceremonial and subsistence (C&S) fisheries. It is estimated that 15 tonnes (32,200 pounds) were retained as C&S. A revised estimate of the 2021 removals will be provided at the end of the year and may be higher than previous years due to an increased usage for food security as a result of the COVID-19 pandemic.

IPHC Regulatory Area 2B (Canada: British Columbia)

The source of Pacific halibut subsistence harvest in British Columbia is the First Nations FSC fishery. The IPHC receives some logbook and landing data for this harvest from the DFO, but those data have not been adequate for the IPHC to make an independent estimate of the FSC fishery harvest. DFO estimated the First Nations FSC harvest to be 136 tonnes (300,000 pounds) annually until 2006, and since 2007, the yearly estimate has been provided as 184 tonnes (405,000 pounds).

IPHC Regulatory Areas 2C, 3, and 4 (USA: Alaska)

In 2003, the subsistence Pacific halibut fishery off Alaska was formally recognized by the North Pacific Fishery Management Council and implemented by IPHC and NOAA Fisheries regulations. The fishery allows the customary and traditional use of Pacific halibut by rural residents and members of federally recognized Alaska, USA native tribes who can retain Pacific halibut for non-commercial use, food, or customary trade. The NOAA Fisheries regulations define legal gear, number of hooks, and daily bag limits, and IPHC regulations set the fishing season. Prior to subsistence fishing, eligible persons registered with NOAA Fisheries Restricted Access Management to obtain a SHARC. The Division of Subsistence at ADF&G was contracted by NOAA Fisheries to estimate the subsistence harvest in Alaska, USA through a data collection program. A voluntary survey of fishers is conducted by mail or phone, with some onsite visits. Beginning in 2018, this survey is conducted on a biannual schedule, rather than annually. The 2020 estimate has been carried forward for 2021.

In addition to the SHARC harvest, IPHC regulations allow Pacific halibut less than 81.3 cm or 32 inches in fork length (also called U32) to be retained in the IPHC Regulatory Area 4D and 4E commercial Pacific halibut CDQ fishery, under an exemption requested by the North Pacific Fishery Management Council, as long as the fish are not sold or bartered. The exemption originally applied only to CDQ fisheries in IPHC Regulatory Area 4E in 1998, but was expanded in 2002 to also include IPHC Regulatory Area 4D. The CDQ organizations are required to report to the IPHC the amounts retained during their commercial fishing operations. This harvest is not included in the SHARC program estimate and is reported separately.

Reports for 2021 removals were received from three CDQ management organizations: Bristol Bay Economic Development Corporation (BBEDC), Norton Sound Economic Development Corporation (NSEDC), and Coastal Villages Regional Fund (CVRF), with CVRF reporting no removals.

CDQ - Bristol Bay Economic Development Corporation (BBEDC)

BBEDC requires their fishers to record the lengths of retained U32 Pacific halibut in a separate log, which are then tabulated by BBEDC at the conclusion of the season. The lengths were converted to weights using the IPHC length/weight relationship and summed to estimate the total retained U32 weight. Pacific halibut were landed by BBEDC vessels primarily in Togiak and Dillingham in a lesser amount. A small amount was landed equally in Naknek and King Salmon. BBEDC reported 13 harvesters landed 158 U32 Pacific halibut (<1 tonne; 1,641 pounds).

CDQ - Coastal Villages Regional Fund (CVRF)

CVRF reported that no Pacific halibut were landed by their fishers or received by their facilities.

CDQ - Norton Sound Economic Development Corporation (NSEDC)

NSEDC required their fishers to offload the U32 Pacific halibut for weighing. The fish were not washed nor were the heads removed. The U32 Pacific halibut were then returned to the harvester. NSEDC reported 54 U32 Pacific halibut weighing <1 tonne (466 pounds) were caught in the local CDQ fishery and landed at the Nome plant.

NON-DIRECTED COMMERCIAL DISCARD MORTALITY

The IPHC accounts for non-directed commercial discard mortality by IPHC Regulatory Area and sector. All removals for 2021 are available in [Table 2](#). Historical data are also available on the IPHC website: <https://www.iphc.int/data/datatest/non-directed-commercial-discard-mortality-fisheries>

Estimating Non-Directed Commercial Discard Mortality

Non-directed commercial discard mortality of Pacific halibut is estimated because not all fisheries have 100% monitoring and not all Pacific halibut that are discarded are assumed to die. Agencies estimate the amount of non-directed commercial discard that will not survive, called non-directed commercial discard mortality.

The IPHC relies upon information supplied by observer programs run by Contracting Party agencies for non-directed commercial discard mortality estimates in most fisheries. Non-IPHC research survey information is used to generate estimates of non-directed commercial discard mortality in the few cases where fishery observations are unavailable. Trawl fisheries off British Columbia, Canada are monitored and non-directed commercial discard mortality information is provided to IPHC by DFO. NOAA Fisheries operates observer programs off the USA West Coast and Alaska, which monitor the major groundfish fisheries. Data collected by those programs are used to estimate non-directed commercial discard mortality. A breakout of these removals by IPHC Regulatory Area and year is available on the IPHC website: <https://www.iphc.int/data/datatest/non-directed-commercial-discard-mortality-fisheries>.

Non-directed Commercial Discard Mortality by Area

Canada – IPHC Regulatory Area 2B (British Columbia)

In Canada, Pacific halibut non-directed commercial discard mortality in trawl fisheries are capped at 454 tonnes round weight by DFO. Non-trawl non-directed commercial discard mortality is handled under an IFQ system within the directed Pacific halibut fishery cap.

USA – IPHC Regulatory Area 2A (Washington, Oregon, California)

Groundfish fisheries off Washington, Oregon, and California are managed by NOAA Fisheries, following advice and recommendations developed by the Pacific Fishery Management Council.

USA – IPHC Regulatory Areas 2C, 3, and 4 (Alaska)

Groundfish fisheries in Alaska are managed by NOAA Fisheries, following advice and recommendations developed by the North Pacific Fishery Management Council. Non-directed commercial discard mortality projected estimates for Alaskan areas are provided by NOAA Fisheries.

IPHC Regulatory Area 2C (Southeast Alaska)

For the federal waters of IPHC Regulatory Area 2C, only non-directed commercial discard mortality by hook-and-line vessels fishing in the outside waters were reported by NOAA Fisheries. These vessels are primarily targeting Pacific cod and rockfish (*Sebastes* spp.) in open access fisheries, and sablefish in the IFQ fishery.

Fisheries occurring within state waters and resulting in Pacific halibut non-directed commercial discard mortality include pot fisheries for red and golden king crab, and tanner crab. Information is provided periodically by ADF&G, and the estimate was again rolled forward.

IPHC Regulatory Area 3 (Eastern, Central and Western Gulf of Alaska)

IPHC Regulatory Area 3 is comprised of Areas 3A and 3B. IPHC tracks non-directed commercial discard mortality for each IPHC Regulatory Area due to assessment and stock management needs, while groundfish fisheries operate throughout both areas. Trawl fisheries are responsible for the majority of the non-directed commercial discard mortality in these IPHC Regulatory Areas, with hook-and-line fisheries a distant second. State-managed crab and scallop fisheries are also known to take Pacific halibut as non-directed commercial discard mortality, but at low levels.

IPHC Regulatory Area 3 remains the area where non-directed commercial discard mortality is estimated most poorly. Observer coverage for most fisheries is relatively low. Tendering, loopholes in trip cancelling, and safety considerations likely result in observed trips not being representative of all trips (observed and unobserved) in many regards (e.g., duration, species composition, etc.). This, plus low coverage, lead to increased uncertainty in these non-directed commercial discard mortality estimates and to potential for bias.

IPHC Regulatory Area 4 (Bering Sea and Aleutian Islands)

The Pacific cod fishery, which is conducted in the late winter/early spring and late summer, is the major contributor to Pacific halibut non-directed commercial discard mortality in IPHC Regulatory Area 4. Almost all of the vessels are required to have 100% observer coverage because of the vessel's size and requirements of their fishery cooperative; very few small vessels fish Pacific cod in this IPHC Regulatory Area. Because of this high level of observer coverage, non-directed commercial discard mortality estimates for this and other IPHC Regulatory Area 4 fisheries are considered reliable.

Pots are used to fish for Pacific cod and sablefish and are very selective. Non-directed commercial discard mortality rates are quite low, and survival is relatively high. Annual non-directed commercial discard mortality estimates are typically low, usually less than 7 tonnes.

Within the Bering Sea, non-directed commercial discard mortality estimates have typically been the highest in IPHC Regulatory Area 4CDE ([Table 2](#)) due to the groundfish fisheries which operate in the area, i.e., those for flatfish.

IPHC FISHERY-INDEPENDENT SETLINE SURVEY (FISS) AND OTHER RESEARCH

Approximately 373 tonnes (822,916 pounds) of Pacific halibut were landed from the FISS and other research in 2021 with the amount landed from each IPhC Regulatory Area documented in [Table 2](#).

RECOMMENDATION

That the Commission **NOTE** paper IPHC-2022-AM098-06 Rev_1 which provides an overview of the key fisheries data regarding Pacific halibut removals from fisheries catching Pacific halibut during 2021, including the status of landings compared to fishery limits implemented by the Contracting Parties of the Commission.