2.4 The personal use (subsistence) harvest of Pacific halibut through 2016

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Abstract

Pacific halibut is taken throughout its range as a personal use (or subsistence) harvest by several fisheries. The primary harvests occur in the treaty Indian ceremonial and subsistence fishery in the waters off northwest Washington State, the First Nations food fish fishery in British Columbia, and the subsistence fishery by rural residents and federally-recognized native tribes in Alaska. The coastwide personal use estimate for 2016 is 1.2 Mlbs (544.3 mt). New estimates for all areas are not available so proxy estimates are used: the allocation amount was used for the Area 2A treaty Indian ceremonial and subsistence fishery estimate and the 2014 estimate was used again for Alaska in 2016. The estimate for Area 2B remains unchanged.

Introduction

The removals of Pacific halibut (*Hippoglossus stenolepis*) which are accounted for in the stock assessment include commercial and sport catch, incidental mortality (wastage) during the Pacific halibut sport and commercial fisheries, incidental mortality in other fisheries (bycatch), and personal use of Pacific halibut. Personal use categories are: (1) ceremonial and subsistence removals in the Area 2A treaty Indian fishery, (2) the sanctioned First Nations Food, Social, and Ceremonial (FSC) fishery conducted in British Columbia, (3) federal subsistence fishery in Alaska, and (4) U32 (i.e. less than 32 in or 81.3 cm) halibut retained in Areas 4D and 4E under International Pacific Halibut Commission (IPHC) regulations.

Estimated harvests by area

The coastwide personal use harvest of Pacific halibut was estimated by the IPHC at more than 2 Mlbs (907.2 mt) in 1991, then declined rapidly through 1995, and became relatively stable over the following two years (Table 1). Harvest estimation methods were revised in 1998, and the resulting estimates were somewhat higher than previous years but remained fairly stable through 2002. The estimates of harvest took another jump in 2003 following the implementation of new subsistence fishery regulations in Alaska and a more comprehensive harvest estimation survey. Many of the changes seen in the harvest estimates from 2003 and prior were due primarily to changes in estimation methods and not necessarily actual changes in harvest levels. Methodology explained in the following sections has remained the same since 2003 and changes in estimates represent changes in harvest levels. The total estimate for the 2016 subsistence fishery is 1.2 Mlbs (544.3 mt) with more of the coastwide personal use harvest taken from waters off Alaska (Table 2).

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 catch on the landing records (i.e., State fish tickets or B.C. validation records). This is consistent across areas, including the quota share fisheries in B.C. and Alaska, and as part of fishing period limits and halibut ratios in the incidental fisheries in Area 2A. Therefore, these personal use

fish or take-home fish within the commercial fisheries are accounted for as commercial catch and are not included here.

Washington, Oregon, and California

In Area 2A (Washington, Oregon, and California), the Pacific Fishery Management Council's catch sharing plan allocates the Pacific halibut catch limit to commercial, sport, and treaty Indian users. The treaty tribal catch limit is further sub-divided into commercial and ceremonial and subsistence (C&S) fisheries. The 2015 final estimate of C&S was 33,900 pounds (15.4 mt) and this catch estimate became the 2016 C&S allocation. The estimate of the 2016 catch is not available so it is assumed the treaty tribal C&S allocation was fully harvested.

British Columbia

The source of Pacific halibut personal use harvest in British Columbia is the First Nations FSC fishery. The IPHC receives some logbook and landing data for this harvest from the Fisheries and Oceans Canada (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 300,000 pounds (136.1 mt) annually until 2006, and since 2007, the yearly estimate has been provided as 405,000 pounds (183.7 mt).

Alaska

The IPHC began estimating the Pacific halibut personal use harvest in Alaska in 1991. The available estimates indicated that personal use in Alaska totaled 1.95 million pounds (884.5 mt) that year. The estimate for 1992 dropped in half, to one million pounds (453.6 mt). Estimates were subsequently made for each IPHC area independently and annually for most areas.

Trumble (1999) developed a new methodology to estimate personal use using halibut catch information gathered by household interviews and postal surveys conducted by the Alaska Department of Fish and Game (ADF&G). The surveys did not distinguish between sport and personal use harvests, so Trumble made assumptions regarding the relative amount of sport and personal use in native and non-native households. The resulting estimates were used for Alaska for 1998-2002, with the only annual change being the amount of U32 (i.e. < 32 in or 81.3 cm) poundage retained by the Area 4E Community Development Quota (CDQ) fishers.

In 2003, the subsistence Pacific halibut fishery off Alaska was formally recognized by the North Pacific Fishery Management Council, and implemented by IPHC and National Marine Fisheries Service (NMFS) regulations. The fishery allows the customary and traditional use of Pacific halibut by rural residents and members of federally-recognized Alaska native tribes who can retain halibut for non-commercial use, food, or customary trade. The NMFS 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 NMFS Restricted Access Management to obtain a Subsistence Halibut Registration Certificate (SHARC). The Division of Subsistence at ADF&G was contracted by NMFS to estimate the subsistence harvest in Alaska through a data collection program. Information has been provided for the years 2003-2012 (Fall and Koster 2014) and 2014 (Fall and Lemons 2016). Yearly reports are available at http://www.fakr.noaa.gov/ram/subsistence/halibut.htm. Each year, the data collection program included an annual voluntary survey of fishers conducted by mail or phone, with some onsite visits. The 2012 estimate has been carried forward for the 2013 estimate and the 2014 estimate has been used for 2014 through 2016. The

2014 estimates are about 10% higher than in 2012, and are noticeably higher in Area 4E. To collect the 2014 harvest estimates, the ADF&G staff conducted face to face interviews in two of the major subsistence harvesting communities within Area 4E rather than relying on mailed returns. Face to face interviews likely resulted in more realistic harvest estimates than the mail survey alone, so it is likely that the Area 4E harvest estimates between 2008 through 2013 were low.

In addition to the SHARC harvest, IPHC regulations allow U32 halibut to be retained in the Area 4D and 4E commercial Pacific halibut CDQ fishery as long as the fish are not sold or bartered. The CDQ organizations are required to report to the IPHC the amounts retained during their commercial fishing operations (Erickson 2017). This harvest is not included in the SHARC program estimate so is reported separately. In 2016, a total of approximately 5,500 pounds (2.5 mt) of U32 halibut in Area 4D and 4E were landed, similar to 2014 harvest levels and slightly higher than 2015.

References

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Trumble, R. J. 1999. 1998 estimates of personal use. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 1998: 61-64.

Erickson, G. H. 2017. Retention of U32 Pacific halibut in the 2016 Area 4D/4E CDQ Pacific halibut fisheries. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2016. IPHC-2016-RARA-26-R: 68-70.

Table 1. Estimates of the personal use harvest (thousands of pounds, net weight) of Pacifichalibut by IPHC regulatory area 1991-2016.

Year	2A	2B	2C	3A	3B	4A	4B	4C	4D	4E	Area 4	Total
1991	10.0	50	720	----1,000----		-	-	-	-	-	230	2,010
1992	14.2	100	---- AK total 1,000----			-	-	-	-	-	-	1,114
1993	15.8	300	108	328	59	-	-	-	-	-	121	932
1994	10.9	300	108	328	59	-	-	-	-	-	121	927
1995	14.2	300	-	97	37	-	-	-	-	-	94	542
1996	15.0	300	-	97	37	-	-	-	-	-	94	543
1997	14.8	300	-	97	37	-	-	-	-	-	94	543
1998	10.5	300	170	74	20	-	-	-	-	-	166	741
1999	10.5	300	170	74	20	-	-	-	-	-	170	745
2000	17.5	300	170	74	20	-	-	-	-	-	175	757
2001	16.0	300	170	74	20	-	-	-	-	-	192	772
2002	27.0	300	170	74	20	-	-	-	-	-	180	771
	2A	**2B**	**2C**	**3A**	**3B**	**4A**	**4B**	**4C**	**4D**	**4E**	**4D/4E**	**Total**
2003	19.4	300	623.5	285.5	27.5	21.2	2.6	22.9	4.4	53.8	14.3	1,375.1
2004	38.0	300	677.1	403.6	33.5	28.9	0.9	9.7	10.9	28.5	16.2	1,547.3
2005	36.0	300	598.1	429.3	46.2	35.6	1.4	7.7	5.8	54.1	23.2	1,537.4
2006	33.0	300	580.1	379.3	48.5	27.1	2.8	8.5	8.3	70.7	19.7	1,478.0
2007	30.0	405	524.9	372.3	47.7	14.9	2.0	15.1	3.2	52.1	19.0	1,486.2
2008	29.0	405	458.4	337.4	42.2	19.6	4.7	5.7	3.1	15.9	21.8	1,342.8
2009	30.4	405	457.0	328.5	25.5	33.5	1.2	6.3	0.6	8.7	10.3	1,307.0
2010	25.3	405	424.8	312.7	23.0	14.5	0.5	10.9	1.2	10.1	9.5	1,237.5
2011	24.8	405	387.0	266.1	22.0	13.6	0.5	1.6	0.6	6.2	16.9	1,144.3
2012	32.0	405	396.0	253.5	16.0	9.5	1.7	1.2	0.7	8.4	20.2	1,144.2
2013[a]	28.5	405	396.0	253.5	16.0	9.5	1.7	1.2	0.7	8.4	10.0	1,130.5
2014	31.8	405	428.2	231.3	18.3	7.2	0.4	4.3	0.6	70.1	5.5	1,202.7
2015[b]	33.9	405	428.2	231.3	18.3	7.2	0.4	4.3	0.6	70.1	4.7	1,204.0
2016[b,c]	33.9	405	428.2	231.3	18.3	7.2	0.4	4.3	0.6	70.1	5.5	1,204.8

[a] 2012 Alaska estimates were carried over for the 2013 catch estimate, with the exception that 4D/4E subsistence harvest in the CDQ fishery were updated.
[b] 2014 Alaska estimates were carried over for the 2015 and 2016 catch estimates, with the exception that 4D/4E subsistence harvest in the CDQ fishery were updated.
[c] 2016 2A allocation is used as a proxy for the catch estimate. The current year's allocation is based on the previous year's catch.

Table 2. Summary of personal use harvest (thousands of pounds, net weight) of Pacific halibut by region 1991-2016.

Year	West Coast	B.C.	Alaska	Total
1991	10.0	50	1,950.0	2,010.0
1992	14.2	100	1,000.0	1,114.2
1993	15.8	300	616.0	931.8
1994	10.9	300	616.0	926.9
1995	14.2	300	228.0	542.2
1996	15.0	300	228.0	543.0
1997	14.8	300	228.0	542.8
1998	10.5	300	430.0	740.5
1999	10.5	300	434.0	744.5
2000	17.5	300	439.0	756.5
2001	16.0	300	456.0	772.0
2002	27.0	300	444.0	771.0
2003	19.4	300	1,055.7	1,375.1
2004	38.0	300	1,209.3	1,547.3
2005	36.0	300	1,201.4	1,537.4
2006	33.0	300	1,145.0	1,478.0
2007	30.0	405	1,051.0	1,486.0
2008	30.0	405	908.8	1,343.8
2009	30.4	405	871.6	1,307.0
2010	25.3	405	807.2	1,237.5
2011	25.3	405	714.5	1,144.8
2012	32.0	405	707.2	1,144.2
2013	28.5	405	697.0	1,130.5
2014	31.8	405	765.9	1,202.7
2015	33.9	405	765.1	1,204.0
2016[a]	33.9	405	765.9	1,204.8

[a] Estimates are preliminary.