CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE REPORT ON RECREATIONAL PACIFIC HALIBUT CATCHES IN 2016

The California Department of Fish and Wildlife (CDFW) offers the following update on the recreational catch of Pacific halibut from California for the 2016 fishing season. An update is also provided on the CDFW inseason projection methodology for 2017.

Monthly estimates produced by CDFW's California Recreational Fishery Survey (CRFS) serve as CDFW's estimate of catch. However, production of these estimates involves a time lag of about six weeks after the month's end. Therefore, CDFW uses weekly projections to approximate catch for any months for which CRFS estimates are not yet available – allowing for very timely estimation of cumulative catch during the season.

The 2016 recreational Pacific halibut fishery in California was open May 1-15, June 1-15, July 1-15, August 1-15, and September 1-23. The fishery closed for the year on September 24, due to projected attainment of the quota. CDFW coordinated weekly with the National Marine Fisheries Service, the International Pacific Halibut Commission, and the Pacific Fishery Management Council to track catches and take action to close the fishery early once the quota was projected to be attained.

As in 2015, when the CRFS estimates for a given month became available¹, those monthly estimates replaced the weekly projection values for that month (Table 1). On November 9th, CRFS staff notified the Pacific halibut staff that preliminary catch estimates were available for the month of September, allowing CDFW to determine the seasonal total. CDFW catch estimate is 30,893 net pounds for the 2016 season, or 104 percent of the 29,640 net pound quota.

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	Net Pounds Accrued				
Month	CDFW Projection	CRFS Estimate			
Мау	4,011	2,322			
June	4 ,661	5,658			
July	4,779	5,558			
August	8,889	11,025			
September	7,154	6,331			
October	0 (CLOSED)				
Total	30,893				

Table 1. Preliminary 2016 Pacific halibut catch estimates in California by month. CDFW projection values are provided in strikeout to illustrate the process of replacing the projections with CRFS estimates when those estimates became available. Data are from CRFS; preliminary and subject to change.

¹ Please see the November 2015 CDFW Report on Recreational Fishing Estimates: <u>http://www.pcouncil.org/wp-</u> content/uploads/2015/11/B1a_Sup_CDFW_Rpt_CRFS_Estimates_Nov2015BB.pdf

Updates to Inseason Projection Model for 2017

In order to determine the weekly projections shown in Table 1, CDFW uses a regression to determine about how many net pounds of estimated catch are equivalent to one sampled fish². In 2015, this value was 103.4 pounds, and was revised for the 2016 fishery to 108.4 pounds to include a new additional year of data. Now that CRFS estimates are available for all months, CDFW has updated the analysis to include the preliminary 2016 data and exclude data from years prior to 2013. The new relationship will be used to make weekly projections in the 2017 fishery. In the regression analysis, CDFW examined the number of sampled fish (A+B1) in each month/year against the corresponding catch estimate for each month/year (Table 2). As in previous years, there continues to be a very strong correlation (Figure 1) between the number of fish observed/reported (A+B1 fish) and the resulting monthly catch estimate (r-squared = 0.92).

The updated regression analysis for 2017 indicates that each sampled Pacific halibut in the field equates to 111.9 pounds of estimated catch – independent of month or year. CDFW intends to use this updated regression relationship to monitor catches inseason on a weekly basis, generate a preliminary projection of the total cumulative catch, and compare that relative to the California quota during the 2017 fishing season; the same method used in both 2015 and 2016.

Table 2a-b. Numbers of sampled (A+B1) fish (a) and total catch estimates (b; net pounds) for recreationally caught Pacific halibut in California by month and year from 2013-2016 for PR and PC modes. Data from CRFS; 2016 data are preliminary. (a)

	2013	2014	2015	2016
Мау	18	45	3	37
June	34	21	15	40
July	56	198	113	44
August	176	NA	86	82
September	23	44	NA	66
October	13	3	NA	NA
Yearly Total	320	308	217	269

(b)

	2013	2014	2015	2016
Мау	1,282	4,795	378	2,322
June	5,419	2,779	1,783	5,658
July	12,446	20,124	13,768	5,558
August	19,179	0	8,977	11,025
September	2,554	3,293	NA	6,331
October	2,374	235	NA	NA
Yearly Total	43,254	31,227	24,906	30,893

² For a detailed description of the inseason projection methodology see the CDFW Supplemental Report 2 from November 2014:

http://www.pcouncil.org/wp-content/uploads/G1b_Sup_CDFW_Rpt2_NOV2014BB.pdf



Figure 1. Regression of sampled (sampler examined, A, and angler reported kept, B1) Pacific halibut and monthly catch estimates from 2013-2016 for PR and PC modes. Data from CRFS; 2016 data are preliminary.