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INTERNATIONAL PACIFIC HALIBUT COMMISSION

ESTABLISHED BY A CONVENTION BETWEEN CANADA

AND THE UNITED STATES OF AMERICA

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EL2023EL2023599
27 November 2023

Jonathan M. Kurland
Regional Administrator
NOAA Fisheries, Alaska Region
PO Box 21668
Juneau, AK 99802-1668

Dear Mr Kurland

In December 2021 the North Pacific Fishery Management Council (Council) took final action supporting abundance-based management (ABM) of the Pacific halibut Prohibited Species Catch (PSC) limit as a method to be used to set the Pacific halibut PSC for the Amendment 80 trawl sector in the Bering Sea and Aleutian Islands Management Area (BSAI FMP). The Council action identifies a two-dimensional look-up table, dependent on the Eastern Bering Sea (EBS) trawl survey index and the IPHC index, developed from IPHC Fishery-Independent Setline Survey (FISS)[1] observations and EBS trawl survey observations. Breakpoints for these two survey indices define categories from which the PSC limit is determined (**Figure 1**). The EBS trawl survey index is categorized as low or high, and the IPHC setline survey index for ABM is categorized into very low, low, medium, and high categories. NOAA Fisheries has proposed to implement this action as Amendment 123 to the BSAI FMP (87 FR 75570[2]) and expects to publish a final rule in 2023.

		EBS shelf trawl survey index (t)	
		Low < **150,000**	**High** ≥ **150,000**
IPHC setline survey index in Area 4ABCDE (WPUE)	**High** ≥ **11,000**	1,745 mt (current limit)	1,745 mt (current limit)
	Medium **8,000 – 10,999**	1,396 mt (20% below current)	1,571 mt (10% below current)
	Low **6,000-7,999**	1,309 mt (25% below current)	1,396 mt (20% below current)
	Very Low < **6,000**	1,134 mt (35% below current)	1,134 mt (35% below current)

Figure 1. Two-dimension lookup table for the determination of Pacific halibut PSC limits for the Amendment 80 fleet in the BSAI FMP (from Table 58 to part 679 in 87 FR 75570).

[1] https://iphc.int/management/science-and-research/fishery-independent-setline-survey-fiss
[2] Federal Register: Fisheries of the Exclusive Economic Zone Off Alaska; Bering Sea and Aleutian Islands [Pacific] Halibut Abundance-Based Management of Amendment 80 Prohibited Species Catch Limit

Methods used by IPHC to estimate IPHC FISS indices remain unchanged in 2023. A description can be found in IPHC-2021-IM097-INF05[3]. It is important to note that FISS indices are estimated using a Space-Time model and all years of the index are updated with the addition of a single year of data. Therefore, past IPHC setline survey indices for ABM will be updated with the addition of data each year. This letter provides instructions on how to calculate the IPHC setline survey index from publicly available IPHC data products, and presents the updated IPHC setline survey index, comparing it to values from previous years.

CALCULATING THE IPHC SETLINE SURVEY INDEX

IPHC setline survey indices (numbers-per-unit-effort and weight-per-unit-effort) are available on the IPHC Space-Time Explorer[4] website, and are updated in November before the IPHC Interim Meeting (IM). The IPHC setline survey index can be calculated following these steps.

- Use the "Official Output" page of the IPHC Space-Time Explorer. Occasionally it is slow to load and the web browser may need to be refreshed.
- Select IPHC Regulatory Areas 4A, 4CDE, and 4B, which are shown geographically in **Figure 2**.
- Select "All Sizes WPUE" from the "Select variable" drop-down menu on the left. This will provide a time-series on the right.
- From the Table, take the "mean" value and multiply that by 258.55, which is the total bottom area between 0 and 400 fathoms for these three IPHC Regulatory Areas in units of thousand square nautical miles.
- For measures of uncertainty, use the CV value or multiply 'sd' or 'p2.5' and 'p97.5' (95% posterior credible interval) by 258.55.

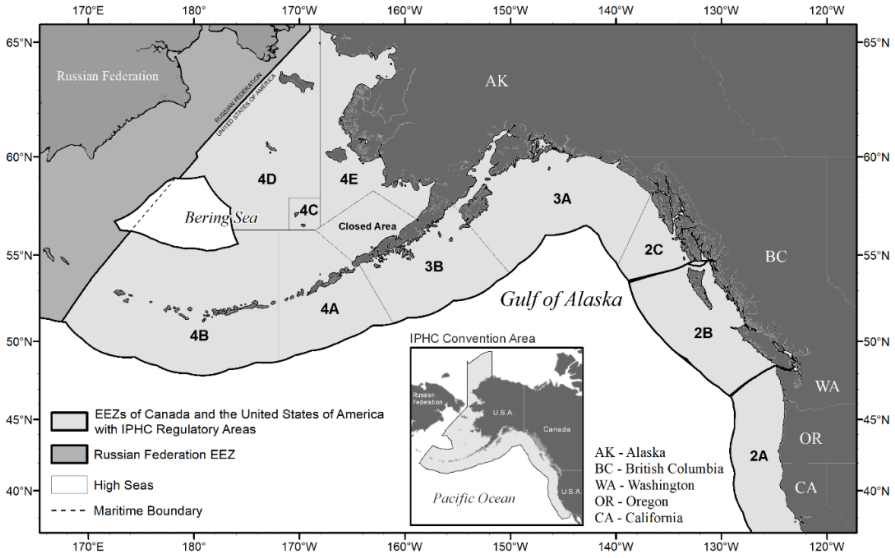

Figure 2. IPHC Convention Area (inset) and IPHC Regulatory Areas.

[3] https://www.iphc.int/uploads/pdf/im/im097/iphc-2021-im097-inf05.pdf
[4] http://iphc-shiny2.westus.cloudapp.azure.com:3838/IPHC_ShinyApps/SpaceTimeExplorer/

2023 IPHC setline survey index for ABM

The IPHC setline survey all-sizes WPUE is 24.99 lbs/skate for 2023. This translates to an IPHC setline survey index for 2023 of 6,462 which is in the "low" category of the lookup table (**Figure 1**). The IPHC setline survey index for 2022 is also updated to 6,493, which was previously 6,614 using results up to and including 2022. The 95% credible interval for the 2023 IPHC setline survey index ranges from 5,613 to 7,543, with a small chance that the index is in the "Very Low" category (**Figure 3**).

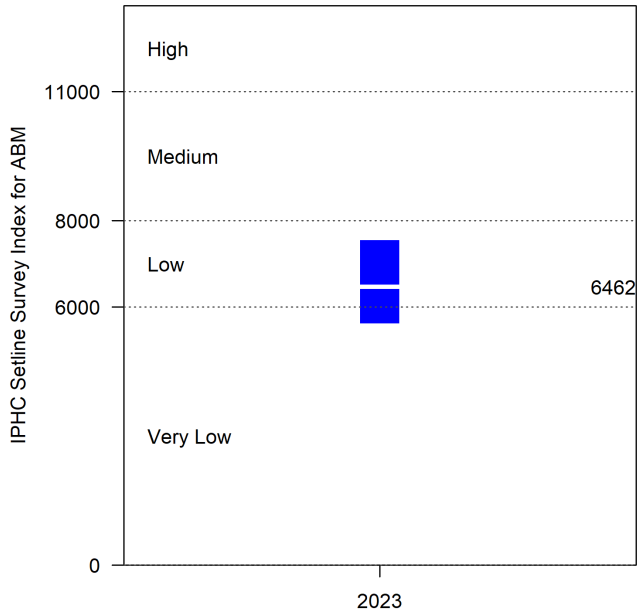

Figure 3. IPHC setline survey index for 2023, with a 95% credible interval, in relation to the four categories.

If you or your team require any assistance, we are available to assist.

Yours Sincerely,

David T. Wilson

David T. Wilson, Ph.D.
IPHC Executive Director

CC:
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IPHC Vice-Chairperson, Mr Paul Ryall
NPFMC Executive Director, Mr David Witherell
AFSC Science and Research Director, Dr Robert Foy