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### C1 IPHC index Halibox ABMWILSON INTERNATIONAL PACIFIC HALIBUT COMMISSION December 2024

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EL2024602 19 November 2024

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)<sup>1</sup> 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 International Pacific Halibut Commission (IPHC) fishery-independent setline survey (FISS) index for ABM is categorized into very low, low, medium, and high categories. NOAA Fisheries has published a final rule to implement this action as Amendment 123 to the BSAI FMP (<u>88 FR 82740</u><sup>2</sup>).

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

**Fig. 1.** Two-dimension lookup table for the determination of Pacific halibut PSC limits for the Amendment 80 fleet in the BSAI FMP (adapted from Table 58 to part 679 in <u>88 FR 82740</u>).

<sup>&</sup>lt;sup>1</sup> <u>https://iphc.int/management/science-and-research/fishery-independent-setline-survey-fiss</u>

<sup>&</sup>lt;sup>2</sup> 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 the IPHC to estimate IPHC FISS indices remain unchanged in 2024. A description can be found in <u>IPHC-2021-IM097-INF05</u><sup>3</sup>. 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 FISS indices for ABM will be updated with the addition of data each year. This letter provides instructions on how to calculate the IPHC FISS index from publicly available IPHC data products, and presents the updated IPHC FISS index, comparing it to values from previous years.

## CALCULATING THE IPHC FISS INDEX

The IPHC FISS indices (numbers-per-unit-effort and weight-per-unit-effort) are available on the <u>IPHC Space-Time Explorer</u><sup>4</sup> website, and are updated in November before the IPHC Interim Meeting (IM) each year. The IPHC FISS index can be calculated following these steps.

- Use the "Official Output" page of the <u>IPHC Space-Time Explorer</u>. 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.

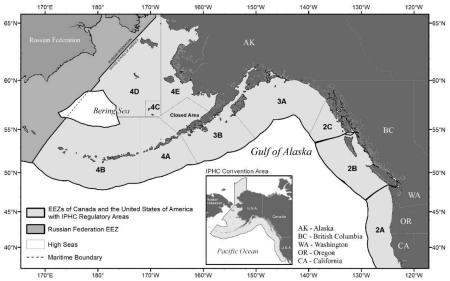


Fig. 2. The IPHC Convention Area (inset) and IPHC Regulatory Areas.

<sup>&</sup>lt;sup>3</sup> <u>https://www.iphc.int/uploads/pdf/im/im097/iphc-2021-im097-inf05.pdf</u>

<sup>&</sup>lt;sup>4</sup> <u>http://iphc-shiny2.westus.cloudapp.azure.com:3838/IPHC\_ShinyApps/SpaceTimeExplorer/</u>

## 2024 IPHC setline survey index for ABM

The IPHC FISS all-sizes WPUE is 24.30 lbs/skate for 2024. This translates to an IPHC FISS index for 2024 of **6,282** which is in the "low" category of the lookup table (Figure 1). The IPHC FISS index for 2023 is also updated to 6,443, which was previously 6,462 using results up to and including 2023. The 95% credible interval for the 2024 IPHC FISS index ranges from 5,283 to 7,632, with a small chance that the index is in the "Very Low" category (Figure 3).

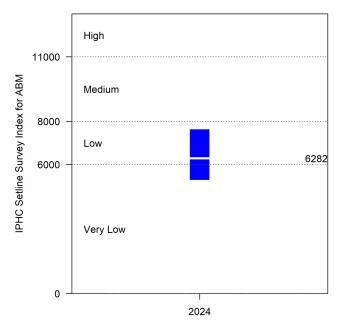


Fig. 3. The IPHC FISS index for 2024, with a 95% credible interval, in relation to the four categories.

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

Yours Sincerely,

Bavid T. Wilson

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

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

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<b>Name</b> David Wilson	Status signed	Viewed At 11/19/2024 12:54 EST	
<b>Email</b> david.wilson@iphc.int <b>Components</b> 1	Multi-factor Digital Fingerprint Checksum 9b83b8dd944265909487f655c6a9d43daaddedab7787b59ec7f4ac4ce073ea44	Identity Authenticated At 11/19/2024 12:54 EST Signed At 11/19/2024 12:54 EST	
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