INTERNATIONAL PACIFIC HALIBUT COMMISSION

IPHC–2026–IM102–00
Last Update: 3 November 2026

102nd Session of the IPHC Interim Meeting (IM102) – *Compendium of meeting documents*

1 December 2026, Seattle, WA, USA

Commissioners

Canada	United States of America
Mark Waddell	Jon Kurland
Neil Davis	Robert Alverson
Peter DeGreef	

Executive Director

David T. Wilson, Ph.D.

DISTRIBUTION: IPHC WEBSITE
LAST UPDATE: 3 November 2026

BIBLIOGRAPHIC ENTRY
IPHC 2026. 102nd Session of the IPHC Interim Meeting (IM102) - Compendium of meeting documents. Int. Pac. Halibut Comm.

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DRAFT: AGENDA & SCHEDULE FOR THE 102nd SESSION OF THE IPHC INTERIM MEETING (IM102)

Date: 1 December 2026
Location: Electronic
Venue: Adobe Connect
Time: 09:00-17:00 (PST)
Chairperson: Mr Mark Waddell (Canada)
Vice-Chairperson: Mr Jon Kurland (USA)

***Note: Document deadline**: 01 November 2026 (30 days prior to the opening of the Session)*

AGENDA FOR THE 102nd SESSION OF THE IPHC INTERIM MEETING (IM102)

1. **OPENING OF THE SESSION** (Chairperson)

2. **ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION** (Chairperson & Executive Director)

3. **IPHC PROCESS** (D. Wilson)
   - 3.1 Update on actions arising from the 102nd Session of the IPHC Annual Meeting (AM102), 2026 Special Sessions, and intersessional decisions (D. Wilson)
   - 3.2 Report of the IPHC Secretariat (2026): Draft (D. Wilson & B. Hutniczak)
   - 3.3 Reports of IPHC Subsidiary Bodies (Q&A only)

4. **FISHERY MONITORING**
   - 4.1 Fishery-dependent data overview (2026)
     - 4.1.1 Port Operations (M. Thom)
     - 4.1.2 Fisheries data (B. Hutniczak)
   - 4.2 Fishery-independent data overview (2026)
     - 4.2.1 IPHC Fishery-Independent Setline Survey (FISS) design and implementation in 2026 (K. Ualesi)

5. **STOCK STATUS OF PACIFIC HALIBUT (2026)**
   - 5.1 Space-time modelling of survey data (R. Webster)
   - 5.2 Stock Assessment: Data overview and stock assessment (2026)

6. **MANAGEMENT STRATEGY EVALUATION**
   - 6.1 Management Strategy Evaluation: 2026 updates (A. Hicks)

7. **HARVEST DECISION TABLE 2027**
   - 7.1 Stock projections and harvest decision table 2027-2029 (I. Stewart & A. Hicks)

8. FISS DESIGN EVALUATIONS 2027-2031

8.1 2027-31 FISS design evaluation (R. Webster)

9. BIOLOGICAL AND ECOSYSTEM SCIENCES – PROJECT UPDATES

9.1 Report on Current and Future Biological and Ecosystem Science Research Activities (J. Planas)

10. IPHC FISHERY REGULATIONS: PROPOSALS FOR THE 2026-27 PROCESS

10.1 IPHC Secretariat fishery regulation proposals (B. Hutniczak)
10.2 Contracting Party fishery regulation proposals (Contracting Parties)
10.3 Stakeholder fishery regulation proposals (Stakeholders)
10.4 Stakeholder statements (B. Hutniczak)

11. OTHER BUSINESS

11.1 Preparation for the 103rd Session of the IPHC Annual Meeting (AM103) and associated subsidiary bodies (D. Wilson)

12. REVIEW OF THE DRAFT AND ADOPTION OF THE REPORT OF THE 102nd SESSION OF THE IPHC INTERIM MEETING (IM102) (Chairperson & Executive Director)

SCHEDULE FOR THE 102nd SESSION OF THE IPHC INTERIM MEETING (IM102)

Tuesday, 1 December 2026		
Time	**Agenda item**	**Lead**
09:00-09:05	1. Opening of the Session	Chairperson
09:05-09:10	2. Adoption of the agenda and arrangements for the Session	Chairperson
09:10-09:30	3. IPHC Process 3.1 Update on actions arising from the 102nd Session of the IPHC Annual Meeting (AM102), 2026 Special Sessions, and intersessional decisions (D. Wilson) 3.2 Report of the IPHC Secretariat (2026): Draft (D. Wilson & B. Hutniczak) 3.3 Reports of IPHC Subsidiary Bodies	D. Wilson Q&A only
09:30-09:45	4. Fishery Monitoring 4.1 Fishery-dependent data overview (2026) 4.1.1 Port Operations (M. Thom) 4.1.2 Fisheries data (B. Hutniczak)	 M. Thom B. Hutniczak
09:45-10:00	4.2 Fishery-independent data overview (2026) 4.2.1 IPHC Fishery-Independent Setline Survey (FISS) design and implementation in 2026	 K. Ualesi
10:00-10:30	5. Stock status of Pacific halibut (2026) 5.1 Space-time modelling of survey data	R. Webster
10:30-10:45	Break	
10:45-12:00	5.2 Stock Assessment: Data overview and stock assessment (2026)	I. Stewart
12:00-12:30	6. Management strategy evaluation 6.1 Management Strategy Evaluation: 2026 updates	A. Hicks
12:30-12:45	*Public comment and questions (Agenda Items 5 & 6)*	
12:45-13:30	Lunch	
13:30-14:00	7. Harvest decision table for 2027-29	I. Stewart
14:00-15:00	8. FISS design evaluations 2027-2031 8.1 2027-31 FISS design evaluation	R. Webster
15:00-15:30	*Public comment and questions (Agenda Items 7 & 8)*	
15:30-15:45	Break	

15:45-16:10	9. Biological and ecosystem sciences – project updates *Public comment and questions (Agenda Item 9)*	J. Planas
16:10-16:30	10. IPHC Fishery Regulations: Proposals for the 2026-27 process 10.1 IPHC Secretariat fishery regulation proposals 10.2 Contracting Party fishery regulation proposals 10.3 Stakeholder fishery regulation proposals 10.4 Stakeholder statements *Public comment and questions (Agenda Item 10)*	B. Hutniczak Contracting Parties Stakeholders B. Hutniczak
16:30-16:40	11. Other business 11.1 Preparation for the 103rd Session of the IPHC Annual Meeting (AM103) and associated subsidiary bodies	D. Wilson
16:40-17:00	Break: Report drafting Session	IPHC Secretariat
17:00-17:30	12. Review of the draft and adoption of the Report of the 102nd Session of the IPHC Interim Meeting (IM102)	Chairperson & Executive Director

LIST OF DOCUMENTS FOR THE 102nd SESSION OF THE IPHC INTERIM MEETING (IM102)

Last updated: 3 November 2026

Document	Title	Availability
IPHC-2026-IM102-01	Agenda & Schedule for the 102nd Session of the IPHC Interim Meeting (IM102)	✓ 1 May 2026
IPHC-2026-IM102-02	List of Documents for the 102nd Session of the IPHC Interim Meeting (IM102)	✓ 1 May 2026 ✓ 30 Oct 2026 ✓ 3 Nov 2026
IPHC-2026-IM102-03	Update on actions arising from the 102nd Session of the IPHC Annual Meeting (AM102), and 2026 intersessional decisions (D. Wilson)	✓ 27 Oct 2026
IPHC-2026-IM102-04 Rev_1	Report of the IPHC Secretariat (2026): Draft (D. Wilson & B. Hutniczak)	✓ 27 Oct 2026 ✓ 29 Oct 2026
IPHC-2026-IM102-05	IPHC Fisheries Dependent Data Collection Design and Implementation in 2026 – Port operations: Preliminary (M. Thom, I. Stewart & R. Webster)	✓ 28 Oct 2026
IPHC-2026-IM102-06	Fisheries data overview (2026): Preliminary (B. Hutniczak, H. Tran, T. Kong, K. Sawyer van Vleck, & K. Magrane)	✓ 27 Oct 2026
IPHC-2026-IM102-07	IPHC Fishery-independent setline survey (FISS) design and implementation in 2026 (K. Ualesi, T. Jack, K. Coll, & C. Skalley)	✓ 28 Oct 2026
IPHC-2026-IM102-08	Space-time modelling of survey data (R. Webster)	✓ 28 Oct 2026
IPHC-2026-IM102-09	Data overview and stock assessment for Pacific halibut (*Hippoglossus stenolepis*) at the end of 2026 (I. Stewart, A. Hicks, R. Webster, D. Wilson)	✓ 27 Oct 2026
IPHC-2026-IM102-10	Management Strategy Evaluation: 2026 updates (A. Hicks & I. Stewart)	✓ 28 Oct 2026
IPHC-2026-IM102-11	Stock projections and harvest decision table for 2027-2029 (I. Stewart & A. Hicks)	✓ 27 Oct 2026
IPHC-2026-IM102-12	2027-31FISS designs (R. Webster, I. Stewart, K. Ualesi, & D. Wilson)	✓ 30 Oct 2026
IPHC-2026-IM102-13	Report on Current and Future Biological and Ecosystem Science Research Activities (J. Planas)	✓ 23 Oct 2026
IPHC-2026-IM102-14 Rev_1	IPHC Fishery Regulations: Proposals for the 2026-27 process (B. Hutniczak)	✓ 30 Oct 2026 ✓ 3 Nov 2026

IPHC Fishery Regulation proposals for 2027		
IPHC Secretariat Fishery Regulation proposals for 2027		
IPHC-2026-IM102-PropA1	IPHC Fishery Regulations: Mortality and Fishery Limits (Sect. 5)	✓ 23 Oct 2026
IPHC-2026-IM102-PropA2	IPHC Fishery Regulations: Commercial Fishing Periods (Sect. 9)	✓ 23 Oct 2026
Contracting Party Fishery Regulation proposals for 2027		
IPHC-2026-IM102-PropB1	IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut – IPHC Regulatory Areas 2C, 3A, 3B, 4A, 4B, 4C, 4D, 4E (Sect. 28) - Charter Management Measures in IPHC Regulatory Areas 2C and 3A (USA)	*Deferred - AM103*
IPHC-2026-IM102-PropB2	IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut - IPHC Regulatory Area 2B (Sect. 27) - Daily bag limit in IPHC Regulatory Area 2B (Canada)	✓ 30 Oct 2026
IPHC-2026-IM102-PropB3	IPHC Fishery Regulations: Logs (Sect. 19): Addition of Community-Based Fisheries and Five Nations Rights-Based Fishery Logbooks as permitted logs in IPHC Regulatory Area 2B	*Deferred - AM103*
IPHC-2026-IM102-PropB4	IPHC Fishery Regulations: Closed Periods (Sect. 11): Limited retention outside the commercial fishing period in IPHC Regulatory Area 2B	*Deferred - AM103*
IPHC-2026-IM102-PropB5	IPHC Fishery Regulations: Mortality and Fishery Limits (Sect. 5) - Incorporating Recreational Fishing Quota issued to the guided recreational fishery in IPHC Regulatory Area 2C and Area 3A into the IPHC Fishery Regulations table containing Contracting Party catch-sharing arrangements and respective quantities (USA)	✓ 30 Oct 2026
IPHC-2026-IM102-PropB6	IPHC Fishery Regulations: IPHC Fishery Regulations: Fishing Gear (Sect. 17) - Allowing for donation of Pacific halibut in the non-directed commercial sector through an Exempted Fishing Permit issued by NOAA Fisheries (USA)	✓ 30 Oct 2026
Other Stakeholder Fishery Regulation proposals for 2027		
IPHC-2026-IM102-PropC1	Nil	Nil
Information papers		
IPHC-2026-IM102-INF01	Stakeholder Statements on IPHC Fishery Regulation proposals (B. Hutniczak)	Nil to date
Reports from IPHC subsidiary bodies		

IPHC-2026-MSAB022-R	Report of the 22nd Session of the IPHC Management Strategy Advisory Board (MSAB022)	✓ 14 May 2026
IPHC-2026-SRB028-R	Report of the 28th Session of the IPHC Scientific Review Board (SRB028)	✓ 21 May 2026
IPHC-2026-SRB029-R	Report of the 29th Session of the IPHC Scientific Review Board (SRB029)	✓ 24 Sept 2026
IPHC-2026-RAB027-R	Report of the 27th Session of the IPHC Research Advisory Board (RAB027)	Expected 18 Nov 2026

Update on actions arising from the 102nd Session of the IPHC Annual Meeting (AM102), 2026 Special Sessions, and intersessional decisions

PREPARED BY: IPHC SECRETARIAT (D. WILSON; 27 OCTOBER 2026)

Outcome sought: *NOTE the update; AGREE to close actions AM102–Req.01 and AM102–Req.02.*

PURPOSE

To provide the Commission with an opportunity to consider the progress made during the inter-sessional period in relation to the direct requests for action by the Commission.

BACKGROUND

At the 102nd Session of the IPHC Annual Meeting (AM102) (IPHC-2026-AM102-R), Contracting Parties agreed on a series of actions to be taken by Commissioners, subsidiary bodies, and the IPHC Secretariat on a range of issues as detailed in Appendix A.

No Special Sessions of the Commission were convened during 2026, and no intersessional decisions were taken.

DISCUSSION

Noting that best practice governance requires the prompt delivery of core tasks assigned to the IPHC Secretariat by the Commission, at each session of the Commission and its subsidiary bodies, any recommendations for action are carefully constructed so that each contains the following elements:

1) a specific action to be undertaken (deliverable);
2) clear responsibility for the action to be undertaken (i.e. a specific Contracting Party, the IPHC Secretariat staff, a subsidiary body of the Commission, or the Commission itself);
3) a desired time frame for delivery of the action (i.e. by the next session of a subsidiary body, or other date).

This involves numbering and tracking all action items from the Commission, as well as including clear progress updates and document reference numbers.

Against that standard, the position at the date of this paper is as follows. AM102 generated two (2) direct requests for action and no formal recommendations. Both requests have been completed, and no actions remain outstanding. As no Special Sessions were convened during 2026 and no intersessional decisions were taken, no further actions arise from those sources.

RECOMMENDATION/S

That the Commission:

1) **NOTE** paper IPHC-2026-IM102-03, which provided the Commission with an opportunity to consider the progress made during the inter-sessional period, in relation to the direct requests for action by the Commission.
2) **NOTE** that both actions arising from AM102 have been completed, that no Special Sessions of the Commission were convened during 2026, and that no intersessional decisions were taken; and
3) **AGREE** to close actions AM102–Req.01 and AM102–Req.02.

APPENDICES

Appendix A: Update on actions arising from the 102nd Session of the IPHC Annual Meeting (AM102: January 2026)

APPENDIX A

Update on actions arising from the 102nd Session of the IPHC Annual Meeting (AM102: January 2026)

102nd Session of the IPHC Annual Meeting (AM102)		
Action No.	**Description**	**Update**
RECOMMENDATIONS		
Nil	Nil	Nil
REQUESTS		
AM102–Req.01 (para. 93)	***IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut - IPHC Regulatory Areas 2C, 3A, 3B, 4A, 4B, 4C, 4D, 4E (Sect. 28) – unguided sector bag limit*** The Commission **REQUESTED** that the Secretariat send a letter to the North Pacific Fishery Management Council transmitting copies of regulatory proposals C1 and C3 for the Council's awareness and consideration. The letter should inform the Council that the expansion of the unguided recreational harvest in Alaska prompted considerable feedback from IPHC stakeholders. In 2025 the final unguided harvest and removal estimate in Area 2C was 1.445 Mlb, compared to the preliminary removal estimate of 0.992 Mlb, and the increase is understood to be driven by growing harvest by anglers fishing from unguided rental boats. This poses both management and allocative concerns, particularly in light of the current low abundance of the halibut resource. Given the Council's important role in these matters, the Council may wish to consider measures to improve management and catch data collection for the unguided recreational sector of the Pacific halibut fishery.	**Lead**: IPHC Secretariat (D. Wilson & B. Hutniczak) **Status/Plan**: Completed A letter was sent via email to the Chair of the NPFMC and Executive Director on 26 January 2026, with all IPHC Commissioners in CC. **EL2026002** dtd 26 January 2026 - IPHC Letter to the NPFMC. **NPFMC response**: The NPFMC considered the IPHC letter at its February 2026 meeting. B8 IPHC Letter to NPFMC, and decided to take no action at that time.
AM102–Req.02 (para. 107)	***Review of the draft and adoption of the report of the 102nd Session of the IPHC Annual Meeting (AM102)*** The Commission **REQUESTED** that the IPHC Secretariat finalise and publish the IPHC *Pacific Halibut Fishery Regulations (2026)* as soon as possible, **NOTING** that only minor editorial and formatting changes are permitted beyond the decisions made by the Commission at the AM102.	**Lead**: IPHC Secretariat (B. Hutniczak) **Status/Plan**: Completed Published on the IPHC website 4 February 2026: IPHC-2026-FISHR26.

Report of the IPHC Secretariat (2026): draft

PREPARED BY: IPHC SECRETARIAT (D. WILSON & B. HUTNICZAK, 27 & 29 OCTOBER 2026)

1 PURPOSE

To provide the Commission with a preliminary report on IPHC Secretariat activities in 2026 not already contained in other papers before the Commission.

2 IPHC SECRETARIAT 2026

The IPHC is a public international organization so designated via Presidential Executive Order 11059 and established by a Convention between Canada and the United States of America. The IPHC Convention was signed on 2 March 1923, ratified on 21 July 1924, and came into effect on **21 October 1924** upon exchange.

The basic texts of the Commission are available on the IPHC website, and prescribe the mission of the organization as:

*"….. **to develop the stocks of [Pacific] halibut in the Convention waters to those levels which will permit the optimum yield from the fishery and to maintain the stocks at those levels**. ….." IPHC Convention* (Article I, sub-article 1, para. 2).

The IPHC Secretariat, formed in support of the Commission's activities, is based in Seattle, WA, U.S.A. (Fig. 1) and currently consists of 29 full-time positions (FTEs) and ~19–45 temporary/seasonal positions to staff our ports and research vessels (Appendix I). As our shared vision, ***the IPHC Secretariat aims to deliver positive economic, environmental, and social outcomes for the Pacific halibut resource for Canada and the U.S.A. through the application of rigorous science, innovation, and the implementation of international best practice.***

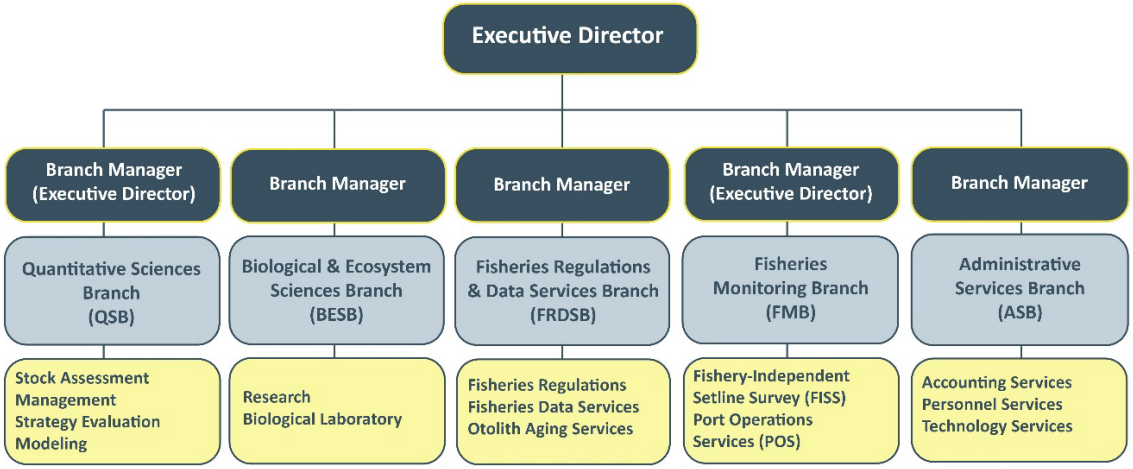


Figure 1. IPHC Secretariat organisation chart (2026).

3 ORGANISATIONAL TRANSFORMATIONS

3.1 Implementation of the Recommendations from the 2nd IPHC Performance Review

The Report of the 2nd Performance Review of the IPHC (PRIPHC02), IPHC-2019-PRIPHC02-R was adopted on 11 October 2019. Since then, the IPHC Secretariat has provided twice-yearly updates on the implementation of the 26 Recommendations to the Commission. The most recent update is available in paper IPHC-2025-AM101-05.

Only one (1) recommendation remains 'In progress', with all others either fully "Completed", or completed and "annually ongoing".

At AM101, the Commission reached the following agreement:

IPHC-2025-AM101-R, para. 13. "*The Commission AGREED to continue to monitor progress on the implementation of the PRIPHC02 recommendations and determine at a later date when to initiate the next performance review. At this point in time the Commission does not see a need to initiate a third performance review.*"

The one (1) Recommendation that remains in progress is as follows:

REF#	RECOMMENDATION	PRIORITY	RESPONSIBILITY	UPDATE/STATUS
PRIPHC02–Rec.09 (para. 73)	***Conservation and Management: Data collection and sharing*** The PRIPHC02 **RECOMMENDED** that observer coverage be adjusted to be commensurate with the level of fishing intensity in each IPHC Regulatory Area.	N/A	N/A	**N/A**
	Commission directive: The Commission **RECOMMENDED** that the IPHC Secretariat, in consultation with the Commission, develop minimum data collection standards for Pacific halibut by scientific observer programs. The intention would be for the Commission to review and approve the minimum standards, and recommend them for implementation by domestic agencies.	High	Contracting Parties	**In progress**: The Contracting Parties have yet to engage on this recommendation. See paper: **IPHC-2023-AM099-16**. At IM099 (Dec. 2023) the Commission provided the following update: (IM099, para. 7) The Commission **RECALLED** recommendation 09 from the PRIPHC02 (shown below) and **NOTED** that while there was no current agreement between the Contracting Parties to collectively move this recommendation forward, the Commission would continue discussions to seek common ground. PRIPHC02-Rec.09: *"The Commission RECOMMENDED that the IPHC Secretariat, in consultation with the Commission, develop minimum data collection standards for Pacific halibut by scientific*

REF#	RECOMMENDATION	PRIORITY	RESPONSIBILITY	UPDATE/STATUS
				observer programs. The intention would be for the Commission to review and approve the minimum standards, and recommend them for implementation by domestic agencies."

3.2 Artificial Intelligence (AI) Strategy

The Secretariat has developed an artificial intelligence (AI) Adoption Strategy to strengthen our support for the Commission's objectives using AI.

> *AI Adoption Strategy: Our AI Adoption Strategy will be designed to integrate AI into our core operations by focusing on six core areas: Strategic Alignment, Data Infrastructure, People & Culture, Governance & Ethics, Technology, and Execution & Scaling. Successful transformation relies predominantly on giving agency to Secretariat staff, and fostering an adaptive culture, supported by technology and necessary algorithms. We will aim to prioritise ethical governance, continuous employee upskilling, and secure data infrastructure. We will aim to ensure that AI serves as a responsible, transparent tool to augment staff potential, drive measurable operational value, and foster sustainable innovation.*

By embedding AI into our tactical and strategic operational frameworks, we aim to cultivate an AI-enhanced data-driven (and reproducible) operational environment that further supports the optimum utilisation of Pacific halibut and the long-term viability of target fisheries and the communities that depend on the resource.

Working closely with our partners at DFO and NOAA, we also aim to draw upon their AI expertise and experiences, and where feasible, integrate our own strategy with theirs to achieve mutual advancement and success.

Key components included in our AI Strategy:

1) Problem Definition:

We will initiate our AI journey by identifying specific challenges in Pacific halibut management, including:

- Fluctuating stock levels
- Climate change impacts
- Complex relationship with the environment and ecosystem
- Fishing practices
- Cost-efficient data collection

Engaging stakeholders via a range of formats will be essential in clarifying these challenges and prioritising the most impactful and sustainable AI applications.

2) Strategic Timing and Planning:

Implementing AI solutions requires careful timing. We will adopt a phased approach that aligns with the Commission's operational calendar to ensure AI tools are identified for potential use as they become available, tested to ensure accuracy and precision are understood, and then deployed in support of Commission objectives and key performance indicators. This will be supported by detailed project timelines that will outline key milestones, designate responsible teams, and allocate resources effectively to ensure seamless execution.

3) Benefit Measurement:

Defining success metrics will be vital for our AI initiatives to be successful. We will establish a framework to evaluate the impact of AI using key performance indicators to be developed on:

- Data collection efficiency (time and cost)
- Advances in the understanding of Pacific halibut biology and ecology (ecosystem relationships)
- Stock assessments
- Fishing yields
- Operational efficacy (governance)

Regular reviews will be conducted to ensure our AI strategy remains aligned with the IPHC's objectives and is adaptable to changing challenges in the field.

4) Data, Algorithms, and Infrastructure Considerations:

A robust data infrastructure is crucial for the success of our AI initiatives. We will:

- Conduct an inventory of existing data sources, emphasizing data quality and accessibility.
- Identify data collection and processing needs that could be addressed with AI.
- Invest in scalable cloud-based infrastructure to support our secure data collection, storage, and processing needs, ensuring our AI systems are sustainable and future-proof.
- Collaborate with data scientists (both internal and external) to identify suitable algorithms for data analysis, predictive modeling, and scenario analysis.

By strategically implementing these components, we are committed to realising our AI ambitions, thereby enhancing our capacity to support the optimum utilisation of Pacific halibut.

3.3 Deployment of Claude (AI) across IPHC work streams

During 2026 the Secretariat began the controlled introduction of Claude, a generative artificial intelligence assistant developed by Anthropic, into its daily work streams. Whereas the AI Strategy set out above addresses the medium-term ambition to apply AI to the scientific and data challenges of Pacific halibut management, this deployment addresses a more immediate constraint: the volume of drafting, reviewing, summarising and cross-checking that a Secretariat must carry in support of a Commission cycle comprising an Annual Meeting, an Interim Meeting, a Work Meeting and the sessions of the Commission's subsidiary bodies each year. The tool is used as an assistant to staff, not as a substitute for them. Every output is reviewed and owned by the staff member responsible, and no scientific conclusion, management advice or regulatory recommendation is generated by AI without expert verification.

The benefits realised to date have fallen into four areas. First, **document preparation and quality assurance**: meeting papers, agendas, correspondence and reports can be drafted and restructured considerably more quickly, and — importantly for a Commission that works from a numbered document series — checked for internal consistency, arithmetic accuracy, and consistency with previously published Commission decisions, at a level of thoroughness that is difficult to sustain manually under deadline. Second, **institutional memory**: the Commission's published record now extends across a century, and an assistant able to search, reconcile and cite that record reduces the Secretariat's dependence on individual recall. Third, **released capacity**: time recovered from routine drafting and checking is redirected to analysis, stakeholder engagement, and delivery against the Commission's Programme of Work. Fourth, **consistency of communication**: technical material can be summarised for different audiences — Commissioners, Contracting Party officials, stakeholders and the public — without re-working the underlying analysis. Together these gains advance the Secretariat's stated aim of delivering outcomes for the Pacific halibut resource "through the application of rigorous science,

innovation, and the implementation of international best practice", at modest cost and with no addition to establishment.

Security and data confidentiality

This deployment is not informal. AI use across the Secretariat is governed by **Section 702 (Artificial Intelligence Usage Policy)** of the IPHC Employee Manual (2026) (IPHC-2026-EM26, last updated 1 July 2026), which sits within the Commission's wider digital governance framework at Section 700 and is read together with Section 701 (electronic resources), 703 (password security and protection of confidential information), 704 (data confidentiality and data sharing), 705 (protecting and preserving IOIA rights) and 706 (records management). Section 702 applies to all employees, contractors and consultants, to any AI tool whether IPHC-provided or externally accessed, and irrespective of whether the tool is used on IPHC or personal devices. It is built on six binding principles — human oversight, accuracy and integrity, confidentiality, impartiality, transparency, and compliance. Materially for the Commission: IPHC confidential information, including commercial fisheries data, personnel information, legal advice and internal correspondence, must not be entered into any external or non-IPHC-approved AI platform; AI tools must not be used to make or materially influence employment decisions without full human review and approval; and AI must not be used to generate, modify or present scientific data or findings without full disclosure of the method and independent expert validation. Claude is an approved tool under Section 702, appearing on the list of approved AI tools maintained by the Administrative Services Branch; use of any tool not on that list requires the prior written approval of the relevant Branch Manager, and additions to the list are approved by the Executive Director. Completion of *AI Usage and Digital Governance* training is mandatory for all employees with system access within 90 days of appointment, and annually thereafter or on any material policy update.

Section 702 also establishes a disclosure regime that bears directly on documents placed before the Commission. It distinguishes *routine* use — drafting, editing, summarising or reformatting that the employee then substantially reviews and takes ownership of, requiring no disclosure in the output — from *substantive* use, where AI has materially shaped the analysis, conclusions, recommendations or scientific content. For scientific outputs, technical reports and Commission submissions, including submissions to subsidiary bodies, substantive use requires a standard disclosure note in the output, a brief indication of the nature of the AI contribution, and disclosure to the relevant Branch Manager. In addition, any use of AI in work intended for publication or submission to the Commission or its subsidiary bodies must be disclosed to the relevant Branch Manager and noted in the work itself (Appendix II, para. 19). Employees must also retain an auditable record of AI-assisted outputs under the record-keeping provisions of Section 702 and the Records Management policy at Section 706. Separately, and consistent with the Commission's direction to reduce the carbon footprint of IPHC activities, Section 504 Part 6 (*Responsible and Sustainable AI Usage*) requires mindful and proportionate use of AI tools, makes environmental performance a criterion in tool approval, and will report AI usage volume in the Secretariat's annual sustainability summary.

Current application across the Secretariat

AI is presently applied, or under development, in the following areas:

Area	Application	Status
General	• IPHC governance review and improvement • Quality assurance • Legal research • Website review and development • Professional development • Stakeholder engagement planning • Budget trend analysis • Document research	Operational
Biological and Ecosystem Sciences	• Assist with data processing, scientific literature searches, and code quality checks and documentation. • Optimization of software integration. • Review and update website content. • Development of training materials.	Operational
Fisheries Regulations & Data Services	• AI-assisted: - data quality and consistency checks across fisheries databases - development of applications supporting data collection and centralization - development of public-facing dashboards to inform stakeholders - review of documents and meeting papers • Automated otolith ageing based on otolith images and CNN training	Operational In development
Fisheries Monitoring (Port operations & FISS)	• Reviewing Commission meeting papers • Development and review of data quality assurance code for biological data • Drafting and review of budget narratives to ensure alignment with Commission and Federal financial regulations.	Operational
Quantitative Sciences (Stock assessment, MSE, and Modelling)	• Support for enhanced data processing and statistical analyses as well as assessment and MSE programming • Model and code development for the analysis and projection of weight-at-age • Code optimization to reduce simulation time • Documentation of code • Assistance summarizing and developing graphics of results • Development of public-facing tools such as MSE Explorer and summary dashboard	Operational
Administrative Services	• Support IT systems administration and cybersecurity hardening — including drafting technical proposals and documentation • Troubleshooting infrastructure and network authentication issues • Use of AI coding tools to support application development and scripting tasks • Drafting, review and troubleshooting of internal HR • Administrative and operational communications and workflows • Data/system issue resolution	Operational

The Secretariat will report more fully on adoption, measured benefits and any issues arising in the Report of the IPHC Secretariat to AM103, alongside the finalised AI Adoption Strategy.

IPHC Artificial Intelligence (AI) Usage Policy: Recognising the operational and scientific value that artificial intelligence (AI) tools can provide to the work of the Secretariat, while also

acknowledging the need to safeguard data confidentiality, scientific integrity, and the IPHC's privileges and immunities under the International Organizations Immunities Act (IOIA), the Commission is invited to NOTE the draft public-facing Artificial Intelligence (AI) Usage Policy (IPHC-2027-PP-06). The draft will be reviewed at FAC103 for recommendation to the Commission, with a view to adoption at AM103 in January 2027. It would be adopted under a new paragraph 12 of Regulation 12 (Internal Controls), proposed in the Financial Regulations amendments at FAC103 (IPHC-2027-FAC103-08). Section 702 of the IPHC Employee Manual will be aligned with the policy once adopted. The draft policy is provided at Appendix II.

4 IPHC INTERNSHIP PROGRAM: 2026

The IPHC funds full-time internships each summer. In 2026, the IPHC hosted two (2) undergraduate interns, Ms Justine Vuong and Mr William Mixon, recent graduates of the University of California, San Diego, and University of Washington, respectively. The two interns have actively participated in IPHC's efforts to genotype the sex of commercial landings and to develop an automated method for the ageing of otoliths using artificial intelligence, among other activities. The internship period ran from 15 June through 18 September 2026.



William Mixon
(University of Washington)
2026



Justine Vuong
(University of California, San Diego)
2026

5 IPHC MERIT SCHOLARSHIP FOR 2026-29

The IPHC funds several Merit Scholarships to support university, technical college, and other post-secondary education for students from Canada and the United States of America who are connected to the Pacific halibut fishery. Generally, a single new scholarship valued at US$4,000 per year is awarded every two years. The scholarships are renewable annually for the normal four-year period of undergraduate education, subject to maintenance of satisfactory academic performance.

Since the scholarship's inception in 2002, the IPHC has awarded over US$160,000 in scholarship funds to 21 recipients.

In 2026, the IPHC Merit Scholarship Selection Panel reviewed applications and selected an outstanding candidate from a strong application pool, based on academic qualifications, career goals, and relationship to the Pacific halibut industry.

The Selection Panel consists of the following three (3) panellists:

- Robert Alverson (USA Commissioner)

- Peter DeGreef (Canadian Commissioner)
- Christa Rusel (Industry representative)

The Selection Panel unanimously awarded Ms Ava Young (Madeira Park, BC, Canada) the 2026 IPHC Merit Scholarship. The current recipients and their expected years of receipt are provided below.

Name	2025	2026	2027	2028	2029
Shea Davis (Cordova, AK, USA)	$4,000	$4,000	$4,000	$4,000	-
Ava Young (Madeira Park, BC, Canada)	-	$4,000	$4,000	$4,000	$4,000



Ava Young
2026



Shea Davis
2024

6 MEETINGS OF THE COMMISSION AND SUBSIDIARY BODIES DURING 2026

Meeting	No.	Date	Location	Secretariat material
Finance and Administration Committee (FAC)	102nd	14 Jan	Bellevue, WA, USA	5 working papers
Annual Meeting (AM)	**102nd**	**19-22 Jan**		14 working papers, 8 regulatory proposals
Conference Board (CB)	96th	20-21 Jan		Commission papers
Processor Advisory Board (PAB)	31st	20-21 Jan		Commission papers
Management Strategy Advisory Board (MSAB)	22nd	12-14 May	Electronic	5 working papers
Scientific Review Board (SRB)	28th	19-21 May	Seattle, USA & Electronic	7 working papers
Work Meeting (WM)	2026	16 Sept	Seattle, USA & Electronic	9 working papers
Scientific Review Board (SRB)	29th	22-24 Sept	Seattle, USA & Electronic	6 working papers
Research Advisory Board (RAB)	27th	17-18 Nov	Seattle, USA & Electronic	Pending
Interim Meeting (IM)	**102nd**	**1 Dec**	Electronic	Pending

7 IPHC FISHERY REGULATIONS ADOPTED IN 2026

In 2026, the Commission adopted **six (6)** fishery regulations proposals (IPHC-2026-AM102-R) in accordance with Article III of the Convention, as follows:

7.1 IPHC Secretariat fishery regulation proposals

IPHC Fishery Regulations: Mortality and Fishery Limits (Sect. 5)

(par. 81) The Commission **ADOPTED** fishery regulation proposal IPHC-2026-AM102-PropA1, which provided the framework for the mortality and fishery limits populated at AM102 (Appendix VIII). *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

(par. 82) The Commission **ADOPTED** the distributed mortality limits for each Contracting Party, by IPHC Regulatory Area, (Table 5) and sector, as provided in Appendix VIII. *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

Table 5. Adopted TCEY mortality limits for 2026

Contracting Party IPHC Regulatory Area	Mortality limit (TCEY) (Mlb)	Mortality limit (TCEY) (metric tonnes)	% change from 2025
Canada Total: 2B	**5.06**	**2,295**	**-7.2%**
USA: 2A	1.65	748	0.0%
USA: 2C	5.22	2,368	0.0%
USA: 3A	9.08	4,119	0.0%
USA: 3B	2.86	1,297	0.0%
USA: 4A	1.34	608	0.0%
USA: 4B	1.04	472	0.0%
USA: 4CDE	3.08	1,397	0.0%
United States of America Total	**24.27**	**11,009**	**0.0%**
Total (IPHC Convention Area)	**29.33**	**13,304**	**-1.3%**

IPHC Fishery Regulations: Commercial fishing periods (Sect. 9)

(par. 87) The Commission **ADOPTED** fishery regulation proposal IPHC-2026-AM102-PropA2, that provided the framework for setting fishing periods for the commercial Pacific halibut fisheries. *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

(par. 88) The Commission **ADOPTED** fishing periods for 2026 as provided below, thereby superseding the relevant portions of Section 9 of the IPHC Fishery Regulations (Appendix IX) by specifying that commercial fishing for Pacific halibut in all IPHC Regulatory Areas may begin no earlier than 06:00 hrs local time on **26 March 2026** and must cease at 23:59 hrs local time on **7 December 2026**. *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

7.2 *Contracting Party fishery regulation proposals*

IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut—IPHC Regulatory Areas 2C, 3A, 3B, 4A, 4B, 4C, 4D, 4E (Sect. 28) - Charter Management Measures in IPHC Regulatory Areas 2C and 3A (USA)

(par. 89) The Commission **ADOPTED** fishery regulation proposal IPHC-2026-AM102-PropB1, that included charter management measures in IPHC Regulatory Areas 2C and 3A reflective of

mortality limits adopted by the IPHC and resulting allocations under the North Pacific Fisheries Management Council's (NPFMC) Pacific halibut Catch Sharing Plan (Appendix X). *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut - IPHC Regulatory Area 2B (Sect. 27) - Daily bag limit in IPHC Regulatory Area 2B (Canada)

(par. 90) The Commission **ADOPTED** fishery regulation proposal IPHC-2026-AM102-PropB2, with an amendment to limit the application to one (1) year. PropB2 proposed a daily bag limit of up to three fish per day per person in the recreational fishery in IPHC Regulatory Area 2B beginning on or after 1 August of each year. This provision shall remain in effect through 2026, unless extended by a vote of the Commission (Appendix XI). *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut - IPHC Regulatory Area 2A – Season opening dates for recreational fishery subareas within IPHC Regulatory Area 2A (USA)

(par. 91) The Commission **ADOPTED** fishery regulation proposal IPHC-2026-AM102-PropB3, that proposed opening the 2026 Regulatory Area 2A recreational fishery in the Convention waters of the Washington Puget Sound and the U.S.A. Convention waters in the Strait of Juan de Fuca subarea and in the Convention Waters off the California subareas on 2 April and on 1 April (Appendix XII). *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

7.3 Stakeholder fishery regulation proposals

IPHC Fishery Regulations: Commercial Fishing Periods (Sect. 9) – limited retention outside the commercial fishing period in IPHC Regulatory Area 2B (R. Hauknes)

(par. 94) The Commission **ADOPTED** fishery regulation proposal IPHC-2026-AM102-PropC2, with an amendment to limit the application to one (1) year. PropC2 proposed a three-year pilot program authorising limited retention of legal-sized Pacific halibut caught incidentally as bycatch outside the Pacific halibut commercial fishing period in year-round hook & line and trap groundfish fisheries in IPHC Regulatory Area 2B (Canada). As explicit regulatory language was not provided with the proposal, the Secretariat and Fisheries and Oceans Canada developed specific regulatory language before the IPHC Fishery Regulations were finalised for implementation and enforcement. This measure will be applicable for a period of one (1) year, unless extended by a vote of the Commission. *[Canada/USA: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*

*The final r*egulatory language implementing PropC2 can be found in IPHC Fishery Regulations 2026 published on 4 February 2026.

8 INTERACTIONS WITH CONTRACTING PARTIES [PRELIMINARY]

8.1 Contracting Party reports

The IPHC Secretariat engages annually with agency representatives from both Contracting Parties to ensure comprehensive reporting of all forms of Pacific halibut removals. Efforts are ongoing to identify and address data gaps, as well as to improve data collection processes. Additionally, the Secretariat collaborates with both Contracting Parties to streamline the development of the National Report and enhance consistency across submissions.

8.2 Data audit and reporting review

During 2026, the Secretariat also audited a number of database tables, compared these against domestic data sources maintained by the Contracting Parties, and reviewed processing approaches to improve the reporting of time series datasets available to stakeholders.

8.3 Canada

Fisheries and Oceans Canada (DFO)

Collaboration with DFO and AMR to complete IPHC Regulatory Area 2B logbook coverage

In 2026, IPHC continued its collaboration with DFO and Archipelago Marine Research (AMR) to obtain Canadian logbook data that had not previously been included in IPHC's standard data collection. Through this collaboration, IPHC obtained missing Regulatory Area 2B logbooks for the years 2009–2025, ensuring comprehensive coverage of fishing activity for incorporation into the Pacific halibut stock assessment. This initiative strengthens data completeness and improves the accuracy and consistency of catch information used in scientific analyses and management decisions. This amounts to approximately 1,700 logbooks not previously included. Processing of these logbooks is in progress.

Areas of conservation concern

The IPHC Secretariat continues to work with the DFO representatives to address gaps in coverage for the IPHC FISS in the IPHC Regulatory Area 2B. Currently, the FISS license excludes Marine Protected Areas as described by Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas Regulations, and Rockfish Conservation Areas (RCAs).

Memorandum of Understanding/Collective Agreement – Rockfish

This agreement has been put on hold for 2026 by DFO.

Central Coast of BC: Mia-yaltwa Ha'lidzogm hoon National Marine Conservation Area Reserve and Indigenous Protected and Conserved Area

An establishment agreement for the Mia-yaltwa Ha'lidzogm hoon National Marine Conservation Area (NMCAR) on the Central Coast of British Columbia was completed in May 2026. Mia-yaltwa Ha'lidzogm hoon has also been declared as an Indigenous Protected and Conserved Area (IPCA) by the six partnering Nations. The area has an overlap with 19 IPHC FISS standard grid stations (Fig. 2).

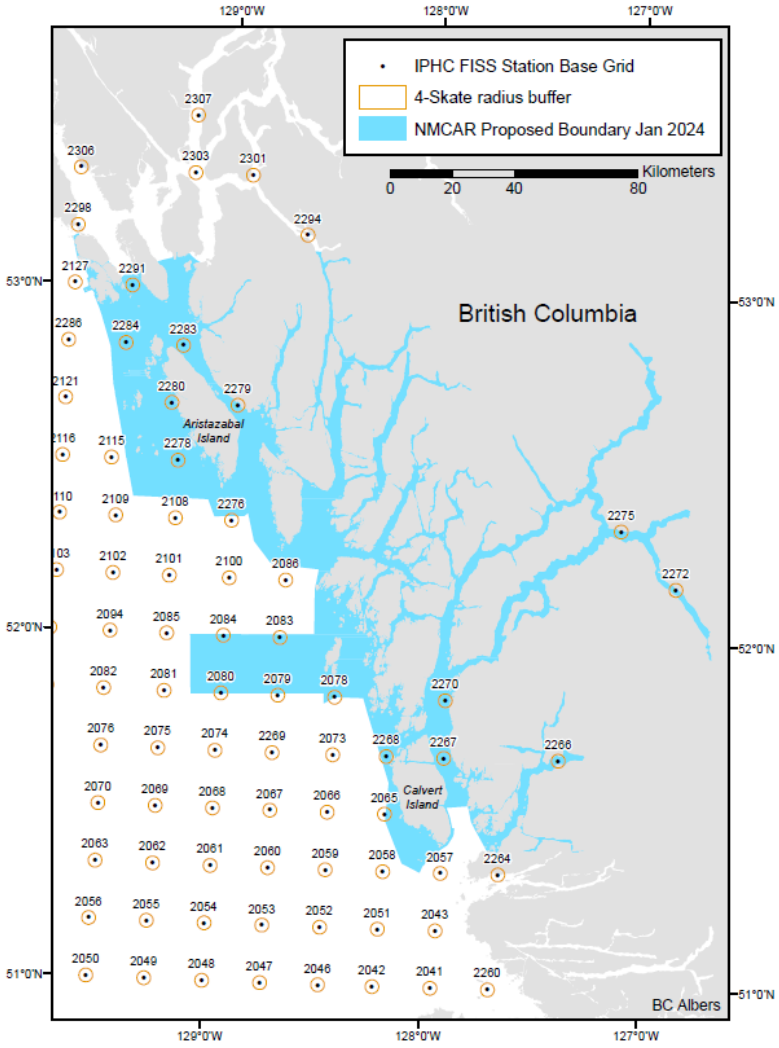


Figure 2: Central Coast National Marine Conservation Area with IPHC FISS standard grid stations.

Halibut Advisory Board (HAB)

The Executive Director (Dr. Wilson) participates as a HAB member, with the Fisheries Regulations and Data Services Branch manager (Dr. Hutniczak) as the IPHC alternate. This relationship is expected to continue into the future given the HAB's contributions to the Canadian decision-making process.

8.4 United States of America

The 2026 Annual Management Measures were published in the Federal Register on 25 March 2026 and are available here.

NOAA Fisheries

Electronic logbooks in Alaska

In 2026, the IPHC continues to support the implementation of electronic logbooks in Alaska. Building on the successful 2024 trial, the Secretariat is working with the vendor and NOAA Fisheries to expand adoption and integration of the system, which enables digital recording and verification of fishing activity without the need for paper records.

NOAA Fisheries is also finalizing the development of its application programming interface (API), which should allow the IPHC to access electronically submitted Daily Fishing Logbooks (DFLs) through the eLandings platform, further enhancing data sharing and coordination between agencies.

Management in IPHC Regulatory Area 2A

The Secretariat has a data sharing agreement with NOAA Fisheries West Coast Region to access confidential data, including:

- All non-trawl logbook data submissions that include landings or discards of Pacific halibut, either sourced from the electronic application (FishVue Float) or paper logbooks, which are currently located in a data system maintained by the Pacific States Marine Fisheries Commission (PacStates); and
- All permit data for directed commercial fishery, recreational charter fishery, incidental salmon troll, and incidental longline sablefish fishery permits for Pacific halibut, which are currently located in a data system maintained by NOAA Fisheries.

These data are essential for the efficient fulfillment of tasks related to biological sampling collection and log data compilation for IPHC Regulatory Area 2A. IPHC is also actively working with 2A partners to ensure the quality of these data. The agreement was signed on 16 October 2023 and is valid through 15 October 2028.

North Pacific Fishery Management Council (NPFMC)

The IPHC provided the Council with the outcomes of the 102nd Session of the IPHC Annual Meeting (AM102) during its February 2026 meeting (B8 report).

At its October meeting, the NPFMC discussed Charter Halibut Permits, Transfer Eligibility Certificate (TEC) requirements, Community Quota Entity (CQE) transfer changes, and changes to landing/unloading requirements. Of particular interest for the IPHC are potential changes to the prior notice of landing (PNOL) requirements.

The IPHC Secretariat's port sampling program relies on PNOLs to know when and where landings will occur, and to decide whether a landing must be sampled and how much to sample. Waiving prior notice for small landings would leave port staff unable to reliably sample those landings. That could bias the biological data. Expanding designated unloading areas could likewise spread landings across more locations. Maintaining sampling coverage might then require staffing additional ports. The Secretariat will continue to monitor these proposals and expects to provide input should the NPFMC move forward with regulatory changes related to PNOLs.

Under agenda item Charter Halibut Permits Data Request, the Council requested evaluation of decoupling the cumulative limit on the transfer of IFQ to Guided Angler Fish (GAF) and the pounds of Recreational Fishing Quota (RFQ) issued to the RQE in IPHC Regulatory Area 2C, and impacts of raising the annual transfer limit of the commercial Pacific halibut QS pool to RQE.

The Council also supported NMFS approval of an exempted fishing permit (EFP) application from SeaShare, Inc. and Glacier Fish Company. The applicants propose to test an alternative processing workflow on a single trawl catcher/processor. A limited amount of Pacific halibut remaining in the catch after deck sorting and observer sampling would be retained and donated through the Prohibited Species Donation Program, rather than discarded at sea as currently required.

Pacific Fishery Management Council (PFMC)

2A Pacific Halibut Catch Sharing Plan and the structure of the non-Tribal directed commercial Pacific halibut fishery

At the meeting in December 2025, the Council adopted the 2026 Area 2A Pacific halibut fisheries season structure for the 2026 non-Tribal directed commercial Pacific halibut fishery and Washington, Oregon, and California sport fisheries. Details are available in the Decision Summary Document.

The management measures for the Area 2A Pacific halibut directed commercial fishery are published in the Federal Register (91 FR 36094, 16 June 2026). In-season action added additional fishing periods (91 FR 45224, 20 July 2026; 91 FR 50726, 6 August 2026, 91 FR 55497, 28 August 2026).

Incidental Catch Limits for Fixed Gear Sablefish Fisheries

Adopted in March 2026, the Council's final recommendation for the 2026 incidental Pacific halibut catch limits in the fixed gear fishery north of Point Chehalis beginning 1 April was 75 pounds of dressed weight Pacific halibut for every 1,000 pounds dressed weight of sablefish, plus 2 additional Pacific halibut in excess of the ratio, which was consistent with the Groundfish Advisory Subpanel recommendations.

Incidental Catch Limits for Salmon Troll Fishery

Under the Pacific Halibut Catch Sharing Plan, the salmon troll fishery is provided a portion of the non-tribal commercial Pacific halibut allocation for incidental retention of Pacific halibut. In April 2026, the Council adopted catch ratio and vessel limits for incidental Pacific halibut retention in the salmon troll fishery which are effective from 16 May 2026 through the end of the 2026 salmon troll fishery, and beginning 1 April 2027, until modified through in-season action or the 2027 management measures. License holders may land no more than one Pacific halibut per two Chinook, except one Pacific halibut may be landed without meeting the ratio requirement, and no more than 35 Pacific halibut landed per trip.

2027 Commercial and Recreational Catch Sharing Plan and Annual Regulations

In September 2026, the Council adopted, for public review, proposed changes to the 2027 Pacific Halibut Commercial and Recreational Catch Sharing Plan (CSP) and annual regulations. Status quo was proposed for the directed commercial fishery. The Council will adopt final changes to the 2027 Pacific halibut CSP and annual fishery regulations at their November 2026 meeting.

Alaska Fisheries Science Center (AFSC)

Pacific cod and Pacific spiny dogfish sampling agreement

NOAA Fisheries, through the Alaska Fisheries Science Center (AFSC), requested sex and length data from Pacific spiny dogfish and length data from Pacific cod from all FISS stations surveyed in 2026. The IPHC has been collecting these data from Pacific spiny dogfish since 2011, from Pacific cod in the Bering Sea since 2007 and from Pacific cod in the Gulf of Alaska (GOA) since 2017. During the 2026 FISS, the IPHC FISS team collected 1,211 lengths of Pacific cod and 1,365 lengths/sex of Pacific spiny dogfish as a part of this agreement.

Data sharing agreement with the AFSC Fisheries Monitoring Division

The Secretariat has a standing data sharing agreement with the NOAA Alaska Fisheries Science Center (AFSC) Fisheries Monitoring Division to obtain confidential information from commercial fisheries observers and electronic monitoring systems, including haul information: fishing gear, location, date and time, lengths of specimens and species composition. The current agreement is valid through 28 August 2028.

Northwest Fisheries Science Center (NWFSC)

The Secretariat has a standing data sharing agreement with the Northwest Fisheries Science Center to obtain confidential data from commercial fishing vessels observed by the West Coast Groundfish Observer Program (WCGOP) or the At-Sea Hake Observer Program (A-SHOP). This includes haul-level observer data: fishing vessel information, gear used, Pacific halibut catch, catch of other species, species biological data (e.g. length, weight, sex), mortality assessments, haul locations, tow or soak time duration, depth, date, and time. The current agreement is valid through 19 July 2027.

Washington Department of Fish and Wildlife (WDFW)

Memorandum of Understanding – Rockfish (2026-2030)

The objective of the Memorandum of Understanding with the WDFW is to 1) collect and utilize catch and biological sample data from species caught during the IPHC's FISS; 2) agree on how proceeds from the sale of Pacific halibut, rockfish and Pacific cod will be disbursed; and 3) lay forth the financial obligations associated with undertaking additional FISS stations, as requested by the WDFW, to survey rockfish populations off the Washington coastline.

Surveying rockfish index stations in Washington was put on hold in 2026.

Data sharing agreement with California Department of Fish and Wildlife

The IPHC and the CDFW entered into a data sharing agreement for the purpose of tracking all Pacific halibut removals from within Convention waters. The agreement provides the Secretariat with access to commercial landing receipt data from California. The agreement was extended in 2025 and is now valid through 31 March 2027.

9 IPHC PUBLICATIONS AND OUTREACH

9.1 IPHC Website

The IPHC Secretariat continues to enhance the accessibility of data and statistics for stakeholders and other interested parties, with a particular focus on providing timely and informative visual displays such as those listed below. In 2026, the IPHC website underwent ongoing improvements in design and simplified content management, including the introduction of five (5) interactive dashboards:



1) Stock Status
2) Fishery-Independent Setline Survey
3) Commercial Fisheries
4) Biology & Ecology
5) Socio-Economics

9.2 Annual Report

The 2025 Annual Report (1 January to 31 December 2025) was published on 13 March 2026 and is available for download from the IPHC website at the following link:

https://www.iphc.int/uploads/2026/03/IPHC-2026-AR2025-R-IPHC-Annual-Report.pdf

The 2026 Annual Report is expected to be published in March 2027.

9.3 IPHC Circulars and Media Releases

2026 IPHC Circulars continue to serve as the formal inter-sessional communication mechanism for the Commission. Circulars are used to announce meetings of the Commission and its subsidiary bodies, as well as inter-sessional decisions made by the Commission. The following are those published in 2026, and a full list may be accessed via the following weblink: https://www.iphc.int/category/circulars/

Circular	Title	Date published
IPHC-2026-CR-001	Report of the 102nd Session of the IPHC Finance and Administration Committee (FAC102)	14 Jan 2026
IPHC-2026-CR-002	Report of the 31st Session of the IPHC Processor Advisory Board (PAB031)	21 Jan 2026
IPHC-2026-CR-003	Report of the 96th Session of the IPHC Conference Board (CB096)	21 Jan 2026
IPHC-2026-CR-004	Report of the 102nd Session of the IPHC Annual Meeting (AM102)	22 Jan 2026
IPHC-2026-CR-005	Invitation to the 22nd Session of the IPHC Management Strategy Advisory Board (MSAB022)	11 Feb 2026

IPHC-2026-CR-006	Invitation to the 28th Session of the IPHC Scientific Review Board (SRB028)	17 Feb 2026
IPHC-2026-CR-007	Publication of IPHC Annual Report 2025 (IPHC-2026-AR2025-R)	13 Mar 2026
IPHC-2026-CR-008	Report of the 22nd Session of the IPHC Management Strategy Advisory Board (MSAB022)	15 May 2026
IPHC-2026-CR-009	Report of the 28th Session of the IPHC Scientific Review Board (SRB028)	21 May 2026
IPHC-2026-CR-010	Invitation to the 29th Session of the IPHC Scientific Review Board (SRB029)	26 Jun 2026
IPHC-2026-CR-011	Invitation to the 27th Session of the IPHC Research Advisory Board (RAB027)	18 Aug 2026
IPHC-2026-CR-012	Invitation to the 102nd Session of the IPHC Interim Meeting (IM102)	3 Sep 2026
IPHC-2026-CR-013	Report of the 29th Session of the IPHC Scientific Review Board (SRB029)	24 Sep 2026
IPHC-2026-CR-014	Invitation to the 103rd Session of the IPHC Finance and Administration Committee (FAC103)	22 Oct 2026
IPHC-2026-CR-015	Invitation to the 103rd Session of the IPHC Annual Meeting (AM103)	26 Oct 2026
IPHC-2026-CR-016	Invitation to the 97th Session of the IPHC Conference Board (CB097) and the 32nd Session of the IPHC Processor Advisory Board (PAB032)	27 Oct 2026

2026 IPHC Media Releases are the primary informal communication with all stakeholders. https://www.iphc.int/category/media-releases/

Media Release	Title	Date published
IPHC-2026-MR-001	Outcomes of the 102nd Session of the IPHC Annual Meeting (AM102)	22 Jan 2026
IPHC-2026-MR-002	IPHC 2026 Fishery-Independent Setline Survey (FISS) Request for Tender – Adak	11 Feb 2026
IPHC-2026-MR-003	Notification of Potential Pacific Halibut Sales in 2026: Seeking Buyers Interested in Fish Sales from the IPHC Fishery-Independent Setline Survey (FISS)	5 Mar 2026
IPHC-2026-MR-004	Notification of IPHC Fishery-Independent Setline Survey (FISS) 2026 Contract Awards	20 Mar 2026
IPHC-2026-MR-005	2026 Commercial Fishing Period Opens 26 March 2026	25 Mar 2026
IPHC-2026-MR-006	2026 IPHC Merit Scholarship 2026	6 Apr 2026
IPHC-2026-MR-007	Application Deadline for the 2026 IPHC Merit Scholarship: 12 June 2026	20 May 2026
IPHC-2026-MR-008	Fishery-Independent Setline Survey (FISS): 2026	21 May 2026
IPHC-2026-MR-009	Attention Salmon Processors – Chum Salmon Needed for the 2027 IPHC Fishery-Independent Setline Survey (FISS)	2 Jun 2026
IPHC-2026-MR-010	Request for Proposal (RFP): Fishery-Independent Setline Survey (FISS) Field Data Collection Application	11 Jun 2026
IPHC-2026-MR-011	2026 Fecundity Study Request for Tender	7 Jul 2026
IPHC-2026-MR-012	Attention Salmon Processors – Chum Salmon Needed for the 2027 IPHC Fishery-Independent Setline Survey (FISS)	30 Jul 2026
IPHC-2026-MR-013	IPHC Merit Scholarship (2026) AWARDED	10 Aug 2026

All interested persons are encouraged to request that their email addresses be added to IPHC distribution lists at the following link: https://www.iphc.int/media-news-subscription/.

9.4 IPHC external engagement

There is a considerable amount of effort put into public outreach, attending conferences and meetings that enhance knowledge, contributing expertise to the broader scientific community through participation on boards and committees, and seeking further education and training.

Committees and external organisation appointments

North America:

1) *Canada – U.S. Groundfish Technical Committee* - Dr. Josep Planas

Canada:

1) *Halibut Advisory Board* (Canada) - Dr. David Wilson (Dr. Basia Hutniczak – Alternate)

United States of America:

1) *Bering Sea/Aleutian Islands Plan Team* - Dr. Allan Hicks
2) *NPFMC Scientific and Statistical Committee* - Dr. Ian Stewart
3) *North Pacific Research Board Science Panel* - Dr. Allan Hicks
4) *Marine Resource Education Program, North Pacific* – Dr. Allan Hicks
5) *Fisheries Monitoring Science Committee (NOAA-Alaska)* – Dr. Ray Webster
6) *Interagency electronic reporting system for commercial fishery landings in Alaska (eLandings) Steering Committee* – Dr. Basia Hutniczak

Academic affiliations 2026

Affiliate Faculty:

1) Dr. Allan Hicks - University of Washington School of Aquatic and Fishery Sciences, Seattle, WA, USA
2) Dr. Ian Stewart - University of Washington School of Aquatic and Fishery Sciences, Seattle, WA, USA
3) Dr. Josep Planas - Alaska Pacific University, Anchorage, AK, USA

Graduate student committee member:

1) Dr. Allan Hicks - University of Washington School of Marine and Environmental Affairs, Seattle, WA, USA
2) Dr. Allan Hicks - University of Washington School of Aquatic & Fishery Sciences, Seattle, WA, USA
3) Dr. Ian Stewart - University of Washington School of Aquatic & Fishery Sciences, Seattle, WA, USA
4) Dr. Josep Planas - Alaska Pacific University, Anchorage, AK, USA

Cooperation with other organisations

Since its inception, the IPHC has entered into a number of arrangements with other institutions, almost invariably of a technical nature, either to conduct activities in cooperation or to facilitate exchange of information that would enhance the output of both organisations. Some of these are outlined in Section 8 (Interactions with Contracting Parties).

The arrangements take a variety of forms, including Memorandum of Understanding, agreements to share data, and permits to undertake research on Pacific halibut. Current and closed arrangements are publicly available on the IPHC website: https://www.iphc.int/about/cooperation-with-other-organizations/.

Of particular note is our engagement with the North Pacific Marine Science Organization (PICES) facilitating collaboration between IPHC and PICES. The current Memorandum of Understanding was signed on 6 July 2024 and remains in effect through 5 July 2029.

10 IPHC PUBLICATIONS IN 2026

10.1 Published peer-reviewed journal papers

Heppell, D.S., Lomeli, M.J.M., Wakefield, W.W., Herrmann, B., **Dykstra, C.L.**, and **Stewart, I.J.** 2026. Hook modification to reduce rockfish and Pacific spiny dogfish bycatch in the U.S. West Coast Pacific halibut longline fishery. Reviews in Fish Biology and Fisheries 36(1). doi:10.1007/s11160-026-10042-7.

Larson, S., Lowry, D., Andrews, K., **Dykstra, C.L.**, Juanes, F., Timmer, B., and May, S. (2026). Molecular relatedness-based analyses reveal breeding site philopatry in female bluntnose sixgill sharks (*Hexanchus griseus*). Frontiers in Marine Science 13:1759346. https://doi.org/10.3389/fmars.2026.1759346

10.2 In press peer-reviewed journal papers

Lomeli, M.J.M., McVeigh, J., Wakefield, W.W., Herrmann, B., **Dykstra, C.L**., **Stewart, I.J**., Eibner, J. 2026 The effect of hook appendage length on species' catch probability in a Pacific halibut longline fishery. Aquaculture and Fisheries. https://doi.org/10.1016/j.aaf.2026.07.002.

Trochta, J., Bartolino, V., Berger, A., Bitetto, I., Chiarini, M., Garcia, D., Haltuch, M., Hernvann, P.-Y., **Hicks, A.**, Ibaibarriaga, L., Jacobsen, N.S., Kapur, M., Kell, L., Kühn, B., MacKenzie, B.R., Peterson, C., Rindorf, A., Sanchez-Maroño, S., Taylor, M., Tengvall, J., Savina-Rolland, M., and Carpi, P. 2026. Incorporating environmental drivers and productivity changes into Management Strategy Evaluation. ICES Journal **of** Marine Science.

10.3 Submitted peer-review journal papers – In review

Heppell, D., Lomeli, M., Mcveigh, J., Wakefield, W. Herrmann, B., **Dykstra, C., and Stewart, I.J.** Examining the effect of headrope height and use of artificial illumination on bycatch of Pacific halibut in a U.S. groundfish bottom trawl fishery. Canadian Journal of Fisheries and Aquatic Sciences.

Jasonowicz, A.J. and Planas, J.V. 2026. fst-gl: Efficient and performance-oriented estimation of F_{ST} from genotype likelihoods. Bioinformatics.

Jasonowicz, A.C., Planas, J.V. Generation of multi-tissue transcriptomic resources uncovers the molecular architecture underlying tissue functional specialization in a highly migratory flatfish species. BMC Genomic Data.

Jones, C.L., Webster, R.A., Stewart, I.J., Hicks, A.C., Planas, J.V. Spatial and temporal characterization of histology-based maturity-at-age for female Pacific halibut (*Hippoglossus stenolepis*). Canadian Journal of Fisheries and Aquatic Sciences.

Lomeli, M.J.M., McVeigh, J., Wakefield, W.W., Herrmann, B., Eibner, J., **Coll, K., Dykstra, C.L., and Stewart, I.J.** Testing of a semi-demersal longline to reduce yelloweye rockfish bycatch in a Pacific halibut longline hook fishery. Regional Studies in Marine Science.

McGilliard, C.R., Ianelli, J., Cunningham, C., **Hicks, A**., Hanselman, D., Stram, D., Henry, A. Evaluating Bering Sea Pacific halibut bycatch management options using closed-loop simulations in a dynamic, multi-agency setting. Canadian Journal of Fisheries and Aquatic Sciences.

Tessnow-von Wysocki, I., Barclay, K.M., Schrempf, S., Haas, B., Andriamahefazafy, M., Robertson, K., Villasante, S., Le Manach, F., Muawanah, U., Ortuño Crespo, G., Sinan, H., Green, S., Alfiado Munwane, A., Schatz, V., **Wilson, D.**, Bailey, M., Singh, G.G. Cumulative Inequity: Tracing equity concerns in tuna regional fisheries management organisations. NPJ Ocean Sustainability.

11 RECOMMENDATION

That the Commission:

a) **NOTE** paper IPHC-2026-IM102-04 Rev_1, that provides a preliminary update on IPHC Secretariat activities in 2026 not detailed in other papers before the Commission, and NOTE that the final Report of the IPHC Secretariat for 2026 is provided to the 103rd Session of the IPHC Annual Meeting (AM103).

b) **NOTE** the draft IPHC Artificial Intelligence (AI) Usage Policy, as provided at Appendix II, that will be considered for recommendation to the Commission at FAC103.

12 APPENDICES

Appendix I: IPHC Secretariat positions

Appendix II: Draft: IPHC Artificial Intelligence (AI) Usage Policy (IPHC-2027-PP-06)

Appendix I
IPHC Secretariat positions

(https://www.iphc.int/locations/map)

Branch	Sub-Section	Position	Current Employee
-	-	Executive Director	Dr Wilson, David
Quantitative Sciences	-	Quantitative Scientist (Stock Assessment)	Dr Stewart, Ian
Quantitative Sciences	-	Quantitative Scientist (Management Strategy Evaluation)	Dr Hicks, Allan
Quantitative Sciences	-	Quantitative Scientist (Biometrician)	Dr Webster, Raymond
Biological and Ecosystem Sciences	-	Branch Manager (Biological and Ecosystem Sciences)	Dr Planas, Josep
Biological and Ecosystem Sciences	-	Research Biologist (Mortality and Survivorship)	Dykstra, Claude
Biological and Ecosystem Sciences	-	Research Biologist Genetics	Jasonowicz, Andrew
Biological and Ecosystem Sciences	-	Research Biologist (Life History)	Jones, Colin
Biological and Ecosystem Sciences	-	Biological Science Laboratory Technician	May, Darran
Fisheries Monitoring	Port Operations Services	Port Operations Coordinator	Thom, Monica
Fisheries Monitoring	Port Operations Services	Fisheries Data Specialist (Field)	Multiple Employees (9-10)
Fisheries Monitoring	Fishery-Independent Setline Survey	Setline Survey Coordinator	Ualesi, Kayla
Fisheries Monitoring	Fishery-Independent Setline Survey	Setline Survey Specialist (Snr)	Jack, Tyler
Fisheries Monitoring	Fishery-Independent Setline Survey	Setline Survey Specialist	Coll, Kevin
Fisheries Monitoring	Fishery-Independent Setline Survey	Setline Survey Specialist	Skalley, Courtney
Fisheries Monitoring	Fishery-Independent Setline Survey	Setline Survey Specialist (Field)	Multiple Employees (10-35)
Fisheries Regulations and Data Services	-	Branch Manager (FRDS)	Dr Hutniczak, Barbara

Fisheries Regulations and Data Services	Fisheries Data Services	Fisheries Data Coordinator	Tran, Huyen
Fisheries Regulations and Data Services	Fisheries Data Services	Fisheries Data Specialist (HQ-GIS)	Kong, Thomas
Fisheries Regulations and Data Services	Fisheries Data Services	Fisheries Data Specialist (HQ) & Otolith Technician	Sawyer Van Vleck, Kim
Fisheries Regulations and Data Services	Fisheries Data Services	Fisheries Data Specialist (HQ) & Otolith Technician	Magrane, Kelsey
Fisheries Regulations and Data Services	Otolith Aging Services	Otolith Laboratory Technician (Snr)	Forsberg, Joan
Fisheries Regulations and Data Services	Otolith Aging Services	Otolith Laboratory Technician	Gallaher, Kiah
Administrative Services	-	Branch Manager (Administrative Services Branch)	Dr White, Brad
Administrative Services	Personnel Services	Administrative Coordinator	Chapman, Kelly
Administrative Services	Personnel Services	Administrative Specialist (Snr)	Wietecha, Ola
Administrative Services	Personnel Services	Administrative Specialist	Wickham, Kenneth
Administrative Services	Personnel Services	Administrative Specialist	Sherk, Sydney
Administrative Services	Accounting Services	Accountants	Sommerville & Associates
Administrative Services	Accounting Services	Administrative Services (Accounting)	Arian, Mohammad
Administrative Services	Technology Services	Systems Administrator	Tynes, Robert
Administrative Services	Technology Services	Information Technology Specialist (Application Developer)	Taheri, Afshin
Administrative Services	Technology Services	Information Technology Specialist (Application Developer)	Outsourced

Appendix II
DRAFT: IPHC ARTIFICIAL INTELLIGENCE (AI) USAGE POLICY (IPHC-2027-PP-06)

The International Pacific Halibut Commission (IPHC),

RECOGNISING the operational and scientific value that artificial intelligence (AI) tools can provide to the work of the Secretariat, while acknowledging the need to safeguard data confidentiality, scientific integrity, and the IPHC's privileges and immunities under the International Organizations Immunities Act (IOIA);

RECOGNISING the need for comprehensive details regarding the IPHC's governance of artificial intelligence tools to be provided on the IPHC website for public inspection;

ADOPTS in accordance with Regulation 12 (Internal Controls), paragraph 12 of the IPHC Financial Regulations (2027), that:

Purpose:

1. This policy establishes the IPHC's governance framework for the use of artificial intelligence (AI) tools in connection with IPHC business. The IPHC recognises the operational and scientific value that AI tools provide and supports their responsible use, subject to safeguards that protect data confidentiality, the integrity of IPHC science, and the IPHC's obligations as a public international organisation.

Scope:

2. This policy applies to all employees of the IPHC, and to all contractors and consultants working on its behalf, regardless of employment category. It applies to the use of any AI tool, platform, or system — whether provided by the IPHC or externally accessed, and whether used on IPHC or personal devices — to undertake work for the IPHC, including generative AI tools, large language models, AI-assisted data analysis platforms, and automated decision-support systems. The section on meetings, recordings, and meeting summaries below additionally sets out the IPHC's expectations of participants in IPHC meetings who are not otherwise subject to this policy.

Definitions:

3. **Artificial intelligence** or "AI" refers, for the purposes of this policy, to any software system that uses machine learning, natural language processing, or similar methods to generate content, analyse data, make predictions, or support decision-making, including generative tools that produce text, images, code, or data outputs in response to user prompts.

Guiding Principles:

4. AI outputs must be reviewed and verified by the employee, contractor, or consultant before being relied upon or distributed. AI tools support, but do not replace, professional judgement.

5. Employees, contractors, and consultants are responsible for verifying the accuracy of all AI-generated content. AI tools can produce incorrect or fabricated information, and reliance on unverified outputs is not an acceptable standard of work.

6. IPHC confidential information — including commercial fisheries data, personnel information, legal advice, and internal correspondence — must not be entered into any AI tool or platform not provided or approved by the IPHC, including AI models installed locally on personal devices.

7. AI tools must not be used in a manner that introduces bias into hiring, performance evaluation, or any other employment decision. All employment decisions remain the sole responsibility of qualified IPHC personnel.

8. Employees, contractors, and consultants must be transparent about the use of AI where it is material to the output produced, in accordance with the disclosure requirements set out in this policy.

Approved and Prohibited Uses:

9. The following uses of AI tools are generally permitted, subject to the guiding principles above: drafting, editing, summarising, or reformatting documents for subsequent employee review and approval; assisting with research, literature review, or the synthesis of publicly available information; writing, reviewing, or debugging code where the output is verified by a qualified IPHC employee; and supporting data analysis where the methodology and outputs are validated by the relevant Branch Manager or quantitative scientist.

10. The following uses are prohibited: entering IPHC confidential data, personnel information, commercial fisheries data, legal advice, or internal correspondence into any AI tool or platform not provided or approved by the IPHC; using AI tools to materially influence employment decisions without review and approval by the Executive Director; presenting AI-generated content as original research, scientific analysis, or professional advice without disclosure and independent verification; and using AI tools to circumvent IPHC security, access controls, or data governance requirements.

11. The IPHC Secretariat maintains a list of AI tools approved for IPHC use, which is available for public inspection on the IPHC website. Use of a tool not on the approved list requires the prior written approval of the employee's Branch Manager.

Data Confidentiality and Security:

12. Any AI tool used in connection with IPHC work must be accessed and operated in accordance with the IPHC's Data Confidentiality Policy and Data Sharing Procedures (IPHC-2023-PP-01) and the IPHC's password security and electronic resources policies. Where an AI tool requires account registration or data sharing with a third-party provider, this must be approved via internal protocols before use.

Meetings, Recordings, and Meeting Summaries:

13. The IPHC may record its meetings and may use AI tools to produce transcripts, summaries, or draft reports of them. Where AI tools are used for this purpose, participants will be notified in advance, in the notice of meeting or at the opening of the session. Such recordings and outputs are working material only. All such outputs must be reviewed and verified by the

Secretariat before use, and are retained and disposed of in accordance with the IPHC Records Management Policy (IPHC-2024-PP-04).

14. The official record of a meeting of the Commission or of a subsidiary body is the written report of that meeting as approved by the Commission or by the subsidiary body concerned. No recording, transcript, summary, or report generated by an AI tool — whether produced by the IPHC or by any other person — is an official record or official document of the IPHC, and no such output may be issued, circulated, cited, or relied upon as the official record of proceedings. Where the IPHC publishes or circulates an AI-assisted transcript or summary, it will be labelled to that effect.

15. AI tools must not be used to record, transcribe, or summarise any closed, executive, or in-camera session, or any part of a meeting at which confidential data, personnel matters, or legally privileged information is considered, unless the Executive Director has given prior written approval and the tool operates wholly within IPHC-controlled systems. Meeting audio and video are IPHC information: their transmission to a third-party AI service places that information beyond the IPHC's control and may engage both the IPHC's data confidentiality obligations and its privileges and immunities under the IOIA.

16. AI meeting agents — applications that join a meeting as a participant in order to listen to, record, transcribe, or summarise it, commonly described as "bots" — are not permitted at meetings of the Commission or of its subsidiary bodies. Participants, including Commissioners, delegations of the Contracting Parties, members of subsidiary bodies, observers, and members of the public, must not admit or invite such an application to a meeting and must not enable any recording, transcription, or AI note-taking function of the meeting platform. The Secretariat will apply the controls available in the IPHC's meeting platform to detect and exclude such applications, and will state this requirement in the notice of meeting and at the opening of each session.

17. The Chairperson may permit an exception in a particular case, on a request made to the Secretariat in advance and recorded in the report of the meeting; where the meeting or any part of it is closed, the prior written approval of the Executive Director is additionally required. Nothing in this section prevents the Secretariat from arranging captioning, transcription, or other assistance required as a reasonable accommodation for a participant, on terms that satisfy the IPHC's data confidentiality requirements.

18. The IPHC recognises that it cannot detect every AI tool that may be present at a meeting, and this policy does not purport to do so. The expectation is one of disclosure and good faith. Participants remain bound by any confidentiality undertaking applicable to the meeting irrespective of the means by which a record is made, and the use of an undisclosed AI tool does not diminish that obligation.

Scientific and Research Integrity:

19. Given the IPHC's mandate as a science-based organisation, the use of AI in research, data analysis, and scientific reporting carries particular responsibility. AI tools must not be used to generate, modify, or present scientific data or findings without full disclosure of the method and independent expert validation. Any use of AI in work intended for publication or submission to the Commission or its subsidiary bodies must be disclosed to the relevant Branch Manager and noted in the work itself.

Governance and Review:

20. The Executive Director is responsible for approving the use of any new AI tools for inclusion on the approved list, ensuring the consistent application of this policy, and making final determinations on matters engaging the IPHC's scientific integrity, IOIA obligations, or reputational interests.

21. The Executive Director will review this policy at least annually to ensure its effectiveness and compliance with any regulatory changes, and earlier where a significant AI capability development, a new approved tool, a regulatory change, or a material shift in organisational practice may warrant earlier updating. The Administrative Services Branch is responsible for monitoring such triggers and notifying the Executive Director and Branch Managers without delay. The outcome of each review shall be reported to the Commission, and any recommended amendments to this policy shall be submitted to the Commission for approval. Any revisions and updates will be communicated to all employees, contractors, consultants, and stakeholders, via the IPHC website.

IPHC Fisheries Dependent Data Collection Design and Implementation in 2026 – Port operations: Preliminary

PREPARED BY: IPHC SECRETARIAT (M. THOM, I. STEWART, R. WEBSTER; 28 OCTOBER 2026)

Outcome sought: *NOTE. This paper is provided for information; no decision is sought at this Session.*

PURPOSE

To provide the Commission with a preliminary account of the design and implementation of the IPHC fishery-dependent data collection activities in 2026 – Port Operations.

This paper is provided for information. The figures are preliminary: they reflect collections through 23 October 2026, during a commercial fishing period that remains open. No decision is sought at IM102. Final figures will be presented at AM103 (25-28 January 2027).

BACKGROUND

The International Pacific Halibut Commission (IPHC) undertakes fishery-dependent data collection activities coastwide to collect Pacific halibut biological data and catch per unit effort data in the form of vessel logbooks. The IPHC fishery-dependent data collection is the IPHC's primary data source providing extensive information on both spatial and temporal variation of commercial landings for Pacific halibut on an annual basis. With sampled ports receiving landings from across the spatial range of the fishery throughout the commercial fishing period, the IPHC is able to obtain representative data that allow us to characterize spatio-temporal patterns in Pacific halibut length, weight, age, sex and genetic information.

Historical logbooks have been provided to the IPHC dating back to 1907. Biological data collection from the commercial sector began in 1933 and continues to the present day. The sampling design and implementation of these data collections have changed in line with the changing fishery regulations, fleet behaviour and best scientific practices.

The Canadian and U.S.A. governments implemented an Individual Vessel Quota (IVQ) in Canada, and an Individual Fishing Quota (IFQ) program in Alaska, in 1991 and 1995, respectively. As a result of this change, the Pacific halibut fishery along the Canadian and USA Alaskan coasts went from a 'derby style race for fish' open from 1-22 days to a nearly year-round fishery lasting 245 days with a winter closure. The length of the fishing period has extended further to present day and in 2026 is 257 days. Prior to the implementation of IVQ/IFQ, the fishery-dependent data collection was accomplished by one or more Secretariat staff stationed in landing ports for up to a week. After implementation, it became necessary to staff major ports throughout the fishery's extended duration (8-9 months) to meet the spatio-temporal sampling objectives.

In addition to collecting data directly, the IPHC coordinates with other entities for standardised collection of fishery-dependent data. This includes provided training and/or materials to IPHC Regulatory Area 2A Tribes, California Department of Fish and Wildlife (CDFW), Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife (WDFW), and Alaska Department of Fish and Game (ADF&G).

FISHERIES DEPENDENT DATA COLLECTION DESIGN

The primary goal and objective of the IPHC port operations is to collect representative samples from Pacific halibut landings from across the geographical range of the commercial fishery and throughout the commercial fishing period:

- To provide biological input data for the annual IPHC stock assessment;

- To ensure accurate estimation of quantities such as age composition of the landings, mean weights, size at age, and length-weight relationships;
- To provide data in support of the IPHC research goals, including the collection of biological samples for genetics;
- To field-verify commercial logbook information and reconcile incomplete or conflicting information with captains, where possible;
- To maintain field-based points of contact between the fishing industry and the IPHC headquarters Secretariat.

These goals are achieved through staffing major ports for Pacific halibut landings throughout the commercial fishing period and collaborating with other entities as mentioned above.

Methods for Pacific halibut data collection

The IPHC Secretariat collects data from commercial Pacific halibut landings in major ports. Individual fish are randomly sampled from each landing using prescribed sampling rates for each port and IPHC Regulatory Area, with the goal of sampling a constant proportion of the landed catch over the entire fishing period within each IPHC Regulatory Area. Sampling Pacific halibut consists of the collection of fish lengths, weights, otoliths, and fin clips as well as Pacific halibut logbook data. Biological sampling targets are established by IPHC Regulatory Area to ensure sample sizes are sufficient for the needs of the stock assessment. Prior to the start of each fishing period, landing patterns from each port (for the previous fishing period) are reviewed to ensure proportional sampling (by weight landed) by IPHC Regulatory Area and to ensure data goals are met.

Canada: The IPHC staffed two (2) ports in Canada (Port Hardy and Prince Rupert, BC) with Fisheries Data Specialists (Field, FDS(F)) (Fig. 1).

USA: The IPHC staffed eight (8) ports in Alaska, (Dutch Harbor, St. Paul, Kodiak, Homer, Seward, Juneau, Sitka, and Petersburg) with Fisheries Data Specialists (Field, FDS(F)) (Fig. 1). In addition, Pacific halibut landings in Bellingham, WA and Newport, OR were sampled by headquarters-based Secretariat staff. In 2026, training and materials were provided for IPHC Regulatory Area 2A Tribal commercial fishery samplers, with eight (8) Washington Treaty Tribes represented as well as the California Department of Fish and Wildlife.

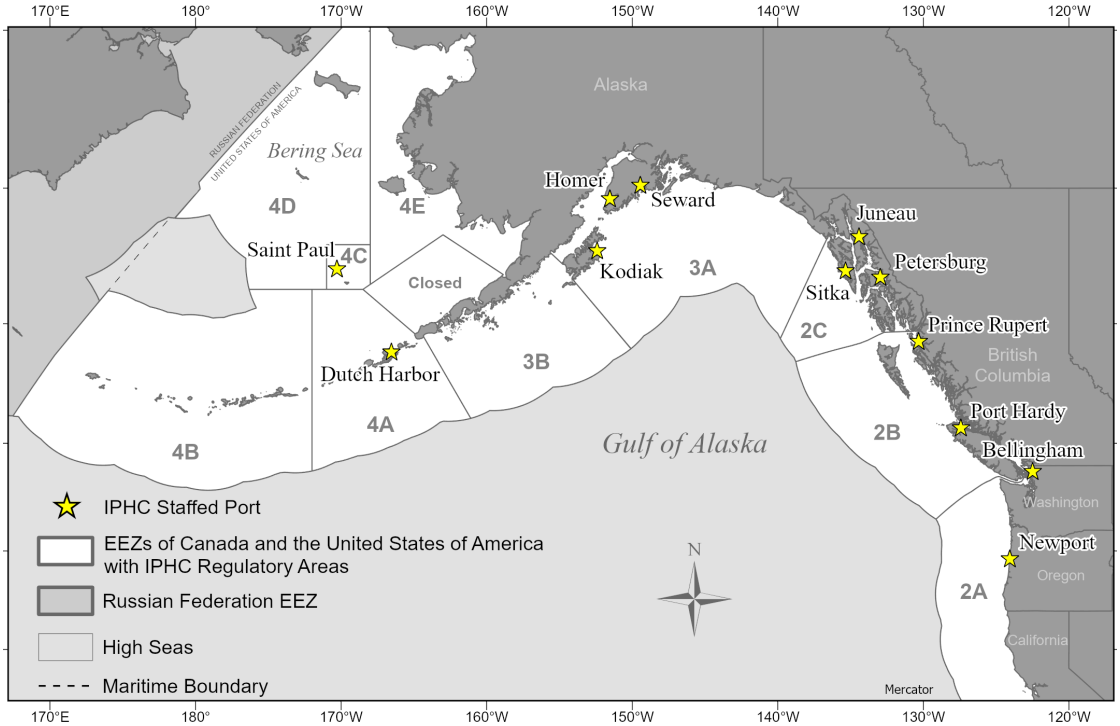


Figure 1. IPHC Fishery-Dependent Data Collection Ports 2026.

Sampling protocols

The IPHC Secretariat collects data according to protocols established in the 2026 International Pacific Halibut Commission Manual for Sampling Directed Commercial Landings (IPHC-2026-PSM01).

DATA COLLECTED IN 2026

Biological data were collected from randomly selected Pacific halibut during the 2026 fishing period. The following metrics were recorded for each sampled fish: left (blind side) sagittal otolith for age determination, fork length measured to the nearest centimeter, weight documented to the nearest tenth of a pound, and a fin clip collected for genetic sex determination.

Sampling targets were established to ensure adequate representation of the Pacific halibut population across all IPHC Regulatory Areas. The targets were set at 1,500 samples from each of the IPHC Regulatory Areas 2B, 2C, 3A, 3B, 4A, 4B and the combined Areas 4CDE, and 1,000 samples from IPHC Regulatory Area 2A. Port and IPHC Regulatory Area-specific sampling rates were determined based on access to catch, spatial and temporal goals, and to meet minimum sampling target numbers. Rationalisation for these targeted minimums is detailed in Appendix I. The summary of biological sampling can be found in Table 1.

Table 1. Biological samples collected as of 23 October 2026 during the 2026 Pacific halibut commercial fishing period. Percent of sampling target should be read against percent landed rather than in isolation.

IPHC Regulatory Area	Fish Sampled	Percent of Sampling Target	Percent Landed
2A	886	89%	93.1%
2B	1,946	130%	86.2%
2C	1,357	90%	80.8%
3A	1,644	110%	87.7%
3B	1,787	119%	83.5%
4A	915	61%	70.1%
4B	998	67%	47.7%
4CDE	1,833	122%	50.4%
Total	11,366	-	-

As of 23 October 2026, we are 82% of the way through the fishing period. As seen in Table 1, sampling to date is on pace with or ahead of landings in every IPHC Regulatory Area except 2A and 4A: the percent of the sampling target achieved exceeds the percent of the catch landed. Sufficient staffing and access to landings in those areas have allowed this to occur. In IPHC Regulatory Area 2A, staffing shortages and other factors have limited access to catch, and collections may fall short of the target. IPHC Regulatory Areas 4A and 4B may also fall short of their targets if the proportion of the fishery limit landed remains low.

Table 2 summarizes fishery logbook and biological data collection, as well as associated costs, by port as of 23 October 2026 for the 2026 fishing period. A total of 1,508 logbooks have been collected by IPHC Secretariat and 11,366 biological samples were collected across all ports,

with an estimated program-wide cost of $605,768. This figure excludes the costs of IPHC Secretariat staff based in Seattle. Program costs are reported here for transparency; no funding decision is sought in connection with this paper.

Table 2. Fishery logbook and biological data collected and estimated costs by port as of 23 October 2026 for the 2026 fishing period. Costs do not include IPHC Secretariat staff based at the headquarters office in Seattle, which directly assist with and manage IPHC fishery-dependent data collection, or indirect costs such as technology or administrative staffing.

Port	Logbooks	Biological samples	Total Estimated Cost (USD)	Estimated Cost / Trip (USD)	Estimated Cost / Sample (USD)
Dutch Harbor	103	2,425	$76,317	$741	$31
Homer	231	1,566	$64,050	$277	$41
Juneau	53	275	$60,942	$1,150	$222
Kodiak	151	1,729	$66,190	$438	$38
Petersburg	236	839	$61,793	$262	$74
Seward	135	379	$75,472	$559	$199
Sitka	204	444	$63,477	$311	$143
St. Paul	112	877	$29,767	$266	$34
Prince Rupert	118	968	$51,002	$432	$53
Port Hardy	165	978	$51,026	$309	$52
2ATribal	N/A	751	$2,420	N/A	$3
Bellingham	N/A	8	$51	N/A	$6
Newport	N/A	82	$3,262	N/A	$40
California	N/A	45	$0	N/A	N/A
TOTAL	**1,508**	**11,366**	**$605,768**	N/A	N/A

Costs vary across ports based on factors such as employee turnover, travel costs, and housing and transportation needs. Estimated cost per sampled trip outside of IPHC Regulatory Area 2A ranged from $262 (Petersburg) to $1,150 (Juneau), while estimated cost per biological sample ranged from $31 (Dutch Harbor) to $222 (Juneau). The two measures do not rank ports the same way. Dutch Harbor is the least expensive port per sample ($31) but the second most expensive per trip ($741), because a relatively small number of large landings (103 logbooks) yields a high sample volume (2,425). Juneau and Seward show the highest per-sample costs ($222 and $199), reflecting the small number of trips landed in Juneau (53 logbooks) and the small number of samples per trip in Seward (379 samples from 135 logbooks).

As set out in Appendix I, effective sample size is driven more by the number of trips sampled than by the number of samples collected, so cost per trip is the more relevant efficiency measure for evaluating port coverage: seven (7) ports deliver trip coverage at $262-$438 per trip, whereas Juneau ($1,150) and Dutch Harbor ($741) are the most expensive. However, as seen in Appendix I, trips are unique across space and time, and thus both Juneau and Dutch Harbor landings provide valuable data for the stock assessment. Dutch Harbor is almost the sole source of IPHC Regulatory Areas 4A and 4B data and is therefore a high priority port. Juneau, in turn, samples a component of the IPHC Regulatory Area 3A landings that is not represented at the other sampled ports: 3A fish delivered to Juneau include fewer males than those delivered to Seward, Homer, and Kodiak (Figure A1). Continued sampling in Juneau is therefore necessary to avoid bias in IPHC Regulatory Area 3A sex composition, in addition to its contribution to IPHC Regulatory Area 2C coverage.

Costs shown for IPHC Regulatory Area 2A (2A Tribal, Bellingham, Newport and California) reflect biological sample collection only, as logbooks from those landings were handled by Seattle-based staff (Table 2).

CHALLENGES

While sampling goals may be met in most areas, challenges remain in achieving adequate sampling coverage in IPHC Regulatory Areas 2A, 4A, and 4B due in part to limited access to catch. The Secretariat is evaluating options to address these constraints, including increased staffing at affected ports and expanded collaboration with external sampling entities. These options carry resource implications, which the Secretariat will quantify and bring forward with costs and expected data outcomes as part of FY2028 budget development. No decision on these matters is sought at this Session.

RESULTS

Fishery-dependent data collected and verified prior to 30 October of this year will be used in the 2026 Pacific halibut stock assessment. Data collected and processed after 30 October will be used in the following year's stock assessment.

Commercial biological and catch data interactives including 2026 fishery limits reports which are updated bi-monthly can be found at this link https://www.iphc.int/data/.

RECOMMENDATION

That the Commission:

1) **NOTE** paper IPHC-2026-IM102-05 that provides a preliminary summary of the IPHC fishery-dependent data collection design and implementation in 2026, and that no decision is sought at this Session;

2) **NOTE** that as of 23 October 2026 sampling is on target for all IPHC Regulatory Areas other than 2A, 4A and 4B; and

3) **NOTE** that the IPHC Secretariat will report final figures and bring forward costed options to improve sampling access in any IPHC Regulatory Area(s) that fall short of their respective minimum sampling goal at AM103.

APPENDICES

Appendix I: Fishery Dependent Data Sampling Targets

Appendix I
Fishery Dependent Data Sampling Targets

PURPOSE

To provide clarification of IPHC's rationalised biological data collection targets.

INTRODUCTION

Biological sampling by the IPHC provides the primary source of biological information used for the annual stock assessment and management supporting analyses for Pacific halibut. Biological samples are collected from two primary sources: the Secretariat on the IPHC's Fishery-Independent Setline Survey (FISS) and commercial fishery landings in major landing ports coastwide.

In addition, the Alaska Department of Fish & Game (ADFG) collects data from the recreational fishery in Alaska, and both IPHC Secretariat [subject to funding] and National Oceanographic and Atmospheric Administration Fisheries (NOAA) staff collect data from fish captured on the fishery-independent NOAA trawl surveys conducted in Alaska.

This total comprises approximately:

1) 10,000-12,000 otoliths from the FISS (target collections include 2,000 per IPHC Regulatory Area, but are often lower due to actual vs projected catch rates and generally insufficient overall catch in Biological Region 4 even at a 100% sampling rate);
2) 11,500 otoliths from the directed commercial fishery landings (1,500 targeted per IPHC Regulatory Areas 2B, 2C, 3A, 3B, 4A, 4B and 4CDE combined, and 1,000 from IPHC Regulatory Area 2A);
3) 1,500-2,000 from the recreational sector (collected in the previous year); and
4) 1,500-3,000 from the NOAA trawl surveys (collected in the previous year).

Ideally, all commercial Pacific halibut landings would have an equal chance of being sampled, creating a truly representative sampling frame across the entire fishery. In practice, this is not feasible. Instead, sampling is focused on ports with the highest landing volume except in the case of Dutch Harbor and St. Paul, which are essential for coverage of IPHC Regulatory Areas 4A, 4B, and 4CDE, respectively.

The Secretariat has undertaken a review and analysis of the IPHC capacity for sampling, ageing and annual needs for stock assessment and provides the following information for general awareness.

ASSESSMENT OF THE EFFECTIVE SAMPLE SIZE

To inform future data collection priorities, the IPHC Secretariat conducted an analysis in early 2024 to assess how reductions in the number of otoliths aged from biological samples might impact the overall information content of the age dataset. This analysis relied on the concept of effective sample size (Hulson et al. 2023; Stewart and Hamel 2014), which is used as the starting point for weighting the age data in the IPHC's stock assessment models.

Effective sample size is calculated using a statistical method known as bootstrapping, which involves repeatedly resampling the observed age data thousands of times. These simulated datasets are then compared to the full dataset across the entire age range. This allows for an estimate of how much unique information the original sample contains. Unlike the total number of fish sampled, the effective sample size accounts for the fact that fish caught on the same trip tend to be more similar in age than fish from different trips (Pennington and Volstad 1994). As a result, individual fish are not truly independent observations. This means that increasing the number of trips sampled (or unique logbook entries) contributes more to statistical power than simply increasing the number of otoliths collected from a few trips, and conversely, decreasing

the number of otoliths read is preferable to decreasing the number of trips sampled. However, the number of otoliths remains important, particularly when data are later subdivided by IPHC Regulatory Area, sex, or other relevant categories (e.g. in analyses of legal vs. sublegal fish under recent minimum size limits).

To evaluate effective sample sizes, we summarized commercial fishery age reading over the most recent five years of available data (2017-2021). Table A1 presents the average annual number of trips sampled, the average number of otoliths aged from those trips, and the resulting effective sample size for each Biological Region. To assess the impact of reduced age reading effort, the analysis was repeated using a random subsample of 50% of the original number of fish. Comparing the effective sample sizes between the full and reduced datasets helps answer the question: If we had aged only 50% of the collected otoliths in recent years, how much statistical information would have been lost?

While this analysis is based on historical data, the results provide insight into how future reductions in age reading or data collections could affect data quality. Biological Regions were used in this analysis because they represent the most detailed spatial scale at which data are applied in the stock assessment process.

Table A1. Summary of 2017-2021 commercial fishery fish ages by Biological Region and reductions for 2024. Values reported for effective sample size are the simulated sample size and percentage reduction from the actual effective sample sizes.

Biological Region	Average number of trips sampled	Average number of ages	Effective sample size	Effective sample size from 50% subsampling	Percentage reduction from actual
Region 2	366	4,436	1,525	1,069	30%
Region 3	169	2,552	905	646	29%
Region 4	81	1,866	629	478	24%
Region 4B	13	1,148	57	54	5%

As expected, the effective sample size is considerably lower than the number of fish because multiple fish are sampled from each unique trip. The largest effective sample sizes come from the commercial fishery in Biological Region 2. Regions 3, 4, and 4B follow in descending order. Simulated subsampling for age reading at 50% resulted in reductions in effective sample size of only 5-30%, depending on Biological Region. Regions 2 and 3 could be subsampled at 50% and still outperform Regions 4 and 4B. Based on similar 2022 analyses and field staff capacity, Region 4B's sampling target was reduced in 2023, effectively implementing subsampling in the field with the goal of increasing trip coverage and therefore increasing the effective sample size.

Given staffing limits, IPHC reads otoliths from a subsample of those collected in the field at rates detailed in Table A2. The results presented here suggest that commercial fishery data from Biological Regions 2 and 3 subsampled at a rate of 50% still result in effective sample sizes only modestly reduced from recent levels.

In the long term, it is preferable to maintain current field sampling rates, even if only a subsample of otoliths is aged. Once staff are deployed to a port, collecting fewer otoliths offers little cost savings, while reducing ports staffed would significantly lower the number of trips sampled and, in turn, the effective sample size. Maintaining field sampling preserves the option to age additional otoliths later if needed or if an alternative ageing method is established, ensuring flexibility without permanently compromising the dataset, as would occur with reduced field sampling.

Table A2. Biological sampling rates in commercial fisheries for 2026, and the target size of the sample for ageing by IPHC Regulatory Area.

Regulatory Area	Rate	Ageing subsample
2A	1	1,000
2B	0.5	750
2C	0.5	750
3A	0.5	750
3B	0.5	750
4A	1	1,500
4B	1	1,500
4C	1	750
4D	1	750
4E	1	NA
TOTAL		**8,500**

PORT-SPECIFIC PATTERNS IN BIOLOGICAL DATA

To further explore the need for sampling across a network of ports in Alaska, the IPHC Secretariat examined patterns in the fishery-dependent biological data collected between 2017 and 2022 in each port where samples were collected. The results provide supporting evidence that landings vary meaningfully by port, month, and season. These differences are biologically meaningful and would likely introduce bias into the data if sampling were reduced or eliminated in any location or season.

In recent years (2017-2022), the IPHC has sampled biological information from the directed commercial fishery in eight primary Alaskan ports, with a small number of samples also collected from deliveries made into ports in the state of Washington (Table A3). Two ports provide most of the samples for the entire IPHC Regulatory Area: Dutch Harbor supplies 96% of 4B and 85% of 4A samples, while St. Paul provides 52% of 4CDE (up to 76% when the local fleet is inactive). In contrast, samples from 2C, 3A, and 3B are spread across three main ports each; Juneau, Petersburg, and Sitka for 2C; Homer, Kodiak, and Seward for 3A and 3B.

Table A3. Distribution among ports of complete directed commercial fishery biological samples collected from each IPHC Regulatory Area in Alaska over 2017-2022.

Port	2C	3A	3B	4A	4B	4CDE
Dutch	0	0	95	5,236	6,005	1,709
Homer	0	2,293	3,074	415	177	394
Juneau	1,694	820	0	0	0	0
Kodiak	0	1,840	2,301	376	101	383
Petersburg	4,064	121	0	0	0	0
Seward	0	2,276	1,312	128	0	114
Sitka	2,709	643	0	0	0	0
St. Paul	0	0	0	0	0	2,783
Washington	153	661	0	0	0	0

To evaluate the potential loss of samples if coverage was reduced over certain time-periods during the fishing season, the distribution of all samples collected into each port was summarized by month (Table A4). Some ports have fewer landings at the beginning of the season (e.g. Homer, Kodiak, Seward), the end of the season (most ports) or months during the summer when fishing/processing focuses on other species (e.g. Juneau and Petersburg in July, Sitka in August). These months may be the best candidates if there is a need to reduce or eliminate sampling for a portion of the fishing season, though they may not lead to much cost savings due to increased travel costs for mid-year reductions (July, August).

Table A4. Samples collected from 2017-2022 by port and month

Port	March	April	May	June	July	August	September	October	November
Dutch	-	214	749	2,352	2,113	2,687	3,227	1,173	530
Homer	98	584	1,102	976	784	1,075	768	842	124
Juneau	359	495	563	254	77	241	258	177	90
Kodiak	38	484	951	377	595	630	667	840	419
Petersburg	389	704	789	530	173	553	591	353	103
Seward	86	655	640	447	447	716	418	274	147
Sitka	381	703	673	406	308	156	283	335	107
St. Paul	-	-	-	241	986	1,556	-	-	-
Washington	-	13	27	42	16	130	229	174	183

In addition to maintaining adequate sample sizes by IPHC Regulatory Area and Biological Region, it is critical that sampled landings reflect the full range of fish demographics; age, length, weight, and sex. This ensures that the data accurately represent the entire fishery.

The examples below illustrate how bias could be introduced if sampling were eliminated from a port or for an entire season by highlighting differences in age-structure, and sex composition across ports within IPHC Regulatory Areas and across seasons.

- For IPHC Regulatory Area 3A, landings delivered to Southeast Alaska ports (Juneau and Sitka) include fewer males than those delivered to ports within IPHC Regulatory Area 3A (Seward, Homer and Kodiak) (Figure A1).
- For Regulatory Area 3A, fish sampled in Kodiak tend to be younger than those from other ports, and the relative strength of specific age classes varies by port in which they are landed (Figure A1).
- For Regulatory Area 3B, females landed in Seward tend to be slightly older than those landed in Homer and Kodiak (Figure A2).
- In 2017, Sitka landings showed a much stronger 2002 year-class (age-15) than Petersburg or Juneau (Figure A3).
- Very few males are seen in the summer fishery in Area 4CDE (Figure A4).
- In Area 2C, older fish are mostly absent from landings until August (Figure A5).

These seasonal differences tend to persist across months, so minor adjustments to sampling effort within a month or port may not introduce significant bias. However, because Pacific halibut are highly migratory, landings may reflect different segments of the population depending on whether fish are encountered during spawning migrations or summer feeding.

Both spatial and seasonal patterns in age and sex composition suggest that further reductions in biological sampling at ports would likely introduce bias. The extent of the impact depends on the

availability and quality of other data (e.g. FISS) and whether reductions in sampling are short-term or persist over multiple years.

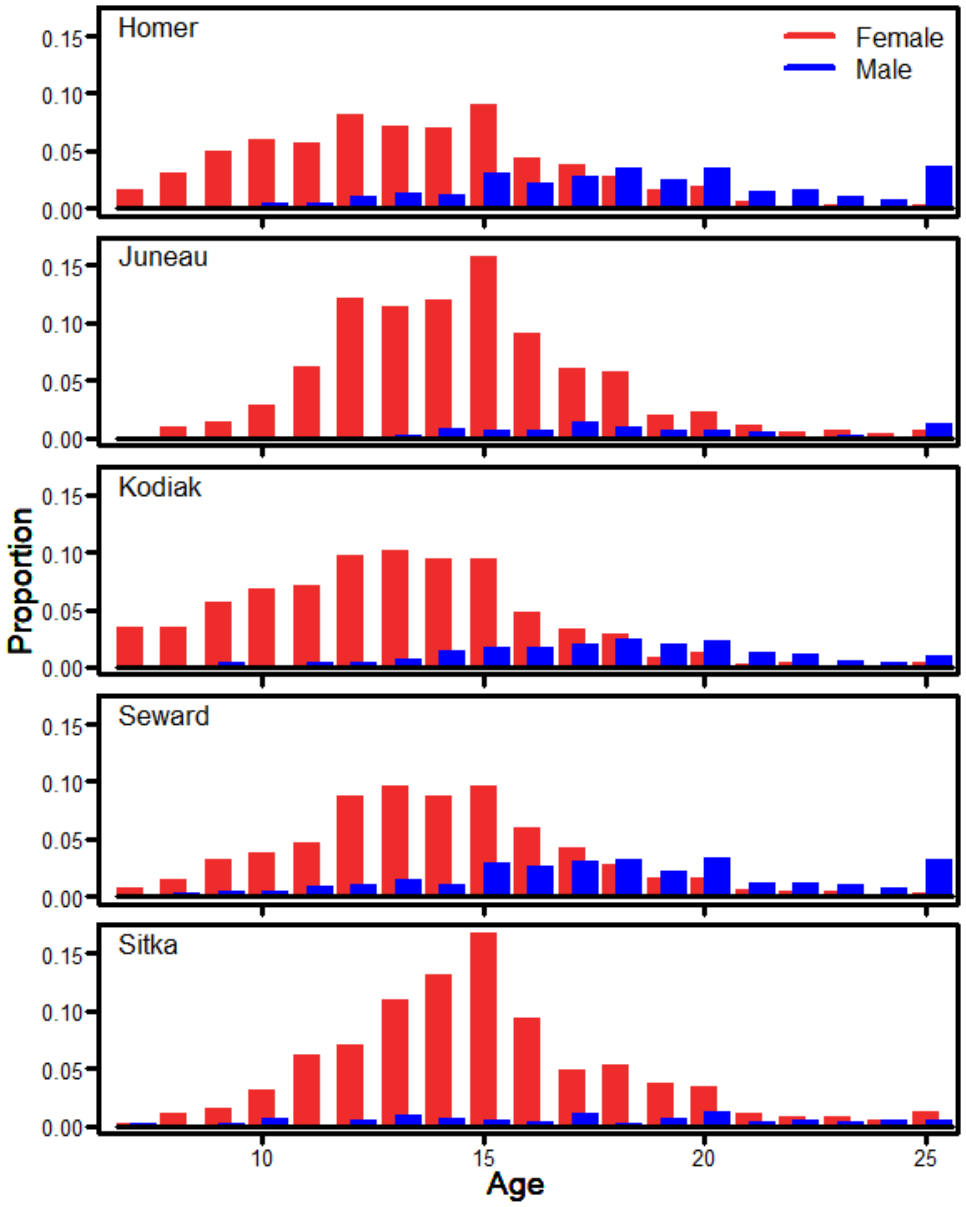


Figure A1. Age frequency distributions for 2017-2022 from IPHC Regulatory Area 3A landings by the port in which they were sampled. Red bars represent the proportion of the landings (by number of fish) that were female at each age (age-7 includes all fish up to age-7 and age-25 includes all fish 25 or older), and blue bars represent the proportion of males at each age.

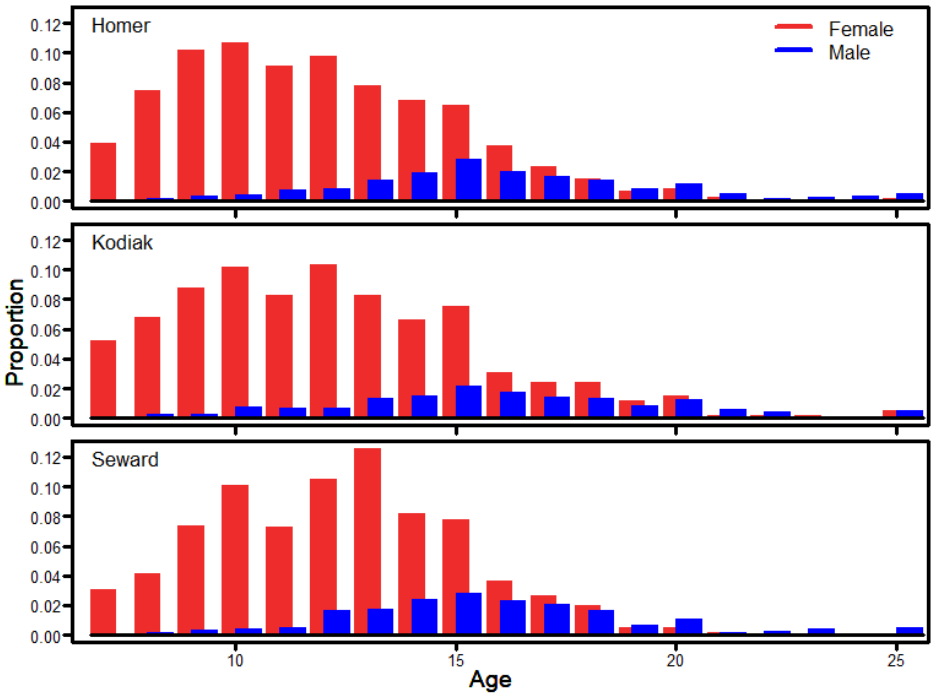


Figure A2. Age frequency distributions for 2017-2022 from IPHC Regulatory Area 3B landings by the port in which they were sampled. Red bars represent the proportion of the landings (by number of fish) that were female at each age (age-7 includes all fish up to age-7 and age-25 includes all fish 25 or older), and blue bars represent the proportion of males at each age.

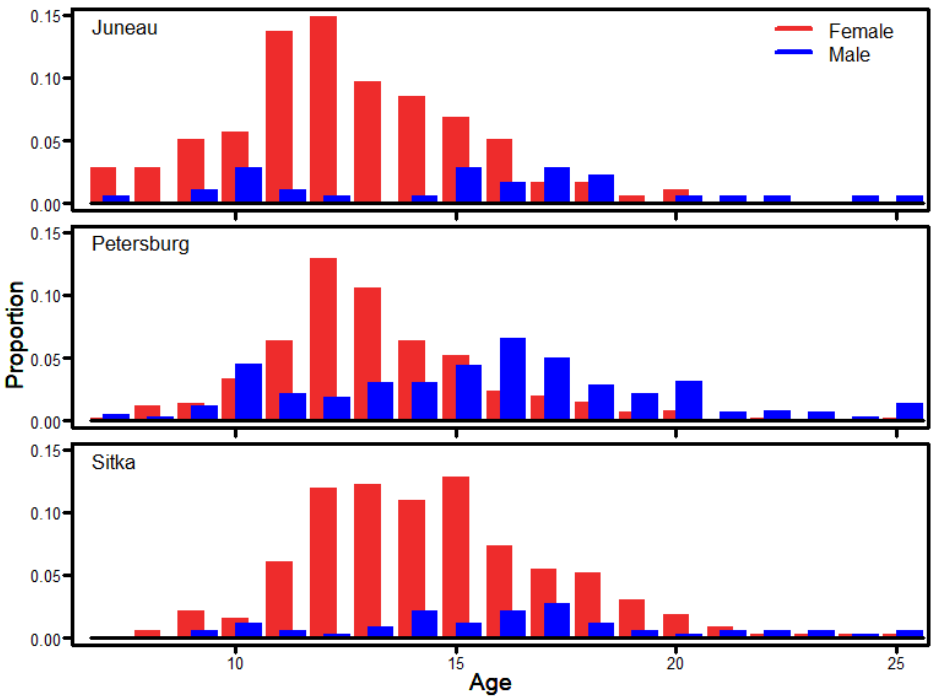


Figure A3. Age frequency distributions from IPHC Regulatory Area 2C landings in 2017 by the port in which they were sampled. Red bars represent the proportion of the landings (by number of fish) that were female at each age (age-7 includes all fish up to age-7 and age-25 includes all fish 25 or older), and blue bars represent the proportion of males at each age.

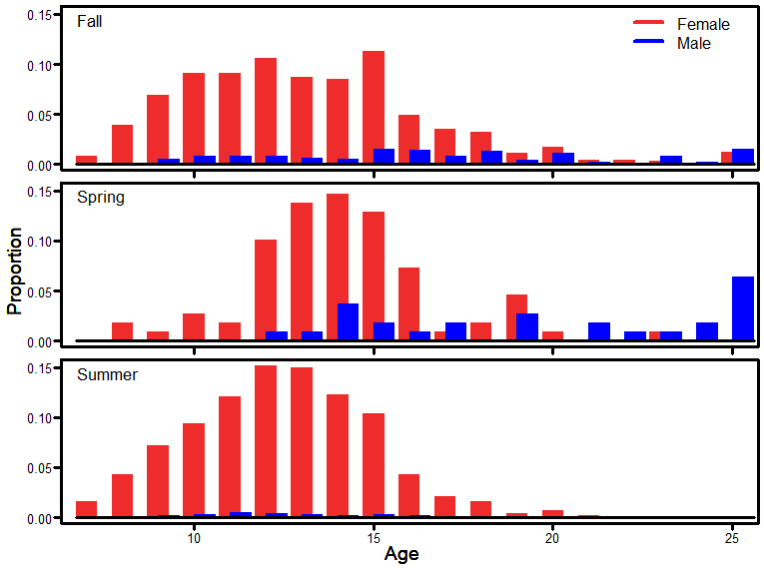


Figure A4. Age frequency distributions for 2017-2022 from IPHC Regulatory Area 4CDE by season in which they were sampled. Spring indicates March-May, Summer June-August, and Fall September-December. Red bars represent the proportion of the landings (by number of fish) that were female at each age (age-7 includes all fish up to age-7 and age-25 includes all fish 25 or older), and blue bars represent the proportion of males at each age.

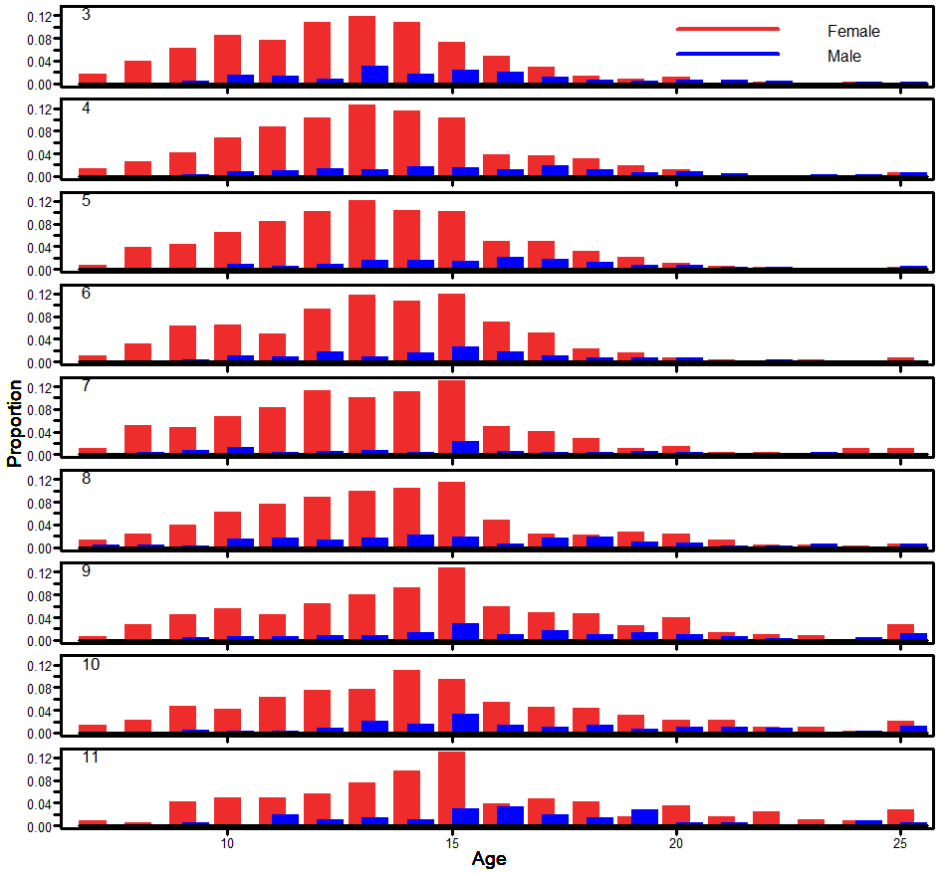


Figure A5. Age frequency distributions for 2017-2022 from IPHC Regulatory Area 2C by the month in which they were sampled. Red bars represent the proportion of the landings (by number of fish) that were female at each age (age-7 includes all fish up to age-7 and age-25 includes all fish 25 or older), and blue bars represent the proportion of males at each age.

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Fisheries Data Overview (2026): preliminary

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PURPOSE

To provide a preliminary overview of the 2026 Pacific halibut removals, including the status of mortality reported against mortality and fishery limits adopted by the Commission and outlined in the IPHC Fishery Regulations (2026).

This paper presents current data and a selection of year-end projections available as of 26 October 2026. Year-end projections for directed commercial landings, estimates of directed commercial discard mortality, and non-directed commercial discard mortality will be included in Rev_1 of this paper.

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-2026-IM102-09) and other analyses. The data are compiled by the IPHC Secretariat and include data from federal and state agencies of each Contracting Party. All 2026 data are in net weight (head-off, dressed, ice and slime deducted) and considered preliminary at this time. The IPHC Regulatory Areas are provided in Figure 1.

The report provides a preliminary summary of removals in Tables 1 and 2. Table 2 provides estimates of mortality reported against the fishery limits (FCEY) resulting from the IPHC-adopted distributed mortality (TCEY) limits and the existing Contracting Party catch sharing arrangements, as well as non-FCEY mortality projections, by IPHC Regulatory Area. Figure 2 provides the cumulative percentage of the directed commercial Pacific halibut limit landed by week.

DEFINITIONS

Directed commercial fisheries include landings and discard mortality from commercial fisheries that can legally retain Pacific halibut. Directed commercial discard mortality includes estimates of sub-legal Pacific halibut (under 81.3 cm or 32 inches, also called U32) that die as a result of being caught and subsequently discarded, fish that die on lost or abandoned fishing gear, and legal-sized fish that die after being discarded for regulatory compliance reasons. Commercial fisheries also include non-targeted catch in other fisheries where retention is allowed (e.g. non-treaty incidental catch in the salmon troll fishery and sablefish fishery in IPHC Regulatory Area 2A).

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

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. 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 that uses Alaska Subsistence [Pacific] Halibut Registration Certificate (SHARC), and
iv) U32 Pacific halibut retained for personal use by the Community Development Quota (CDQ) fishery in IPHC Regulatory Areas 4D and 4E.

Non-directed commercial discard mortality includes incidentally caught Pacific halibut by fisheries targeting other species and that cannot legally be retained, e.g. by the trawl fleet. This category 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 IPHC research.

Table 1. 2026 mortality reported against mortality limits (TCEYs) by IPHC Regulatory Area and U26 non-directed discards (year-end projections as of 26 October 2026).

IPHC Regulatory Area	Mortality limits (TCEY) (net weight)		Mortality to date[1] (net weight)		Percent attained
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	(%)
IPHC Regulatory Area 2A	748	1,650,000	555	1,223,432	74.1
IPHC Regulatory Area 2B	2,295	5,060,000	2,024	4,462,804	88.2
IPHC Regulatory Area 2C	2,368	5,220,000	2,464	5,431,265	104.0
IPHC Regulatory Area 3A	4,119	9,080,000	3,720	8,201,795	90.3
IPHC Regulatory Area 3B	1,297	2,860,000	985	2,170,569	75.9
IPHC Regulatory Area 4A	608	1,340,000	353	777,661	58.0
IPHC Regulatory Area 4B	472	1,040,000	199	438,820	42.2
IPHC Regulatory Area 4CDE and Closed Area	1,397	3,080,000	407	897,988	29.2
Subtotal (TCEY)	**13,304**	**29,330,000**	**10,707**	**23,604,334**	**80.5**
Non-directed commercial discard mortality (U26)	816	1,800,000	*	*	*
Total[1]	**14,120**	**31,130,000**	**10,707**	**23,604,334**	**75.8**

[1]Totals exclude sectors for which data are confidential or unavailable.

Table 2. 2026 estimates of mortality reported against fishery limits (FCEY) and mortality projections (non-FCEY components of TCEY) by IPHC Regulatory Area (year-end projections as of 26 October 2026).

IPHC Regulatory Area	Fishery limit / projection (net weight)		Mortality to date[1] (net weight)		Percent attained
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	(%)
Area 2A (California, Oregon, and Washington)	**748**	**1,650,000**	***555***	***1,223,432***	**74.1**
Domestic mortality limits (FCEY)					
Non-treaty directed commercial fishery	118	261,211	115	254,133	97.3
Non-treaty incidental catch in salmon troll fishery	21	46,096	*8*	*18,664*	40.5
Non-treaty incidental catch in sablefish fishery[2]	32	70,000	*23*	*51,236*	73.2
Treaty Indian commercial fishery	240	528,200	245	539,570	102.2
Treaty Indian ceremonial and subsistence (year-round)	5	10,800	*5*	*10,800*	100.0
Recreational – Washington	130	286,356	*102*	*225,807*	78.9
Recreational – Oregon	135	297,297	*50*	*110,000*	37.0
Recreational – California	18	40,040	*5*	*10,500*	26.2
Projections (non-FCEY)[3]					
Directed commercial discard mortality	27	60,000	*	*	*
Recreational discard mortality	--	--	1	2,722	--
Non-directed commercial discard mortality (O26)	23	50,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	0	0	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	5	10,000	*	*	*

IPHC Regulatory Area	Fishery limit / projection (net weight)		Mortality to date[1] (net weight)		Percent attained
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	(%)
Area 2B (British Columbia)	**2,295**	**5,060,000**	***2,024***	***4,462,804***	**88.2**
Domestic mortality limits (FCEY)					
Directed commercial fishery landings	1,637	3,610,000	1,484	3,271,202	90.6
Recreational fishery	290	640,000	*282*	*621,967*	97.2
Recreational fishery (XRQ – Experimental Quota)[5]	--	--	0	0	--
Projections (non-FCEY)[3]					
Directed commercial discard mortality	73	160,000	*	*	*
Recreational discard mortality	14	30,000	*17*	*36,635*	122.1
Subsistence	186	410,000	*184*	*405,000*	98.8
Non-directed commercial discard mortality (O26)	104	230,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	58	128,000	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	45	100,000	*	*	*
Area 2C (southeastern Alaska)	**2,368**	**5,220,000**	***2,464***	***5,431,265***	**104.0**
Domestic mortality limits (FCEY)					
Directed commercial fishery landings	1,275	2,810,000	1,049	2,312,666	82.3
Directed commercial discard mortality	45	100,000	40	87,246	87.2
Metlakatla (Annette Island Reserve)	--	--	29	63,224	--
Guided recreational fishery	295	650,000	305	672,859	103.5
Guided recreational fishery (GAF)[5]	--	--	*95*	*208,500*	--
Projections (non-FCEY)[3]					
Unguided recreational fishery	617	1,360,000	742	1,634,910	120.2
Subsistence	113	250,000	*102*	*225,876*	90.4
Non-directed commercial discard mortality (O26)	18	40,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	103	225,984	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	0	0	*	*	--
Area 3A (central Gulf of Alaska)	**4,119**	**9,080,000**	***3,720***	***8,201,795***	**90.3**
Domestic mortality limits (FCEY)					
Directed commercial fishery landings	2,703	5,960,000	2,424	5,343,789	89.7
Directed commercial discard mortality	163	360,000	150	330,061	91.7
Guided recreational fishery	667	1,470,000	633	1,395,802	95.0
Guided recreational fishery (GAF)[5]	--	--	*24*	*53,750*	--
Projections (non-FCEY)[3]					
Unguided recreational fishery	408	900,000	414	912,268	101.4
Subsistence	54	120,000	*44*	*96,078*	80.1
Non-directed commercial discard mortality (O26)	122	270,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	32	70,047	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	100	220,000	*	*	*
Area 3B (western Gulf of Alaska)	**1,297**	**2,860,000**	***985***	***2,170,569***	**75.9**
Domestic mortality limits (FCEY)					
Directed commercial fishery landings	1,125	2,480,000	973	2,145,350	86.5
Projections (non-FCEY)[3]					
Directed commercial discard mortality	95	210,000	*	*	*
Recreational fishery	0	0	5	11,856	--
Subsistence	5	10,000	*1*	*1,897*	19.0
Non-directed commercial discard mortality (O26)	73	160,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	5	11,466	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	54	120,000	*	*	*

IPHC Regulatory Area	Fishery limit / projection (net weight)		Mortality to date[1] (net weight)		Percent attained
	Tonnes (t)	Pounds (lb)	Tonnes (t)	Pounds (lb)	(%)
Area 4A (eastern Aleutians)	**608**	**1,340,000**	***353***	***777,661***	**58.0**
Domestic mortality limits (FCEY)					
Directed commercial fishery landings	458	1,010,000	337	741,918	73.5
Projections (non-FCEY)[3]					
Directed commercial discard mortality	23	50,000	*	*	*
Recreational fishery	5	10,000	3	6,801	68.0
Subsistence	0	0	*3*	*6,209*	--
Non-directed commercial discard mortality (O26)	118	260,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	10	22,733	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	68	150,000	*	*	*
Area 4B (central and western Aleutians)	**472**	**1,040,000**	***199***	***438,820***	**42.2**
Domestic mortality limits (FCEY)					
Directed commercial fishery landings	417	920,000	199	438,820	47.7
Projections (non-FCEY)[3]					
Directed commercial discard mortality	0	0	*	*	--
Recreational fishery	0	0	0	0	--
Subsistence	0	0	*0*	*0*	--
Non-directed commercial discard mortality (O26)	54	120,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	0	0	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	9	20,000	*	*	*
Areas 4CDE and Closed Area	**1,397**	**3,080,000**	**407**	**897,988**	**29.2**
Domestic mortality limits (FCEY)					
Directed commercial fishery landings	739	1,630,000	393	866,287	53.1
Projections (non-FCEY)[3]					
Directed commercial discard mortality	23	50,000	*	*	*
Recreational fishery	0	0	0	0	--
Subsistence[6]	5	10,000	14	31,701	317.0
Non-directed commercial discard mortality (O26)	626	1,380,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	0	0	--
Non-TCEY mortality					
Non-directed commercial discard mortality (U26)	535	1,180,000	*	*	*
Total (TCEY)	**13,304**	**29,330,000**	***10,707***	***23,604,334***	**80.5**
Directed commercial fishery	9,215	20,315,507	*7,468*	*16,464,166*	81.0
Recreational fishery	2,578	5,683,693	*2,678*	*5,904,377*	103.9
Subsistence	368	810,800	*353*	*777,561*	95.9
Non-directed commercial discard mortality (O26)	1,139	2,510,000	*	*	*
IPHC fishery-independent setline survey and research[4]	--	--	208	458,230	--
Total non-directed commercial discard mortality (U26)	816	1,800,000	*	*	*
Total	**14,120**	**31,130,000**	***10,707***	***23,604,334***	**75.8**

Totals exclude sectors for which data are confidential or unavailable.Values shown in italics represent year-end projections.

[1] Totals by IPHC Regulatory area include all TCEY components, i.e. exclude non-directed commercial discard mortality (U26).
[2] North of Pt. Chehalis; non-treaty incidental to sablefish fishery limit allocated from Washington sport allocation in accordance with the Pacific halibut Catch Sharing Plan for IPHC Regulatory Area 2A.
[3] Fishery projection is value used in setting the TCEY for each IPHC Regulatory Area (i.e., non-FCEY components of TCEY).
[4] Includes U32 Pacific halibut landed during FISS; limit not applicable (shown as "--").
[5] XRQ and GAF leased from commercial quota.
[6] Includes U32 CDQ landings retained for personal consumption and not accounted as commercial CDQ landings in IPHC Regulartory Areas 4D and 4E.
* =Data not yet available or confidential, in accordance with Data confidentiality policy and data sharing procedures. Subject to update by 5 November 2026.

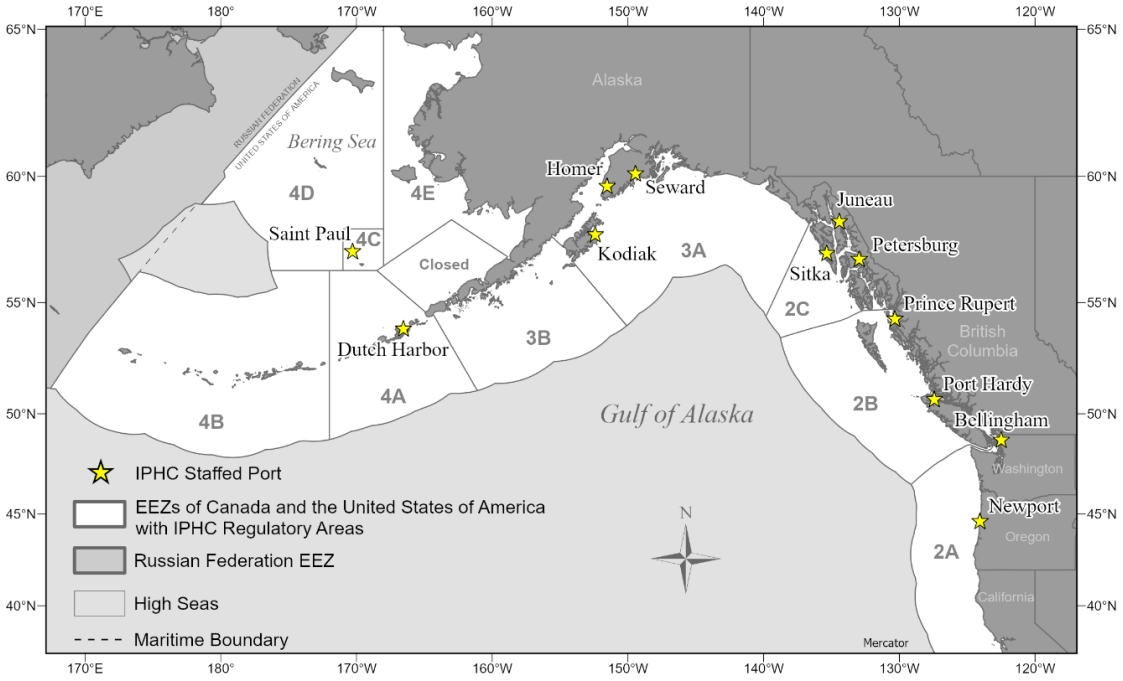


Figure 1. IPHC Convention Area and associated IPHC Regulatory Areas.

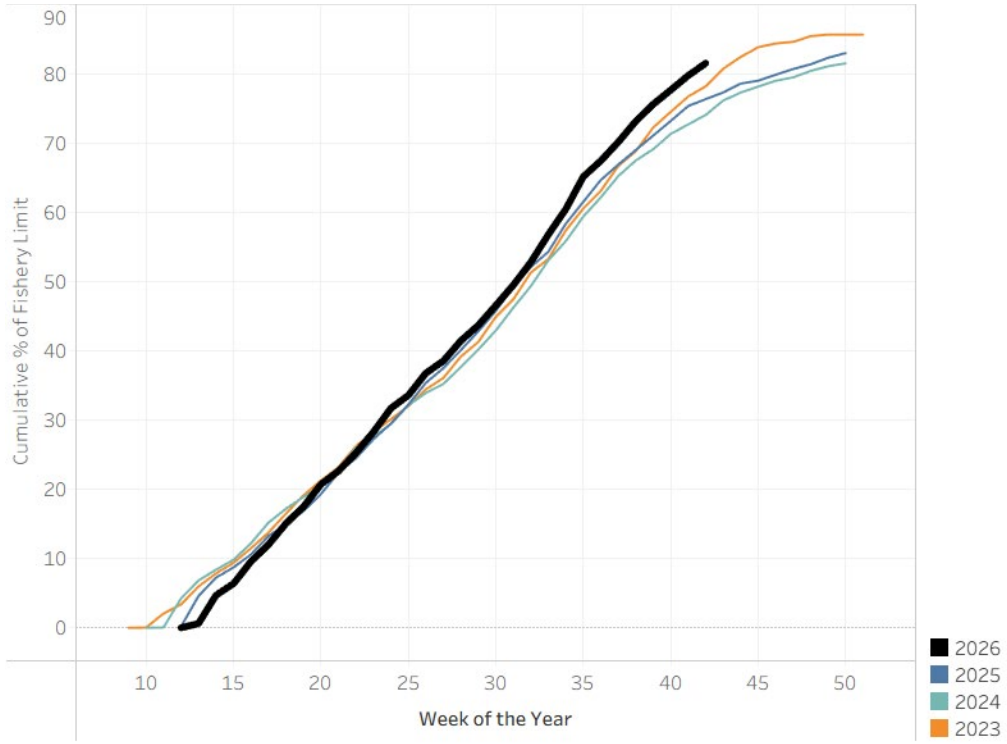


Figure 2. Cumulative percentage of directed commercial Pacific halibut limit landed by week.

REMOVALS OUTSIDE THE IPHC CONVENTION AREA

The latest (2024) Food and Agriculture Organization (FAO) statistics for Pacific halibut capture production outside the IPHC Convention Area indicate catches by Russia amounting to 1,578 tonnes (live weight), or 12% of the global total.

RECOMMENDATION

That the Commission:

1) **NOTE** paper IPHC-2026-IM102-06 that provides the Commission with a preliminary overview of the 2026 Pacific halibut removals, including the status of mortality reported against mortality and fishery limits adopted by the Commission and outlined in the IPHC Fishery Regulations (2026);
2) **NOTE** that percentages shown for combined lines and for the coastwide total understate attainment, because mortality that is confidential or not yet available is excluded from the numerator while the corresponding fishery limit remains in the denominator;
3) **NOTE** that mortality in IPHC Regulatory Area 2C currently stands at 104% of the mortality limit; this figure is not final, will be updated in early November, and may increase; and
4) **NOTE** that all estimates are preliminary. This paper presents current data and a selection of year-end projections available as of 26 October 2026. Year-end projections for directed commercial landings, estimates of directed commercial discard mortality, and non-directed commercial discard mortality will be included in Rev_1 of this paper. The updated data will be used in the 2026 stock assessment.

IPHC Fishery-Independent Setline Survey (FISS) design and implementation in 2026

PREPARED BY: IPHC SECRETARIAT (K. UALESI , T. JACK, K. COLL, C. SKALLEY; 29 OCTOBER 2026)

PURPOSE

To provide a summary of the IPHC Fishery-Independent Setline Survey (FISS) design and implementation in 2026.

BACKGROUND

The annual IPHC Fishery-Independent Setline Survey (FISS) of the Pacific halibut stock was augmented from 2014-2019 with expansion stations that filled in gaps in coverage in the annual FISS. Prior to 2020, the standard grid of stations comprised 1,200 stations. Following the completion in 2019, expansion stations were added to the standard grid in all IPHC Regulatory Areas, now totaling 1,890 stations for the full FISS design (Figure 1), within the prescribed depth range of 18 to 732 metres (10 to 400 fathoms).

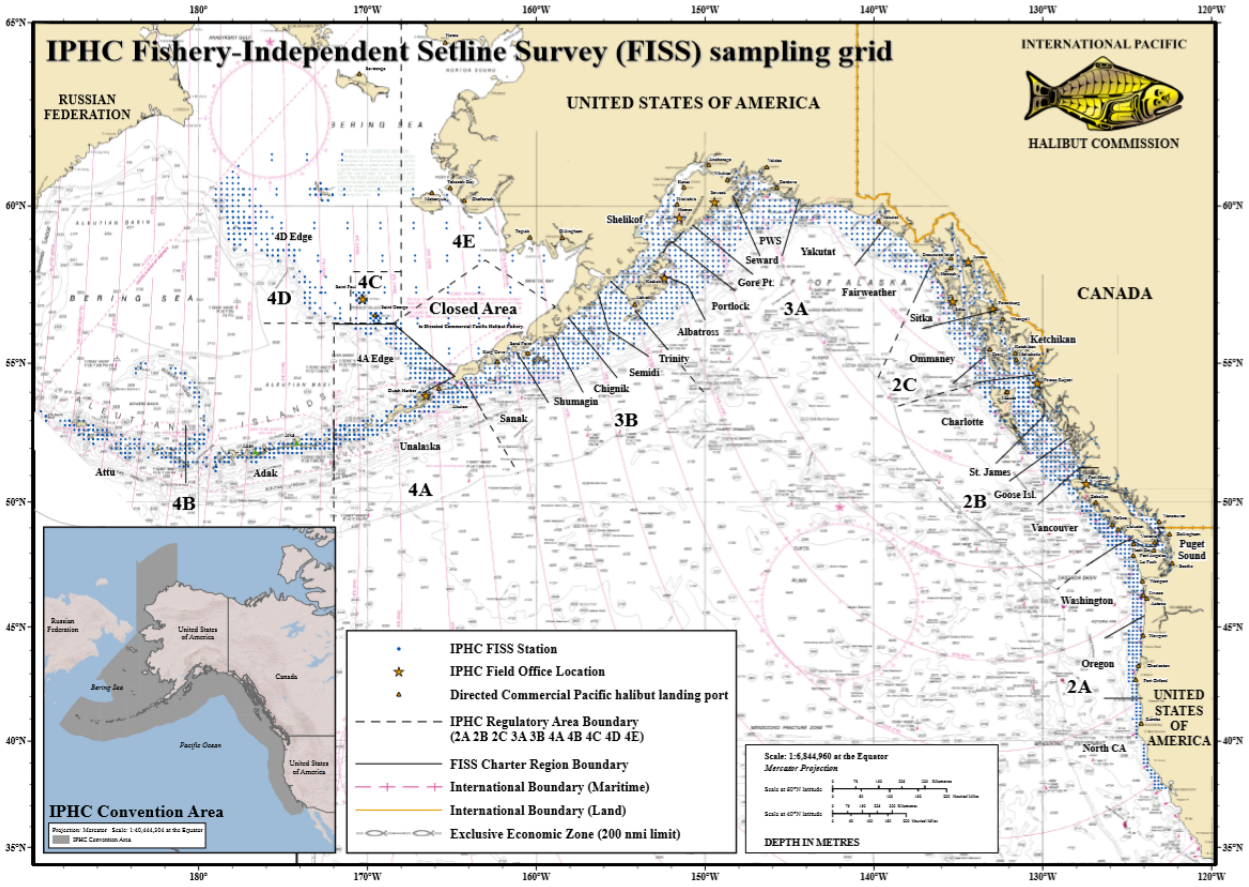


Figure 1. IPHC Fishery-Independent Setline Survey (FISS) with full sampling grid shown.

Prior to 2019, only fixed gear was used to fish FISS sets. With increasing use of snap gear in the commercial fishery, this restriction has limited the number of vessels available for the FISS. Further, any differences between snap and fixed gears (including catch rate differences and differences in fishing locations) may affect our understanding of trends in commercial fishery indices. This has motivated the need for a study comparing the two gear types with this work being done in 2019, 2020, and again in 2021. No further comparison was undertaken in 2022;

recognizing the increased use of snap gear, the IPHC Secretariat opened all bids for 2023 to both fixed gear and snap gear vessels and has continued this practice through 2026.

Beginning in 2019, individual weight data were collected coastwide from Pacific halibut caught on the FISS to eliminate questions that have arisen regarding the accuracy of estimates that depend on these weights, including weight per unit effort (WPUE) indices of density. Data from IPHC collections from commercial landings and other sources had provided evidence that the current standard length-net weight curve used for estimating Pacific halibut weights on the FISS may have been over-estimating weights on average in most IPHC Regulatory Areas, and that the relationship between weight and length may vary spatially.

2026 FISS design

On 19 December 2025 (IPHC-2025-MR-019), the 2026 FISS Tender Specifications were published to the IPHC website, with a deadline of 1 February 2026 for tenders (subsequently extended to 8 February 2026).

At the 101st Session of the IPHC Interim Meeting (IM101, 2 December 2025), the Commission adopted the Supplemented Reduced Loss design (Option 2; 692 stations) for the 2026 FISS (IPHC-2025-IM101-R). At its 102nd Session of the IPHC Annual Meeting (AM102, 19–22 January 2026), the Commission subsequently adopted a revised 2026 FISS design, substituting the Gore Point and Fairweather charter regions for Prince William Sound and Yakutat respectively and adding the Goose Island charter region, bringing the total to 717 stations coastwide, an increase of 25 stations on the design adopted at IM101 (IPHC-2026-AM102-R).

The design (Figure 2) comprised sampling subareas within IPHC Regulatory Areas 2B, 2C, 3A, 3B, 4A and 4B, intended to balance the Commission's primary and secondary objectives for the FISS, on the understanding that vessel availability, bids received, additional bait needs, and field staff recruitment may affect operational feasibility.

MATERIALS AND METHODS

The IPHC's FISS design encompasses nearshore and offshore waters of the IPHC Convention Area (Fig. 1). The IPHC Regulatory Areas are divided into 29 charter regions, each requiring between 10 and 46 charter days to complete. FISS stations are located at the intersections of a 10 nmi by 10 nmi square grid within the depth range occupied by Pacific halibut during summer months (18 – 732 m [10 – 400 fm]). Figure 2 depicts the 2026 FISS station positions adopted at AM102, together with the IPHC Regulatory Areas, for a coastwide total of 717 stations.

Fishing vessels are chosen through a competitive bid process where up to four (4) charter regions per vessel may be awarded and typically 8-15 vessels are chosen. In 2026, the process was clearly documented on the IPHC website for accountability and transparency purposes: Vessel Recruiting - IPHC.

In 2026, six (6) vessels were chartered to complete the FISS, reflecting the reduced scale of the design adopted at AM102 (717 stations, against 1,890 stations under the full FISS design), as detailed in IPHC-2026-MR-004 Notification of IPHC Fishery-Independent Setline Survey (FISS) 2026 Contract Awards - IPHC.

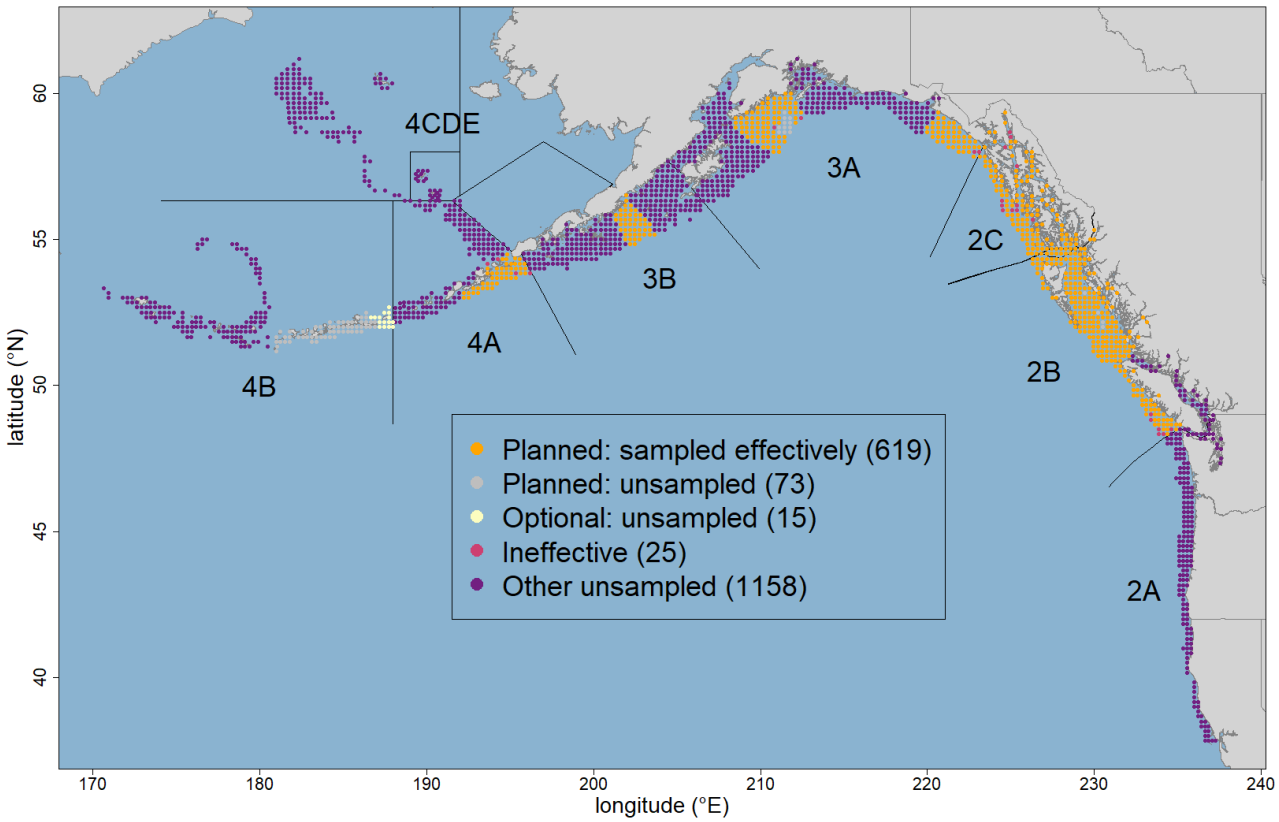


Figure 2. Map of the 2026 FISS design (717 stations, plus 15 optional stations in IPHC regulatory area 4B), approved by the Commission at AM102 on 22 January 2026. This map shows the 619 stations sampled effectively (in orange, the 73 unsampled stations (in grey), the 15 optional stations in IPHC regulatory area 4B (in yellow) and the 25 ineffective stations (in red).

Sampling protocols

IPHC Setline Survey Specialists (Field) collected data according to protocols established in the 2026 FISS Sampling Manual (IPHC-2026-VSM01).

Sampling challenges - 2026

Of the 717 FISS stations planned for the 2026 FISS season, 619 (86%) were effectively sampled.

Not sampled: A total of 73 stations initially planned for sampling in 2026 were not completed. In the Adak charter region, 58 stations were not sampled due to lack of vessel availability. In the Charlotte charter region, one (1) station was excluded because it was located within the Hecate Marine Protected Area. Additionally, three (3) stations in the St James charter region were not completed because they were in the Hecate Marine Protected Area. In the Seward charter region, 11 stations were not completed because the vessel contracted for this region encountered a significant mechanical issue that required substantial repairs.

Ineffective stations: Coastwide, twenty-five (25) stations were deemed ineffective due to orca depredation (n=5), sperm whale depredation (n=14), sand fleas (n=4), soak time (n=1), and setting and gear issues (n=1).

Bait (Chum salmon)

The minimum quality requirement for FISS bait is No. 2 semi-bright (Alaska Seafood Marketing Institute grades A through E), headed and gutted, and individually quick-frozen chum salmon. Bait usage is based on 0.17 kilograms (0.37 pounds) per hook resulting in approximately 136

kilograms (300 pounds) per eight skate station. Bait quality was monitored and documented throughout the season and found to meet the standard as described above.

Pre-season: In August 2025 (IPHC-2025-MR-011), the Secretariat solicited pre-season bait purchases of up to approximately 72.4 tonnes (159,600 lbs) of chum salmon (28.3 t in Canada; 44.1 t in the United States) to ensure a smooth start to the 2026 FISS.

RESULTS

Interactive views of the FISS results are provided via the IPHC website here:

https://www.iphc.int/data/setline-survey-catch-per-unit-effort

As in previous years, legal-sized (O32) Pacific halibut caught on the FISS were sacrificed in order to obtain biological data and were retained for sale. In addition, beginning in 2020, sub-legal (U32) Pacific halibut randomly selected for otolith sampling were also retained and sold. This helped to offset costs of the FISS. FISS vessels also retained for sale incidentally captured rockfish (*Sebastes spp*.) and Pacific cod (*Gadus macrocephalus*) as these species rarely survive the barotrauma resulting from capture. Most vessel contracts provided the vessel a lump sum payment, along with a 10% share of the Pacific halibut proceeds and a 50% share of the incidental catch proceeds.

The 2026 FISS chartered six (6) commercial longline vessels (three Canadian and three USA), during a combined 37 trips and 364 charter days (Tables 1). Otoliths were removed from 9,791 fish coastwide. Approximately 160 tonnes (353,451 pounds) of Pacific halibut, 14.72 tonnes (32,458 pounds) of Pacific cod, and 38.44 tonnes (84,737 pounds) of rockfish were landed from the FISS stations.

Table 1a. Effort and landing summary by FISS charter region and vessel for all 2026 stations and all Pacific halibut (sampled U32 and all O32).

IPHC Regulatory Area	Charter Region	Vessel	Vessel Number[1]	Charter Days[2]	Planned Stations	Effective Stations[3]	Pacific halibut Sold (t)[4]	Pacific halibut Sold (lb)[4]	Average Price USD/kg[5]	Average Price USD/lb[5]
2B	Vancouver Outside	*Vanisle*	21912	32	56	50	8	18,424	$22.04	$10.00
2B	Goose Is.	*Star Wars II*	99997	32	57	57	9	20,382	$24.19	$10.97
2B	St. James	*Vanisle*	21912	28	60	57	17	36,705	$24.64	$11.17
2B	Charlotte	*Vanisle*	21912	54	89	88	24	52,489	$23.85	$10.82
2C	Ketchikan	*Pender Isle*	27282	23	43	43	20	43,466	$23.82	$10.80
2C	Ommaney	*Pender Isle*	27282	28	52	45	31	67,483	$22.84	$10.36
2C	Sitka	*Predator*	33133	31	52	48	17	38,300	$21.52	$9.76
3A	Fairweather	*Predator*	33133	24	51	49	4	8,329	$19.95	$9.05
3A	Seward	*J-Bae*	56103	34	52	39	8	16,547	$21.18	$9.61
3A	Gore Pt.	*Kema Sue*	41033	28	48	48	8	17,127	$21.24	$9.64
3B	Chignik	*Kema Sue*	41033	25	48	48	5	11,466	$16.17	$7.34
4A	Unalaska	*Kema Sue*	41033	25	51	47	10	22,733	$16.76	$7.60
Total		**6 Vessels**		**364**	**659**	**619**	**160**	**353,451**	**$22.36**	**$10.14**

[1] Canada: Vessel Registration Number and USA: ADF&G vessel number.
[2] Days are estimated - some vessels fished two charter regions in one day.
[3] Stations that did not meet setting parameters or deemed ineffective are excluded.
[4] Net weight (head-off, dressed, washed). May not sum to correct total due to rounding.
[5] Ex-vessel price.

Table 1b. Effort and landing summary by FISS charter region and vessel for all 2026 stations and O32 Pacific halibut.

IPHC Regulatory Area	Charter Region	Vessel	Vessel Number[1]	Charter Days[2]	Planned Stations	Effective Stations[3]	Pacific halibut Sold (t)[4]	Pacific halibut Sold (lb)[4]	Average Price USD/kg[5]	Average Price USD/lb[5]
2B	Vancouver Outside	*Vanisle*	21912	32	56	50	8	17,745	$22.14	$10.04
2B	Goose Is.	*Star Wars II*	99997	32	57	57	9	18,924	$24.32	$11.03
2B	St. James	*Vanisle*	21912	28	60	57	16	35,975	$24.67	$11.19
2B	Charlotte	*Vanisle*	21912	54	89	88	23	49,634	$23.99	$10.88
2C	Ketchikan	*Pender Isle*	27282	23	43	43	19	41,975	$23.91	$10.84
2C	Ommaney	*Pender Isle*	27282	28	52	45	29	64,722	$23.06	$10.46
2C	Sitka	*Predator*	33133	31	52	48	17	36,820	$21.52	$9.76
3A	Fairweather	*Predator*	33133	24	51	49	3	7,705	$20.04	$9.09
3A	Seward	*J-Bae*	56103	34	52	39	7	15,115	$21.33	$9.68
3A	Gore Pt.	*Kema Sue*	41033	28	48	48	7	15,135	$21.43	$9.72
3B	Chignik	*Kema Sue*	41033	25	48	48	4	9,247	$17.51	$7.94
4A	Unalaska	*Kema Sue*	41033	25	51	47	5	10,253	$18.10	$8.21
Total		**6 Vessels**		**364**	**659**	**619**	**147**	**323,249**	**$22.79**	**$10.34**

[1] Canada: Vessel Registration Number and USA: ADF&G vessel number.
[2] Days are estimated - some vessels fished two charter regions in one day.
[3] Stations that did not meet setting parameters or deemed ineffective are excluded.
[4] Net weight (head-off, dressed, washed). May not sum to correct total due to rounding.
[5] Ex-vessel price.

Table 1c. Effort and landing summary by FISS charter region and vessel for all 2026 stations and sampled U32 Pacific halibut.

IPHC Regulatory Area	Charter Region	Vessel	Vessel Number1	Charter Days2	Planned Stations	Effective Stations[3]	Pacific halibut Sold (t)[4]	Pacific halibut Sold (lb)[4]	Average Price USD/kg[5]	Average Price USD/lb[5]
2B	Vancouver Outside	*Vanisle*	21912	32	56	50	0	679	$19.57	$8.88
2B	Goose Is.	*Star Wars II*	99997	32	57	57	1	1,458	$22.56	$10.23
2B	St. James	*Vanisle*	21912	28	60	57	0	730	$22.74	$10.31
2B	Charlotte	*Vanisle*	21912	54	89	88	1	2,855	$21.45	$9.73
2C	Ketchikan	*Pender Isle*	27282	23	43	43	1	1,491	$21.28	$9.65
2C	Ommaney	*Pender Isle*	27282	28	52	45	1	2,761	$17.75	$8.05
2C	Sitka	*Predator*	33133	31	52	48	1	1,479	$21.61	$9.80
3A	Fairweather	*Predator*	33133	24	51	49	0	625	$18.84	$8.54
3A	Seward	*J-Bae*	56103	34	52	39	1	1,432	$19.58	$8.88
3A	Gore Pt.	*Kema Sue*	41033	28	48	48	1	1,992	$19.84	$9.00
3B	Chignik	*Kema Sue*	41033	25	48	48	1	2,219	$10.58	$4.80
4A	Unalaska	*Kema Sue*	41033	25	51	47	6	12,480	$15.66	$7.10
Total		**6 Vessels**		**364**	**659**	**619**	**14**	**30,202**	**$17.71**	**$8.04**

[1] Canada: Vessel Registration Number and USA: ADF&G vessel number.
[2] Days are estimated - some vessels fished two charter regions in one day.
[3] Stations that did not meet setting parameters or deemed ineffective are excluded.
[4] Net weight (head-off, dressed, washed). May not sum to correct total due to rounding.
[5] Ex-vessel price.

Vessels chartered by the IPHC delivered fish to 12 different ports (Tables 2). Fish sales were awarded based on obtaining a fair market price. When awarding sales, the Commission considered the price offered, the number of years that a buyer had been buying and marketing Pacific halibut, how fish were graded at the dock (including the determination of No. 2 and chalky Pacific halibut), and the promptness of settlements following deliveries. In the case of multi-port bidding, vessel transit logistics and operational requirements were also considered. Individual sales were evaluated after each event to ensure that the buyer was meeting IPHC standards. Average prices increased from $18.04/kg in 2025 to $22.36/kg in 2026 (Tables 3). This represents a 24% increase in price.

Table 2a. FISS Pacific halibut landings by port for all Pacific halibut (sampled U32 and all O32), 2026[1,2].

Offload Port	Trips	Tonnes	Pounds	Total USD	Average Price (USD/kg)	Average Price (USD/lb)
Dutch Harbor	2	10	22,733	$172,840.89	$16.76	$7.60
Homer	3	8	17,127	$165,024.60	$21.24	$9.64
Juneau	1	2	4,223	$38,881.75	$20.30	$9.21
Petersburg	2	8	17,357	$168,028.00	$21.34	$9.68
Port Hardy	5	25	54,197	$599,413.71	$24.38	$11.06
Prince Rupert	12	77	169,400	$1,804,771.28	$23.49	$10.65
Sand Point	2	5	11,466	$84,115.20	$16.17	$7.34
Seward	5	8	18,476	$177,771.00	$21.21	$9.62
Sitka	2	10	22,167	$215,097.00	$21.39	$9.70
Tofino/Ucluelet	1	4	9,905	$91,767.60	$20.43	$9.26
Vancouver	1	2	5,447	$58,622.53	$23.73	$10.76
Yakutat	1	0	953	$8,455.68	$19.56	$8.87
Grand Total	**37**	**160**	**353,451**	**$3,584,789.24**	**$22.36**	**$10.14**

[1] Net weight (head-off, dressed, washed).
[2] Prices based on net weight.

Table 2b. FISS Pacific halibut landings by port for O32 Pacific halibut, 2026[1,2].

Offload Port	Trips	Tonnes	Pounds	Total USD	Average Price (USD/kg)	Average Price (USD/lb)
Dutch Harbor	2	5	10,253	$84,179.80	$18.10	$8.21
Homer	3	7	15,135	$147,096.60	$21.43	$9.72
Juneau	1	2	4,168	$38,386.75	$20.30	$9.21
Petersburg	2	8	17,062	$165,293.00	$21.36	$9.69
Port Hardy	5	24	52,329	$580,563.46	$24.46	$11.09
Prince Rupert	12	73	161,703	$1,733,843.68	$23.64	$10.72
Sand Point	2	4	9,247	$73,464.00	$17.51	$7.94
Seward	5	8	17,024	$164,884.00	$21.35	$9.69
Sitka	2	9	20,525	$199,466.00	$21.42	$9.72
Tofino/Ucluelet	1	4	9,541	$89,150.19	$20.60	$9.34
Vancouver	1	2	5,401	$58,132.86	$23.73	$10.76
Yakutat	1	0	861	$7,646.08	$19.58	$8.88
Grand Total	**37**	**147**	**323,249**	**$3,342,106.42**	**$22.79**	**$10.34**

[1] Net weight (head-off, dressed, washed).
[2] Prices based on net weight.

Table 2c. FISS Pacific halibut landings by port for sampled U32 Pacific halibut, 2026[1,2].

Offload Port	Trips	Tonnes	Pounds	Total USD	Average Price (USD/kg)	Average Price (USD/lb)
Dutch Harbor	2	6	12,480	$88,661.10	$15.66	$7.10
Homer	3	1	1,992	$17,928.00	$19.84	$9.00
Juneau	1	0	55	$495.00	$19.84	$9.00
Petersburg	2	0	295	$2,735.00	$20.44	$9.27
Port Hardy	5	1	1,868	$18,850.25	$22.25	$10.09
Prince Rupert	12	3	7,697	$70,927.57	$20.32	$9.21
Sand Point	2	1	2,219	$10,651.20	$10.58	$4.80
Seward	5	1	1,452	$12,887.00	$19.57	$8.88
Sitka	2	1	1,642	$15,631.00	$20.99	$9.52
Tofino/Ucluelet	1	0	364	$2,617.41	$15.85	$7.19
Vancouver	1	0	46	$489.67	$23.47	$10.65
Yakutat	1	0	92	$809.60	$19.40	$8.80
Grand Total	**37**	**14**	**30,202**	**$242,682.80**	**$17.71**	**$8.04**

[1] Net weight (head-off, dressed, washed).
[2] Prices based on net weight.

Table 3a. FISS landings (total pounds and price) of all Pacific halibut (sampled U32 and all O32) by IPHC Regulatory Area in 2026[1].

IPHC Regulatory Area	2B	2C	3A	3B	4A	Total Weight and Average Price
Tonnes	58	68	19	5	10	160
Pounds	128,000	149,249	42,003	11,466	22,733	353,451
Price USD/kg	$23.87	$22.79	$20.96	$16.17	$16.76	$22.36
Price USD/lb	$10.83	$10.34	$9.51	$7.34	$7.60	$10.14

[1] Net weight (head-off, dressed, washed)

Table 3b. FISS landings (total pounds and price) of O32 Pacific halibut by IPHC Regulatory Area in 2026[1].

IPHC Regulatory Area	2B	2C	3A	3B	4A	Total Weight and Average Price
Tonnes	55	65	17	4	5	147
Pounds	122,277	143,517	37,955	9,247	10,253	323,249
Price USD/kg	$23.97	$22.91	$21.11	$17.51	$18.10	$22.79
Price USD/lb	$10.87	$10.39	$9.57	$7.94	$8.21	$10.34

[1] Net weight (head-off, dressed, washed)

Table 3c. FISS landings (total pounds and price) of sampled U32 Pacific halibut by IPHC Regulatory Area in 2026[1].

IPHC Regulatory Area	2B	2C	3A	3B	4A	Total Weight and Average Price
Tonnes	3	3	2	1	6	14
Pounds	5,723	5,731	4,049	2,219	12,480	30,202
Price USD/kg	$21.67	$19.67	$19.59	$10.58	$15.66	$17.71
Price USD/lb	$9.83	$8.92	$8.89	$4.80	$7.10	$8.04

[1] Net weight (head-off, dressed, washed)

FISS timing

The months of June, July, and August are targeted for FISS fishing every year. In 2026, this activity took place from 22 May through 15 September. On a coastwide basis, FISS vessel activity was highest in intensity at the beginning of the FISS season (Figure 3). All FISS activity was completed by the middle of September.

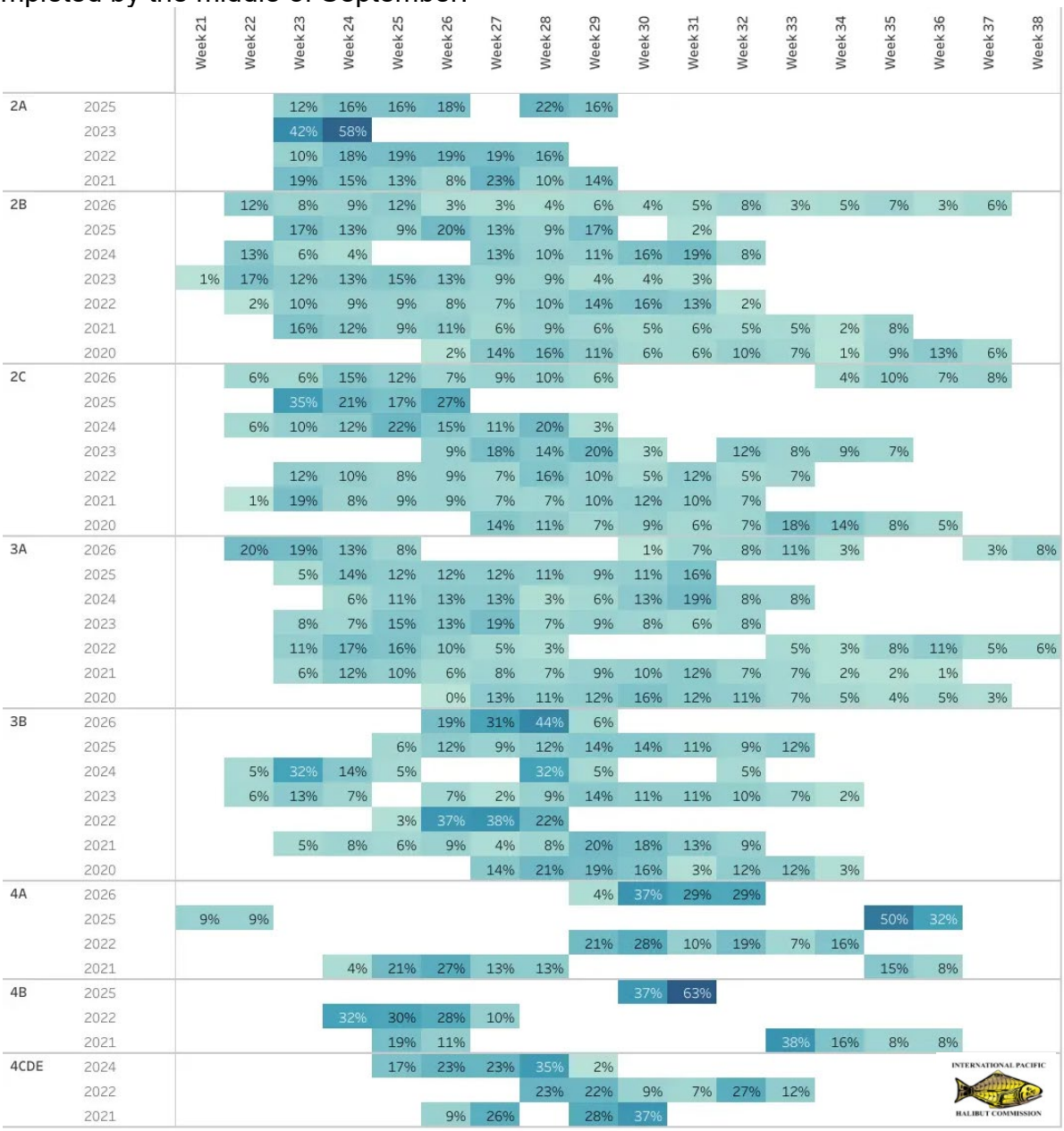


Figure 3. Percent of the total FISS stations completed by IPHC Regulatory Area during each week of the year (2020-2026). Week 21 begins in late May or early June, depending on the year.

RECOMMENDATION/S

That the Commission **NOTE** paper IPHC-2026-IM102-07 that provides a summary of the IPHC Fishery-Independent Setline Survey (FISS) design and implementation in 2026.

APPENDICES

Nil.

Space-time modelling of survey data

PREPARED BY: IPHC SECRETARIAT (R. A. WEBSTER; 28 OCTOBER 2026)

PURPOSE

To provide results of the space time modelling of Pacific halibut survey data for the period 1993-2026.

INTRODUCTION

Since 2016 space-time modelling has been used by the IPHC to produce estimates of mean O32 WPUE (weight per unit effort), all sizes WPUE and all sizes NPUE (numbers per unit effort) indices of Pacific halibut density and abundance. The modelling depends primarily on data from the IPHC's Fishery-Independent Setline Survey (FISS, Ualesi et al. 2026), but in the Bering Sea also integrates data from the National Oceanic and Atmospheric Administration (NOAA) - Fisheries annual trawl survey and the Alaska Department of Fish and Game's (ADFG) annual Norton Sound trawl survey. Both surveys are fishery-independent data sources.

Since 2019, the weighing of Pacific halibut onboard FISS charter vessels has meant that the weight data used to compute WPUE comes almost entirely from observed weights of fish rather than estimates from a length-net weight relationship. For fish without directly measured weights, weights are predicted from a year- and IPHC Regulatory Area-specific length-net weight relationship estimated from the FISS length and weight data. For U32 fish with round weight recorded, net weights are estimated from a round-net weight relationship estimated from coastwide sample data from the 2019 FISS.

Data inputs to the space-time modelling were updated with 2026 data from the IPHC's FISS along with data from NOAA Bering Sea trawl survey data, which did not include sampling in the northern Bering Sea this year. The spatial coverage of the FISS was greater than recent years (Figure 1), although remained lower than the optimal Base Block design in Regions 3 and 4B. The latter region was unsampled in 2026 due to a lack of charter bids. The stations sampled in IPHC Regulatory Area 4A were fished for the first time since 2019. The vessel that fished the Seward charter region in IPHC Regulatory Area 3A was unable to complete 100% of planned stations due to a mechanical issue.

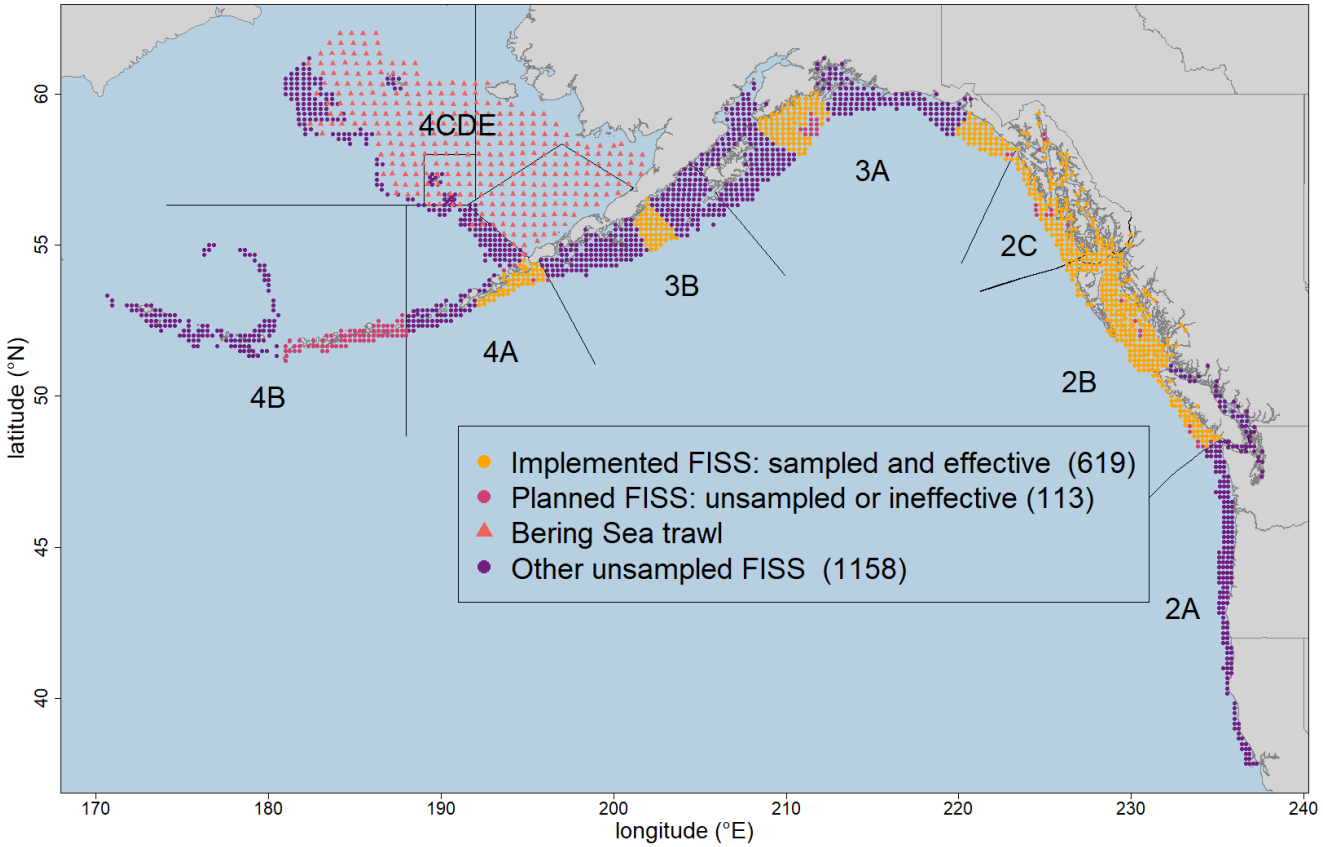


Figure 1. Map of 2026 sampled survey stations with data used in the space-time modelling (orange circles for FISS, red triangles for trawl), along with planned FISS stations that were either ineffective or not fished due to logistical reasons (fuchsia circles).

RESULTS OF SPACE-TIME MODELLING IN 2026

Figure 2 shows the time series estimates of O32 WPUE (most comparable to fishery catch-rates) over the 1993-2026 period included in the 2026 space-time modelling. Coastwide, we estimate a relatively stable index, with a 1% estimated decline since 2025. The index increased slightly in IPHC Biological Region 4 but declined in Regions 2 and 3. Coastwide indices of all sizes WPUE (Figure 3) and all sizes NPUE (Figure 4) were also estimated to be relatively stable, with changes of close to 0% since 2025. These indices showed small increases in Regions 2 and 4, and a decline in Region 3. Estimates for Biological Region 4B are highly uncertain due to the lack of sampling in 2026. Results for IPHC Regulatory Areas are shown in Appendix A.

Tables of model output (time series, stock distribution estimates) are updated annually on the IPHC website at https://www.iphc.int/data/time-series-datasets. Time series and other FISS summary information are presented on the FISS dashboard. These links are expected to be updated with 2026 data prior to the Interim Meeting on December 1.

RECOMMENDATION

That the Commission **NOTE** paper IPHC-2026-IM102-08 which provides results of the space-time modelling of Pacific halibut survey data for 1993-2026.

REFERENCE

Ualesi, K., Jack, T., and Coll, K. 2026. IPHC Fishery-independent setline survey (FISS) design and implementation in 2026. IPHC-2026-IM102-07.

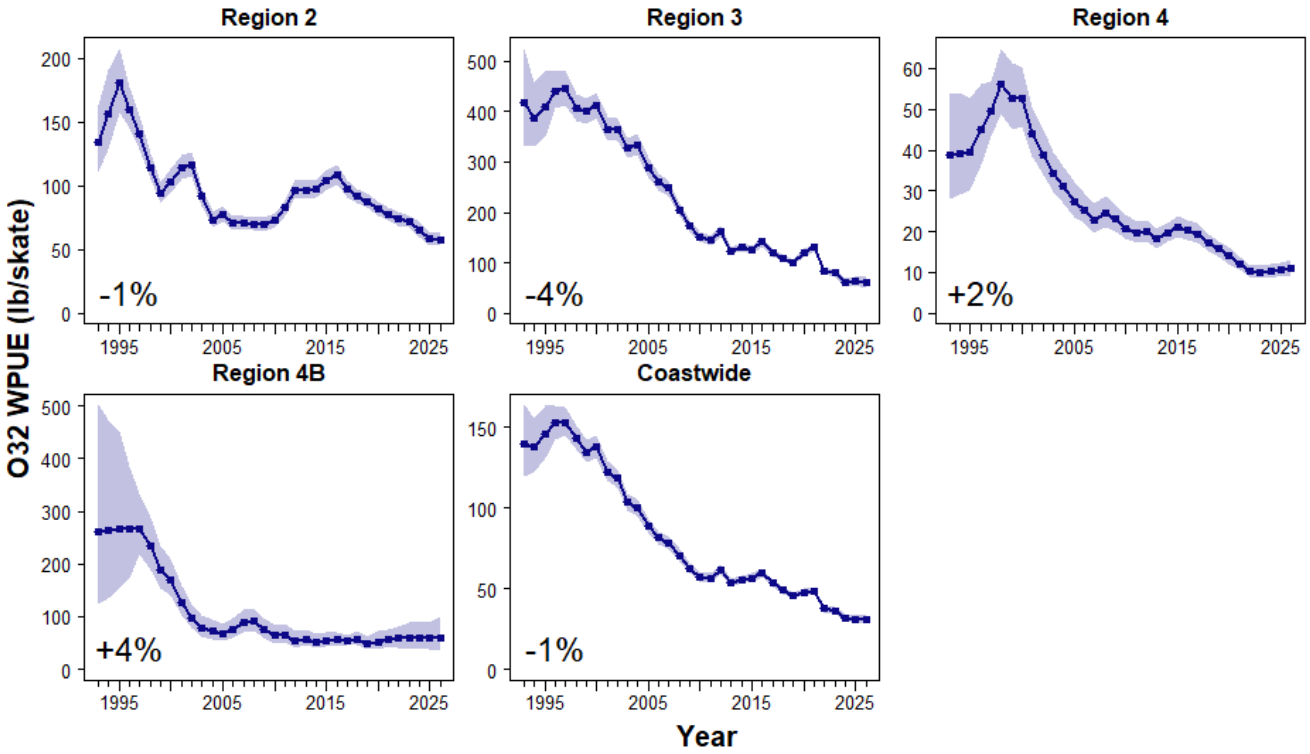


Figure 2. Space-time model output for O32 WPUE for 1993-2026 for Biological Regions. Filled circles denote the posterior means of O32 WPUE for each year. Shaded regions show posterior 95% credible intervals, which provide a measure of uncertainty: the wider the shaded interval, the greater the uncertainty in the estimate. Numeric values in the lower left-hand corners are estimates of the change in mean O32 WPUE from 2025 to 2026.

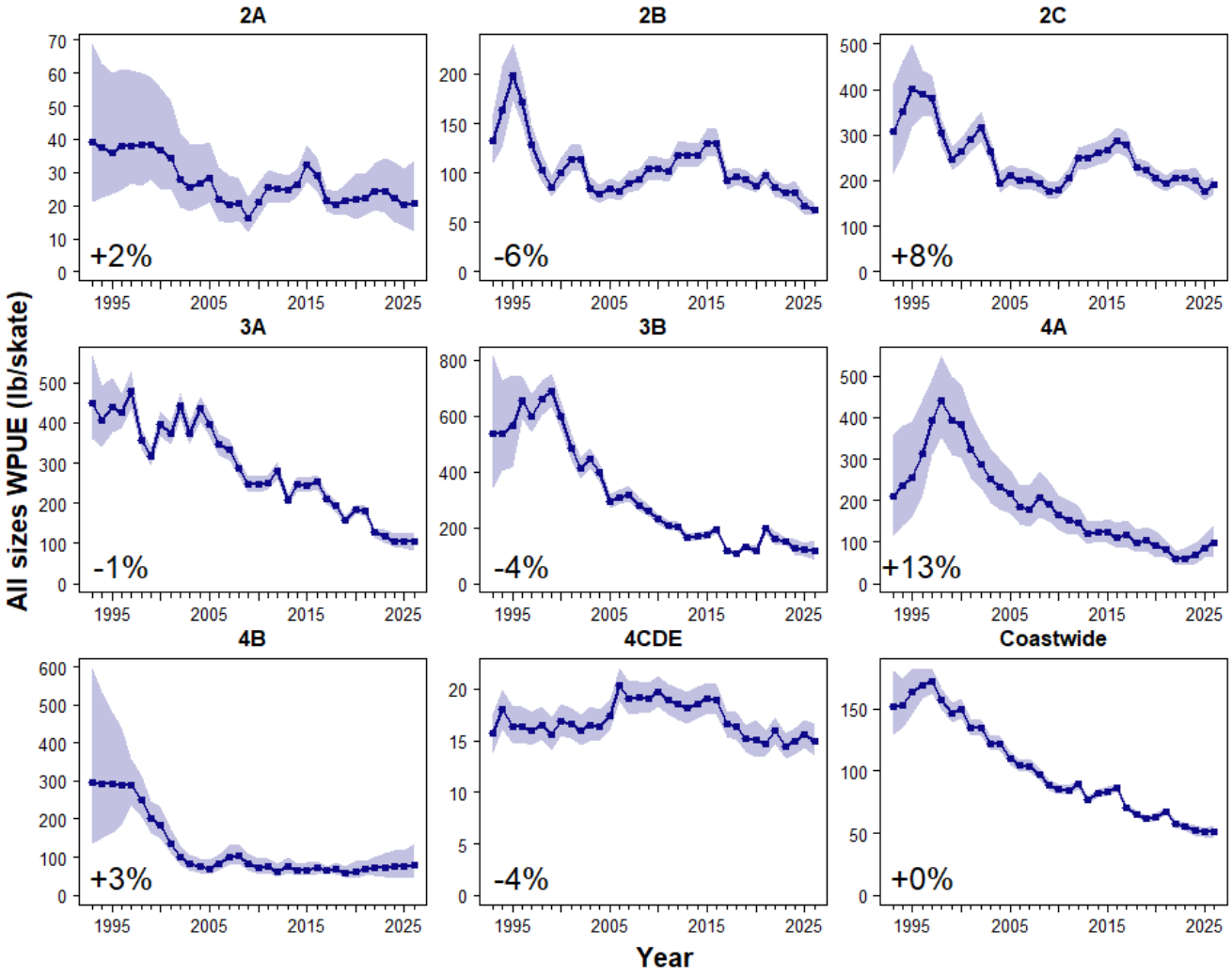


Figure 3. Space-time model output for all sizes WPUE for 1993-2026 for Biological Regions. Filled circles denote the posterior means of all sizes WPUE for each year. Shaded regions show posterior 95% credible intervals, which provide a measure of uncertainty: the wider the shaded interval, the greater the uncertainty in the estimate. Numeric values in the lower left-hand corners are estimates of the change in mean all sizes WPUE from 2025 to 2026.

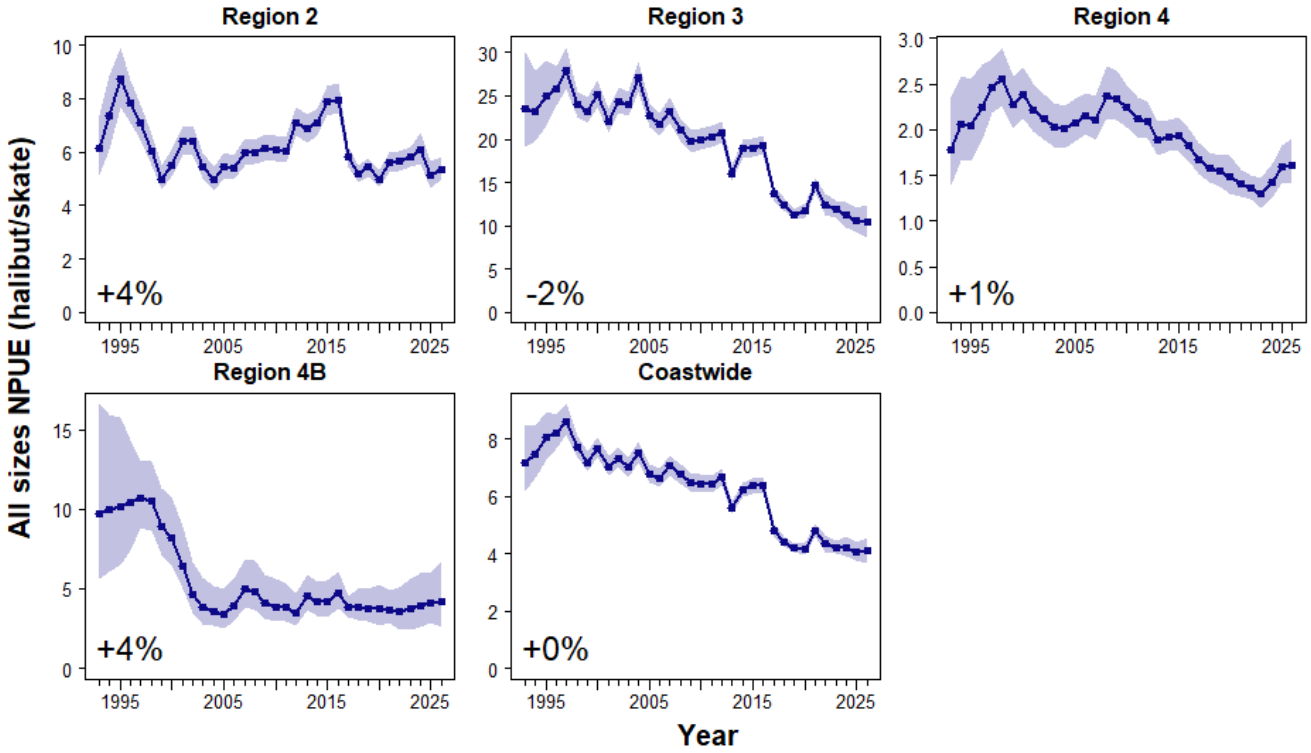


Figure 4. Space-time model output for all sizes NPUE for 1993-2026 for Biological Regions. Filled circles denote the posterior means of all sizes NPUE for each year. Shaded regions show posterior 95% credible intervals, which provide a measure of uncertainty: the wider the shaded interval, the greater the uncertainty in the estimate. Numeric values in the lower left-hand corners are estimates of the change in mean all sizes NPUE from 2025 to 2026.

APPENDIX A

Space-time modelling results by IPHC Regulatory Area

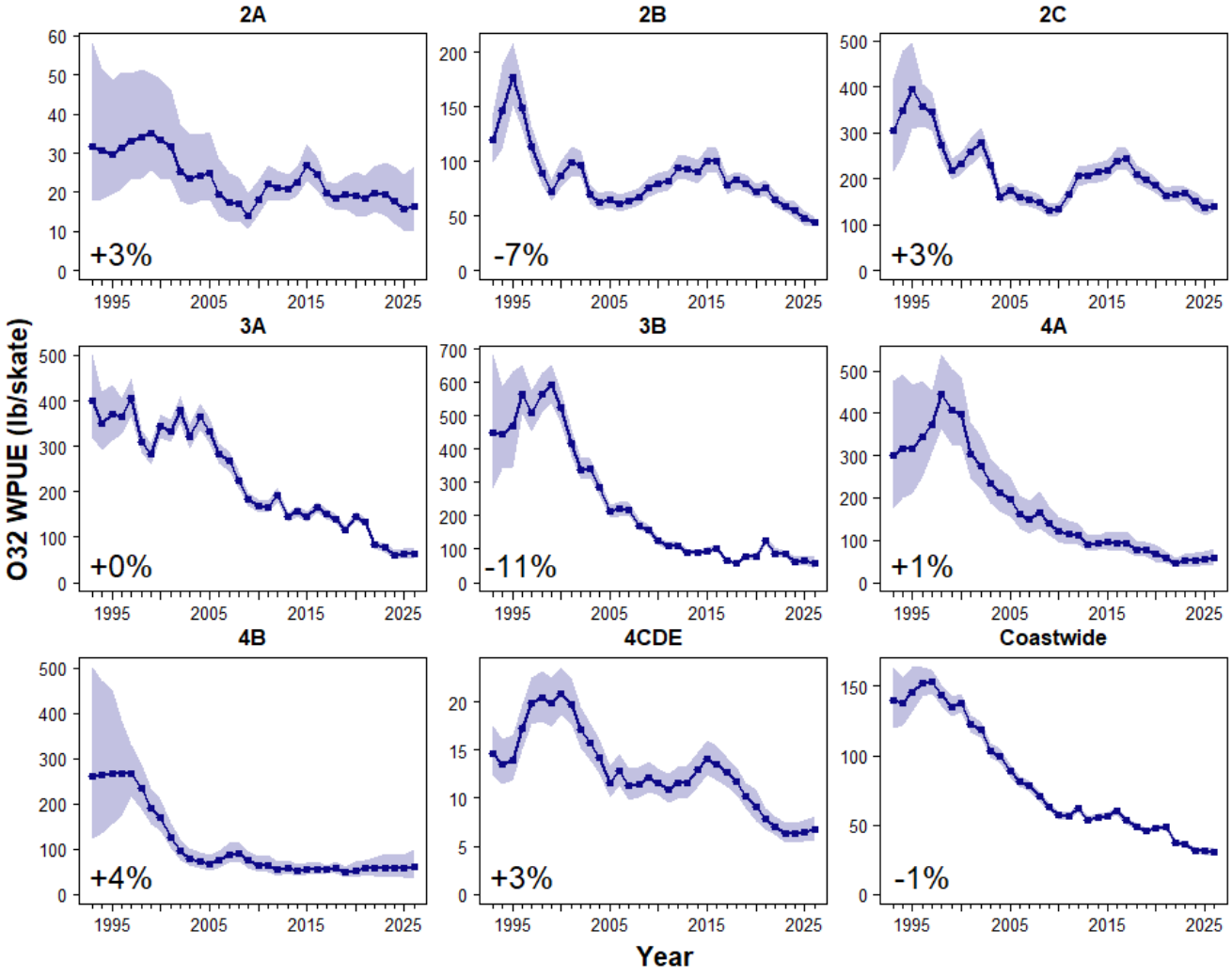


Figure A.1. Space-time model output for O32 WPUE for 1993-2026. Filled circles denote the posterior means of O32 WPUE for each year. Shaded regions show posterior 95% credible intervals, which provide a measure of uncertainty: the wider the shaded interval, the greater the uncertainty in the estimate. Numeric values in the lower left-hand corners are estimates of the change in mean O32 WPUE from 2025 to 2026.

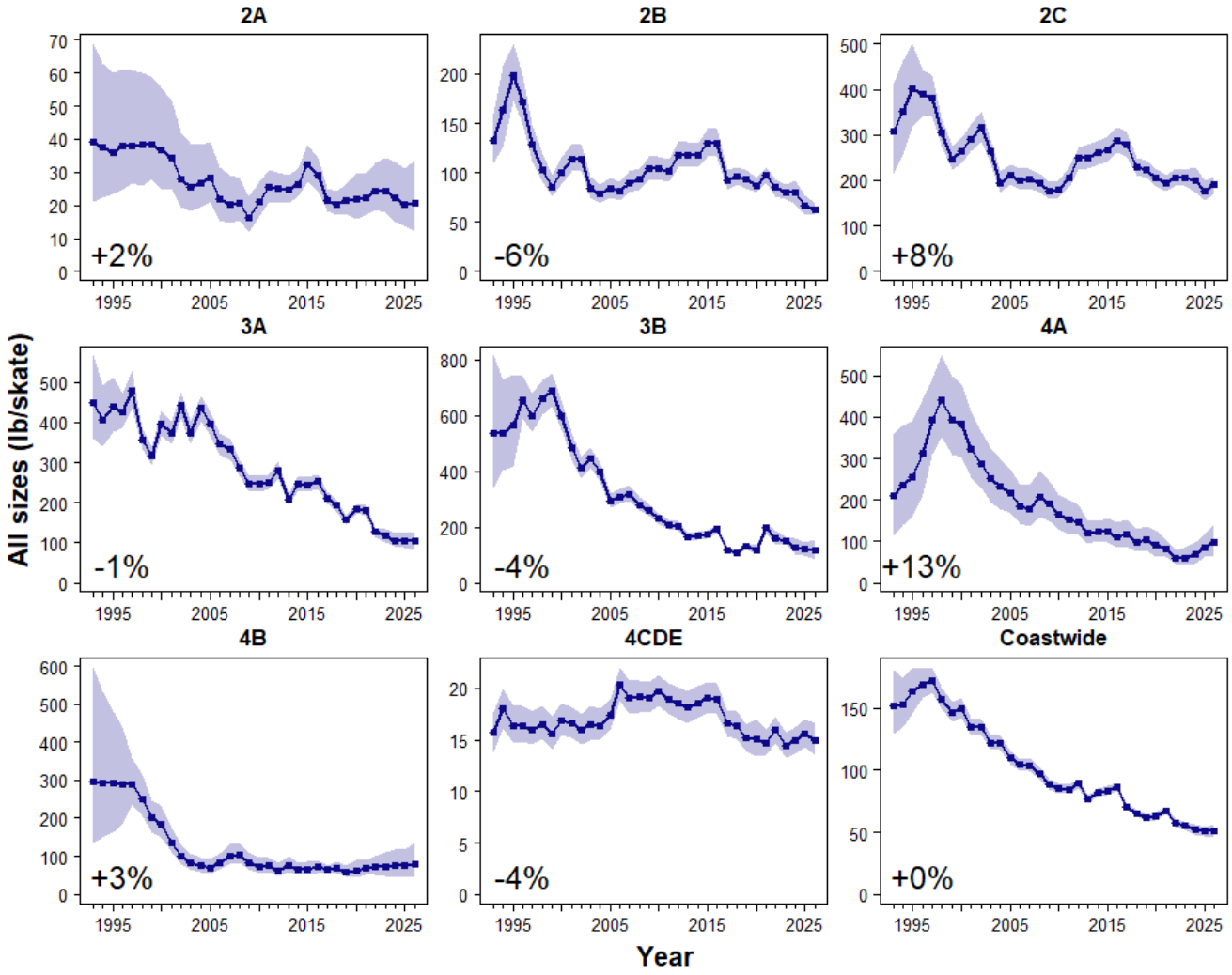


Figure A.2. Space-time model output for all sizes WPUE for 1993-2026. Filled circles denote the posterior means of all sizes WPUE for each year. Shaded regions show posterior 95% credible intervals, which provide a measure of uncertainty: the wider the shaded interval, the greater the uncertainty in the estimate. Numeric values in the lower left-hand corners are estimates of the change in mean all sizes WPUE from 2025 to 2026.

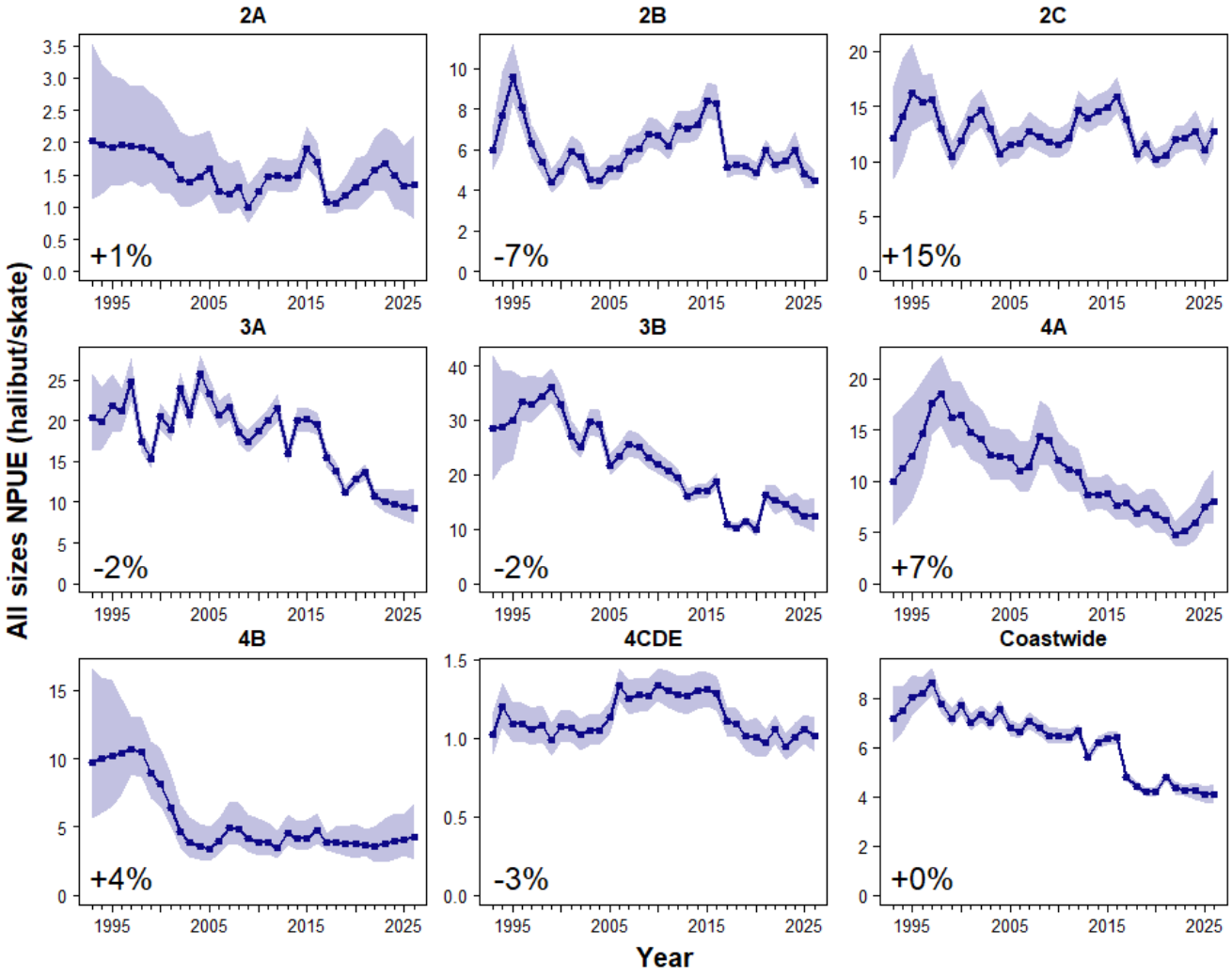


Figure A.3. Space-time model output for all sizes NPUE for 1993-2026. Filled circles denote the posterior means of all sizes NPUE for each year. Shaded regions show posterior 95% credible intervals, which provide a measure of uncertainty: the wider the shaded interval, the greater the uncertainty in the estimate. Numeric values in the lower left-hand corners are estimates of the change in mean all sizes NPUE from 2025 to 2026.

Data overview and stock assessment for Pacific halibut (*Hippoglossus stenolepis*) at the end of 2026

This document is a placeholder: a Rev 1 will be published prior to IM102.

PREPARED BY: IPHC SECRETARIAT (I. STEWART, A. HICKS, R. WEBSTER, AND D. WILSON; 27 OCTOBER 2026)

PURPOSE

To provide the Commission with a summary of the data and stock assessment at the end of 2026.

INTRODUCTION

In 2026 the International Pacific Halibut Commission (IPHC) undertook its annual coastwide stock assessment of Pacific halibut (*Hippoglossus stenolepis*). The most recent full assessment was completed in 2025 (IPHC-2026-SA01, IPHC-2026-SA02, and detailed model evaluation was presented during SRB026: IPHC-2025-SRB026-07). That analysis followed updates in 2023 (IPHC-2024-SA01) and 2024 (IPHC-2025-SA01). This stock assessment represents an update to the 2025 analysis.

Starting with the final 2025 stock assessment data, models and results (Stewart and Webster 2026; Stewart and Hicks 2026), data from 2026 including updates of previous years will be sequentially added to provide 'bridging analysis' of the changes made through the final 2026 stock assessment. At the time this document was produced complete data were not available for 2026. Standard data sources that will be included in the final 2026 stock assessment include:

1) New modelled trend information from the 2026 FISS for all IPHC Regulatory Areas.
2) Age, length, individual weight, and average weight-at-age estimates from the 2026 FISS.
3) Directed commercial fishery logbook trend information from 2026 (and earlier logs that were not available for the 2025 assessment) for all IPHC Regulatory Areas.
4) Directed commercial fishery biological sampling from 2026 (age, length, individual weight, and average weight-at-age) and sex-ratio-at-age information from the 2025 biological samples from all IPHC Regulatory Areas.
5) Biological information (lengths and/or ages) from non-directed discards (all IPHC Regulatory Areas) and the recreational fishery (IPHC Regulatory Area 3A only) from 2025. The availability of these data routinely lags one year.
6) Updated mortality estimates from all sources for 2025 (where preliminary values were used) and estimates for all sources in 2026.

STOCK AND MANAGEMENT

The stock assessment reports the status of the Pacific halibut (*Hippoglossus stenolepis*) resource in the IPHC Convention Area. As in recent stock assessments, the resource is modelled as a single stock extending from northern California to the Aleutian Islands and Bering

Sea, including all inside waters of the Strait of Georgia and Puget Sound, but excludes known extremities in the western Bering Sea within the Russian Exclusive Economic Zone (Figure 1).

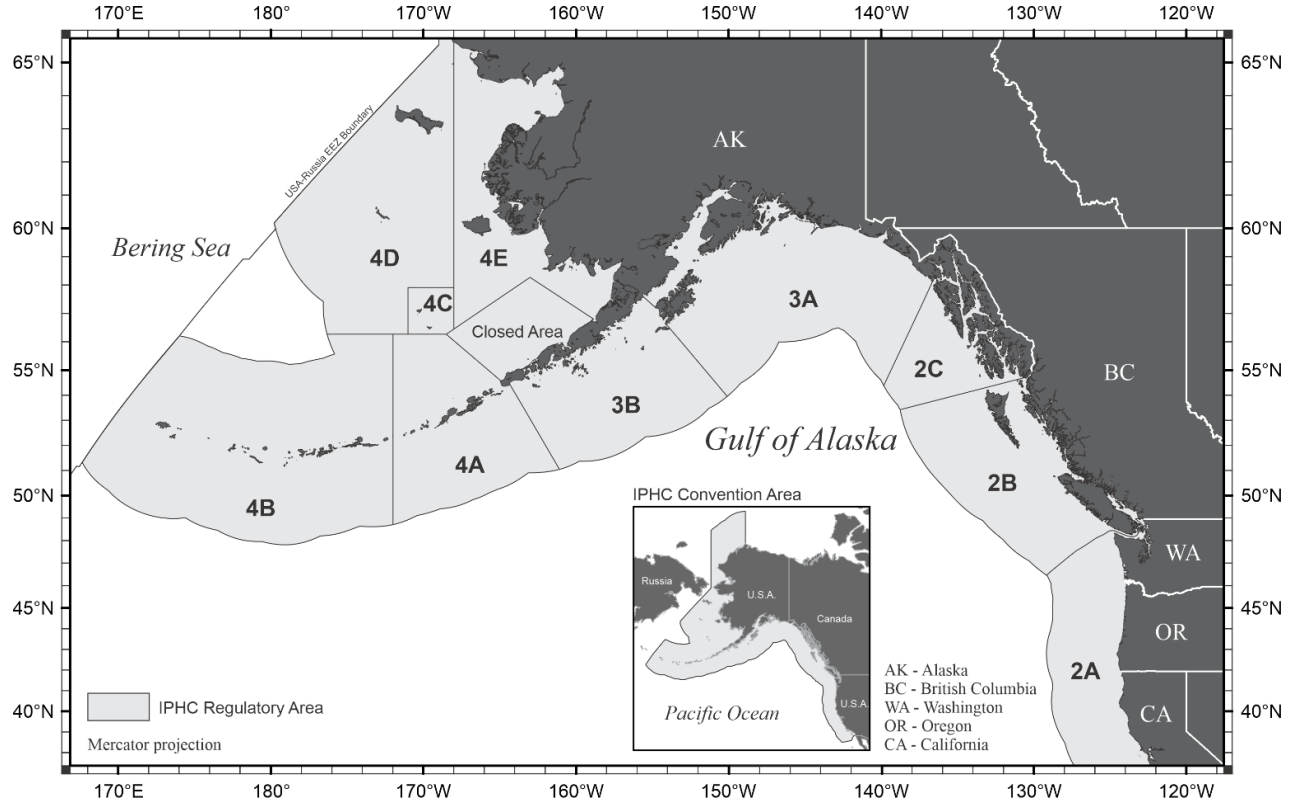


Figure 1. IPHC Convention Area (insert) and IPHC Regulatory Areas.

The Pacific halibut fishery has been managed by the IPHC since 1923. Catch limits for each of eight IPHC Regulatory Areas[1] are set each year by the Commission. The stock assessment provides a summary of recently collected data, and model estimates of stock size and trend. Specific management information is summarized via a decision table reporting the estimated risks associated with alternative management actions and catch tables projecting the level of mortality for fisheries in each IPHC Regulatory Area indicated by the IPHC's interim management procedure, as well as other alternatives.

SUMMARY OF PENDING CONTENT

This document will contain a summary of the data relevant to Pacific halibut management and contributing to the 2026 stock assessment. These data include:

- Recent and historical mortality,
- The results of the 2026 (and earlier) Fishery-Independent Setline Survey (FISS) analyzed via the IPHC's space-time model:
    - Trends by Biological Region and IPHC Regulatory Area
    - Age-compositions
    - Stock distribution estimates by Biological Region

This document will also include a summary of the 2026 stock assessment results. Primary results include:

- Coastwide biomass and recruitment trends

[1] The IPHC recognizes sub-Areas 4C, 4D, 4E and the Closed Area for use in domestic catch agreements but manages the combined Area 4CDE.

- A comparison to 2025 and earlier stock assessment results (estimated biomass and fishing intensity scale and trends)
- Reference points
- Major sources of uncertainty

Short-term projections and the harvest decision table for 2027 will be reported in a separate document (*IPHC-2026-IM102-11*).

TIMELINE FOR REVISION

The complete document (IPHC-2026-IM102-09 Rev_1) is anticipated to be available no later than **23 November 2026**.

Detailed material for AM103 will include any further revisions to this summary document. More detailed stock assessment (IPHC-2027-SA-01) and data overview (IPHC-2027-SA-02) documents will be published directly to the stock assessment page on the IPHC's website.

REFERENCES

Stewart, I., and Hicks, A. 2024. Assessment of the Pacific halibut (*Hippoglossus stenolepis*) stock at the end of 2023. IPHC-2024-SA-01. 37 p.

Stewart, I., and Hicks, A. 2025. Assessment of the Pacific halibut (*Hippoglossus stenolepis*) stock at the end of 2024. IPHC-2025-SA-01. 40 p.

Stewart, I., and Webster, R. 2026. Overview of data sources for the Pacific halibut stock assessment, harvest policy, and related analyses. IPHC-2026-SA-02. 59 p.

Stewart, I., and Hicks, A. 2026. Assessment of the Pacific halibut (*Hippoglossus stenolepis*) stock at the end of 2025. IPHC-2026-SA-01. 38 p.

Stewart, I., Hicks, A., Webster, R., and Wilson, D. 2026. Data overview and stock assessment for Pacific halibut (*Hippoglossus stenolepis*) at the end of 2025. IPHC-2026-AM102-10. 17 p.

Management Strategy Evaluation: 2026 updates

PREPARED BY: IPHC SECRETARIAT (A. HICKS & I. STEWART; 28 OCTOBER 2026)

PURPOSE

To provide the Commission with an update on progress of the Management Strategy Evaluation (MSE) 2026 Program of Work approved by the Commission at the 102nd Annual Meeting (AM102), and provide information for decisions regarding: 1) an update to the reference fishing intensity in the Harvest Strategy Policy (HSP), 2) continuing work to identify a depleted reference point for Pacific halibut, and 3) a request to evaluate other elements of management procedures.

BRIEF SUMMARY OF PROGRESS ON HIGH-PRIORITY TASKS

Below is a summary of progress and outcomes for each high-priority task of the 2026 MSE Program or Work.

Task A: Condition the Operating Model (*Completed*)

1) The operating model (OM) has been updated and conditioned to data through 2025 and to the 2025 stock assessment.
2) This OM will be used to evaluate management procedures (MPs) until after the full stock assessment in 2028, unless an exceptional circumstance is declared.

Task B: Evaluate a range of SPR values (*Results available*)

1) Various SPR values from 55% to 40% have been evaluated assuming integrated (low and high) productivity, decision-making variability, estimation uncertainty, and observation error.
2) All SPR values evaluated met the objectives to be above $RSB_{20\%}$ and at or above $RSB_{36\%}$.
3) There is a trade-off between the short-term TCEY and variability in the TCEY (AAV):
   a) The median short-term TCEY increased at lower SPR values (i.e. higher fishing intensity) with smaller gains at higher fishing intensities. For example, the median TCEY increased by 2.7 Mlbs moving from an SPR of 55% to 52% and increased by 1.9 Mlbs moving from an SPR of 43% to 40%.
   b) The AAV increased with fishing intensity going from an SPR of 49% to an SPR of 40%, but remained similar at lower fishing intensities (SPRs from 55% to 49%).
4) There is approximately a 1 in 4 chance that the short-term spawning biomass (SB) would be less than the SB experienced in 2023 with an SPR of 46%, and 1 in 3 at an SPR = 43%.
5) The chance that a long-term total mortality less than 34 Mlbs occurs is minimized at an SPR value between 46% and 49%.

Task C: Investigate productivity regimes (*Results available*)

1) Fixed productivity based on current weight-at-age and low PDO (e.g. low recruitment) was evaluated for the same range of SPR values and resulted in the following.
   a) The objective to be at or above $RSB_{36\%}$ was not met for an SPR of 43% and less.
   b) There is approximately a 1 in 2 chance that the short-term spawning biomass (SB) would be less than the SB experienced in 2023 with an SPR of 46%.

Task D: Identify a depleted limit reference point for Pacific halibut (*In progress*)

1) Discussions with the Scientific Review Board have highlighted important concepts.

Below is a summary of results to inform the decision-making process related to the MSE and HSP.

Decision: **Update the reference SPR in the Harvest Strategy Policy (HSP) from the current SPR of 43% to an SPR of 46%.**

- SPR values in the range of 40% to 55% are reasonable choices for a reference fishing intensity, but the higher fishing intensities (e.g. SPRs of 40 or 43%) do not meet priority objectives in low productivity scenarios.
- SPR values from 55% to 40% met the objectives to be above $RSB_{20\%}$ and at or above $RSB_{36\%}$ when integrating over low and high productivity.
- SPR values greater than 43% met the objectives to be above $RSB_{20\%}$ and at or above $RSB_{36\%}$ for low productivity based on recent conditions.
- Variability in the TCEY was similar to SPR values 49% and greater, regardless of productivity assumptions.
- Gains in the TCEY are reduced when moving between high fishing intensities (e.g. an SPR of 55% to 52%) compared to moving between low fishing intensities (e.g. an SPR of 43% to 40%).
- The fishing intensity to achieve Maximum Sustainable Yield (MSY) is less than an SPR of 40%, but closer to 40% when assuming low productivity. It is also uncertain and 80% of MSY can be obtained across a wide range of SPR values, including 46%.

Decision: **Include identifying a depleted limit reference point for Pacific halibut as a high priority task in 2027.**

- Discussions with the SRB and MSAB have highlighted the importance of continuing this analysis.
- The SRB has requested an investigation of how this concept may be used by other fisheries management bodies.

Decision: **Request evaluating the following elements of MPs: a triennial assessment frequency, empirical rules to determine the reference TCEY in years without a stock assessment, and constraints and smoothers on the interannual change in the TCEY including minimum and maximum TCEYs.**

- Evaluating elements of MPs was identified as a low-priority task for 2026.
- The MSAB requested to evaluate these same general elements.
- The RAB expressed interest in evaluating a minimum TCEY.

INTRODUCTION

The International Pacific Halibut Commission (IPHC) adopted the IPHC Harvest Strategy Policy (HSP) at the 101st Session of the IPHC Interim Meeting (IM101; IPHC-2025-IM101-R, para. 25) and requested a number of items to be added to the MSE Program of Work for 2026 (IPHC-2025-IM101-R, para. 26). The Commission noted priority items for the 2026 MSE Program of Work at the 102nd Session of the IPHC Annual Meeting (AM102):

> **IPHC-2026-AM102-R, para. 56**: *The Commission **NOTED** that the 2026 MSE and HSP Program of Work will include the following high priority topics:*
>
> *a) Update and recondition the MSE Operating Model in accordance with the schedule defined in the Harvest Strategy Policy;*
> *b) Evaluate a range of SPR values to determine if the optimal reference coastwide fishing intensity is different than the current reference fishing intensity (F43%) defined in the HSP;*
> *c) Investigate productivity regimes to determine how the Pacific halibut population and fisheries respond to different productivity regimes, if the optimal reference fishing intensity differs across productivity regimes, and how productivity regimes may be incorporated into a Management Procedure;*
> *d) Further develop the Depleted concept and identify a limit reference point below which recovery of the Pacific halibut population would be uncertain.*

The Commission also noted lower priority items for the 2026 MSE Program of Work.

> **IPHC-2026-AM102-R, para. 57.** *The Commission **NOTED** that the 2026 MSE and HSP Program of Work will include the following low priority topics, which may not be completed before AM103:*
>
> *a) Improve the estimation model used in the MSE framework to better characterize the stock assessment in the simulations;*
>
> *b) Evaluate potential management actions to invoke when approaching a depleted limit reference point;*
>
> *c) Evaluate additional elements of Management Procedures which may include a triennial assessment frequency, constraints and smoothers on the interannual change in the TCEY, and empirical rules to determine the reference TCEY in years without a stock assessment;*
>
> *d) Determine reference points using the updated MSE Operating Model (e.g. FMSY and MSY);*
>
> *e) Develop guidance documents for the Harvest Strategy Policy (e.g. specifications of a rebuilding plan).*

This paper presents an update on progress for these topics.

CONDITION THE OPERATING MODEL

The MSE operating model (OM) consists of four individual regional models based on the four models in the stock assessment ensemble, which includes new updates made during the full stock assessment in 2025. The models in the stock assessment ensemble are an Areas-As-Fleets (AAF) long time-series model (longAAF), an AAF using a short time-series starting in 1992 (shortAAF), a coastwide (CW) long time-series model (longCW), and a CW short time-series model (shortCW). Recent updates to the stock assessment that were incorporated into the MSE OM included updating the time-series information for the Pacific Decadal Oscillation, re-tuned recruitment variability, and an updated maturity ogive to reflect the recent histology-based estimates produced by the IPHC's Biological and Ecosystem Sciences Branch.

Each individual model in the MSE OM begins in 1952 to avoid technical challenges associated with highly uncertain but low spawning biomass and population dynamics bottlenecks in the 1920s and 1930s. This later start date, however, still captures important historical changes in the Pacific halibut stock. The parameters and assumptions from each stock assessment model were used to initialize the associated individual model in the MSE OM while unfished equilibrium recruitment, movement, and recruitment distribution parameters were estimated during the conditioning process to best fit the estimated spawning biomass from the associated assessment model, the stock distribution estimated from the FISS, and the age compositions estimated from the FISS. Variability was added by sampling from the distribution of parameters to produce 125 individual trajectories for each of the four models. The MSE OM integrates over these four models to include parameter and structural uncertainty.

The median integrated spawning biomass for the 2026 MSE OM with 5th and 95th percentiles is shown in Figure 1. The estimated spawning biomass from the ensemble stock assessment, shown in blue for comparison, is similar when comparing the medians but has less variability for most of the time-series. The MSE OM is designed to represent additional uncertainties to ensure that the best performing management procedures (MPs) are robust to many sources of uncertainty.

An additional component of conditioning the OM is to simulate variability into the future. Each individual trajectory characterizes uncertainty in the projections, including simulated variability for weight-at-age, recruitment, and fishery selectivity. Along with fishing mortality, weight-at-age and recruitment are the biggest factors influencing the biomass of the stock in the past and the future.

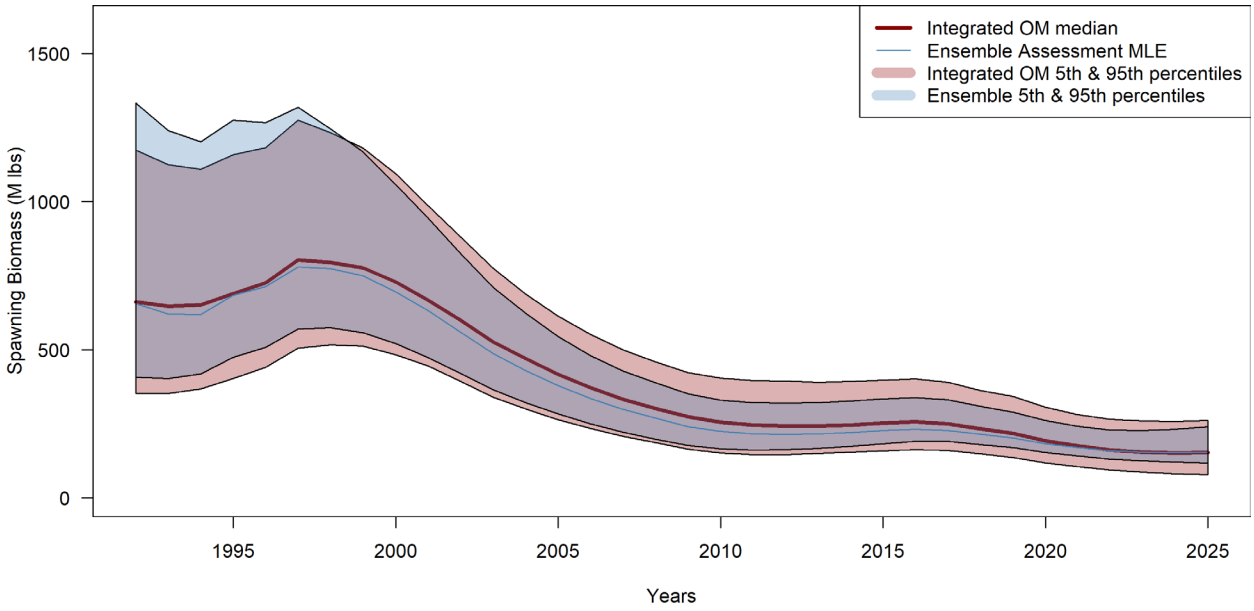


Figure 1. Integrated conditioned spawning biomass for the MSE Operating Model in 2026. The red line shows the median and the red polygon encompasses the 5th and 95th percentiles of 500 simulated trajectories integrated over the four individual models. The blue line and polygon show the median and 5th and 95th percentiles from the stock assessment ensemble for comparison.

A new analysis of weight-at-age was conducted that provided insight into some of the factors influencing weight-at-age. Using modern random effects models, it was found that year and age were both important effects to predict weight-at-age, which suggests that fish in the same cohort experience a similar trajectory of weight-at-age being below or above average over their lifetime, with some variability (Figure 2). The estimated relationships in the random effects model were used to simulate weight-at-age in the future with variability. Figure 3 shows three examples of simulated weight-at-age and how they compare to historical weight-at-age. The main objective was to capture the oscillations in weight-at-age over decadal time scales.

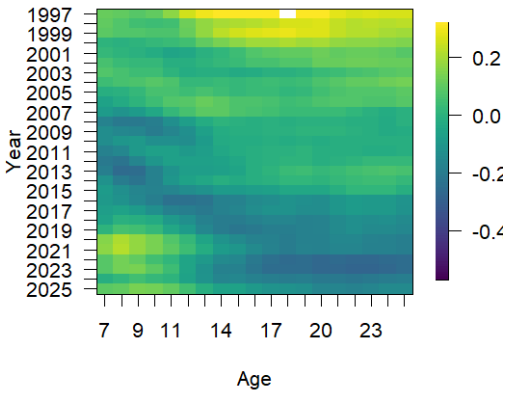


Figure 2. Estimated year and age effects for female Pacific halibut weight-at-age showing deviations from an overall average weight at each age. Blue colours indicate low weight-at-age and yellow colours indicate high weight-at-age. Consistent coloration along a diagonal suggests that a cohort experienced similar low or high weight-at-age across its lifetime.

Recruitment was simulated into the future with annual random deviations representing a departure from average recruitment determined from the stock-recruit relationship. Average recruitment is dependent on the PDO regime, where high average recruitment occurred in high PDO regimes, and low average recruitment occurred in low PDO regimes. The difference in average recruitment between the two regimes was determined from the stock assessment models where high average recruitment was about 1.5 times greater than low average recruitment. The PDO regime was simulated as high or low with a typical period of 10-20 years before switching to the opposite regime.

The parameter and structural uncertainty along with the variability in weight-at-age and recruitment results in a considerable amount of uncertainty in the spawning biomass, especially when projected 70 years into the future (Figure 4). This is consistent with the estimated dynamics and past observations of Pacific halibut.

Overall, the newly conditioned OM reflects the current understanding of the Pacific halibut stock while also incorporating a scientifically plausible range of variability for the robust evaluation of MPs. The updated range of projected spawning biomass is narrower than the simulation results from 2025, which is mostly due to improved methods to simulate weight-at-age and average recruitment (Figure 4). At the beginning of the projections, the median spawning biomass and the median TCEY remain low, representing the persistence of low productivity in the short-term. At the end of the time-series, the median spawning biomass and median TCEY are similar to previous results, but the variability is narrower, representing an improved method to model weight-at-age where extreme high and low weight-at-age (e.g. levels that have been recently experienced) have lower chances of occurring compared to the methods used in 2025. Figure 5 shows that fixing weight-at-age at levels seen in the last five years and keeping the projected PDO in the low regime results in a similar spawning biomass and TCEY levels in short-term projections, but lower levels in the long-term. These results highlight the importance of evaluating results for specific weight-at-age and PDO scenarios to understand the effect these have on the outcomes (also see below).

The 2026 performance metrics associated with the Commission's priority objectives show small differences when compared to those determined in 2025 for an SPR of 43% (Table 1). The new results show a slightly higher probability of exceeding the 36% relative spawning biomass (RSB) threshold (at or above with a probability of 0.5). The median short-term TCEY is slightly lower and the short-term AAV is larger. These differences are mostly due to updates in the understanding of Pacific halibut population dynamics (e.g. maturity and natural mortality) and to weight-at-age projections. Additionally, the short-term probability that the spawning biomass is less than the 2023 estimated spawning biomass is greater because the 2026 OM has a more gradual increase away from recent low productivity.

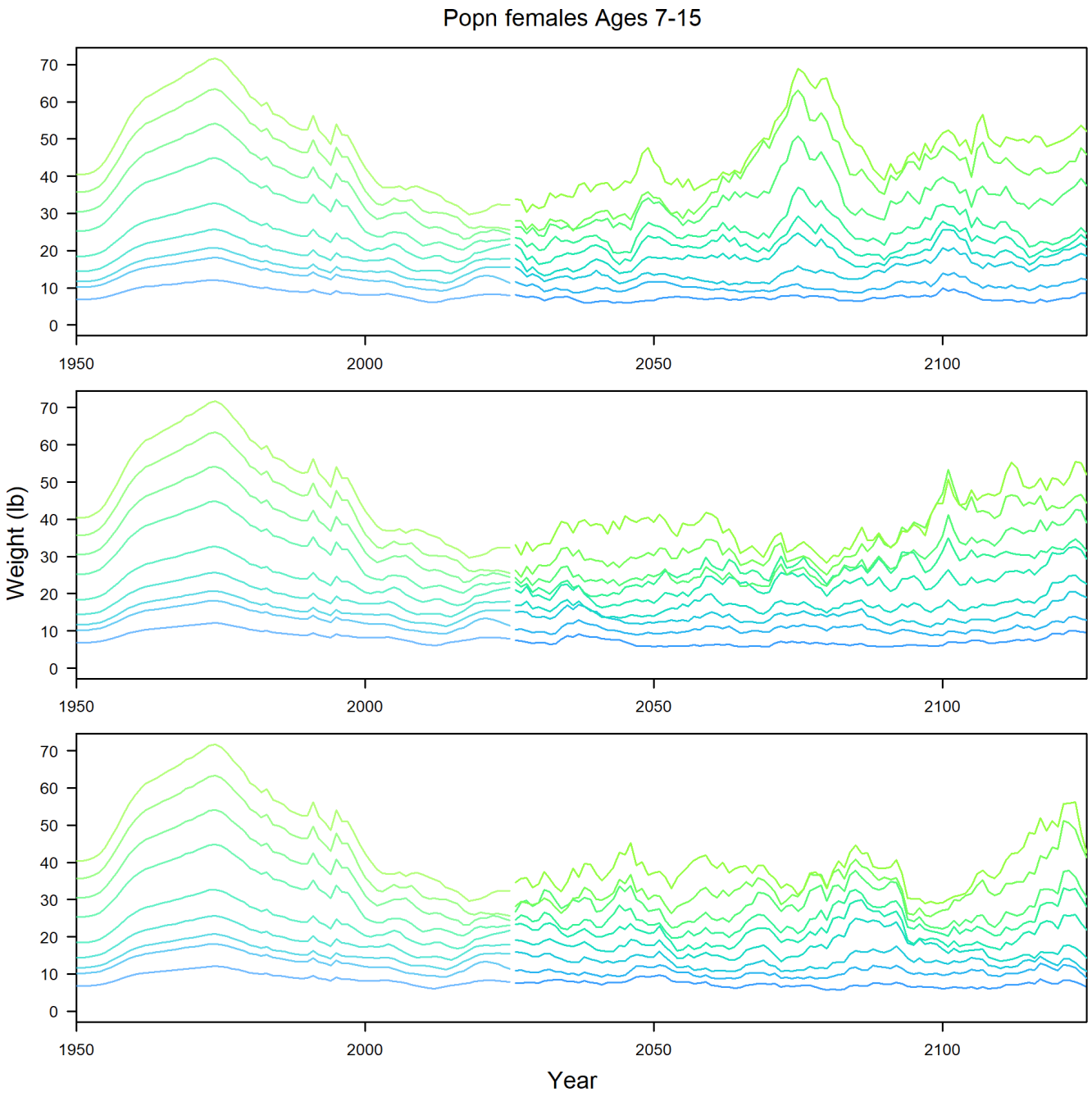


Figure 3. Historical weight-at-age and three examples of simulated weight-at-age for female Pacific halibut in Region 2 for ages 7 to 15 using a random effects model with year and age effects. The break in the time-series between 2025 and 2026 represents the transition from estimated to simulated trends.

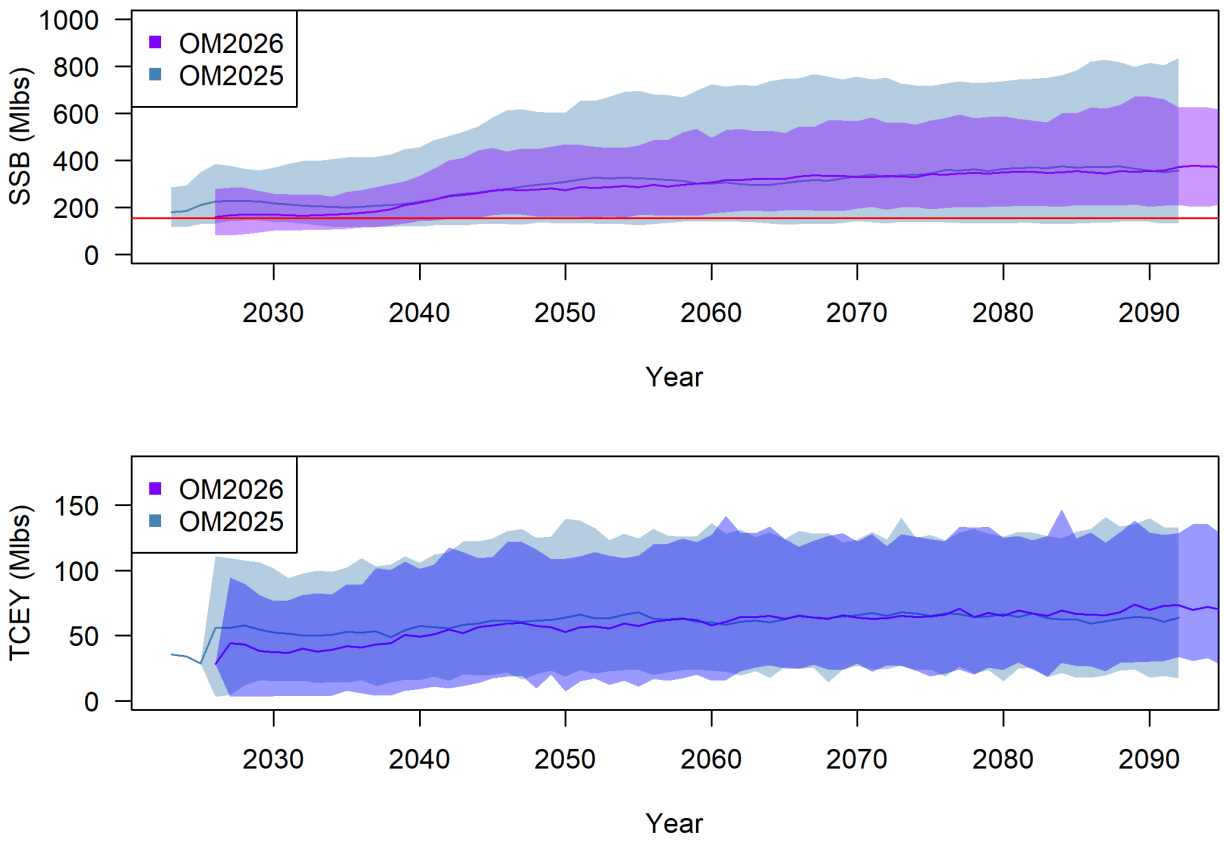


Figure 4. Projected spawning biomass (top) and the corresponding TCEY (bottom) based on harvesting at an SPR of 43%. Simulations include decision-making variability, estimation error, and observation uncertainty. Results using the updated simulation framework for 2026 are shown in purple (OM2026) and the results using the 2025 framework with the same options are shown in blue (OM2025). The red horizontal line is at a spawning biomass of 153 Mlbs to reflect the lowest estimated spawning biomass (2024) from the recent stock assessment.

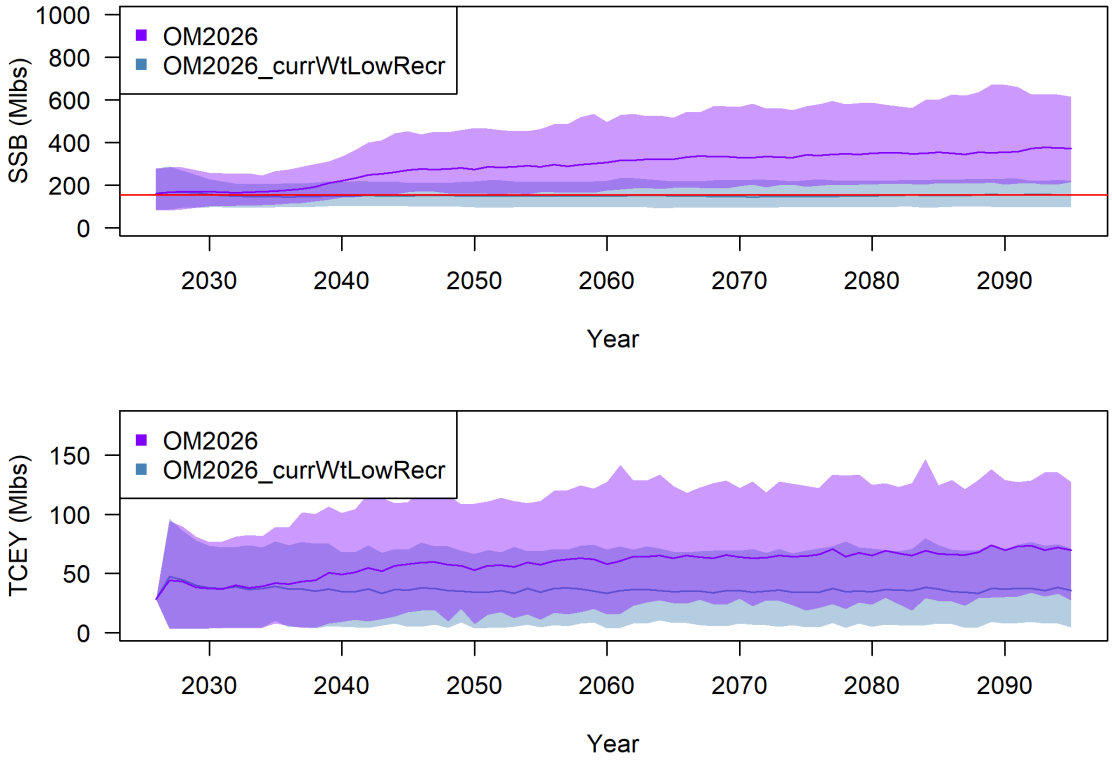


Figure 5. Projected spawning biomass (top) and the corresponding TCEY (bottom) based on harvesting at an SPR of 43%. Simulations include decision-making variability, estimation error, and observation uncertainty. Results using the 2026 OM are shown in purple (OM2026) and the results fixing weight-at-age at recent levels seen in the last five years and keeping the projected PDO at low values are shown in blue (OM2026_currWtLowRecr). The red horizontal line is at a spawning biomass of 153 Mlbs to reflect the lowest estimated spawning biomass (2024) from the 2025 stock assessment.

Table 1. Performance metrics from 2025 simulations (OM2025) and new simulations (OM2026) for an SPR value of 43%, comparing a scenario integrating over changes in weight-at-age and cyclical PDO and a low productivity scenario (i.e. current weight-at-age and negative PDO). A green colour indicates that the performance metric passes and red indicates that it does not, which applies to only the probabilistic long-term objectives.

		Integrated (low & high) Productivity			Recent (low) Productivity	
		OM2025	**OM2026**		**OM2025**	**OM2026**
	SPR (%)	**43**	**43**		**43**	**43**
Long-term	**P(RSB<20%)**	<0.001	<0.001		<0.001	<0.001
	P(RSB<36%)	0.195	0.263		0.462	0.629
Short-term	**Median TCEY**	52.0	40.7		41.2	37.0
	AAV	26.3%	36.5%		28.3%	34.6%
	P(SB < SB_{2023})	0.350	0.338		0.543	0.573

EVALUATE A RANGE OF SPR VALUES

Simulations across a range of spawning potential ratio (SPR) values (i.e. different fishing intensities) were evaluated against the Commission's objectives. The Management Strategy Advisory Board (MSAB) defined a minimum set of SPR values during its recent 22nd Session of the MSAB meeting in May 2026.

> **IPHC-2026-MSAB022-R, para. 37 (MSAB022–Req.06):** *The MSAB **REQUESTED** further evaluations of the following MP elements:*
>
> *a) fishing intensities including, but not limited to, SPRs of 40%, 43%, 46%, 49%, 52%, 55%, and 100% (no fishing), as well as no directed fishing (e.g. bycatch only);*

Although considerable improvements to the simulation code were made to speed up the simulations, this remains a time-consuming process and the full set of results examining this range of SPR values for all potential MP elements are currently not available. However, results for the minimum set of SPR values, annual stock assessments, and no constraints are shown in Table 2 and Figure 6. The MSE Explorer (https://apps.iphc.int/MSE-Explorer/) will be updated as additional results become available.

All SPR values pass the conservation objective of keeping the spawning biomass above 20% of unfished spawning biomass. They all also pass the objective to be at or above 36% of unfished spawning biomass. The trade-off between the yield (TCEY) and variability in yield (AAV) shows that variability (as a percentage of the TCEY) decreases at a faster rate from an SPR of 40% to an SPR of 46%. The AAV increases at lower fishing intensities (e.g. SPR=55%) because the absolute amount of change in the TCEY is similar, but the actual TCEY is decreasing.

Table 2. Performance metrics associated with Commission priority objectives for a range of SPR values simulated with integrated (low and high) productivity. The performance metric P(SB<SB_{2023}) is an additional metric to indicate the short-term spawning biomass relative to a recent low spawning biomass.

	SPR (%)	55	52	49	46	43	40
Long-term	P(RSB<20%)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	P(RSB<36%)	<0.001	0.001	0.015	0.088	0.263	0.479
Short-term	Median TCEY	30.7	33.4	35.9	38.7	40.7	42.6
	AAV	32.9%	32.4%	32.8%	33.8%	36.5%	39.3%
	P(SB < SB_{2023})	0.125	0.163	0.217	0.274	0.338	0.393

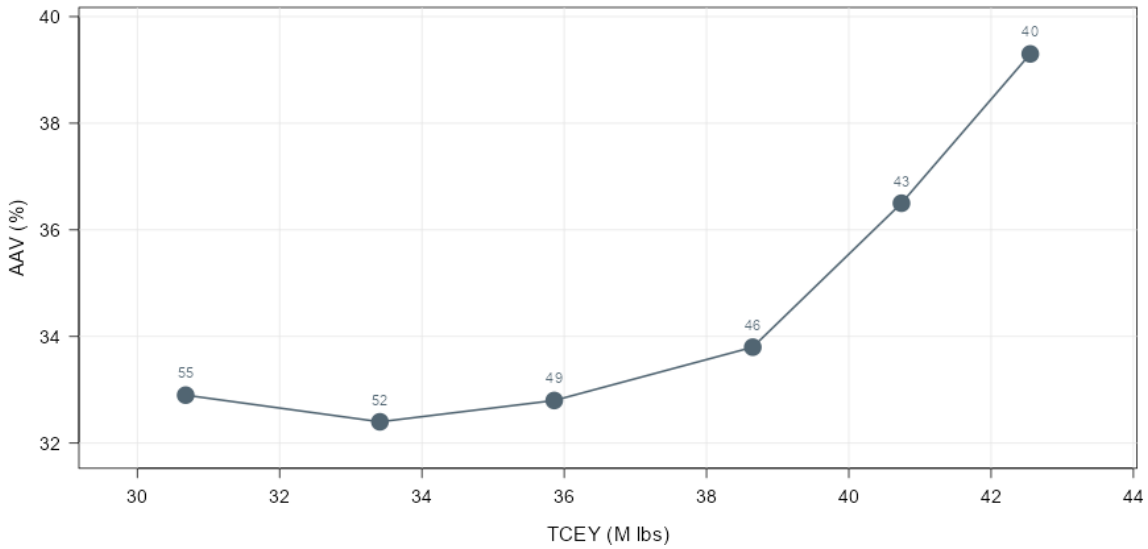


Figure 6. The trade-off between average annual variability in the TCEY (AAV) and the TCEY. Points are labelled by the input SPR.

The determination of an appropriate reference SPR requires the consideration of trade-offs between these performance metrics. A higher fishing intensity (i.e. lower SPR) results in a higher TCEY but potential higher change in the TCEY from year to year, and the variability is similar at SPRs of 49% and higher. Therefore, to minimise variability, an SPR between 49% and 52% would be optimal, with 49% producing the largest TCEY. The risk to the stock dropping below 36% relative spawning biomass increases with higher fishing intensity, but is within the tolerance for SPRs at or greater than 40%.

It may be useful to consider other performance metrics available in the MSE Explorer (http://apps.iphc.int/MSE-Explorer/), in addition those associated with the four priority objectives, when determining an optimal fishing intensity. An additional performance metric not associated with the Commission's priority objectives, but informative relative to recent experiences, is the probability that the short-term projected spawning biomass will be less than the spawning biomass in 2023. This is approximately a 1 in 8 chance with an SPR of 55%, a 1 in 6 chance with an SPR of 52%, a 1 in 5 chance with an SPR of 49%, a 1 in 4 chance with an SPR of 46%, and a 1 in 3 chance with an SPR of 43% (Table 2). Another additional performance metric is the probability that the Total Mortality (typically 2-4 Mlbs greater than the TCEY) will be less than 34 Mlbs in *any* year in the long-term 10-year period. This performance metric was specified early in the MSE process by the MSAB and can easily be respecified to reflect the TCEY and a different quantity. The probability is high at low fishing intensities because the harvest rate is low and is higher at high fishing intensities because the TCEY is more variable and declines in the biomass lead to occasional low TCEYs. SPR values of 46% and 49% result in a minimum probability that any year in the long-term 10-year period has a total mortality less than 34 Mlbs (Figure 7). The use of *any* in this performance metric differs from a probability that it may occur over *all* years because it determines if the event occurred based on the 10-year period (any year in that 10-year period below the threshold would result in the event occurring). The probability is then calculated over the 500 simulations. There are many other performance metrics that may be useful to determine an optimal MP, many of which are available in the MSE-Explorer.

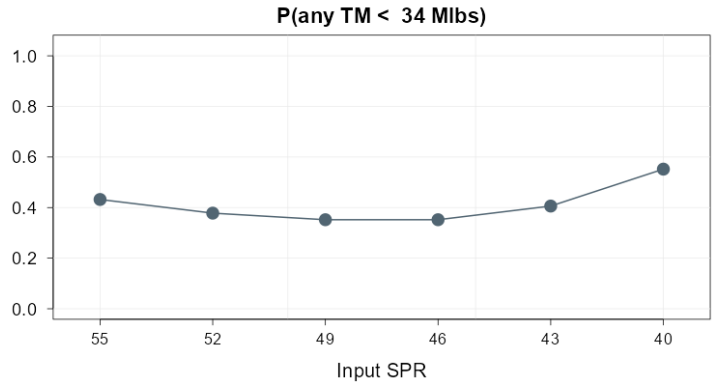


Figure 7. The probability that the Total Mortality is less than 34 Mlbs in any year of the long-term 10-year period.

Two other types of analyses may also be beneficial to determining an optimal fishing intensity. These are to examine the equilibrium yield curve to determine the fishing intensity associated with maximum sustainable yield and to consider specific productivity scenarios, such as current conditions. Both topics are described below.

INVESTIGATE PRODUCTIVITY REGIMES

Pacific halibut experience variable productivity over time, which is important to capture in the MSE projections. However, it is also useful to examine simulations where productivity is held constant in order to better understand the importance of environmental influences on key outcomes, such as mortality limits. Six scenarios defined by low, high, and current weight-at-age crossed with low or high PDO (affecting average recruitment, movement, and age-0 distribution) can be simulated for comparison to the fully integrated results. The MSAB was also interested in these investigations.

> **IPHC-2026-MSAB022-R, para. 38 (MSAB022–Req.09):** *The MSAB **REQUESTED** conducting simulations assuming the following productivity regimes with a subset of the MPs from paras. 37 and 38 and all other sources of variability:*
>
> *a) low recruitment and low weight-at-age;*
> *b) low recruitment and current weight-at-age (the current perceived productivity regime);*
> *c) high recruitment and low weight-at-age.*

Three levels of weight-at-age were chosen to capture the high and low periods, but to also capture the differences in younger and older age classes during the low periods in recent years (Figure 8). The Low period (2011–2015) captures smaller young fish and larger old fish, while the Current period (2021–2025) captures larger young fish and smaller old fish, when compared to each other. The High period (1971–1975) shows average weight-at-age up to four times greater than in 2025 for the older age classes.

The two long time-series models in the IPHC ensemble stock assessment (IPHC-2025-SA01) estimated a link between the Pacific Decadal Oscillation (PDO, Mantua et al. (1997)) and average unfished equilibrium recruitment (R0), with an estimated average recruitment more than 50% greater during a positive PDO. Previous analyses (Clark and Hare 2002; Stewart and Martell 2016) have also shown that a positive PDO phase is correlated with enhanced

productivity, while productivity decreases in negative PDO phases. Although the PDO is strongly correlated with historical recruitments, it is possible that the response of Pacific halibut dynamics to the environment (e.g. PDO) has changed in recent years, whether through movement, recruitment distribution, or some other factor. The 2025 stock assessment has classified the PDO in a low regime since 1998, and recent years have seen the lowest annual average PDO in the entire time-series (Figure 9). However, the North Pacific Ocean has been recently experiencing warmer regional temperatures and novel relationships between climate variables and the PDO (Litzow et al. 2020). It is possible that these novel processes are causing a change in population parameters that the OM models are currently not capturing.

The productivity has a large effect on the outcomes of the simulations with regard to spawning biomass and mortality limits. The median average long-term TCEY when integrating over all types of productivity and managing with an SPR of 43% was 70 Mlbs. If productivity was to remain as we have seen in the last five years (current weight, low PDO) the median average long-term TCEY managing with an SPR of 43% would be 36 Mlbs, similar to recent realized TCEYs. A productivity regime with current weight and high PDO results in a median average long-term TCEY of 72 Mlbs when managing with an SPR of 43%. The performance metrics associated with the Commission's priority objectives, including short-term fishery objectives, are less different for these two productivity scenarios and the integrated results because the integrated results gradually increase from current conditions (Table 3). Figure 5 shows the projected spawning biomass and projected TCEY when integrating over productivity and when assuming current productivity.

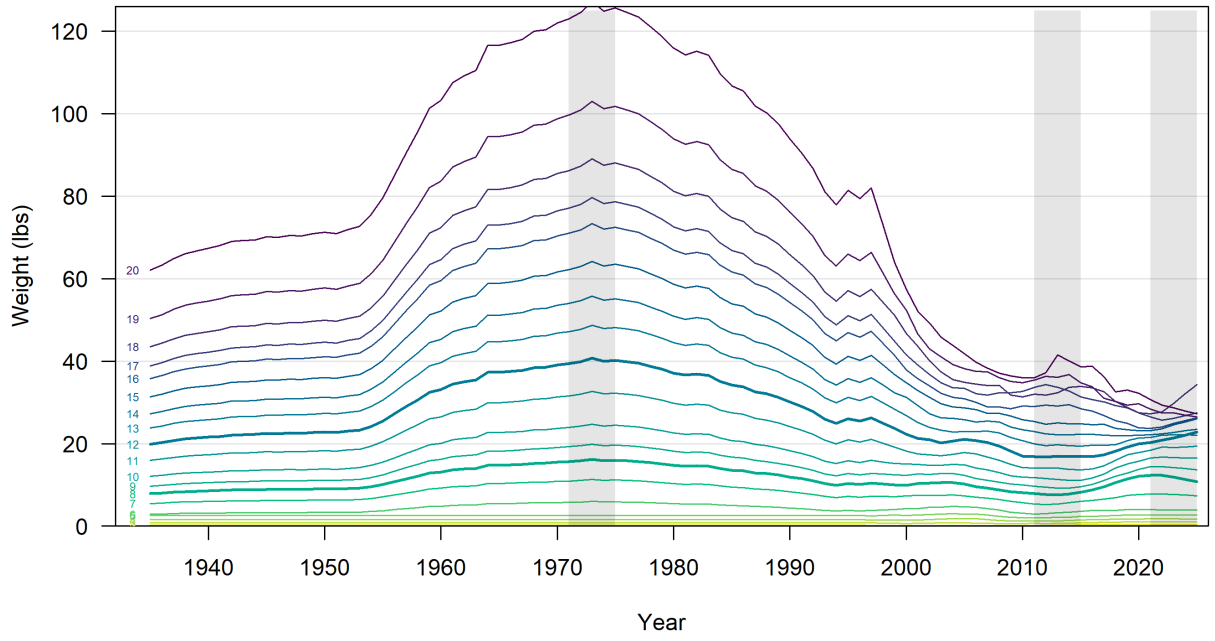


Figure 8. Average historical weight-at-age for Pacific halibut showing three different weight-at-age scenarios defined by the average over 5-year time-periods. High is from 1971–1975, Low is from 2011-2015, and Current is from 2021-2025.

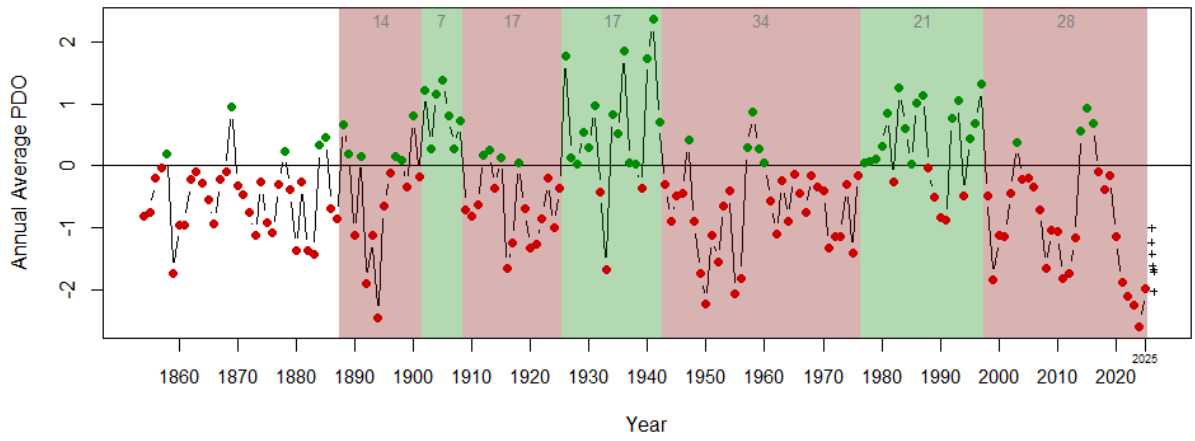


Figure 9. Historical annual mean Pacific Decadal Oscillation (PDO) (data from https://www.ncei.noaa.gov/pub/data/cmb/ersst/v5/index/ersst.v5.pdo.dat). Green colors indicate positive PDO values and periods of expected high productivity for Pacific halibut. Red colors indicate negative PDO values and periods of expected low productivity for Pacific halibut. Gray numbers at the top indicate the number of years in that productivity regime. Plus symbols (+) at the end of the time-series are monthly PDO values in 2026 through July.

The productivity regimes affect the priority objectives in different ways (Figure 10). Regardless of the productivity regime, the conservation objective (maintaining the RSB greater than 20%) is always met, which is due to the 30:20 control rule reducing the realized fishing intensity. The current weight-at-age and low PDO productivity regime (similar to what has been recently experienced) fails to meet the fishery objective to maintain the RSB at or above levels that support optimal fisheries ($RSB_{36\%}$) with SPR values of 43% or less. A productivity regime with current weight-at-age and high recruitment fails to meet this objective at an SPR of 40%. The short-term median TCEY was less for the current weight-at-age and low PDO productivity regime when compared to the integrated productivity, but the short-term median TCEY was similar for the integrated productivity and current weight-at-age with high PDO productivity regimes. The AAVs showed similar patterns except that the AAV was greater for the current weight-at-age with low PDO productivity regime, mainly because the TCEY was less and AAV is a percentage of the interannual variability in the TCEY. The trade-off between short-term TCEY and short-term AAV is shown in Figure 11.

Overall, the current weight-at-age affects the spawning biomass and shows a higher risk to the RSB as well as a higher probability that the projected short-term spawning biomass is less than the spawning biomass in 2023 (Table 3). The PDO has a large effect on average recruitment, which affects the TCEY. Low recruitment results in reduced TCEYs while high recruitment can support high TCEYs because of consistent influxes of young Pacific halibut, but results in a reduction to the spawning biomass, which is likely due to fewer older fish in the population and more younger fish that have recently matured and have had the opportunity to spawn and contribute to the spawning potential.

Table 3. Performance metrics from simulations for an SPR value of 43%, comparing three productivity scenarios: integrating over changes in weight-at-age and cyclical PDO, recent low productivity (i.e. current weight-at-age and negative PDO), and current weight-at-age paired with a positive PDO. A green colour indicates that the performance metric passes and red indicates that it does not, which applies to only the probabilistic long-term objectives.

		Integrated (low & high) Productivity					
	SPR (%)	**55**	**52**	**49**	**46**	**43**	**40**
Long-term	**P(RSB<20%)**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	P(RSB<36%)	<0.001	0.001	0.015	0.088	0.263	0.479
Short-term	**Median TCEY**	30.7	33.4	35.9	38.7	40.7	42.6
	AAV	32.9%	32.4%	32.8%	33.8%	36.5%	39.3%
	P(SB < SB_{2023})	0.125	0.163	0.217	0.274	0.338	0.393

		Recent Productivity (current weight, low PDO					
	SPR (%)	**55**	**52**	**49**	**46**	**43**	**40**
Long-term	**P(RSB<20%)**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	P(RSB<36%)	0.026	0.081	0.219	0.421	0.629	0.776
Short-term	**Median TCEY**	27.9	30.2	32.7	35.0	37.0	39.0
	AAV	34.7%	33.6%	32.6%	33.1%	34.6%	38.0%
	P(SB < SB_{2023})	0.288	0.362	0.435	0.506	0.573	0.632

		Current weight, high PDO					
	SPR (%)	**55**	**52**	**49**	**46**	**43**	**40**
Long-term	**P(RSB<20%)**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	P(RSB<36%)	<0.001	0.002	0.030	0.147	0.370	0.617
Short-term	**Median TCEY**	34.7	37.6	40.5	43.3	45.6	47.8
	AAV	30.2%	29.3%	29.0%	30.1%	31.9%	35.5%
	P(SB < SB_{2023})	0.224	0.288	0.350	0.416	0.484	0.541

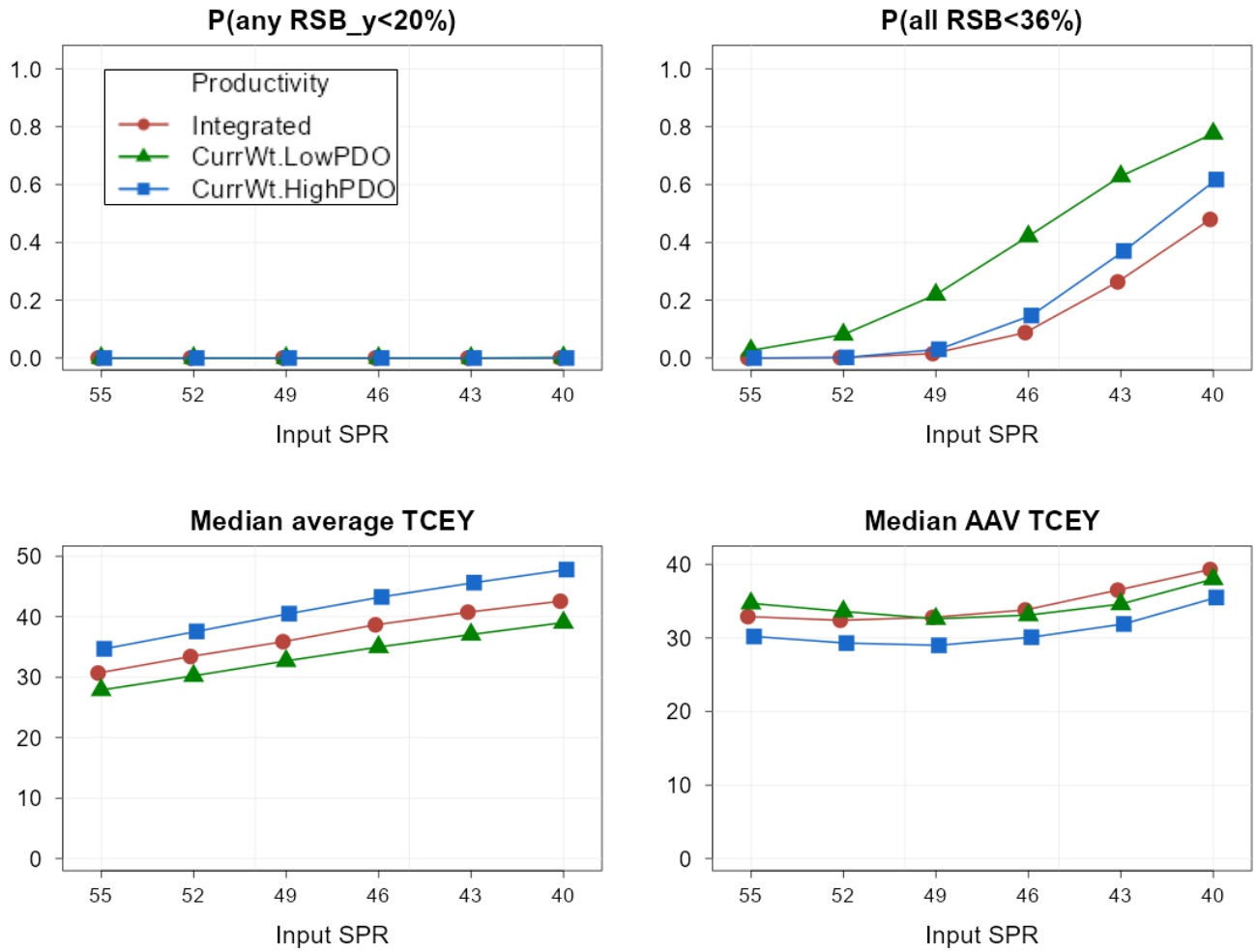


Figure 10. Plots of performance metrics for priority objectives over a range of SPR values and integrated productivity (red circles), current weight-at-age and low PDO productivity (green triangles), and current weight-at-age and high PDO productivity (blue squares).

It is important to note that the future is uncertain and productivity will certainly not remain constant, which is why it is integrated into the simulations. Even though what was experienced in the past may not be experienced in the future, the integrated simulations provide a range of possibilities for strategic planning. The specific scenarios assuming consistent productivity provide additionally understanding of the population and ensure that the evaluation of all candidate management procedures is robust to a wide range of stock conditions. It is possible to develop an MP that is dependent on the current perceived productivity regime, which would require evaluation using the MSE framework.

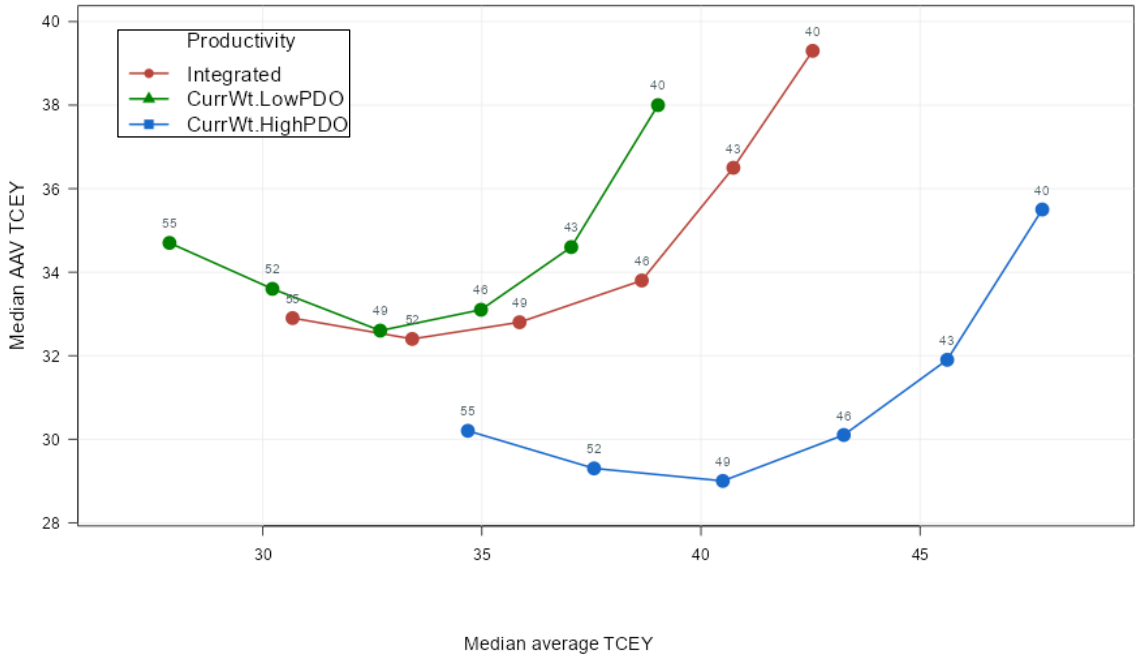


Figure 11. Trade-offs between average annual variability (AAV) in the short-term TCEY and the median short-term TCEY for different SPR values with integrated productivity, current weight-at-age with low PDO, and current weight-at-age with high PDO.

FURTHER DEVELOP THE DEPLETED CONCEPT

The IPHC HSP describes two reference points related to spawning biomass:

- **Overfished**: the female dynamic spawning biomass level where the ecological risk to the population and the risk to the health of the fisheries is regarded as unacceptable.
- **Depleted**: the female absolute spawning biomass level below which the potential for recovery is uncertain.

The overfished level is defined as when the estimated probability that coastwide female relative spawning stock biomass is below the limit reference point ($RSB_{20\%}$) is greater than 50%. Depleted does not have a definition and is currently being investigated.

Overfished implies that fishing was the cause of a low biomass state, whereas a depleted condition could be caused by fishing or other factors. Both definitions are important to fisheries management because managers control fishing to avoid precariously low biomass, but the population may be at low biomass for reasons that cannot be controlled by management yet may require management action to increase the chance of recovery. The use of dynamic reference points allows for the separation of fishing effects from other effects on population size. A dynamic relative spawning biomass (as currently used by IPHC) is appropriate to determine if the population is overfished. An absolute spawning biomass is appropriate to determine if the population is at a low population state from which recovery could be compromised. Both concepts are shown in Figure 12. An example level for Depleted is shown, as it is not currently defined. Overfished is currently defined as 20% of unfished spawning biomass and changes over time when calculated as an absolute spawning biomass, depending on current stock conditions. Depleted is a constant absolute spawning biomass and varies in terms of relative spawning biomass.

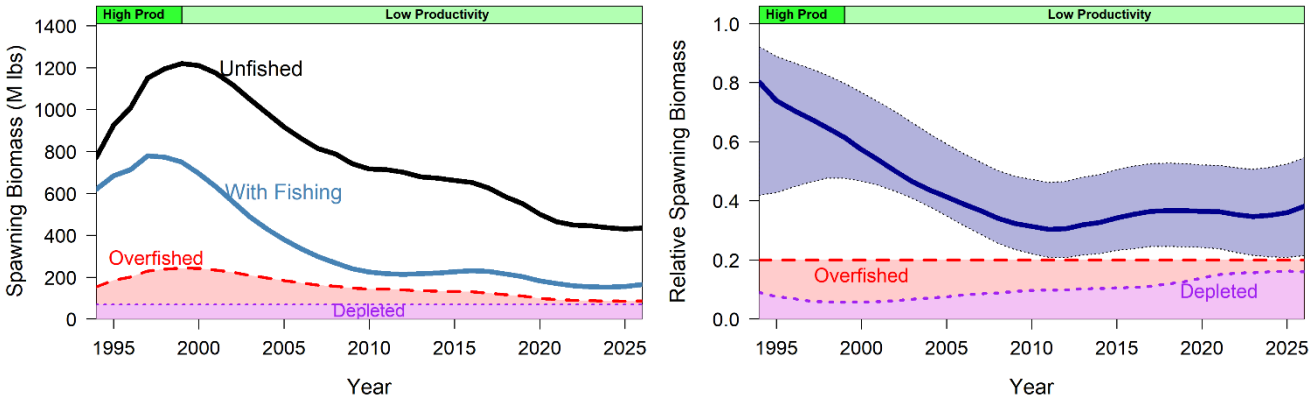


Figure 12. Estimated spawning biomass (left) if fishing had not occurred (unfished) and estimated spawning biomass from the 2025 stock assessment (with fishing). The Overfished threshold of 20% of unfished spawning biomass is shown as a dashed line and changes over time. An example "Depleted" threshold is shown as a straight horizontal line, assuming that it is defined as a constant absolute spawning biomass. The relative spawning biomass ("with fishing" divided by "unfished") is shown on the right with a 95% credible interval (accounting for the covariance in the biomass estimated with and without fishing). The Overfished threshold is shown at 20% and the example Depleted value mapped onto the relative spawning biomass scale is shown in purple.

Absolute spawning biomass is an appropriate measure for a depleted reference point because it directly relates to fecundity (i.e. egg production). The current understanding of Pacific halibut egg production is that it is directly related to body size. For example, a 100-pound mature female Pacific halibut produces four times more eggs than a 25-pound mature female Pacific halibut. Therefore, absolute spawning biomass is a measure of reproductive potential for the stock, and if reproductive potential approaches or drops below a critical level, management response would be warranted. Current research on fecundity by the Secretariat may suggest using reproductive output instead of spawning biomass to account for potential nonlinear reproductive potential over different sizes of Pacific halibut; it would be an easy switch to account for this but would have important effects on estimated reference points.

The Secretariat has currently identified three possible approaches to identify an appropriate absolute spawning biomass reference point for defining a depleted stock condition.

1. Use the lowest spawning biomass observed in the estimated time series from the stock assessment, which is 153 Mlbs in 2024 according to the 2025 stock assessment. The estimated spawning biomass in the 1970s may have been at similar levels seen in recent years, but recent levels are estimated to be low with much greater certainty due to data available from the IPHC's Fishery Independent Setline Survey (FISS).
2. Use a low spawning biomass level that was associated with a high recruitment event. This could be 215 Mlbs that produced the 2012 year-class, according to the 2025 stock assessment.
3. Use simulation (via the MSE framework) to determine an absolute spawning biomass reference point where the potential for recovery is uncertain based on our scientific understanding of biological and reproductive dynamics. This would involve simulating the Pacific halibut population forward at a high fishing rate for many years under a

'worst-case' scenario (e.g. low weight-at-age, low PDO) and then transition to simulating without fishing. A bifurcation point in the spawning biomass where trajectories either recover or stabilize and those that continue to decline could indicate an appropriate depleted threshold that accounts for uncertainty.

The Secretariat discussed the concept of depleted with the Scientific Review Board (SRB) at SRB029, and the SRB made a request for more information. This request followed a preference from the SRB to focus on determining appropriate details for methods 1 and 2 above, noting that method 3 may be informative but is dependent on assumptions.

> **IPHC-2026-SRB029-R, para. 24 (SRB029–Req.10):** ***NOTING*** *that "recovery" is part of the depleted definition, but is not defined itself, the SRB* ***REQUESTED*** *that the Secretariat review how these reference points are defined within other management systems and present, at SRB030, some potential recovery thresholds or definitions that recognise the difference between short (e.g. positive trend) and long-term (e.g. persistent high biomass) aspects of recovery. Alternatively, the Secretariat could redefine "depleted" based on the avoidance of further declines in biomass.*

Furthermore, two requests were made by the MSAB related to determining a depleted reference point.

> **IPHC-2026-MSAB022-R, para. 41 (MSAB022–Req.11):** *The MSAB* ***REQUESTED*** *to conduct MSE simulations to determine appropriate methods of determining when the Pacific halibut stock is recovered after having been defined as depleted.*
>
> **IPHC-2026-MSAB022-R, para. 42 (MSAB022–Req.12):** *The MSAB* ***REQUESTED*** *that simulations to determine a depleted limit reference point be used to understand the interactions between overfished and depleted (e.g. when could a stock be defined as overfished but not depleted, and vice versa) as well as interactions between rebuilt and recovered.*

The Secretariat will continue to work with the SRB and MSAB to refine these approaches and determine an appropriate depleted reference point and definition of recovered if classified as depleted.

IMPROVE THE ESTIMATION MODEL

Work has begun on developing an estimation model for use in the MSE framework. An estimation model mimics the stock assessment and produces outcomes with uncertainty that are used in the MP. The estimation model needs to run quickly because it is used in many years of each of the 500 simulations. Therefore, it is typically a simplification of the actual stock assessment process, but specified to capture the general behaviours of the stock assessment. Two requests from SRB029 are applicable to this topic.

IPHC-2026-SRB029-R, para. 25 (SRB029–Req.11): ***NOTING*** *that the stability of the projections depends on the assumed levels of assessment and implementation uncertainty, the SRB REQUESTED that at SRB030 the Secretariat present materials describing how assessment and implementation uncertainty are included in the MSE and potential alternative approaches.*

IPHC-2026-SRB029-R, para. 26 (SRB029–Req.12): ***RECALLING*** *the following recommendation from SRB027:*

> *SRB027–Rec.09 (para. 24) The SRB RECOMMENDED considering the development of an assessment model within the MSE framework. This would have multiple benefits including: a) facilitating analysis of the economic consequences of reduced FISS sampling and the associated increased potential for bias in assessment-relevant metrics such as WPUE, the maturity schedule, size-at-age, and age composition. b) Understanding the impacts of uncertainty in natural mortality on management performance.*

the SRB ***REQUESTED*** *that the Secretariat present options for implementing an assessment model within the MSE, including investigating potential state-space options which can run faster.*

The development of the estimation model will include building custom models and investigating generalized stock assessment packages in parallel with the current investigation being conducted for the stock assessment. This includes packages such as CEATTLE and SPoRC.

EVALUATE POTENTIAL MANAGEMENT ACTIONS WHEN APPROACHING A DEPLETED LIMIT REFERENCE POINT

Before management actions are developed when approaching a depleted limit reference point, additional progress on defining the depleted limit reference point and a definition of recovered must be made. Potential management actions will be considered following further work on defining a depleted limit reference point (see above).

EVALUATE ADDITIONAL MANAGEMENT PROCEDURES

The Commission, MSAB, and Research Advisory Board (RAB) have identified various elements of MPs that are of interest to investigate. These include a triennial assessment frequency with various empirical rules to determine the TCEY in non-assessment years, constraints and smoothers on the interannual change in the TCEY, and a minimum TCEY. These elements, and any others defined by the Commission, will be evaluated in 2027.

IPHC-2026-MSAB022-R, para. 37 (MSAB022–Req.06): *The MSAB* ***REQUESTED*** *further evaluations of the following MP elements:*

b) a triennial assessment frequency with various empirical rules to determine the reference coastwide TCEY in non-assessment years.

IPHC-2026-MSAB022-R, para. 38 (MSAB022–Req.08): *The MSAB* ***REQUESTED*** *evaluating constraints and smoothers, along with MP elements listed in para. 37, that would potentially reduce the interannual variability in the TCEY, including:*

a) a 3-year rolling average (arithmetic or geometric) on the FISS O32 WPUE used in the empirical rule in a triennial stock assessment frequency;
b) constraints applied only to non-assessment years and/or applied only to assessment years;
c) a phase-in approach for the change in TCEY in assessment years.

IPHC-2025-RAB026-R, para. 36 (RAB026-Req.07): *The RAB **REQUESTED** the consideration of an investigation of a floor coastwide mortality limit (e.g. a minimum Total Constant Exploitation Yield (TCEY)) be conducted as part of the MSE process to understand potential risks to the Pacific halibut stock and fisheries for this type of management procedure.*

DETERMINE REFERENCE POINTS USING THE UPDATED MSE OPERATING MODEL

The previous analysis of reference points for the Pacific halibut stock was completed in 2019 (IPHC-2019-SRB015-11 Rev_1) and defined a precautionary SPR associated with maximum sustainable yield (SPR_{MSY}) at 35%, which is used as the overfishing limit in the HSP. Many improvements in the knowledge of Pacific halibut have occurred since then that may affect reference points, including updated age-at-maturity and natural mortality estimates. An analysis of reference points is underway using this updated knowledge in the stock assessment and the MSE framework.

The updated MSE framework was used to calculate the equilibrium yield curve by simulating various SPR levels without a control rule and no decision, estimation, or observation variability to determine the long-term, equilibrium yield across fishing intensities assuming integrated productivity. The peak of the curve defines maximum sustainable yield (MSY) and can be associated with SB_{MSY}, RSB_{MSY}, and SPR_{MSY}. More work needs to be done to identify the uncertainty, but preliminary results indicate that SPR_{MSY} may be less than previously determined. Previous results showed a range of 29% to 35% for SPR_{MSY} while the current simulations suggest a range between 22% to 30% having less than a 2% difference in the long-term median TCEY (Figure 13). The range of SPR from less than 20% to 46% shows less than an 20% difference in the long-term median TCEY. In other words, the equilibrium yield curve is flat across a range of SPR values, drops off quickly with SPR less than 22%, and drops below 80% of the maximum at SPRs greater than 46% when integrating over low and high productivity regimes.

Without a control rule, the fishing intensity has full effect and can reduce the population to low levels. An SPR of 22% would result in a median RSB of 15%, well below the objective to maintain the RSB above 20%. The minimum SPR (i.e. maximum fishing intensity without a control rule) to meet this objective would be 34% (Figure 13). The integrated productivity of the stock with periods of high-weight-at-age and high recruitment allows the stock to be fished to low relative spawning biomass levels, but with minimal gains in the long-term equilibrium TCEY.

For the low productivity scenario (current weight-at-age and low PDO) the yield (i.e. long-term equilibrium TCEY) is less and SPR_{MSY} is near a value of 36% (Figure 13). The decline on either side of SPR_{MSY} is more gradual than with integrated productivity and 80% of MSY could be achieved at SPR values near 24% to greater than 54%. An SPR of 36% would result in an

RSB near 24%. However, an SPR of 40% would just meet the objective to maintain the stock above 20% RSB with a 95% probability. Other productivity scenarios are currently being evaluated. For example, SPR_{MSY} is near 28% with the assumption of current weight and high PDO productivity.

Overall, the fishing intensity associated with maximum sustainable yield for Pacific halibut is uncertain across a wide range of SPR values and depends on assumptions of productivity. Considering the objective to maintain the RSB above 20% with a 95% probability results in SPR values near the current overfishing limit (SPR=35%) defined in the HSP. The future analysis will identify the variability in absolute and relative reference points across productivity scenarios and evaluations will continue to determine if the SPR_{MSY} and overfishing limit should be updated given current understanding of Pacific halibut population dynamics.

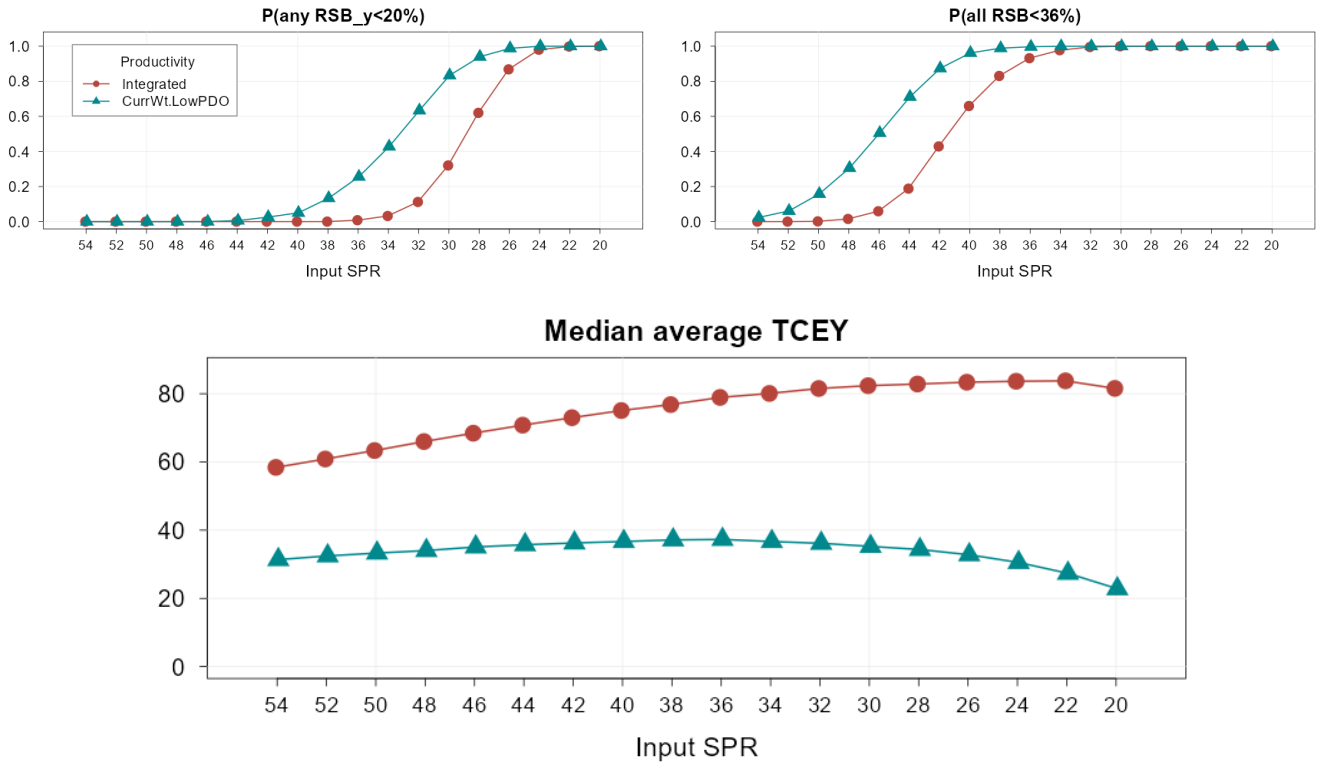


Figure 13. The performance metrics for simulations with a range of SPR values without a control rule and no decision, estimation, or observation error.

DEVELOP GUIDANCE DOCUMENTS FOR THE HSP

The development of guidance documents to supplement the harvest strategy policy (HSP) will begin in 2027. An example document is describing rebuilding guidelines.

ADDITIONAL CONSIDERATIONS

The SRB and MSAB made additional requests to better understand the MSE framework, the concept of depletion and associated objectives, and the short- and long-term consequences of current decisions.

> **IPHC-2026-SRB029-R, para. 27 (SRB029–Req.13):** *The SRB **REQUESTED** that PDO projections be developed that are based on time series analysis of the historical record. This will allow the projections to equilibrate at proportions that are consistent with the historical data rather than 50/50 (high/low phase).*

> **IPHC-2026-MSAB022-R, para. 24 (MSAB022–Req.01):** *The MSAB **NOTED** that the 70% probability for a stock to be rebuilt from an overfished status has not been simulation tested and determined appropriate for the management of Pacific halibut, and **REQUESTED** that this definition and other methods to declare a stock rebuilt be simulation tested using the MSE framework.*
>
> **IPHC-2026-MSAB022-R, para. 29 (MSAB022–Req.04):** *The MSAB **REQUESTED** that the HSP Table be expanded to include long and short-term projections using a fixed productivity regime based on current perceived productivity and additional performance metrics such as the median RSB and median absolute spawning biomass.*
>
> **IPHC-2026-MSAB022-R, para. 46 (MSAB022–Req.13):** *The MSAB **REQUESTED** that the 23rd Session of the MSAB include an agenda item to discuss objectives and performance metrics focused on a depleted limit reference point (if determined), and an objective related to an absolute spawning biomass to be at or above.*

SUMMARY OF PROGRESS ON THE MSE 2026 PROGRAM OF WORK

Significant progress has been made on the tasks in the 2026 MSE and HSP Program of Work, but additional work is necessary which will benefit from the guidance of the Commission, SRB, MSAB, and RAB. The Operating Model has been updated and conditioned, results are available for a range of SPR values suggested by the MSAB, two productivity regimes have been investigated, and a path forward has been identified for the depleted concept, which are all high priority tasks. Some low priority tasks are in progress and may become high priority tasks in 2027.

Table 4. Summary of progress that has been made on the high- and low-priority tasks in the 2026 MSE and HSP Program of Work.

Priority	Task	Status	Progress to date	Next steps
High	Recondition OM	Completed	The Operating Model (OM) has been updated and conditioned. It has been used to conduct simulations.	Continue to use the OM for simulations. Check annually for exceptional circumstances.
	Evaluate a range of SPR values	Results available	Simulations for SPR values from 40% to 55% have been completed with integrated productivity.	A similar range of SPR values will be used as other elements of MPs are specified.
	Investigate productivity regimes	Results available	Two regimes simulated, both with current weight-at-age: consistent low PDO and consistent high PDO.	Productivity regimes will continue to be used to evaluate MPs. Other regimes may be used in 2027.
	Further develop the depleted concept	In progress	Discussions with the SRB at SRB029 have identified a path forward.	Continue this work as a high priority in 2027.
Low	Improve the estimation model	In progress	Development is in the early phases.	Consider as a high priority in 2027.
	Evaluate potential management actions when approaching a depleted limit reference point	Waiting	Dependent on further development of the depleted concept.	Begins following further progress on the development of the depleted concept.
	Evaluate additional elements of management procedures	In progress	Various elements of MPs have been identified.	To be investigated in 2027. Identify if any elements are high priority.
	Determine reference points	Preliminary results available	Some simulations are complete.	Additional analyses and investigations are necessary.
	Develop guidance documents for the HSP	To begin in 2027	Not yet started.	Development begins in 2027.

RECOMMENDATION/S

That the Commission:

1) **NOTE** paper IPHC-2026-IM102-10 which provides an update on progress for the MSE Program of Work in 2026 and initial results from the updated MSE framework.
2) **NOTE** that the MSE operating model (OM) has been reconditioned for 2026 using updated stock assessment inputs and improved weight-at-age and recruitment simulation methods, resulting in a more gradual increase away from current productivity and a narrower range of projected spawning biomass than the 2025 OM.
3) **NOTE** that simulations across a range of SPR values from 55% to 40% and productivity scenarios have been conducted with the following conclusions.
   a) All SPR values evaluated with integrated productivity met the objectives to be above $RSB_{20\%}$ and at or above $RSB_{36\%}$.
   b) The objective to be at or above $RSB_{36\%}$ was met for SPR values higher than 43% assuming low productivity similar to what has been recently experienced (i.e. current weight-at-age and low PDO).
   c) There is a trade-off between the short-term TCEY and the short-term variability in the TCEY (AAV) where the median short-term TCEY increased at lower SPR values (i.e. higher fishing intensity) and showed larger gains between low fishing intensities, and the AAV increased from an SPR of 49% to an SPR of 40% and remained similar for SPRs from 55% to 49%.
   d) There is approximately a 1 in 4 chance that the short-term spawning biomass (SB) would be less than the SB experienced in 2023 with an SPR of 46%, and this chance increases to 1 in 2 assuming recent low productivity.
4) **NOTE** that productivity has an effect on short-term projected outcomes and a larger effect on long-term projected outcomes.
5) **NOTE** that the Secretariat has identified three candidate approaches for defining an absolute spawning biomass reference point for Depleted and will continue to work with the SRB and MSAB on this topic.
6) **NOTE** that low-priority tasks for the 2026 MSE Program of Work are in progress or waiting for other tasks to complete before beginning.
7) **RECOMMEND** updating the reference SPR in the Harvest Strategy Policy (HSP) from the current SPR of 43% to an SPR of 46%.
8) **RECOMMEND** including the identification of a depleted limit reference point for Pacific halibut as a high-priority task in the 2027 MSE Program of Work.
9) **RECOMMEND** including the evaluation of the following elements of management procedures as a high-priority task in the 2027 MSE Program of Work:
   a) a triennial assessment frequency and empirical rules to determine the reference TCEY in years without a stock assessment, and
   b) constraints and smoothers on the interannual change in the TCEY including minimum and maximum TCEYs.

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Stock projections and the harvest decision table for 2027-2029

This document is a placeholder: a Rev 1 will be published prior to IM102.

PREPARED BY: IPHC SECRETARIAT (I. STEWART AND A. HICKS; 27 OCTOBER 2026)

PURPOSE

To provide the Commission with short-term (3 year) stock projections and the harvest decision table for 2027.

METHODS

Short term tactical stock projections under varying levels of mortality are conducted using the 2026 stock assessment (IPHC-2026-IM102-09).

RESULTS

Results will include a range of projected 2027-2029 mortality levels: no fishing mortality, the estimated 3-year surplus (mortality at which there is a 50% chance that the spawning biomass will be smaller in 3-years than at the end of 2026), the *status quo* (2026 coastwide mortality limit), the mortality consistent with the current reference Spawning Potential Ratio (SPR; $F_{43\%}$) and a grid of larger and smaller values to facilitate decision-making.

The harvest decision table for 2027 will provide a comparison of the relative short-term risks of stock and fishery metrics against the range of alternative harvest levels for 2027-2029.

TIMELINE FOR REVISION

The complete document (IPHC-2026-IM102-11 Rev_1) is anticipated to be available no later than **23 November 2026**.

An updated document for AM103 will include revisions based on end-of-year non-directed discard mortality estimates that affect the scale and distribution of projected 2027 mortality. This information will be available in early January.

Detailed stock assessment (IPHC-2027-SA-01) and data overview (IPHC-2027-SA-02) documents will be published directly to the stock assessment page on the IPHC's website.

2027-31 FISS designs

PREPARED BY: IPHC SECRETARIAT (R. WEBSTER, I. STEWART, K. UALESI, D. WILSON; 30 OCTOBER 2026)

Outcome sought: *DISCUSS the 2027–31 design options and the 2027 modular add-ons; APPROVE a FISS design for 2027.*

PURPOSE

To present the Commission with proposed FISS designs for 2027-31, including a cost evaluation of the 2027 **Base Block design** and the **Supplemented Base Block design**. The latter includes Commissioner-selected modular add-ons funded by voluntary supplementary funding of US$749,000 by the US government. This document also provides an update on the balance within Fund 45 – FISS Reserve and the associated request to Contracting Parties.

The modular add-ons included in the Supplemented Base Block design have the following aims:

1) 'Catch up' on FISS regions that were part of the 2026 **Base Block design** but were not fished;
2) Reduce the heterogeneity in net revenue among future years by sampling in 2027 some of the more costly regions planned in future years
3) Fully clear the 'backlog' of uncertainty created by the reduced designs implemented in 2023-2026 to provide the most informative data in 2027 for the stock assessment and management decisions.

Other potential add-ons are also discussed that:

1) Reduce the projected net loss of the FISS in 2027;
2) Set the FISS station charter rate at a higher value to increase the chance of receiving bids for challenging charter regions (i.e. Adak in IPHC Regulatory Area 4B).
3) Further reduce heterogeneity in net revenue among future years.

BACKGROUND

The IPHC's Fishery-Independent Setline Survey (FISS) provides data used to compute indices of Pacific halibut density for use in monitoring stock trends, estimating stock distribution, and as an important input in the stock assessment. Stock distribution estimates are based on the annual mean weight per unit effort (WPUE) for each IPHC Regulatory Area, computed as the average of WPUE of all Pacific halibut and for O32 (greater than or equal to 32" or 81.3 cm in length) Pacific halibut estimated for all stations in an area. Mean numbers per unit effort (NPUE) is used to index the trend in Pacific halibut density for use in the stock assessment models. Annual FISS designs are developed by selecting a subset of stations for sampling from the full 1,890-station FISS footprint (Figure 1).

The IPHC completed the FISS expansion series in 2019, sampling for the first time (over the 2011-2019 period) the full design grid of 1,890 stations. The cost of the FISS expansion resulted in the FISS reserve fund becoming fully expended.

In recent years, declining FISS catch rates, variability in vessel costs, fish sales price, and bait costs, along with a more complete accounting of FISS expenses, have all contributed to the difficulty of designing an annual FISS with optimal spatial coverage while maintaining cost effectiveness. This has led to the Commission's approval of FISS designs with reduced spatial footprints compared to optimal designs. A summary of FISS history and recent FISS designs is available in Appendix A. The most recent year of sampling for each station (not including 2026) is shown in Figure 2.

At AM100 (IPHC-2024-AM100-R, para. 72), AM101 (IPHC-2025-AM101-R, para. 67) and AM102 (IPHC-2026-AM102-R, para. 72) the Commission noted that "*the use of the Base Block Design will be the focus of future planning and annual FISS proposals from the Secretariat*". The **Base Block design** is considered the optimal long-term FISS design in terms of balancing scientific needs and cost-effectiveness (Appendix B). This design implements sampling of complete FISS charter regions (subsets of stations generally sampled by a single vessel via multiple trips), with sampled charter regions in the core of the stock (IPHC Regulatory Areas 2B, 2C, 3A and 3B) rotated over two or three years depending on IPHC Regulatory Area, and most others within a five-year period. In other IPHC Regulatory Areas, coverage is prioritised based on minimising the potential for bias and maintaining the coefficients of variation (CV, a relative measure of precision) of the O32 index of abundance below 25% for each IPHC Regulatory Area. The **Base Block design** includes some sampling in all IPHC Biological Regions (Figure 3) in each year, ensuring that trend and biological data from across the spatial range of Pacific halibut are available to the stock assessment and for stock distribution estimation. The **Base Block design** allows for a smaller annual FISS footprint relative to the historical design (pre-2011) while maintaining a similar level of precision and providing an unbiased estimate of relative density (over a 2-3 year period).

POTENTIAL DESIGNS FOR 2027-31

BASE BLOCK DESIGN

At AM102, the IPHC Secretariat presented the **Base Block design** proposed for 2026-28 (IPHC-2026-AM102-13). Except for a revision for IPHC Regulatory Area 2A in 2027, the Base Block designs in Figures 4 and 5 are the same as those presented at AM102. Potential designs for 2029-31 are shown in Figures 6-8.

Based on statistical modelling with simulated data, the Base Block design is expected to maintain precise estimates of indices of Pacific halibut density and abundance across the range of the stock in each of the next three years (Appendix C). At the same time, the rotating nature of the sampled blocks means that almost all FISS stations are sampled within a 5-year period (2-3 years within the core areas) resulting in low risk of missing important stock changes and therefore a low risk of large bias in estimates of trend and stock distribution.

SUPPLEMENTED BASE BLOCK DESIGN (2027)

Based on preliminary cost projections, Commissioners selected the following modular add-ons to the **Base Block design** (designated as **Option 1**) to be funded by US$749,000 of voluntary supplementary funding from the US government:

- **Options 2, 3 and 4:** Add charter regions from IPHC Regulatory Areas 3A and 4B that were included in the approved 2026 Base Block design but were not fished in 2026 for reasons of cost (3A) or a lack of charter bids (4B). In the case of IPHC Regulatory Area 4B, the region is split into two (2) components (west and east, 29 stations each) to allow more flexibility for those considering submitting a bid for 2027 FISS work.
- **Option 5:** Bring sampling in IPHC Regulatory Area 4A forward from 2028 to reduce costs in that year, which is otherwise projected to have a large net loss.
- **Options 6 and 7:** Bring sampling of the northern and central Bering Sea shelf edge (IPHC Regulatory Area 4CDE) forward from 2028 and 2029, respectively, potentially reducing net losses in those years. These options will result in complete sampling of standard FISS stations in IPHC Regulatory Area 4CDE in 2027.

The resulting **Supplemented Base Block design** is presented in Figure 9.

COST ESTIMATES (2027)

Cost and revenue projections for 2027 are based on the following assumptions:

1. Designs are optimised for numbers of skates, with sets of 4, 6 or 8 100-hook skates used, depending on projected catch rates and bait costs.
2. Projected Pacific halibut average sales price for 2027 in each charter region is unchanged from the 2026 FISS
3. Projected Pacific halibut average landings per station remain unchanged in each charter region from the most recent FISS values (based on the last time the region was sampled).

Cost projections account for the actual price of chum salmon bait already purchased for the 2027 FISS of US$4.09/lb (compared with US$2.40/lb in 2026). Changes in projected costs from those presented previously (Webster et al. 2026) are largely due to this large increase in bait cost from 2026.

Table 1. Preliminary projected costs and revenue for the proposed 2027 Base Block and Supplemented Base Block designs ($US). (Totals may not equal the sum of individual rows due to rounding.)

Design		2027 Base Block design	2027 Supplemented Base Block design
Income	**Pacific halibut sales**	3,819,000	4,305,000
	Byproduct sales	104,000	113,000
	Total	**3,923,000**	**4,418,000**
Expenses	**Base HQ (staff salary and wages, and benefits x 4)**	(547,000)	(547,000)
	Vessel contracts	(1,545,000)	(2,282,000)
	Field staff (salary and wages, and benefits)	(475,000)	(633,000)
	Bait	(867,000)	(1,067,000)
	Non-IPHC fish sales[@]	(430,000)	(485,000)
	Other expenses*	(612,000)	(766,000)
	Total	**(4,476,000)**	**(5,781,000)**
Net revenue		**($533,000)**	**($1,363,000)**

[@]Sales revenue from both byproduct and Pacific halibut that are paid to a third party (e.g. vessel share, ADF&G)
*Other costs include staff training, personnel expenses, mailing and shipping, travel, technology, gear replacement, customs fees, bait storage fees, field supplies and equipment, equipment maintenance fees, facility rental fees, and communication fees.

The proposed 2027 **Base Block design** is projected to result in an operating loss of approximately **US$533,000** (Table 1), while the 2027 **Supplemented Base Block design** is projected to have a loss of **US$1,363,000**. Accounting for the $749,000 in supplemental funding provided by the USA, the adjusted net loss for the Supplemented Base Block design is projected to be **US$614,000.**

MODULAR ADD-ONS

Ten modular add-ons to the proposed 2027 Base Block design were presented to Commissioners at the September Work Meeting and at the September SRB meeting (Webster et al. 2026) with the following aims:

1) Reduce the projected net loss of the FISS in 2027;
2) 'Catch up' on FISS regions that were part of the 2026 **Base Block design** but were not fished;

3) Reduce the heterogeneity in net revenue among future years by sampling in 2027 some of the more costly regions planned in future years;
4) Set the FISS station charter rate at a higher value to increase the chance of receiving bids for challenging charter regions (i.e. Adak in IPHC Regulatory Area 4B);
5) Fully clear the 'backlog' of uncertainty created by the reduced designs implemented in 2023-2026 to provide the most informative data in 2027 for the stock assessment and management decisions.

With updated cost projections, one of the two options (previous Option 3) that were expected to reduce the projected net loss is no longer projected to do so and has been removed from the list of modular add-ons presented previously. In addition to Options 2 through 7 described above (components of the Supplemented Base Block design), the remaining modular add-ons are as follows:

- **Option 8** adds a revenue-positive charter region in IPHC Regulatory Areas 2C to reduce the projected net loss.
- **Option 9** brings forward sampling of stations in IPHC Regulatory Area 2A from 2028, reducing costs in that year, along with stations in deep and shallow waters and the Salish Sea that have not been sampled since 2018 but were not planned until after 2031.
- **Option 10** fixes the charter rate at $5,500 per station in the Adak region of IPHC Regulatory Area 4B, which would be a 28% increase over the previous highest accepted bid. It expands sampling over Options 3 and 4 (58 stations combined) to include all 118 stations in the Adak charter region.

Figure 10 presents a map of stations included in Options 2 to 10.

Table 2. Modular changes to Option 1 (**2027 Base Block design**), including projected expenses, income, net revenue, and benefits to the IPHC. Each of modular Options 2 to 9 can be added in any combination to Option 1, with the net revenue of the resulting FISS design found by summing the revenue changes for the Base Block design and each selected option. Option 10 is an alternative to Options 3 and 4 combined. The **2027 Supplemented Base Block design** is comprised of **Options 1 through 7**.

Option	Design	Sampled IPHC Regulatory Areas (with number of FISS charter regions)	Projected expenses (US$)	Projected income (US$)	Projected net revenue	Benefit/rationale
1	Base Block	2A(3), 2B(2), 2C(2), 3A(4), 3B(2), 4B(1), 4CDE(1)	($4,476,000)	$3,923,000	($533,000)	Optimal long-term design
	Design change	**Change in sampling**	**Projected change in expenses ($US)**	**Projected change in income ($US)**	**Projected change in net revenue**	
2	Add Shelikof	3A(+1)	($277,000)	$226,000	($51,000)	3A catch-up. Last sampled 2024.
3	Add Adak West	4B(+1)	($211,000)	$101,000	($110,000)	4B catch-up. Last sampled 2021.
4	Add Adak East	4B(+1)	($211,000)	$101,000	($110,000)	4B catch-up. Last sampled 2025.
5	Add Unalaska	4A(+1)	($389,000)	$66,000	($323,000)	Reduces costs in 2028.
6	Add 4CDE North	4CDE(+1)	($178,000)	$12,000	($166,000)	Reduces costs in 2029. Last sampled 2021.
7	Add 4CDE Central	4CDE(+1)	($184,000)	$44,000	($140,000)	Potential to reduce costs in 2030. Last sampled 2022.
8	Add Sitka	2C(+1)	($253,000)	$385,000	$112,000	Revenue positive: reduces overall net loss.
9	Expand 2A sampling to include all stations north of 40°N	2A(+2)	($273,000)	$89,000	($185,000)	Reduces costs in 2028. Includes deep, shallow, and Salish Sea stations not sampled since 2018.
10	Fixed Contract rate[1] for expanded Adak (alternative to Options 3-4)	4B(+2)	($996,000)	$411,000	($585,000)	Reduces probability of receiving no bids for this region (as occurred in 2023 and 2026)

[1] This option provides for a fixed 28% increase in inflation-adjusted charter costs paid to the contracting vessel over previous accepted bids.

COST PROJECTIONS FOR 2028-31 BASE BLOCK DESIGNS

Table 3 summarises preliminary projected income and expenses for the 2028-31 Base Block designs, with the 2027 design included for comparison. These projections rely on the assumption of no change in average landings or price relative to 2027, or changes in the bait price from 2027. Note that three (3) charter regions are not included in the five-year rotational Base Block designs (2027-31):

- Bowers Ridge in the western Aleutians (central IPHC Regulatory Area 4B, last sampled in 2022);
- The inside waters of the Salish Sea in Washington and British Columbia (last sampled in 2018);
- The stations in Californian waters south of 40°N (sampled in 2017).

All three (3) regions have very low density of Pacific halibut and can be sampled less frequently (less than once every five years) than elsewhere without impacting the quality of estimates derived from FISS data. It is expected that most of these waters will be included in Base Block designs for 2032-36.

Projections of total net revenue vary widely, depending on which charter regions are fished (Table 3). In years with more revenue-positive regions from IPHC Regulatory Areas 2B and 2C in the design (2027, 2029, 2031), net revenue is projected to range from a net loss of US$451,000 to a net loss of US$626,000. In 2028 and 2030, net losses are projected to be US$1.495 million and US$1.585 million respectively. As noted above, there is high uncertainty in these projections, particularly for later years. The high cost in 2028 and 2030 could be reduced by shifting one or more revenue-negative regions (such as IPHC Regulatory Area 4A, Option 5 in Table 2) to odd-numbered years. Another option is to add sampling in revenue-positive regions that are not part of the Base Block design for those years, as has been done in recent years to reduce losses.

Table 3. Preliminary projected income and expenses for the 2027-31 Base Block designs (US$). (Totals may not equal the sum of individual rows due to rounding.)

Design		2027 Base Block design	2028 Base Block design	2029 Base Block design	2030 Base Block design	2031 Base Block design
Income	**Pacific halibut sales**	3,819,000	2,585,000	3,627,000	2,673,000	3,823,000
	Byproduct sales	104,000	100,000	100,000	85,000	119,000
	Total	**3,923,000**	**2,685,000**	**3,727,000**	**2,758,000**	**3,943,000**
Expenses	**Base HQ (staff salary and wages, and benefits x 4)**	(547,000)	(547,000)	(547,000)	(547,000)	(547,000)
	Vessel contracts	(1,545,000)	(1,557,000)	(1,582,000)	(1,650,000)	(1,754,000)
	Field staff (salary and wages, and benefits)	(475,000)	(443,000)	(380,000)	(475,000)	(412,000)
	Bait	(867,000)	(735,000)	(740,000)	(743,000)	(864,000)
	Non-IPHC fish sales@	(430,000)	(316,000)	(409,000)	(315,000)	(441,000)
	Other expenses*	(612,000)	(582,000)	(520,000)	(612,000)	(551,000)
	Total	**(4,476,000)**	**(4,180,000)**	**(4,178,000)**	**(4,343,000)**	**(4,569,000)**
Net revenue		**($533,000)**	**($1,495,000)**	**($451,000)**	**($1,585,000)**	**($626,000)**

@Sales revenue from both byproduct and Pacific halibut that are paid to a third party (e.g. vessel share, ADF&G)

*Other costs include training, personnel expenses, mailing and shipping, travel, technology, gear replacement, customs fees, bait storage fees, field supplies and equipment, equipment maintenance fees, facility rental fees, and communication fees.

FISS RESERVE (FUND 45): STATUS AND FUNDING REQUEST

At the 102nd Session of the IPHC Annual Meeting (AM102), the Commission adopted an aspirational target of **US$4,000,000** for the FISS Reserve (Fund 45) (IPHC-2026-AM102-R, para 39). This target reflects the Commission's judgment on the reserve level needed to achieve cost-effectiveness without compromising the scientific integrity of the FISS design — balancing operational feasibility, cost and revenue pressures, and scientific requirements.

> 39. The Commission **ADOPTED** the following aspirational targets for reserve funds: *[Canada: In favour=2; against=0; abstain=0; absent=1; USA: In favour=3; against=0; abstain=0; absent=0]*
>
> a) Fund 50 – Reserve: **US$4,000,000** (~50% of the annual budget for Funds 10, 20, 30, 35);
>
> b) Fund 40 – FISS: **US$4,000,000** (~50% of the annual budget for Fund 40 over two (2) years of the Base-Block design).

Current status: As of the end of FY2026 (30 September 2026), the FISS Reserve stands at **US$1,161,964.91** — approximately **29%** of the aspirational target (US$4,000,000) leaving a shortfall of roughly **US$2,850,000**. However, with the surplus from the 40 - FISS Fund expected to be approximately **US$2,476,356.27** from FY2026, the shortfall is expected to be less than **US$400,000** (<10% of the aspirational 45 – FISS Reserve target).

Purpose of the Reserve

The FISS Reserve exists to protect the FISS against future contingencies. Specifically, it ensures the IPHC can absorb cost fluctuations without curtailing the FISS in years when:

- operating costs are unusually high, and/or
- revenues are lower than projected.

Without an adequately funded reserve, the Commission risks having to scale back FISS coverage in precisely the years when maintaining it matters most — undermining the scientific continuity the FISS is designed to protect.

Request to Contracting Parties

The Commission has previously requested that Contracting Parties provide annual supplementary contributions to build the FISS Reserve to its target level within a relatively short timeframe. Recognising that funding availability varies by Party, contributions may be scaled to individual circumstances:

Contribution level	**Amount**
Nominal contribution	US$200,000
Full remaining balance to reach target	<US$400,000

Contracting Parties are invited to contribute at whatever level is feasible within this range, with the understanding that closing the gap sooner reduces the Commission's exposure to cost/revenue volatility in the interim.

The United States of America has agreed to voluntarily provide US$749,000 in supplementary funding for the 2027 FISS in order to fund modular Options 2 to 7 of Table 2 as additions to the 2027 Base Block design (Figure 4).

DISCUSSION

The **Base Block design** has a projected net loss of US$533,000 for 2027 and could be implemented using FISS reserves without the need for further supplementary funding. The **Supplemented Base Block** design has a projected adjusted net loss of US$614,000 inclusive of the voluntary US contribution of $749,000 intended to fund several add-ons to the Base Block design. These add-ons include charter regions in IPHC Regulatory Areas 3A and 4B that were part of the approved 2026 Base Block design but were not fished this year, and charter regions in IPHC Regulatory Areas 4A and 4CDE brought forward to reduce projected costs in 2028. The Supplemented Base Block design can also be implemented using FISS reserves to cover the projected loss.

Taken together, the 2027–31 Base Block designs in Table 3 carry a cumulative projected net loss of US$4.69 million over the five years. On these projections the Reserve would be exhausted during the five-year period without supplementary contributions, and the aspirational target of US$4,000,000 adopted at AM102 is of a similar order to the cumulative projected loss. We note that there is a high degree of uncertainty in future cost projections, as highlighted by the unanticipated 70% increase in bait price from 2026 to 2027. Such changes in costs are almost impossible to predict from one year to the next, let alone several years into the future.

The Commission may also wish to note that modular Options 3 and 4 (Adak West and Adak East) are included in the funded package at the standard charter rate, whereas Option 10 was developed because that rate failed to attract bids for the Adak region in 2023 and again in 2026. Funding Options 3 and 4 therefore carries a risk that the stations remain unfished, and the Commission may wish to consider whether the difference between Options 3 and 4 combined (US$220,000) and Option 10 (US$585,000) is warranted to secure the coverage.

RECOMMENDATIONS

That the Commission:

1) **NOTE** paper IPHC-2026-IM102-12, which presents FISS design options for 2027-31, including a cost evaluation of the 2027 Base Block design and the Supplemented Base Block design;
2) **APPROVE** the Supplemented Base Block design (Figure 9) for implementation in 2027;
3) **NOTE** the offer of the United States of America to provide US$749,000 in supplementary funding for 2027 to fund modular Options 2 to 7 (Table 2) included in the 2027 Supplemented Base block design;
4) **PROVIDE GUIDANCE** on the preferred direction for the 2028–31 FISS designs.

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IPHC (2024). Report of the 100th Session of the IPHC Annual Meeting (AM100) IPHC-2024-AM100-R. 55 p.

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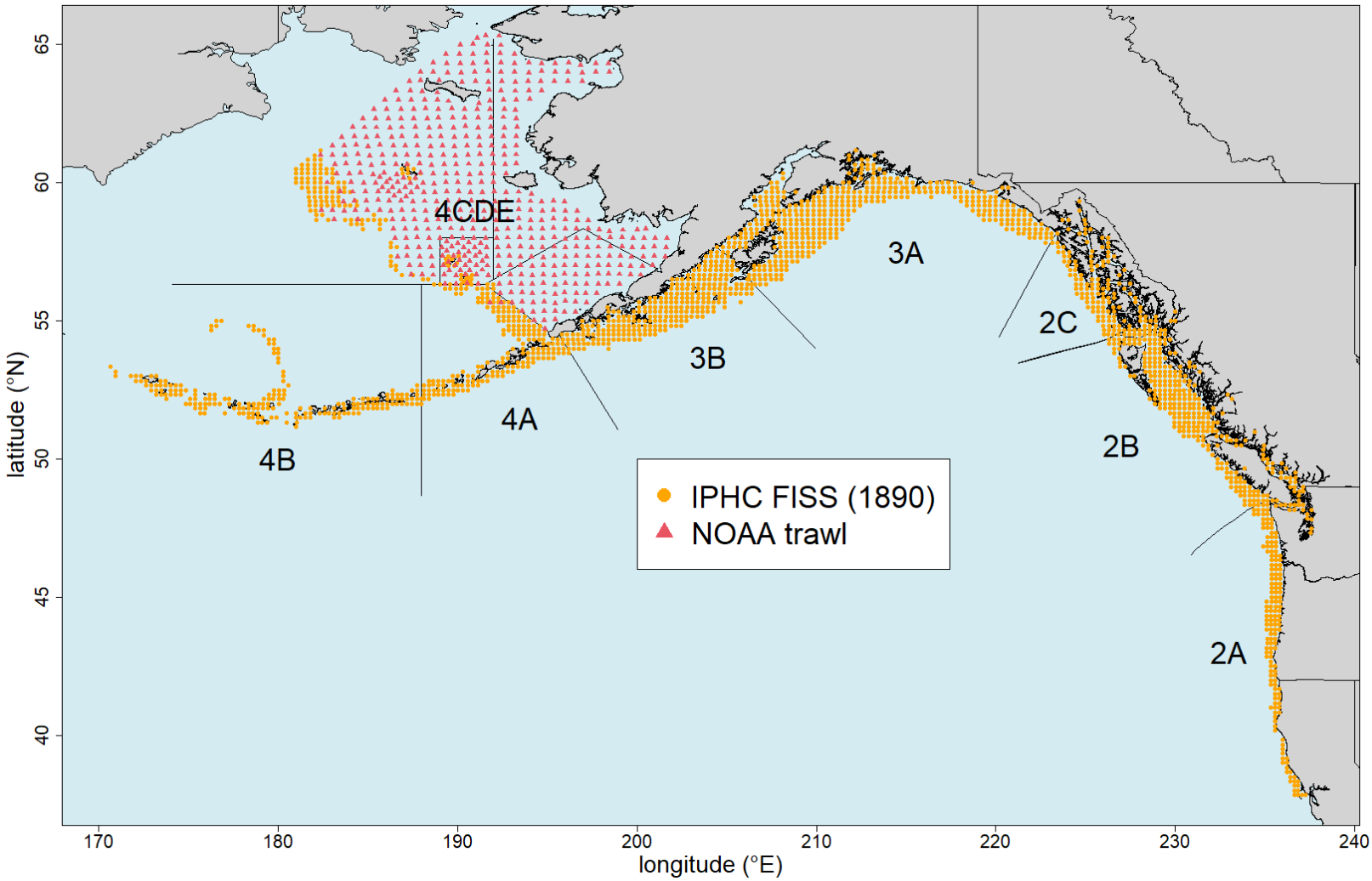


Figure 1. Map of the full 1890 station FISS design, with orange circles representing stations available for inclusion in annual sampling designs. Red triangles represent standard locations of NOAA trawl stations used to provide complementary data for Bering Sea modelling (actual NOAA trawl design can vary year-to-year).

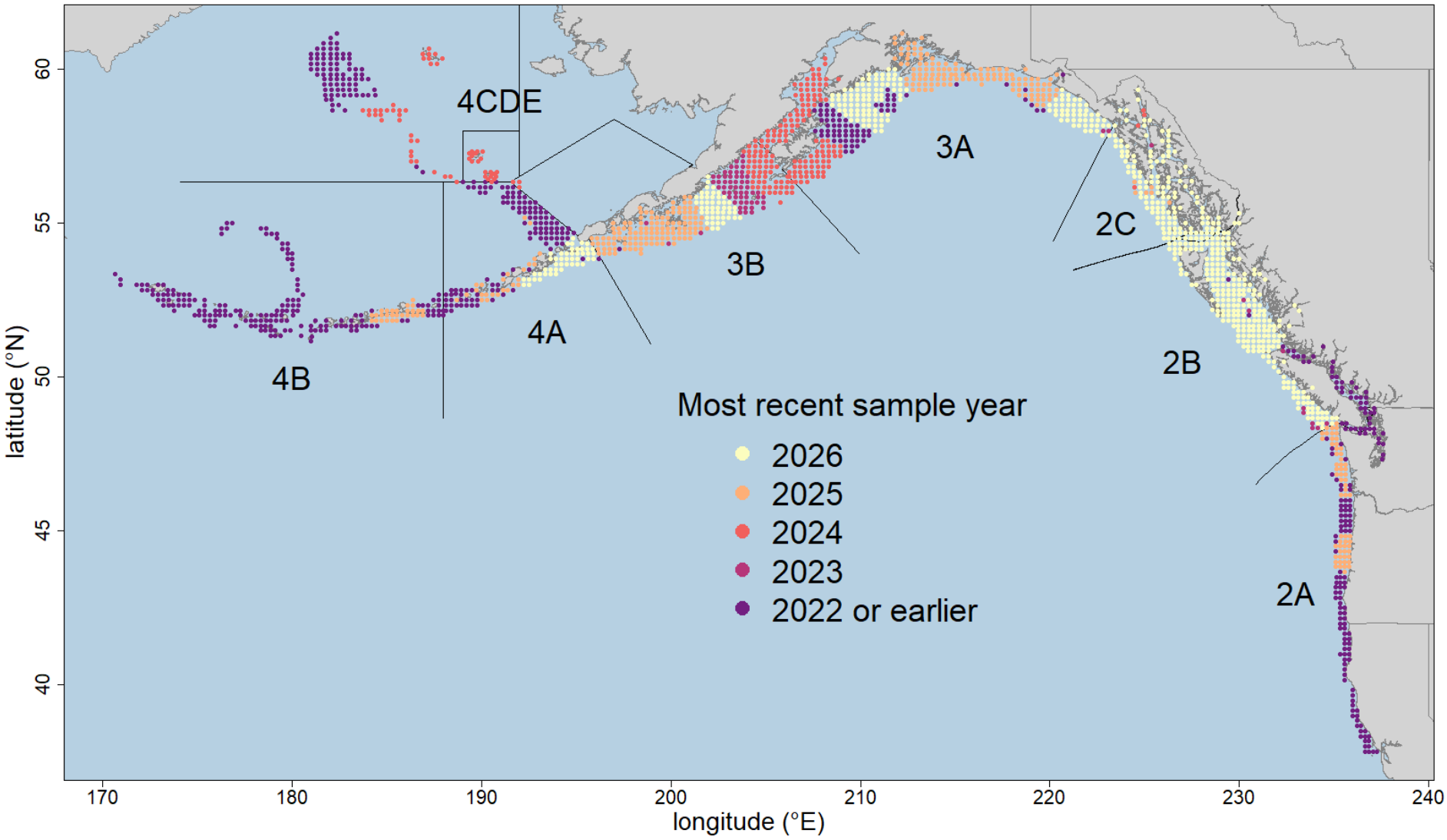


Figure 2. Map showing the most recent sample year of each station on the full FISS grid.

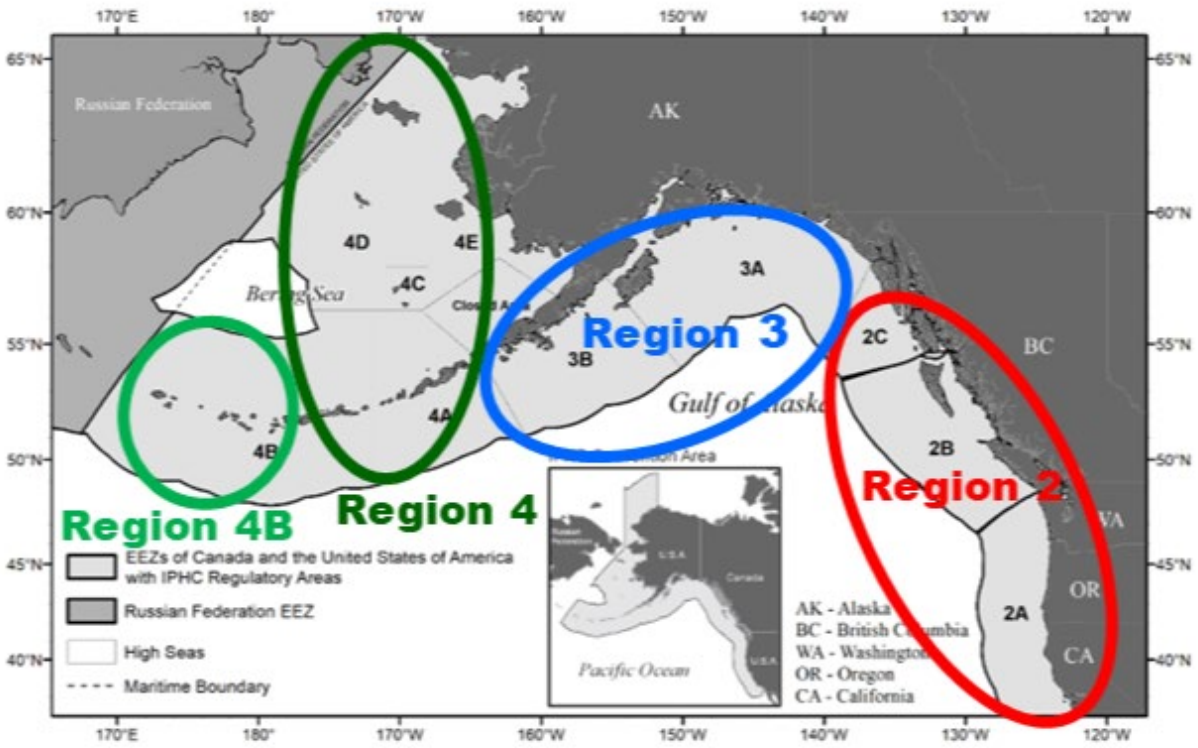


Figure 3. IPHC Biological Regions.

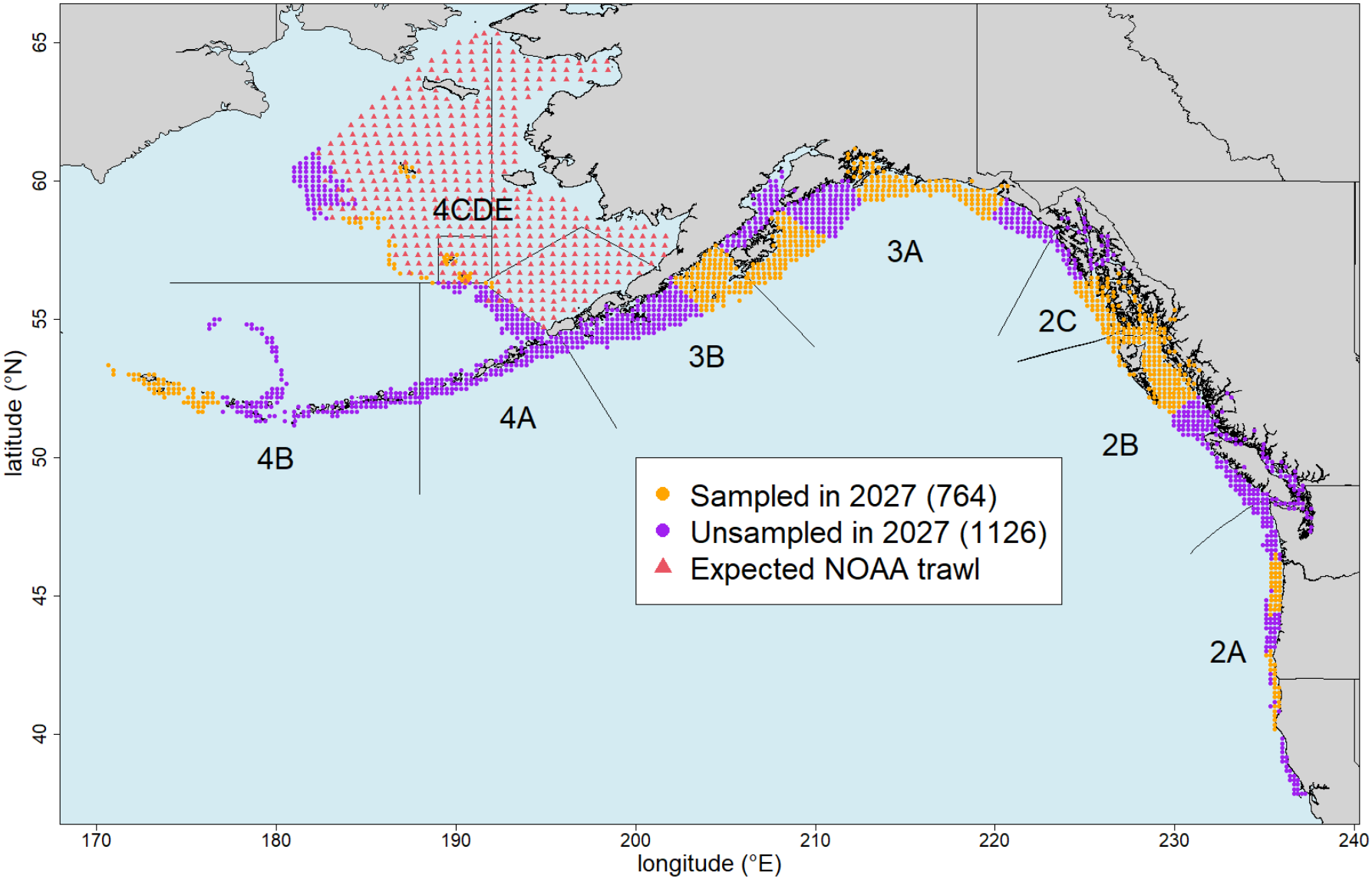


Figure 4. Base Block design for 2027 (orange circles). Design is based on fishing 2-4 complete blocks of stations (charter regions) in the core areas (2B, 2C, 3A and 3B) and previously implemented subareas elsewhere.

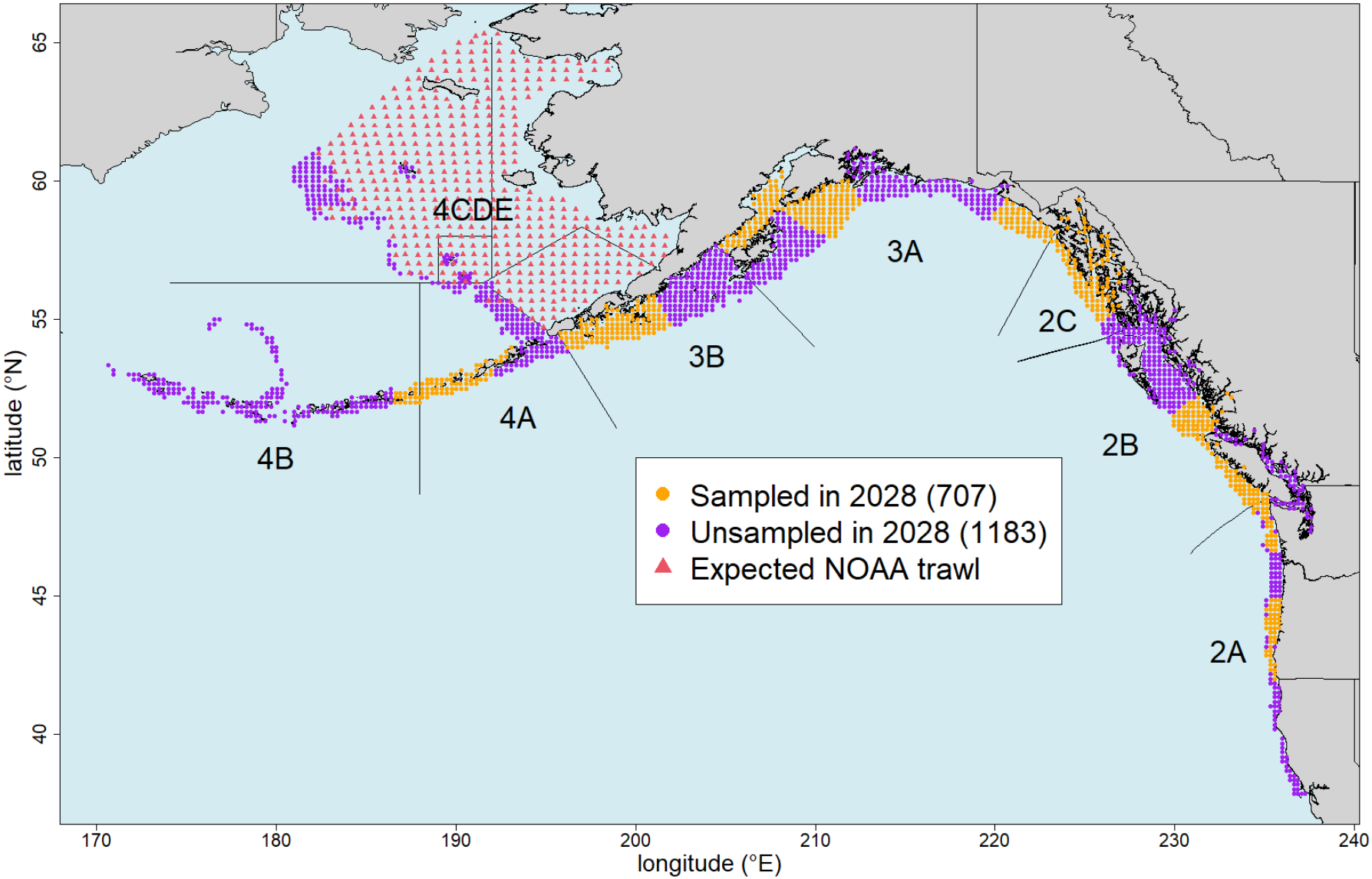


Figure 5. Base Block design for 2028 (orange circles). Design is based on fishing 2-4 complete blocks of stations (charter regions) in the core areas (2B, 2C, 3A and 3B) and previously implemented subareas elsewhere.

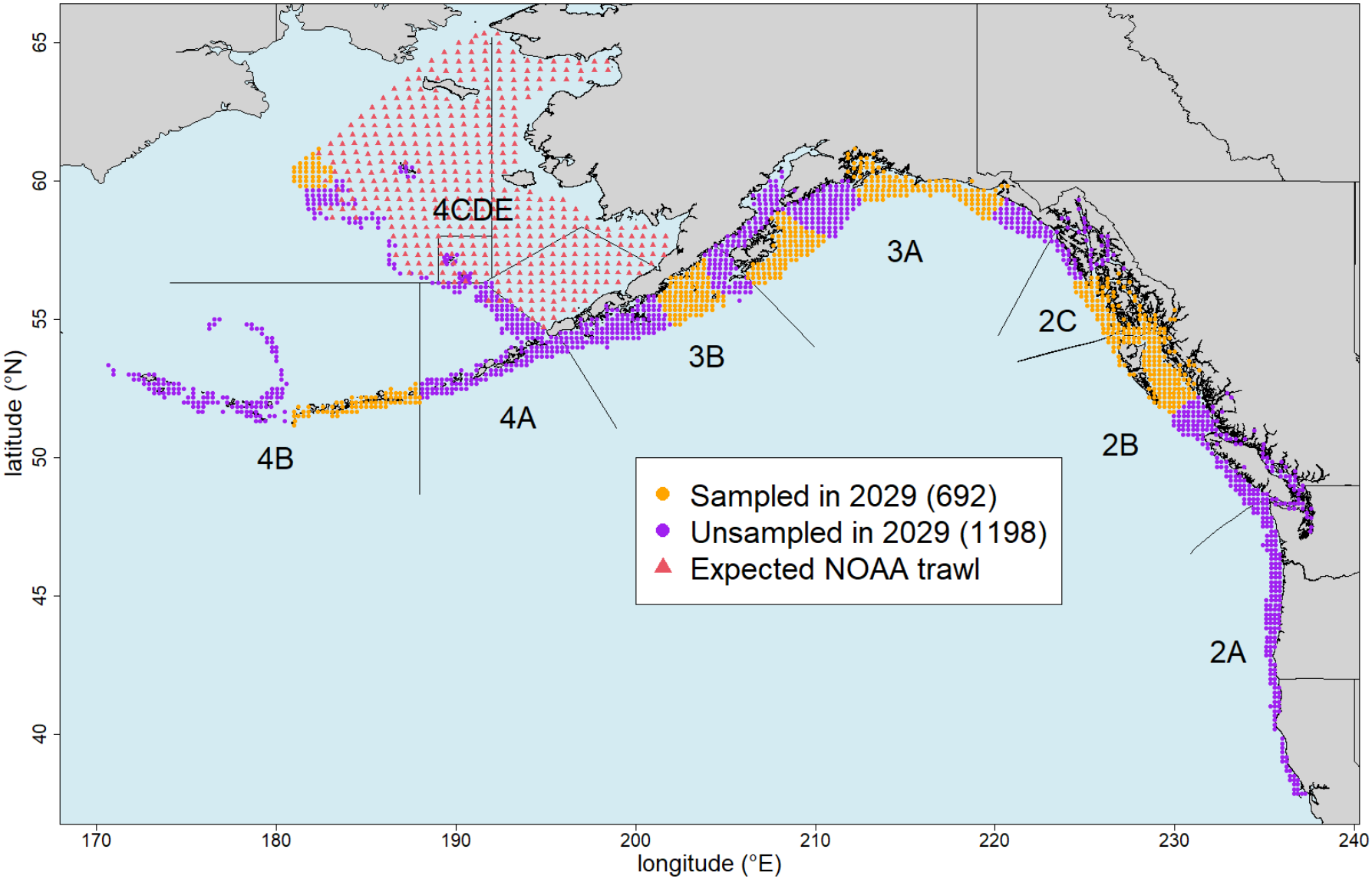


Figure 6. Base Block design for 2029 (orange circles). Design is based on fishing 2-4 complete blocks of stations (charter regions) in the core areas (2B, 2C, 3A and 3B) and previously implemented subareas elsewhere.

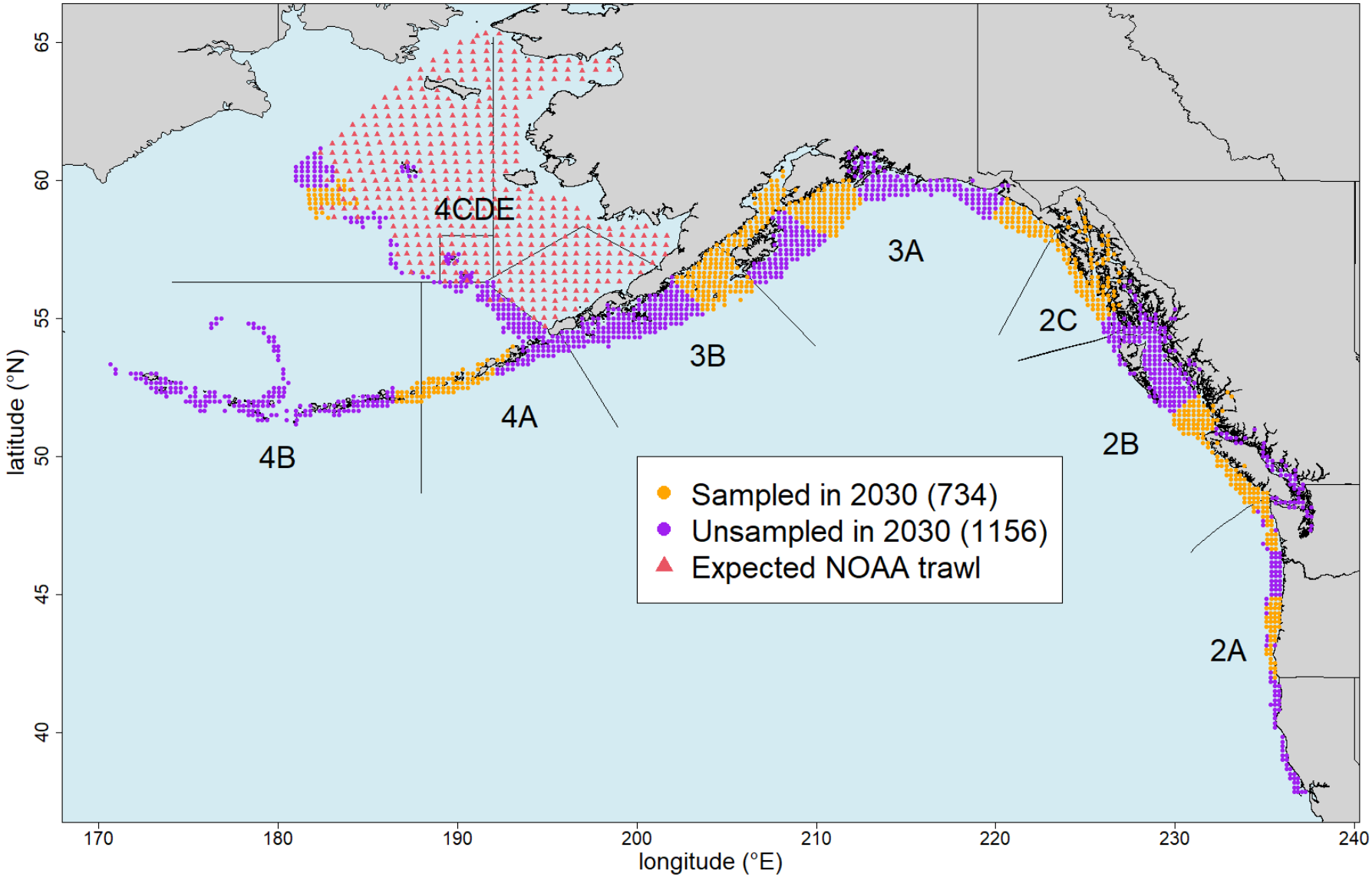


Figure 7. Base Block design for 2030 (orange circles). Design is based on fishing 2-4 complete blocks of stations (charter regions) in the core areas (2B, 2C, 3A and 3B) and previously implemented subareas elsewhere.

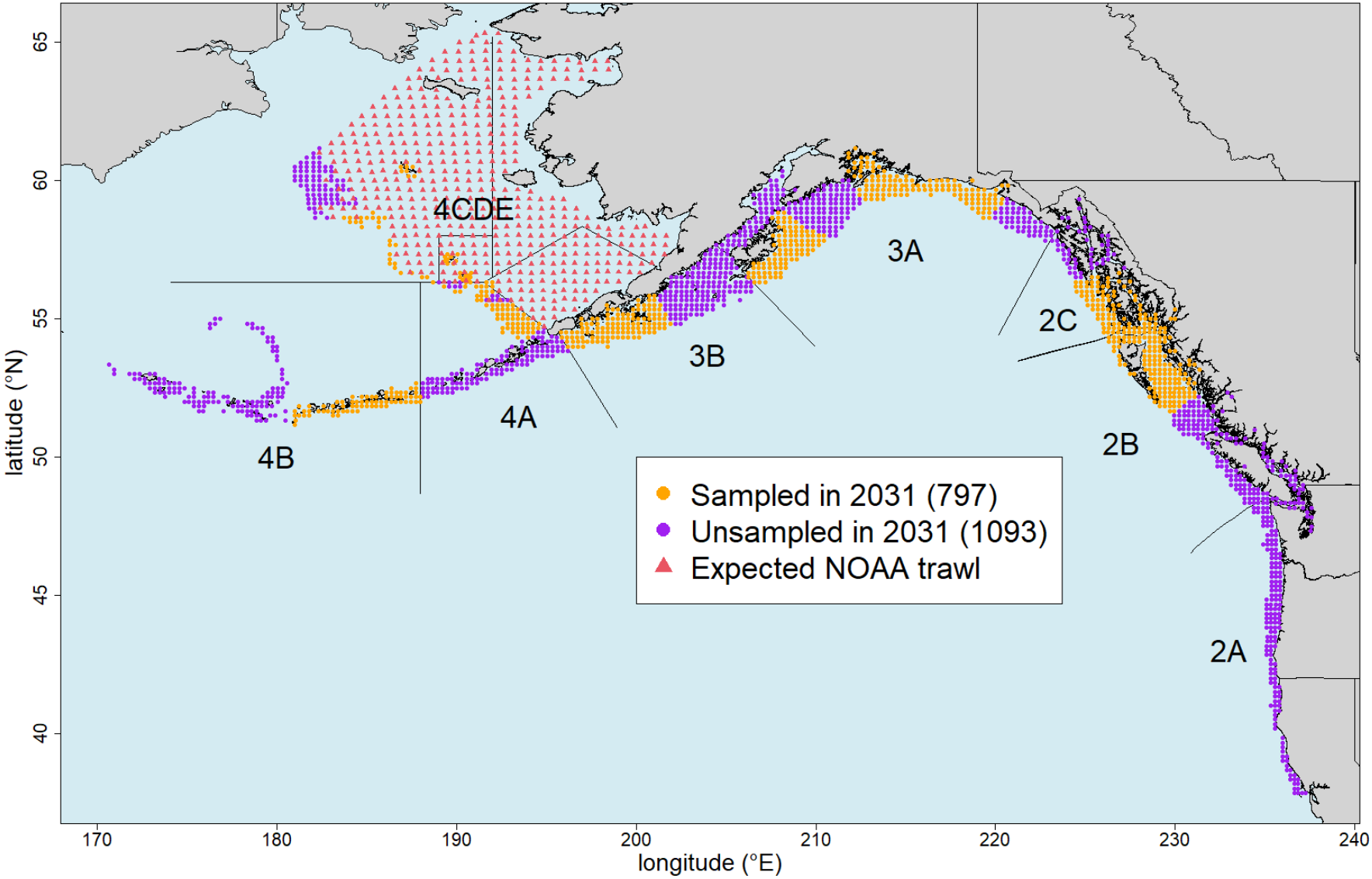


Figure 8. Base Block design for 2031 (orange circles). Design is based on fishing 2-4 complete blocks of stations (charter regions) in the core areas (2B, 2C, 3A and 3B) and previously implemented subareas elsewhere.

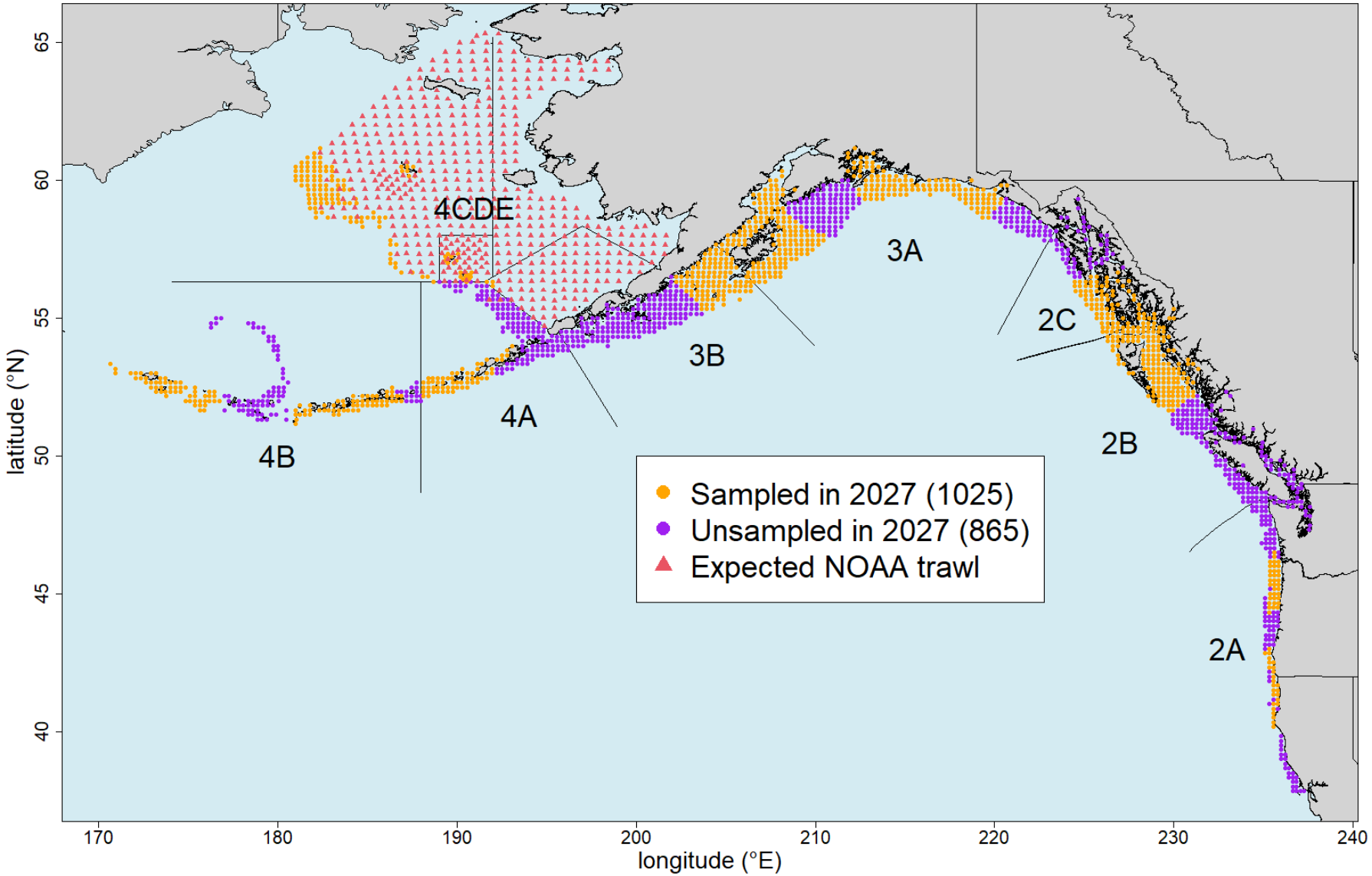


Figure 9. Supplemented Base Block design for 2027 (orange circles).

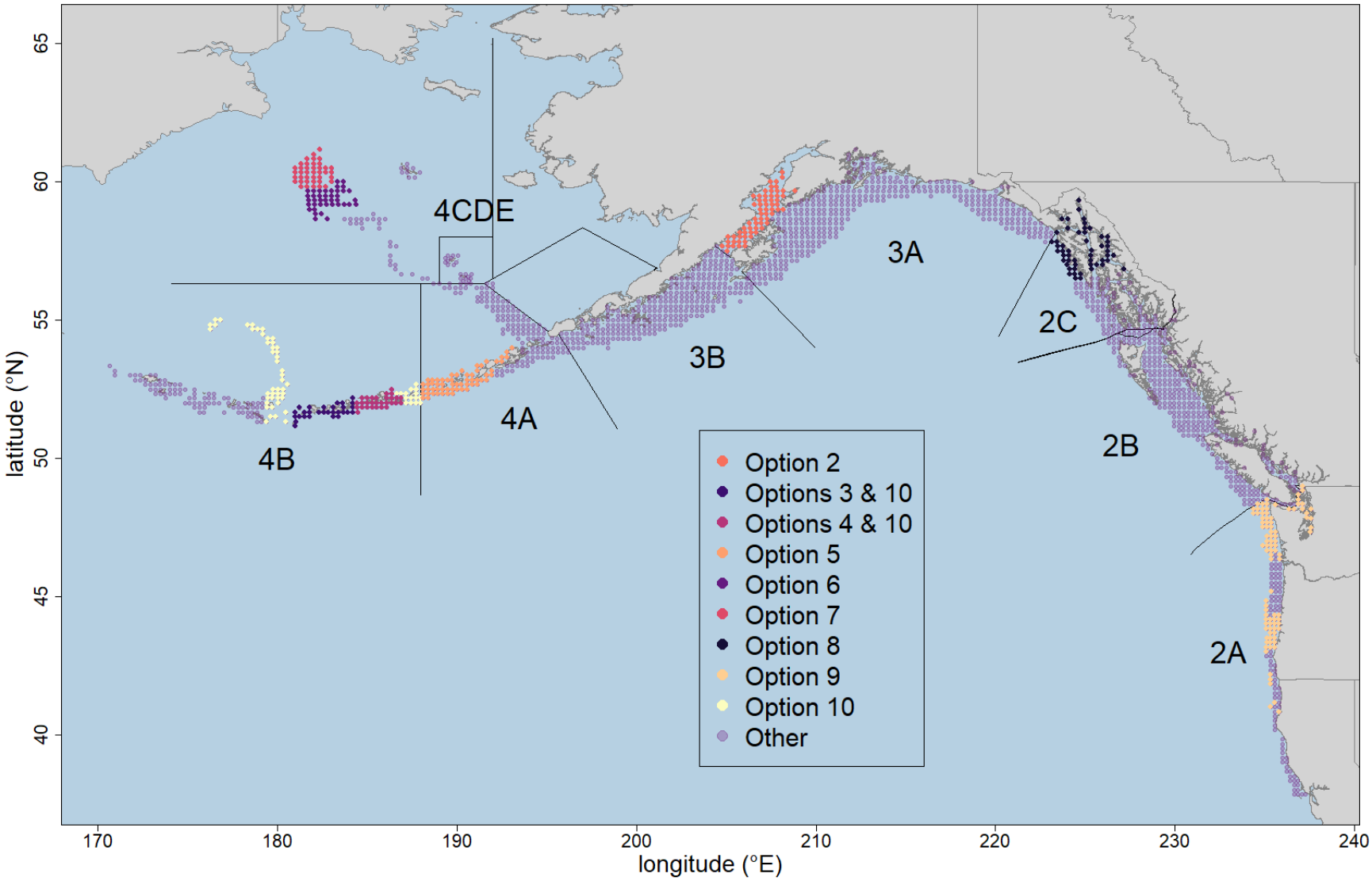


Figure 10. IPHC FISS modular Options 2 to 10 (Table 2) for 2027.

Appendix A: History of modern FISS and modelling

FISS history 1993-2019

The IPHC has undertaken FISS activity since the 1960s. However, methods were not standardized to a degree (e.g., the bait and gear used) that allows for simple combined analyses until 1993. From 1993 to 1997, the annual design was a modification of a design developed and implemented in the 1960s, and involved fishing triangular clusters of stations, with clusters located on a grid (IPHC 2012). Coverage was limited in most years and was generally restricted to IPHC Regulatory Areas 2B through 3B. The modern FISS design, based on a grid with 10 nmi (18.5 km) spacing, was introduced in 1998, and over the subsequent two years was expanded to include annual coverage in parts of all IPHC Regulatory Areas within the depth ranges of 20-275 fathoms (37-503 m) in the Gulf of Alaska and Aleutian Islands, and 75-275 fathoms (137-503 m) in the Bering Sea (IPHC 2012). Annually-fished stations were added around islands in the Bering Sea in 2006, and in the same year, a less dense grid of paired stations was fished in shallower waters of the southeastern Bering Sea, providing data for a calibration with data from the annual National Marine Fishery Service (NMFS) bottom trawl survey (Webster et al. 2020).

Through examination of commercial logbook data and information from other sources, it became clear by 2010 that the historical FISS design had gaps in coverage of Pacific halibut habitat that had the potential to lead to bias in estimates derived from its data. These gaps included deep and shallow waters outside the FISS depth range (0-20 fathoms and 275-400 fathoms), and unsurveyed stations on the 10 nmi grid within the 20-275 fathom depth range within each IPHC Regulatory Area. This led the IPHC Secretariat to propose expanding the FISS to provide coverage of the unsurveyed habitat in United States and Canadian waters. In 2011 a pilot expansion was undertaken in IPHC Regulatory Area 2A, with stations on the 10 nmi grid added to deep (275-400 fathoms) and shallow (10-20 fathoms) waters, the Salish Sea, and other, smaller gaps in coverage. The 10-fathom limit in shallow waters was due to logistical difficulties in standardized fishing of longline gear in shallower waters. The 400-fathom maximum depth is understood to cover the vast majority of Pacific halibut summer habitat. A second expansion in IPHC Regulatory Area 2A was completed in 2013, with a pilot survey in California waters between the latitudes of 40 and 42°N.

The full expansion program began in 2014 and continued through 2019, resulting in the sampling of the entire FISS design of 1890 stations in the shortest time logistically possible. The FISS expansion program allowed us to build a consistent and complete picture of Pacific halibut density throughout its range in Convention waters. Sampling the full FISS design has reduced bias , and, in conjunction with space-time modelling of survey data (see below), has improved precision and fully quantified the uncertainty associated with estimates based on partial annual sampling of the species range. It has also provided us with a complete set of observations over the full FISS design (Figure 1) from which an optimal subset of stations can be selected when devising annual FISS designs. This station selection process began in 2019 for the 2020 FISS and continues with the current review of design proposals for 2024-26. Note that in the Bering

Sea, the full FISS design does not provide complete spatial coverage, and FISS data are augmented with calibrated data from NOAA and Alaska Department of Fish and Game (ADFG) trawl surveys (stations can vary by year – 2019 designs are shown in Figure 1). Both supplementary surveys have been conducted approximately annually in recent years.

Rationalized FISS, 2020-26

Following the 2011-2019 program of FISS expansions, rationalized FISS designs were approved for 2020 based on random selection of over 50% of stations in the core of the stock (IPHC Regulatory Areas 2B, 2C, 3A and 3B) and sampling of all stations in selected subareas of the remaining IPHC Regulatory Areas. For the latter areas, sampling priorities were determined based on maintaining precise estimates of area-specific indices of density and ensuring low bias in index estimators. That year, the COVID19 pandemic led to a reduced FISS with sampling only in the core areas. The 2021-22 FISS sampling proceeded largely as designed, although planned stations in western IPHC Regulatory 4B in 2022 were unsampled due to a lack of viable charter bids. In some charter regions in the core areas, 100% of stations were sampled in order to achieve revenue goals.

Four years of spatially-reduced designs followed the 2022 FISS:

2023 (IPHC-2023-AM099-R)

- Little sampling outside of the core areas due to large projected revenue losses from designs that included extensive sampling in IPHC Regulatory Areas 2A, 4A, 4B and 4CDE
- Limited sampling in northern IPHC Regulatory 2A
- Planned stations around the IPHC Regulatory Area 4A/4B boundary not sampled due to a lack of charter bids

2024 (IPHC-2024-AM100-R)

- High sampling rates in IPHC Regulatory Areas 2B and 2C
- A small number of charter regions in IPHC Regulatory Areas 3A and 3B
- Sampling of the southern shelf edge and Bering Sea islands in IPHC Regulatory Area 4CDE

2025 (Figure A.1, IPHC-2025-AM101-R)

- Charter regions in IPHC Regulatory Areas 3A and 3B selected to complement coverage in recent years
- Sampled stations in IPHC Regulatory Areas 2A, 4A and 4B that had not been sampled for three or more years

2026 (Figure A.2)

- Increases spatial coverage relative to 2023-25
- Complements the 2025 design by including ten charter regions not sampled last year

Space-time modelling

In 2016, a space-time modelling approach was introduced to estimate time series of weight and numbers-per-unit-effort (WPUE and NPUE), and to estimate the stock distribution of Pacific halibut among IPHC Regulatory Areas. This represented an improvement over the largely empirical approach used previously, as it made use of additional information within the survey data regarding the degree of spatial and temporal correlation in Pacific halibut density, along with information from covariates such as depth (see Webster 2016, 2017). It also allowed a more complete accounting of uncertainty; for example, prior to the use of space-time modelling, uncertainty due to unsurveyed regions in each year was ignored in the estimation. Prior to the application of the space-time modelling, these unsampled regions were either imputed using independently estimated scalar calibrations (if fished at least once) or catch-rates at unsampled stations were assumed to be equal to the mean for the entire Regulatory Area. The IPHC's Scientific Review Board (SRB) has provided supportive reviews of the space-time modelling approach (e.g., IPHC-2018-SRB013-R), and the methods have been published in a peer-review journal (Webster et al. 2020). Similar geostatistical models are now routinely used to standardize fishery-independent trawl surveys for groundfish on the West Coast of the U.S. and in Alaskan waters (e.g., Thorson et al. 2015 and Thorson 2019) and to integrate multiple surveys off the Pacific coast of Canada (e.g., Thompson et al. 2023). The IPHC space-time models are fitted through the R-INLA package in the R software (R Core Team, 2024).

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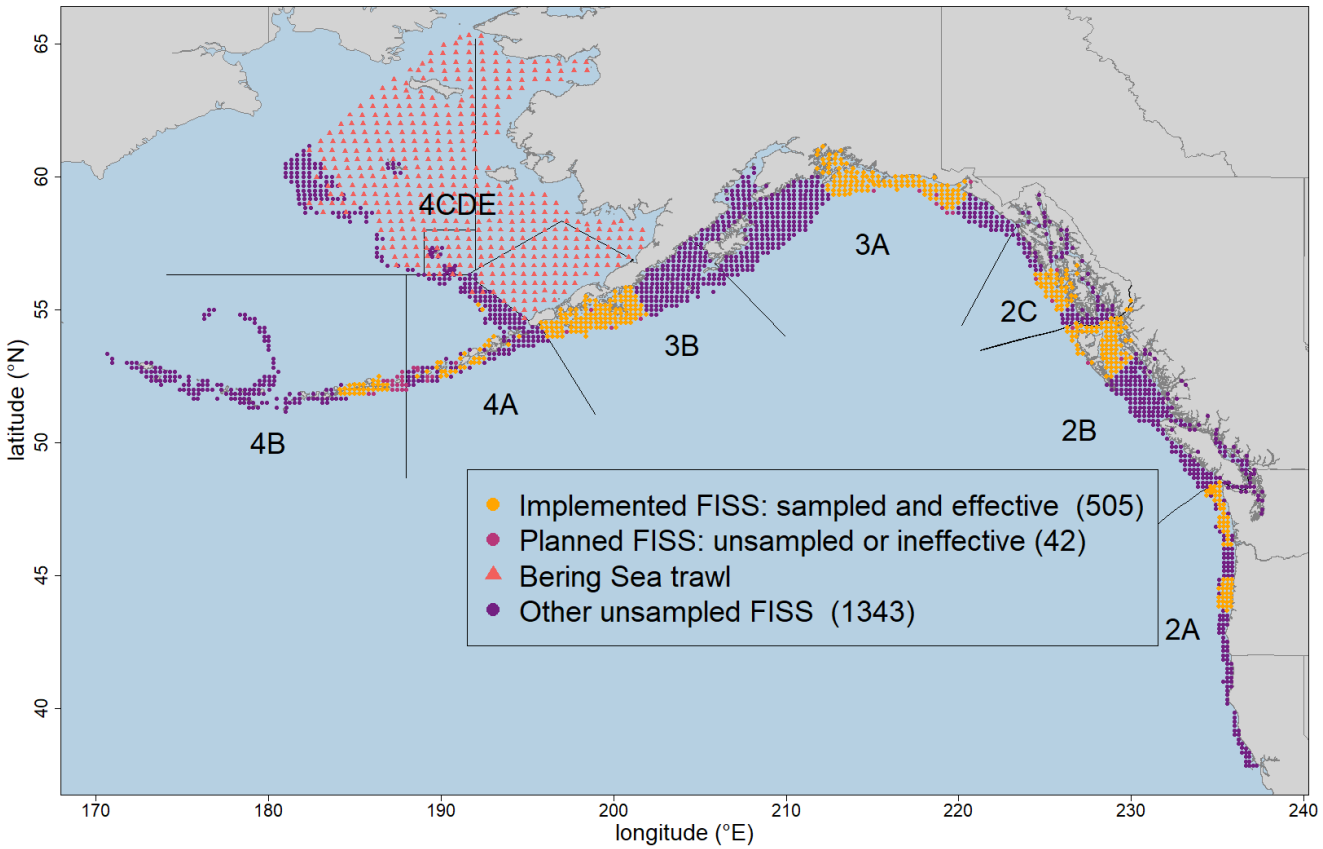


Figure A.1. Map of implemented 2025 sampled FISS design showing sampled stations with data used in modelling (orange circles for FISS, red triangles for NOAA trawl), along with planned but ineffective FISS stations.

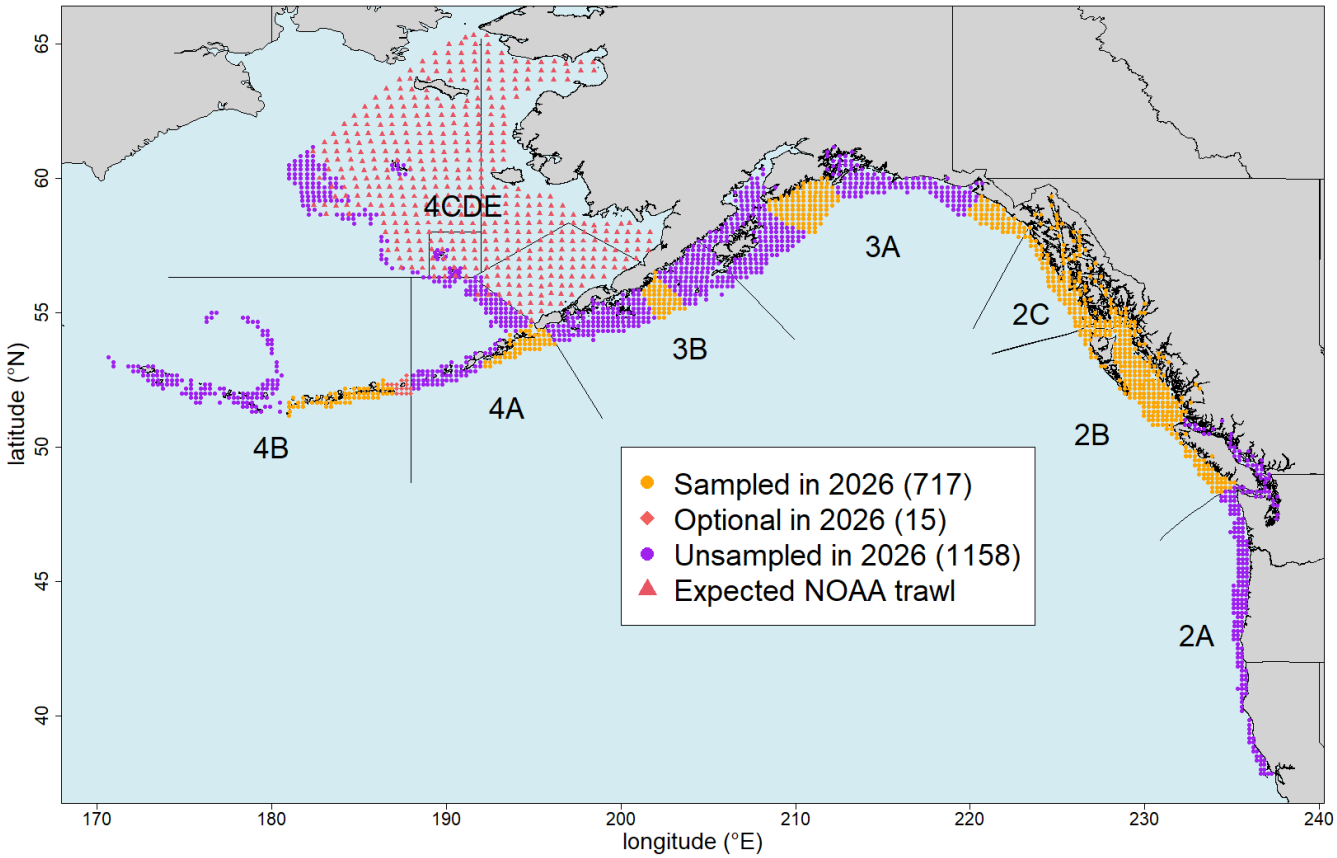


Figure A.2. Adopted 2026 FISS design, with planned FISS stations shown as orange circles. Planned stations in IPHC Regulatory Area 4B are not expected to be sampled in 2026 due to lack of charter bids.

Appendix B: FISS design objectives and review process

Primary objective: *To sample Pacific halibut for stock assessment and stock distribution estimation.*

The primary purpose of the annual FISS is to sample Pacific halibut to provide data for the stock assessment (abundance indices, biological data) and estimates of stock distribution for use in management. The priority of the current rationalized FISS is therefore to maintain or enhance data quality (precision and bias) by establishing baseline sampling requirements in terms of station count, station distribution, and skates per station.

Secondary objective: *Cost effectiveness.*

The FISS is intended to be cost-effective without compromising the scientific integrity of the design. Any implemented design must consider logistics and cost together with scientific integrity.

Tertiary objective: *Minimize removals and assist others where feasible on a cost-recovery basis.*

Consideration is also given to the total expected FISS removals (impact on the stock), data collection assistance for other agencies, and emerging IPHC informational needs.

Table B.1 Prioritized FISS objectives and corresponding design layers.

Priority	Objective	Design Layer
Primary	Sample Pacific halibut for stock assessment and stock distribution estimation	Minimum sampling requirements in terms of: • Station distribution • Station count • Skates per station
Secondary	Cost effectiveness without compromising the scientific integrity of the FISS design.	Balance operational feasibility/logistics, cost/revenue, and scientific needs. Includes an aspirational target reserve of US$4,000,000
Tertiary	Minimize removals, assist others where feasible on a cost-recovery basis, address specific Commission informational needs.	Removals: minimize impact on the stock while meeting primary priority Assist: assist others to collect data on a cost-recovery basis IPHC policies: ad-hoc decisions of the Commission regarding the FISS design

Annual design review, endorsement, and finalisation process

Since completion of the FISS expansions in 2019, a review process has been developed for annual FISS designs created according to the above objectives:

- Step 1: The Secretariat presents preliminary design options based on the primary objective (Table B.1) to the SRB for three subsequent years at the June meeting based on analysis of prior years' data. Commencing in 2024, this has included preliminary cost

projections based on prior year fiscal details (revenue) and current year vessel contract cost updates;

- Step 2: Updated design options for the following year that account for both primary and secondary objectives (Table B.1) are reviewed by Commissioners at the September work meeting, recognising that revenue and cost data from the current year's FISS are still preliminary at this time;
- Step 3: At their September meeting, the SRB reviews design options accounting for both primary and secondary objectives (Table B.1) for comment and advice to the Commission (recommendation). FISS revenue and cost information from the current year is near-final at this time;
- Step 4: Designs are further modified to account for updates based on secondary and tertiary objectives before being finalized during the Interim and Annual meetings and the period prior to implementation:
    - Presentation of FISS designs for 'endorsement' by the Commission occurs at the annual November/December Interim Meeting;
    - Ad-hoc modifications to the design for the current year (due to unforeseen issues arising) are possible at the Annual Meeting of the Commission;
    - The endorsed design for current year is then modified (if necessary) to account for any additional tertiary objectives or revision to inputs into the evaluation of secondary objectives prior (i.e. updated cost estimates) and logistical considerations raised by the operators of contracted vessels prior to summer implementation (February-April).

Consultation with industry and stakeholders occurs throughout the FISS planning process, at the Research Advisory Board meeting (late November) and particularly in finalizing design details as part of the FISS charter bid process, when stations can be added and other adjustments made to provide for improved logistical efficiency. We also note the opportunities for direct stakeholder input during public meetings (Interim and Annual Meetings).

Although the review process examines designs for the next three years, revisions to designs for the second and third years are expected during subsequent review periods as additional data are collected. Having design proposals available for three years instead of the next year only assists the Secretariat with medium-term planning of the FISS, and allows reviewers (SRB, Commissioners) and stakeholders to see more clearly the planning process for sampling the entire FISS footprint over multiple years.

Appendix C: Statistical evaluation of Base Block designs 2027-29

For the Base Block designs proposed at AM102, the IPHC Secretariat used samples generated from the fitted 2025 space-time models (see Appendix A) as simulated data for 2026-29 and projected the coefficient of variation (CV, a relative measure of precision) for mean O32 WPUE for each year of the design by area. As CVs are generally greater in the terminal year of the time series and that year is usually the most relevant for informing management, the CV values in Table 1 are for the final year of the modelled time series. For example, the values for 2027 were found by fitting the model to the data for 1993-2027, with simulated data used for 2026-27.

Table C.1. Projected coefficients of variation (CVs, %) of mean O32 WPUE for the potential 2027-29 Base Block designs by terminal year of time series and IPHC Regulatory Area and Biological Region.

Regulatory Area	**Year** 2027	2028	2029
2A	26	16	22
2B	5	10	7
2C	6	6	6
3A	8	7	7
3B	14	12	9
4A	24	12	19
4B	16	17	14
4CDE	9	9	8
Region 2	5	5	4
Region 3	7	6	6
Region 4	11	7	9
Region 4B	16	17	14
Coastwide	4	4	4

Projected terminal year CVs for the Base Block design were 25% or less for all IPHC Regulatory Areas except IPHC Regulatory Area 2A in 2027. In the core areas (2B, 2C, 3A and 3B), CVs are projected to be 15% or less (Table C.1). All Biological Region CVs, except that of Region 4B, are at most 10%, while the coastwide CV is projected to be 4% in all years.

Due to the CV for IPHC Regulatory Area 2A exceeding the target range of 25% or less, the 2027 Base Block design (Figure 4) was revised from the version presented at AM102 through the addition of 20 stations off the Oregon coast.

Report on Current and Future Biological and Ecosystem Science Research Activities

PREPARED BY: IPHC SECRETARIAT (J. PLANAS, 23 OCTOBER 2026)

Outcome sought: *NOTE the report; provide guidance on research priorities.*

PURPOSE

To provide the Commission with a description of progress towards research activities described in the current IPHC Integrated Research and Monitoring Plan.

BACKGROUND

The primary biological and ecological research activities at the IPHC that follow Commission objectives are identified and described in the current IPHC Integrated Research and Monitoring Plan. These activities are integrated with stock assessment (SA) and the management strategy evaluation (MSE) processes (Appendix I) and are summarized in five main areas, as follows:

1) Migration and Population Dynamics. Studies are aimed at improving current knowledge of Pacific halibut migration and population dynamics throughout all life stages in order to achieve a complete understanding of stock structure and distribution across the entire distribution range of Pacific halibut in the North Pacific Ocean and the biotic and abiotic factors that influence it.
2) Reproduction. Studies are aimed at providing information on the sex ratio of the commercial catch and to improve current estimates of maturity and fecundity.
3) Growth. Studies are aimed at describing the role of factors responsible for the observed changes in size-at-age and at evaluating growth and physiological condition in Pacific halibut.
4) Mortality and Survival Assessment. Studies are aimed at providing updated estimates of discard mortality rates in the guided recreational fisheries and at evaluating methods for reducing mortality of Pacific halibut.
5) Fishing Technology. Studies are aimed at developing methods that involve modifications of fishing gear with the purpose of reducing Pacific halibut mortality due to depredation and bycatch.

A ranked list of biological uncertainties and parameters for SA (Appendix II) and the MSE process (Appendix III) and their links to research activities and outcomes derived from the five-year research plan is provided.

UPDATE ON PROGRESS ON THE MAIN RESEARCH ACTIVITIES

1. Migration and Population Dynamics.

   The IPHC Secretariat is currently focusing on studies that incorporate genomics approaches in order to produce useful information on population structure, distribution and connectivity of Pacific halibut. The relevance of research outcomes from these activities for the SA resides (1) in the introduction of possible changes in the structure of future stock assessments, as separate assessments may be constructed if functionally isolated components of the

population are found (e.g. IPHC Regulatory Area 4B), and (2) in the improvement of productivity estimates, as this information may be used to define management targets for minimum spawning biomass by Biological Region. These research outcomes provide the second and third top-ranked biological inputs into the SA (Appendix II). Furthermore, the relevance of these research outcomes for the MSE process is in biological parameterization and validation of movement estimates, on one hand, and of recruitment distribution, on the other hand (Appendix III).

1.1. Population genomics. The primary objective of these studies is to investigate the genetic structure of the Pacific halibut population and to conduct genetic analyses to inform Pacific halibut population dynamics and distribution within Convention Waters.

1.1.1. Population genetic structure. Understanding population structure is imperative for sound management and conservation of natural resources. Pacific halibut in US and Canadian waters are managed as a single, panmictic population based on tagging studies and historical (pre-2010) analyses of genetic population structure that failed to demonstrate significant differentiation in the eastern Pacific Ocean. While genetic techniques previously employed in fisheries management have generally used a small number of markers (e.g. microsatellites, ~10-100), whole-genome scale approaches can now be conducted at lower cost and are able to provide orders of magnitude more data (millions of markers) that allow investigation of genetic variation in fish populations at an unprecedented resolution.

The main purpose of the present study was to conduct an analysis of Pacific halibut population structure in IPHC Convention Waters using state-of-the-art low-coverage whole-genome resequencing (lcWGR) methods. The final collection of genetic samples representing the complete baseline dataset to finalize our population genomic studies consisted of 731 separate individuals (Figure 1, Table 1).

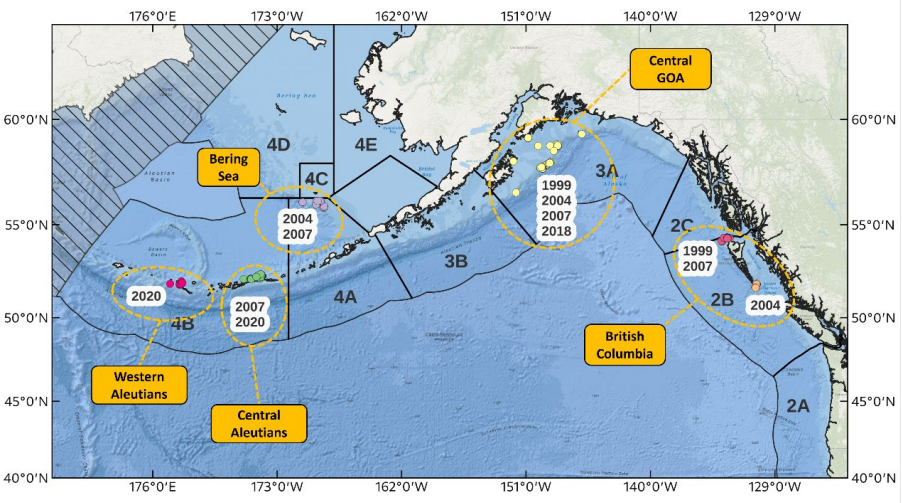


Figure 1. Map of sample collections made during the spawning season used for genomic analysis of population structure in Pacific halibut in the northeast Pacific Ocean.

	Winter Collections (baseline samples)				
	1999	2004	2007	2018	2020
British Columbia (winter)	59	63	61		
GOA (winter)	61	61	61	60	
Bering Sea (winter)		61	61		
Central AI (winter)			61		61
Western AI (winter)					61

Table 1. Final sample sizes for each area in the baseline dataset by year of sample collection after a minimum sequencing depth threshold of 1x is applied.

Despite using very high-resolution genomic methods to characterize genomic variation in spawning groups of Pacific halibut collected over large spatial and temporal scales, our results do not provide evidence of genetic differentiation among the baseline samples and are strongly supportive of genetic panmixia. Genetic differentiation was estimated from lcWGR data using a new bioinformatics method specifically developed by the IPHC Secretariat that improves previous methods to estimate F_{ST} values among several populations and at a lower computational cost. This new method has been described in a manuscript submitted for publication in a leading peer-reviewed journal in the field and is currently under review (Jasonowicz and Planas, in review). From a management perspective, these results support IPHC's current stock assessment practices that model the Pacific halibut stock as a single coastwide unit within IPHC Convention Waters (Stewart and Hicks, 2024). A manuscript describing our results on the lack of population structure in Pacific halibut is currently being written for publication in a leading peer-reviewed journal.

1.2. Genomics-based method for estimating age of Pacific halibut. The primary objective of this project (funded by Alaska Sea Grant; Appendix IV) is to develop a genetic method for aging Pacific halibut using fin tissue, a sample that can be easily collected from either live or dead individuals. This method is based on the identification of DNA methylation patterns in fin tissue that are associated with age through the development of an age estimation model (i.e. epigenetic clock) for Pacific halibut.

For developing an epigenetic clock, we selected genetic samples (fin clips) from 249 fish collected during IPHC's Fishery-Independent Setline Survey (FISS) from 2021 to 2024 throughout IPHC Convention Waters and covering most of IPHC's Regulatory Areas (Table 2). These genetic samples correspond to fish with known ages (read twice by the break-and-bake aging method) between 6 and 30 years and include 6-10 individual samples (aiming for an equal number of males and females) per year of age (Figure 2).

To date, all 249 genetic samples have been processed for DNA extraction and sequenced to identify methylated sites in the genome and quantify the percentage of methylation at each site. Current efforts are devoted to analyzing the methylation data from all individuals using a bioinformatic pipeline developed specifically for this project. Once finalized, we

will characterize the relationship between otolith-derived age and percent methylation across age-correlated genomic sites using established models.

Year	2A	2B	2C	3A	3B	4A	4B	4D	Total
2021	1	12	12	3	0	3	1	0	32
2022	2	22	17	20	2	2	3	1	69
2023	16	32	25	14	10	0	0	0	97
2024	0	15	26	7	1	0	0	2	51
Total	**19**	**81**	**80**	**44**	**13**	**5**	**4**	**3**	**249**

Table 2. Number of genetic samples by year and by IPHC Regulatory Area.



Figure 2. Histograms showing the number of female (top) and male (bottom) genetic samples by year of age that are available for the development of the Pacific halibut epigenetic clock.

2. Reproduction.

Research activities in this Research Area aim at providing information on key biological processes related to reproduction in Pacific halibut (maturity and fecundity) and to provide sex ratio information of Pacific halibut commercial landings. The relevance of research outcomes from these activities for the SA is in the scaling of Pacific halibut biomass and in the estimation of reference points and fishing intensity. These research outputs will result in a revision of current maturity schedules and will be included as inputs into the SA (Appendix II) and represent some of the most important biological inputs for the SA. The relevance of these research outcomes for the MSE process is in the improvement of the simulation of spawning biomass in the Operating Model (Appendix III).

2.1. Sex ratio of the commercial landings. The IPHC Secretariat has finalized processing genetic samples from the 2025 aged commercial landings, and the results have been incorporated into the 2026 stock assessment.

2.2. Reproductive assessment. Sensitivity analyses have shown the importance of changes in spawning output due to changes in maturity schedules and/or skip spawning and fecundity for the SA (Stewart and Hicks, 2018). Information on these key reproductive parameters provides direct input to the SA. For example, information on fecundity-at-age and -size could be used to replace spawning biomass with egg output as the metric for reproductive capability in the SA and management reference points. This information highlights the need for a better understanding of factors influencing reproductive biology and success of Pacific halibut. To fill existing knowledge gaps related to the reproductive biology of female Pacific halibut, research efforts are devoted to characterizing female reproduction in this species. Specific objectives of current studies include: 1) update of maturity schedules based on histology-based data, and 2) collection of samples for fecundity estimations.

2.2.1. Update of maturity schedules based on histology-based data. The IPHC Secretariat provided an update on spatial and temporal patterns in histology-derived maturity ogives by Biological Region from 2022 to 2024, and a revised coastwide maturity ogive using histology-based data in IPHC-2026-AM102-14. The results derived from this work have been described in a manuscript submitted for publication in a leading peer-reviewed journal in the field that is currently under review (Jones et al., in review).

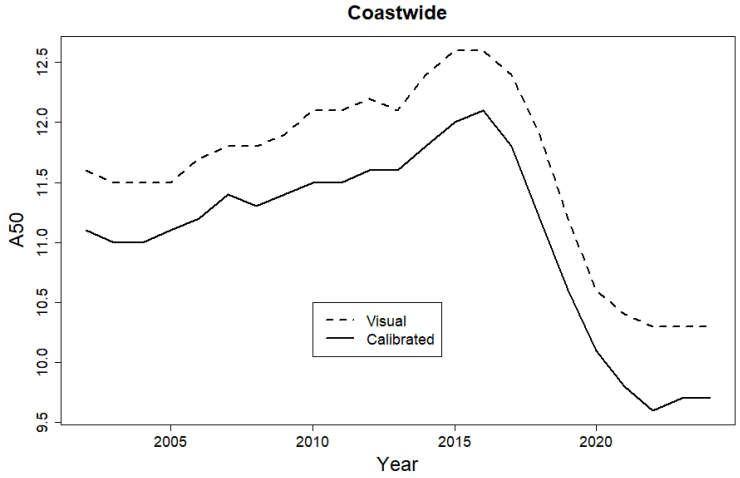


Figure 3. Coastwide A_{50} calculated from visual (dashed line) and calibrated (solid line) maturity ogives from 2002 to 2024.

The IPHC Secretariat developed a calibration between histological and visual maturity ogives from the 2022-2024 data and produced calibrated maturity ogives based on FISS visual maturity data from 2002-2024. This time series started in 2002 when the IPHC Secretariat changed aging methods from surface reading to break and bake. From these data, a mean coastwide calibrated visual maturity ogive for the 2002-2024 time series was generated, yielding an A_{50} value (age at 50% maturity) of 11.0 years.

This new coastwide maturity ogive yielded an A_{50} value that is 0.6 years lower than that of the visual maturity ogive previously used in stock assessment. The revised coastwide maturity ogive was incorporated for the first time in the 2025 stock assessment and will also be incorporated in the 2026 stock assessment.

During the 23-year period between 2002 and 2024, we observed significant changes in the A_{50} value based on the new calibrated maturity ogives (Figure 3; solid line). These results evidence two temporal shifts, one characterized by a gradual increase in the A_{50} (i.e. females maturing at a later age) from 2004 to 2016, and a second one characterized by a sharp decrease in A_{50} (i.e. females rapidly maturing at an earlier age) from 2017 to 2022. Studies are underway to identify possible drivers of these temporal shifts in maturity-at-age in female Pacific halibut.

To continue monitoring maturity over time, the IPHC Secretariat collected ovarian samples for maturity in the 2025 and 2026 FISS seasons. In 2025, FISS sampling resulted in the successful collection of 1,276 ovarian samples from all four Biological Regions: 275 samples in Biological Region 2, 380 samples in Biological Region 3, 355 samples in Biological Region 4, and 266 samples in Biological Region 4B. In 2026 (Figure 4), we collected 1,275 ovarian samples from Biological Regions 2, 3 and 4: 359 samples in Biological Region 2, 489 samples in Biological Region 3, and 427 samples in Biological Region 4. Unfortunately, no samples were collected in Biological Region 4B in 2026 due to the lack of FISS vessel bids. These samples will allow us to further investigate both spatial and temporal differences in histology-based female Pacific halibut maturity.

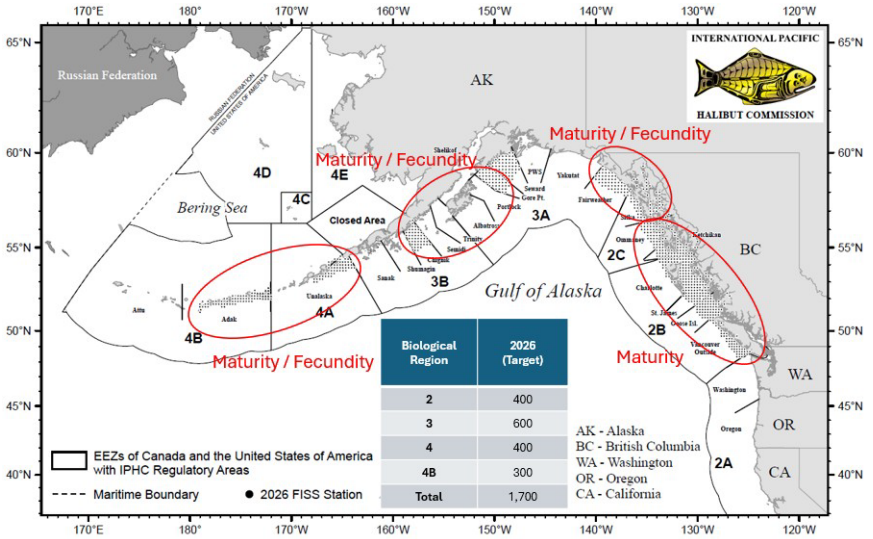


Figure 4. Coastwide map of sample areas and targets for maturity and fecundity collection in the 2026 FISS.

2.2.2. Collection of ovarian samples for fecundity estimations. The IPHC Secretariat has initiated studies that are aimed at improving our understanding of Pacific halibut fecundity. These studies will allow us to estimate fecundity-at-size and fecundity-at-age and could be used to replace spawning biomass with egg output as the metric for

reproductive capability in SA and management reference points. Fecundity determinations in female Pacific halibut will be conducted using the auto-diametric method (Thorsen and Kjesbu, 2001; Witthames et al., 2009) that has been developed for other fish species. IPHC Secretariat staff received training on this method by experts in the field (NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole, MA) in May 2023. For the development and application of the auto-diametric method for estimating fecundity in female Pacific halibut, ovarian samples from maturing females of a wide range of sizes and ages are needed. For this reason, the IPHC Secretariat initiated efforts in 2023 to collect ovarian samples for fecundity estimations.

Ovarian samples from maturing female Pacific halibut have been collected for fecundity during the FISS in 2023, 2024, 2025 and 2026. In addition, special projects aimed at collecting ovarian samples at the end or after the FISS season to target large females (> 90 cm in fork length) at more advanced stages of ovarian development, were conducted in Biological Region 2 in 2024, 2025 and 2026, and in Biological Region 3 in 2026. In 2023, sampling during the FISS was conducted only in Biological Region 3, with a total of 231 fecundity samples collected. In 2024, sampling during the FISS was conducted in Biological Regions 2 and 4, with 33 and 54 fecundity samples collected, respectively. In the fall (October-November) of 2024, 219 additional fecundity samples from large females were collected in Biological Region 2 as part of the special project. In 2025, fecundity samples were collected in the FISS in all four Biological Regions (22, 109, 171 and 77 samples in Regions 2, 3, 4 and 4B, respectively) and 238 samples were collected in Biological Region 2 in the late summer as part of the special project. In 2026, fecundity samples were collected in the FISS, with 23, 30 and 38 samples collected in Biological Regions 2, 3 and 4, respectively. The IPHC Secretariat also collected fecundity samples as part of the special project from mid-September to October of 2026 in Biological Regions 2 and 3, with 199 and 200 samples from large females, respectively. The numbers of ovarian samples for fecundity collected by sampling platform (FISS or special project), by Biological Region and by year, are shown in Table 3.

		Collection Year				
Sampling platform	**Biological Region**	**2023**	**2024**	**2025**	**2026**	**Total by Biological Region**
FISS	2	-	33	22	23	78
FISS	3	231	-	109	30	370
FISS	4	-	54	171	38	263
FISS	4B	-	-	77	-	77
Special project	2	-	219	238	199	656
Special project	3	-	-	-	200	200
	Total by year	231	306	617	490	1644

Table 3. Number of ovarian samples for fecundity method development and fecundity estimations collected by year and by Biological Region in each of the two sampling platforms.

The size and weight distributions of Pacific halibut females from which the fecundity samples were collected are shown in Figures 5 and 6, respectively.

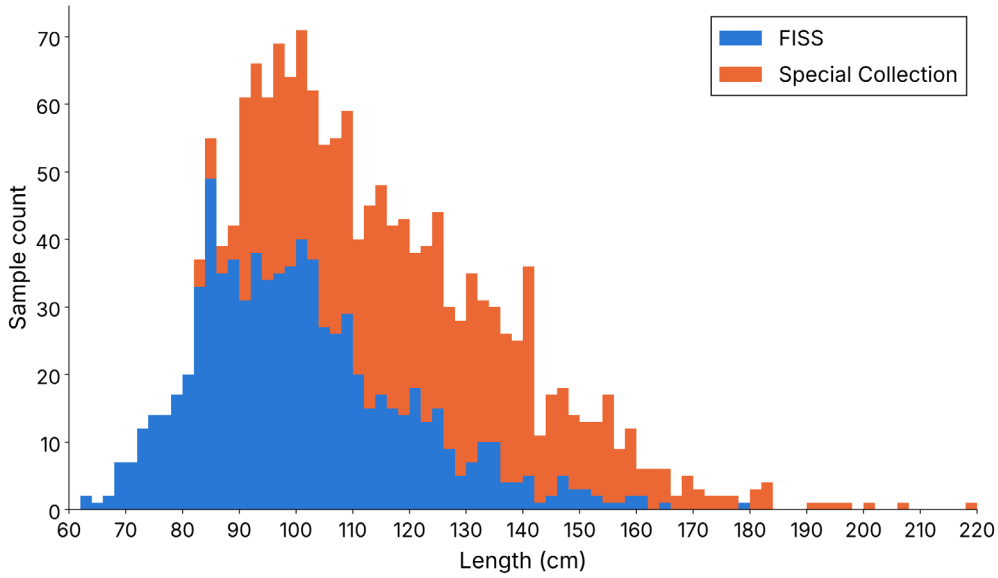


Figure 5. Size distribution of Pacific halibut females from which fecundity samples were collected for the development and application of the fecundity estimation method in the FISS (blue) and in the special projects (red).

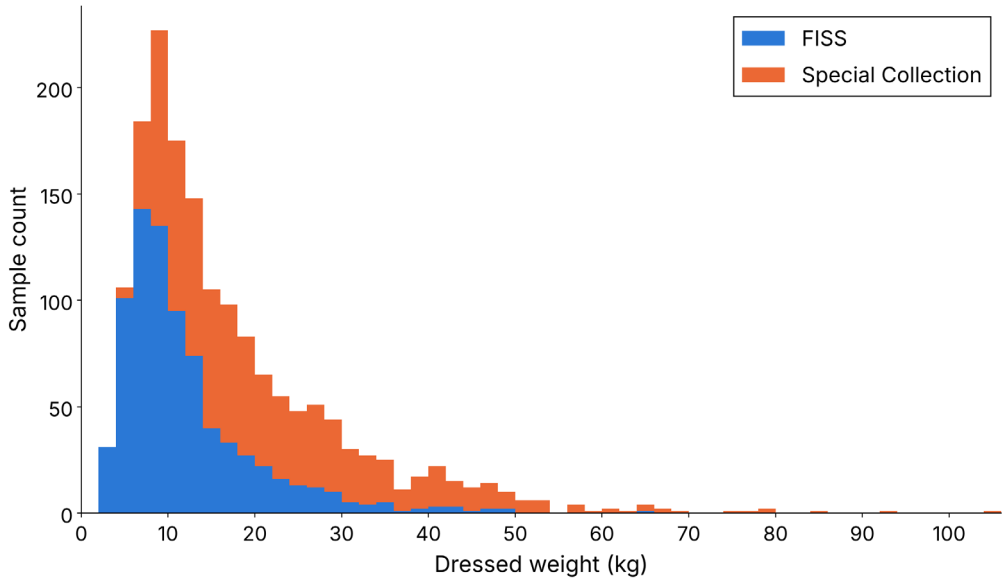


Figure 6. Weight distribution of Pacific halibut females from which fecundity samples were collected for the development and application of the fecundity estimation method in the FISS (blue) and in the special projects (red).

Overall, the collected ovarian samples will allow the IPHC Secretariat to develop the auto-diametric method and apply it to estimate fecundity-at-size and fecundity-at-age in female Pacific halibut, and to compare fecundity estimations across space (i.e. Biological Regions) and across time (i.e. years).

3. Growth.

Research activities conducted in this Research Area aim at providing information on somatic growth processes driving size-at-age in Pacific halibut. The relevance of research outcomes from these activities for the SA resides, first, in their ability to inform yield-per-recruit and other spatial evaluations for productivity that support mortality limit-setting, and, second, in that they may provide covariates for projecting short-term size-at-age and may help delineate between fishery and environmental effects, thereby informing appropriate management responses (Appendix II). The relevance of these research outcomes for the MSE process is in the improvement of the simulation of variability and in allowing for scenarios investigating climate change (Appendix III).

The IPHC Secretariat has conducted studies aimed at elucidating the drivers of somatic growth leading to the decline in size-at-age by investigating the physiological mechanisms that contribute to growth changes in Pacific halibut. The two main objectives of these studies have been: 1) the identification and validation of molecular growth markers for somatic growth; and 2) the application of molecular growth markers for evaluating growth patterns in the Pacific halibut population. A manuscript describing the results of these studies has been published (Planas et al., 2025).

4. Mortality and Survival Assessment.

Information on all Pacific halibut removals is integrated by the IPHC Secretariat, providing annual estimates of total mortality from all sources for SA. Bycatch and wastage of Pacific halibut, as defined by the incidental catch of fish in non-target fisheries and by the mortality that occurs in the directed fishery (i.e. fish discarded for sublegal size or regulatory reasons), respectively, represent important sources of mortality that can result in significant reductions in exploitable yield in the directed fishery. Given that the incidental mortality from the commercial Pacific halibut fisheries and bycatch fisheries is included as part of the total removals that are accounted for in the SA, changes in the estimates of incidental mortality will influence the output of the SA and, consequently, the catch levels of the directed fishery. Research activities conducted in this Research Area aim at providing information on discard mortality rates and producing guidelines for reducing discard mortality in Pacific halibut in the longline and recreational fisheries. The relevance of research outcomes from these activities for the SA resides in their ability to improve estimates of trends in unobserved mortality, thereby improving estimates of stock productivity, and these outcomes represent the most important inputs in fishery yield for the SA (Appendix II). The relevance of these research outcomes for the MSE process is in fishery parameterization (Appendix III).

4.1. Estimation of discard mortality rates in the guided recreational sector. Results from the completed study investigating discard mortality rates and characteristics of fish captured and released using guided recreational fishery practices are currently being prepared for publication in a peer-reviewed journal.

5. Fishing technology.

The IPHC Secretariat has determined that research to provide the Pacific halibut fishery with tools to reduce whale depredation is a high priority (Appendix I), as indicated in the current Integrated Research and Monitoring Plan. Important management implications of these studies reside in improving estimations of mortality of Pacific halibut in the directed commercial fishery that will lead to improved estimates of stock productivity (Appendix II). Depending on the estimated magnitude of whale depredation, this may be included as another explicit source of mortality in the SA and mortality limit-setting process.

The IPHC Secretariat has been investigating gear-based approaches to catch protection as a means for minimizing whale depredation in the Pacific halibut and other longline fisheries with funding from NOAA's Bycatch Reduction Engineering Program (BREP) (NOAA Awards NA21NMF4720534 and NA23NMF4720414). The testing phase of this project took place in May 2025 in the Unalaska region and involved (1) refining effective methods related to the deployment and use of an underwater shuttle as a catch protection device, and (2) conducting tests in the presence of killer whales to demonstrate the efficacy and safety of the device (Figure 7).

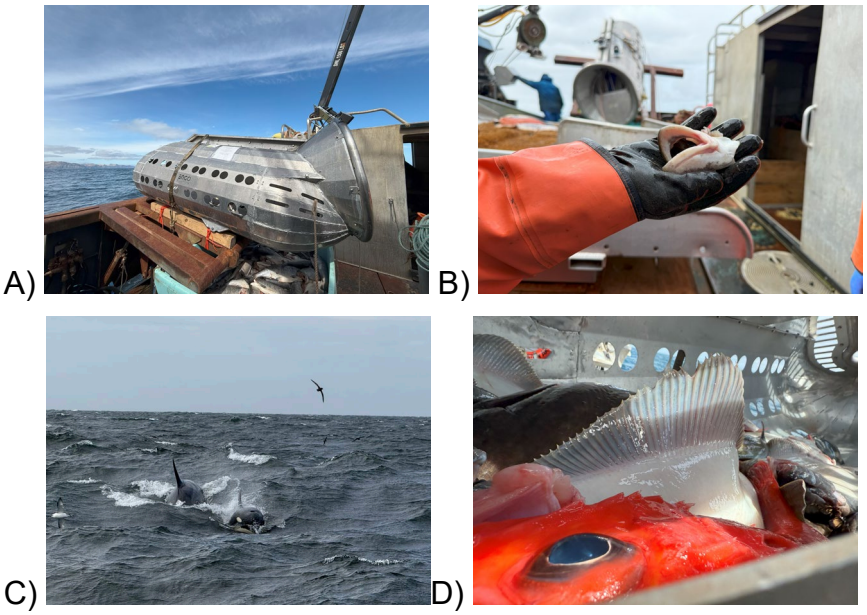


Figure 7. A) Shuttle device in transport. B) Typical evidence (lips only) of depredation. C) Killer whales rapidly approaching the hauling site. D) Catch retained within the shuttle.

Preliminary results from video footage suggest that the shuttle device had high retention rates of Pacific halibut when compared to other frequently encountered species (Table 4). In addition, preliminary results on catch rate comparisons between protected and unprotected skates did not show clear differences, likely due to high variability among catch rates within treatments. Overall, the shuttle device demonstrated good retention capacity (up to 835 kg/1,840 lb) in the trials, with capacity for higher weights. Incidentally, rare footage of killer whales around the groundline at depth was captured.

Common Name	Encountered	Excluded	Entered and Escaped	Entered and Passed Through	Retained
Pacific halibut	**121**	**1 (0.8%)**	**0**	**9 (7.5%)**	**112 (93.3%)**
Sablefish	186	2 (1.1%)	54 (29.4%)	34 (18.5%)	96 (52.2%)
Pacific cod	124	3 (2.4%)	13 (10.7%)	6 (5.0%)	102 (84.3%)
Rockfish	19	7 (43.8%)	2 (16.7%)	1 (8.3%)	9 (75.0%)
Skate	18	3 (16.7%)	0	2 (13.3%)	13 (86.7%)

Table 4. Numbers of fish encountered by the shuttle device that were either excluded, entered and escaped, entered and passed through still on the hook, and/or finally retained on 11 of 15 sets with video footage analyzed to date.

Data analysis and video review are ongoing. These preliminary results suggest potential for this approach to interrupt the reward cycle underpinning toothed whale depredation.

RECOMMENDATION/S

That the Commission:

1) **NOTE** paper IPHC-2026-IM102-13, that provides a report on current and planned biological and ecosystem science and research activities contemplated in the current IPHC Integrated Research and Monitoring Plan.

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APPENDIX I

Integration of biological research, stock assessment (SA) and management strategy evaluation (MSE): rationale for biological research prioritization

Research areas	Research activities	Research outcomes	Relevance for stock assessment	Relevance for MSE	Specific analysis input	SA Rank	MSE Rank	Research priorization
Migration and population dynamics	Population structure	Population structure in the Convention Area	Altered structure of future stock assessments	Improve parametization of the Operating Model	If 4B is found to be functionally isolated, a separate assessment may be constructed for that IPHC Regulatory Area	2. Biological input	1. Biological parameterization and validation of movement estimates and recruitment distribution	2
	Distribution	Assignment of individuals to source populations and assessment of distribution changes	Improve estimates of productivity		Will be used to define management targets for minimum spawning biomass by Biological Region	3. Biological input		2
	Larval and juvenile connectivity studies	Improved understanding of larval and juvenile distribution	Improve estimates of productivity		Will be used to generate potential recruitment covariates and to inform minimum spawning biomass targets by Biological Region	3. Biological input	1. Biological parameterization and validation of movement estimates	2
Reproduction	Histological maturity assessment	Updated maturity schedule	Scale biomass and reference point estimates	Improve simulation of spawning biomass in the Operating Model	Will be included in the stock assessment, replacing the current schedule last updated in 2006	1. Biological input		1
	Examination of potential skip spawning	Incidence of skip spawning			Will be used to adjust the asymptote of the maturity schedule, if/when a time-series is available this will be used as a direct input to the stock assessment			1
	Fecundity assessment	Fecundity-at-age and -size information			Will be used to move from spawning biomass to egg-output as the metric of reproductive capability in the stock assessment and management reference points			1
	Examination of accuracy of current field macroscopic maturity classification	Revised field maturity classification			Revised time-series of historical (and future) maturity for input to the stock assessment			1
Growth	Evaluation of somatic growth variation as a driver for changes in size-at-age	Identification and application of markers for growth pattern evaluation	Scale stock productivity and reference point estimates	Improve simulation of variability and allow for scenarios investigating climate change	May inform yield-per-recruit and other spatial evaluations of productivity that support mortality limit-setting		3. Biological parameterization and validation for growth projections	5
		Environmental influences on growth patterns			May provide covariates for projecting short-term size-at-age. May help to delineate between effects due to fishing and those due to environment, thereby informing appropriate management response			5
		Dietary influences on growth patterns and physiological condition			May provide covariates for projecting short-term size-at-age. May help to deleineate between effects due to fishing and those due to environment, thereby informing appropriate management response			5
Mortality and survival assessment	Discard mortality rate estimate: longline fishery	Experimentally-derived DMR	Improve trends in unobserved mortality	Improve estimates of stock productivity	Will improve estimates of discard mortality, reducing potential bias in stock assessment results and management of mortality limits	1. Fishery yield	1. Fishery parameterization	4
	Discard mortality rate estimate: recreational fishery				Will improve estimates of discard mortality, reducing potential bias in stock assessment results and management of mortality limits			4
	Best handling and release practices	Guidelines for reducing discard mortality			May reduce discard mortality, thereby increasing available yield for directed fisheries	2. Fishery yield		4
Fishing technology	Whale depredation accounting and tools for avoidance	New tools for fishery avoidance/deterence; improved estimation of depredation mortality	Improve mortality accounting	Improve estimates of stock productivity	May reduce depredation mortality, thereby increasing available yield for directed fisheries. May also be included as another explicit source of mortality in the stock assessment and mortality limit setting process depending on the estimated magnitude	1. Assessment data collection and processing		3

APPENDIX II

List of ranked biological uncertainties and parameters for stock assessment (SA) and their links to biological research areas and research activities

SA Rank	Research outcomes	Relevance for stock assessment	Specific analysis input	Research Area	Research activities
1. Biological input	Updated maturity schedule	Scale biomass and reference point estimates	Will be included in the stock assessment, replacing the current schedule last updated in 2006	Reproduction	Histological maturity assessment
	Incidence of skip spawning		Will be used to adjust the asymptote of the maturity schedule, if/when a time-series is available this will be used as a direct input to the stock assessment		Examination of potential skip spawning
	Fecundity-at-age and -size information		Will be used to move from spawning biomass to egg-output as the metric of reproductive capability in the stock assessment and management reference points		Fecundity assessment
	Revised field maturity classification		Revised time-series of historical (and future) maturity for input to the stock assessment		Examination of accuracy of current field macroscopic maturity classification
2. Biological input	Stock structure of IPHC Regulatory Area 4B relative to the rest of the Convention Area	Altered structure of future stock assessments	If 4B is found to be functionally isolated, a separate assessment may be constructed for that IPHC Regulatory Area	Genetics and Genomics	Population structure
3. Biological input	Assignment of individuals to source populations and assessment of distribution changes	Improve estimates of productivity	Will be used to define management targets for minimum spawning biomass by Biological Region		Distribution
	Improved understanding of larval and juvenile distribution		Will be used to generate potential recruitment covariates and to inform minimum spawning biomass targets by Biological Region	Migration	Larval and juvenile connectivity studies
1. Assessment data collection and processing	Sex ratio-at-age	Scale biomass and fishing intensity	Annual sex-ratio at age for the commercial fishery fit by the stock assessment	Reproduction	Sex ratio of current commercial landings
	Historical sex ratio-at-age		Annual sex-ratio at age for the commercial fishery fit by the stock assessment		Historical sex ratios based on archived otolith DNA analyses
2. Assessment data collection and processing	New tools for fishery avoidance/deterence; improved estimation of depredation mortality	Improve mortality accounting	May reduce depredation mortality, thereby increasing available yield for directed fisheries. May also be included as another explicit source of mortality in the stock assessment and mortality limit setting process depending on the estimated magnitude	Mortality and survival assessment	Whale depredation accounting and tools for avoidance
1. Fishery yield	Physiological and behavioral responses to fishing gear	Reduce incidental mortality	May increase yield available to directed fisheries	Mortality and survival assessment	Biological interactions with fishing gear
2. Fishery yield	Guidelines for reducing discard mortality	Improve estimates of unobserved mortality	May reduce discard mortality, thereby increasing available yield for directed fisheries	Mortality and survival assessment	Best handling practices: recreational fishery

APPENDIX III

List of ranked biological uncertainties and parameters for management strategy evaluation (MSE) and their links to biological research areas and research activities

MSE Rank	Research outcomes	Relevance for MSE	Research Area	Research activities
1. Biological parameterization and validation of movement estimates	Improved understanding of larval and juvenile distribution	Improve parametization of the Operating Model	Migration	Larval and juvenile connectivity studies
	Stock structure of IPHC Regulatory Area 4B relative to the rest of the Convention Area		Genetics and Genomics	Population structure
2. Biological parameterization and validation of recruitment variability and distribution	Assignment of individuals to source populations and assessment of distribution changes	Improve simulation of recruitment variability and parametization of recruitment distribution in the Operating Model		Distribution
	Establishment of temporal and spatial maturity and spawning patterns	Improve simulation of recruitment variability and parametization of recruitment distribution in the Operating Model	Reproduction	Recruitment strength and variability
3. Biological parameterization and validation for growth projections	Identification and application of markers for growth pattern evaluation	Improve simulation of variability and allow for scenarios investigating climate change	Growth	Evaluation of somatic growth variation as a driver for changes in size-at-age
	Environmental influences on growth patterns			
	Dietary influences on growth patterns and physiological condition			
1. Fishery parameterization	Experimentally-derived DMRs	Improve estimates of stock productivity	Mortality and survival assessment	Discard mortality rate estimate: recreational fishery

APPENDIX IV

Summary of current external research grants

Project #	Grant agency	Project name	PI	Partners	IPHC Budget ($US)	Management implications	Grant period
1	**Alaska Sea Grant**	Development of a non-lethal genetic-based method for aging Pacific halibut (R/2024-05)	IPHC, Alaska Pacific University (APU)	Alaska Fisheries Science Center-NOAA (Juneau)	$60,374	Stock structure	January 2025-February 2027
Total awarded ($)					**$60,374**		

IPHC Fishery Regulations: Proposals for the 2026-27 process

PREPARED BY: IPHC SECRETARIAT (B. HUTNICZAK; 30 OCTOBER AND 3 NOVEMBER 2026)

PURPOSE

To provide the Commission with an overview of the IPHC Fishery Regulations proposals that the IPHC Secretariat, Contracting Parties, and other stakeholders have submitted or indicated they intend to submit for consideration by the Commission in the 2026-27 process.

BACKGROUND

Recalling the IPHC Fishery Regulations proposals submission and review process instituted in 2017, this paper is intended to provide an early indication of the fishery regulations proposals being submitted to the Commission in the 2026-27 process.

Fishery regulation proposals from the Contracting Parties and other stakeholders are typically received later in the process.

Note DEADLINES: The dates for submission of draft proposals for consideration by the Commission in the 2026-27 process are as follows:

- 102nd Session of the IPHC Interim Meeting (IM102) is 1 November 2026;
- 103rd Session of the IPHC Annual Meeting (AM103) is 26 December 2026.

DISCUSSION

A list of preliminary titles, subjects, and sponsors for IPHC Fishery Regulations proposals expected to be submitted as part of the 2026-27 process is provided in Appendix I**.**

All submitted proposals will be considered in open session at IM102 (1 December 2026) and decided at AM103 (25–28 January 2027). Under the IPHC Rules of Procedure (2025), regulatory proposals are submitted no less than 30 days before the opening of the Session at which they are to be considered and are made available on the IPHC website within two business days of receipt.

Note on Section 11 – Closed Periods

The IPHC Secretariat notes that Section 11(10) of the IPHC Fishery Regulations includes a provision allowing a person to retain, possess, and land legal-sized Pacific halibut caught incidentally outside the commercial fishing period in IPHC Regulatory Area 2B. This provision is currently set to remain in effect through the end of the 2026/2027 closed period, unless extended by the Commission.

This provision is expected to be addressed at AM103 in January 2027. If the Commission does not indicate that an extension beyond the 2026/2027 closed period is intended, the Secretariat will prepare a regulatory proposal for consideration at the Annual Meeting that would remove this temporary provision from the 2027 IPHC Fishery Regulations. Such a proposal would be an administrative housekeeping action only, intended to remove expired text from the Regulations.

Note on Section 27 – Recreational (Sport) Fishing - IPHC Regulatory Area 2B

The IPHC Secretariat notes that Section 27(1)(c) of the IPHC Fishery Regulations includes a provision allowing the daily bag limit to increase from two to three Pacific halibut per person on or after 1 August in IPHC Regulatory Area 2B. This provision is currently set to remain in effect through 2026, unless extended by a vote of the Commission.

This provision is addressed under IPHC-2026-IM102-PropB2. If the Commission does not indicate that an extension beyond 2026 is intended, the Secretariat will prepare a regulatory proposal for consideration at the Annual Meeting that would remove this temporary provision from the 2027 IPHC Fishery Regulations. Such a proposal would be an administrative housekeeping action only, intended to remove expired text from the Regulations.

RECOMMENDATIONS

That the Commission:

1) **NOTE** paper IPHC-2026-IM102-14 Rev_1, which provides the Commission with an overview of the IPHC Fishery Regulations proposals that the IPHC Secretariat, Contracting Parties, and other stakeholders have submitted or indicated they intend to submit for consideration in the 2026-27 process;
2) **NOTE** that listing an expected proposal in this paper does not constitute formal submission for AM103;
3) **NOTE** that Section 11(10) (limited retention outside the commercial fishing period in IPHC Regulatory Area 2B) is scheduled to remain in effect only through the end of the 2026/2027 closed period, and that Section 27(1)(c) (daily bag limit increase in IPHC Regulatory Area 2B) is scheduled to remain in effect only through 2026, unless extended by the Commission;
4) **NOTE** that further proposals, beyond those identified in Appendix I, may be submitted by Contracting Parties or other stakeholders between now and the Annual Meeting deadline;
5) **NOTE** the submission deadline for AM103 is **26 December 2026**.

APPENDICES

Appendix I: Preliminary titles, subjects, and sponsors for IPHC Fishery Regulations proposals submitted or expected to be submitted for consideration in the 2026-27 process.

APPENDIX I

Preliminary titles, subjects, and sponsors for IPHC Fishery Regulations proposals submitted or expected to be submitted for consideration in the 2026-27 process.

Ref. No.	Title	Brief description
IPHC Secretariat		
IPHC-2026-IM102-PropA1	IPHC Fishery Regulations: Mortality and Fishery Limits (Sect. 5)	To provide clear documentation of mortality and fishery limits within the IPHC Fishery Regulations: Mortality and Fishery Limits (Sect. 5). *Mortality and fishery limits tables will be filled when the Commission adopts TCEYs for the individual IPHC Regulatory Areas.*
IPHC-2026-IM102-PropA2	IPHC Fishery Regulations: Commercial Fishing Periods (Sect. 9)	To specify fishing periods for the directed commercial Pacific halibut fisheries within the IPHC Fishery Regulations: Commercial Fishing Periods (Sect. 9).
Contracting Parties		
IPHC-2026-IM102-PropB1 *Deferred to AM103*	IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut - IPHC Regulatory Areas 2C, 3A, 3B, 4A, 4B, 4C, 4D, 4E (Sect. 28): Charter Management Measures in IPHC Regulatory Areas 2C and 3A	**Proponent:** USA (NOAA Fisheries) To propose charter management measures in IPHC Regulatory Areas 2C and 3A reflective of mortality limits adopted by the IPHC and resulting allocations under the North Pacific Fishery Management Council (NPFMC) Pacific halibut Catch Sharing Plan.
IPHC-2026-IM102-PropB2	IPHC Fishery Regulations: Recreational (Sport) Fishing for Pacific Halibut - IPHC Regulatory Area 2B (Sect. 27)**:** Daily bag limit in IPHC Regulatory Area 2B	**Proponent:** Canada (Fisheries and Oceans Canada) To propose extending the provision allowing the daily bag limit of up to three fish per day per person in the recreational fishery in IPHC Regulatory Area 2B beginning on or after 1 August of each year.
IPHC-2026-IM102-PropB3 *Deferred to AM103*	IPHC Fishery Regulations: Logs (Sect. 19) - Addition of Community-Based Fisheries and Five Nations Rights-Based Fishery Logbooks as permitted logs in IPHC Regulatory Area 2B	**Proponent:** Canada (Fisheries and Oceans Canada) To propose adding Community-Based Fisheries and Five Nations Rights-Based Fishery Logbooks to the list of logbooks accepted for reporting Pacific halibut catch in Canada.
IPHC-2026-IM102-PropB4 *Deferred to AM103*	IPHC Fishery Regulations: Closed Periods (Sect. 11) - Limited retention outside the commercial fishing period in IPHC Regulatory Area 2B	**Proponent:** Canada (Fisheries and Oceans Canada) To propose extending the limited retention of legal-sized Pacific halibut caught incidentally as bycatch outside the Pacific halibut commercial fishing period in year-round hook & line and trap groundfish fisheries in IPHC Regulatory Area 2B (Canada).

IPHC-2026-IM102-PropB5	IPHC Fishery Regulations: Mortality and Fishery Limits (Sect. 5) - Incorporating Recreational Fishing Quota issued to the guided recreational fishery in IPHC Regulatory Area 2C and 3A into the IPHC Fishery Regulations table containing Contracting Party catch sharing arrangements and respective quantities	**Proponent:** USA (NOAA Fisheries) To propose incorporating Recreational Fishing Quota issued to the guided recreational fishery in IPHC Regulatory Area 2C and 3A into the IPHC Fishery Regulations table containing Contracting Party catch sharing arrangements and respective quantities.
IPHC-2026-IM102-PropB6	IPHC Fishery Regulations: Fishing Gear (Sect. 17) - Allowing for donation of Pacific halibut in the non-directed commercial sector through an Exempted Fishing Permit issued by NOAA Fisheries	**Proponent:** USA (NOAA Fisheries) To propose amending Section 17(11) of the IPHC Fishery Regulations so that, in addition to the NOAA Fisheries Prohibited Species Donation regulations, trawl-caught Pacific halibut may be retained and donated under certain Exempted Fishing Permits issued by NOAA Fisheries.
Stakeholders		
Nil	IPHC Fishery Regulations:	

IPHC Fishery Regulations:

Mortality and Fishery Limits (Sect. 5)

PREPARED BY: IPHC SECRETARIAT (23 OCTOBER 2026)

PURPOSE

To provide clear documentation of mortality and fishery limits within the IPHC Fishery Regulations: Mortality and Fishery Limits (Sect. 5).

BACKGROUND

The Commission considers new and revised IPHC Fishery Regulations, including proposed changes to mortality and fishery limits, and makes changes as deemed necessary at each Annual Meeting. In the absence of changes being deemed necessary, the existing IPHC Fishery Regulations remain in effect.

In accordance with the IPHC Convention[1], the Contracting Parties may also implement fishery regulations that are more restrictive than those adopted by the IPHC.

This proposal outlines a framework for amending IPHC Fishery Regulations Section 5, '*Mortality and Fishery Limits,'* to reflect Total Constant Exploitation Yield (TCEY) values adopted by the Commission and the corresponding fishery sector limits resulting from those TCEY values, as determined by the existing domestic catch sharing arrangements of the Contracting Parties.

DISCUSSION

Changes to IPHC Fishery Regulations Section 5, '*Mortality and Fishery Limits,'* provide clear documentation of the limits for fishery sectors within defined Contracting Party domestic catch sharing arrangements, which are tied to the mortality distribution (TCEY) decisions of the Commission. This section includes a table of the TCEY values adopted by the Commission for clarity and to emphasize the role of the TCEY values as the basis for the subsequent setting of sector allocations through the operation of the Contracting Parties' existing catch sharing arrangements. Both the TCEY and the fishery sector allocation table will be populated as TCEY decisions are made for each IPHC Regulatory Area by the Commission during the 103rd Session of the IPHC Annual Meeting (AM103) in January 2027.

Benefits/Drawbacks: The benefit is a clear identification of fishery limits resulting from Commission decisions on distributed mortality (TCEY) values for each IPHC Regulatory Area. The potential drawback is a misconception that the resulting catch sharing arrangements and associated fishery limits are within the Commission's mandate, when in fact they are the responsibility of the Contracting Parties. The intention is to reinforce that distinction by clarifying which decisions are made by the Commission.

Sectors Affected: This proposal affects all sectors of the Pacific halibut fishery.

Appendix A provides details on the suggested regulatory language.

[1] The Convention between Canada and the United States of America for the Preservation of the [Pacific] Halibut Fishery of the Northern Pacific Ocean and Bering Sea.

RECOMMENDATIONS

That the Commission:

1) **NOTE** regulatory proposal IPHC-2026-IM102-PropA1, which provides the Commission with an opportunity to recall the format of the IPHC Fishery Regulations: *Mortality and Fishery Limits* (Sect. 5), to be populated at the 103rd Session of the IPHC Annual Meeting (AM103) in January 2027.

APPENDICES

Appendix A: Suggested regulatory language

APPENDIX A

SUGGESTED REGULATORY LANGUAGE

5. Mortality and Fishery Limits

(1) The Commission has adopted the following distributed mortality (TCEY) values:

IPHC Regulatory Area	Distributed mortality limits (TCEY) (net weight)	
	Tonnes (t)	Million Pounds (Mlb)
Area 2A (California, Oregon, and Washington)		
Area 2B (British Columbia)		
Area 2C (southeastern Alaska)		
Area 3A (central Gulf of Alaska)		
Area 3B (western Gulf of Alaska)		
Area 4A (eastern Aleutians)		
Area 4B (central and western Aleutians)		
Areas 4CDE (Bering Sea)		
Total		

(2) The fishery limits resulting from the IPHC-adopted distributed mortality (TCEY) limits and the existing Contracting Party catch sharing arrangements are as follows, recognising that each Contracting Party may implement more restrictive limits:**

IPHC Regulatory Area	Fishery limits (net weight)	
	Tonnes (t)	Million Pounds (Mlb)*
Area 2A (California, Oregon, and Washington)		
Non-tribal directed commercial (south of Pt. Chehalis)		
Non-tribal incidental catch in salmon troll fishery		
Non-tribal incidental catch in sablefish fishery (north of Pt. Chehalis)		
Treaty Indian commercial		
Treaty Indian ceremonial and subsistence (year-round)		
Recreational – Washington**		
Recreational – Oregon**		
Recreational – California**		
Area 2B (British Columbia) (combined commercial and recreational)		
Commercial fishery		
Recreational fishery		

Area 2C (southeastern Alaska) (combined commercial and guided recreational)		
Commercial fishery (includes XX Mlb landings and XX Mlb discard mortality)		
Guided recreational fishery (includes landings and discard mortality)		
Area 3A (central Gulf of Alaska) (combined commercial and guided recreational)		
Commercial fishery (includes XX Mlb landings and XX Mlb discard mortality)		
Guided recreational fishery (includes landings and discard mortality)		
Area 3B (western Gulf of Alaska)		
Area 4A (eastern Aleutians)		
Area 4B (central and western Aleutians)		
Areas 4CDE (Bering Sea)		
Area 4C (Pribilof Islands)		
Area 4D (northwestern Bering Sea)		
Area 4E (Bering Sea flats)		
Total		

* Allocations resulting from the IPHC Regulatory Area 2A Catch Share Plan are listed in *pounds*.

** In IPHC Regulatory Area 2A, the USA (NOAA Fisheries) may take in-season action to reallocate the recreational fishery limits between Washington, Oregon, and California after determining that such action will not result in exceeding the overall IPHC Regulatory Area 2A recreational fishery limit and that such action is consistent with any domestic catch sharing plan. Any such reallocation will be announced by the USA (NOAA Fisheries) and published in the Federal Register.

IPHC Fishery Regulations:

Commercial Fishing Periods (Sect. 9)

PREPARED BY: IPHC SECRETARIAT (23 OCTOBER 2026)

PURPOSE

To specify fishing periods for the directed commercial Pacific halibut fisheries within the IPHC Fishery Regulations: Commercial Fishing Periods (Sect. 9).

BACKGROUND

Each year, the International Pacific Halibut Commission (IPHC) selects fishing period dates for the directed commercial Pacific halibut fisheries in each of the IPHC Regulatory Areas. Historically, the first management measures implemented by the IPHC were to limit periods when fishing was allowed. Biological factors considered in the past when setting fishing period dates included migration and spawning considerations, neither of which is now used as a basis for determining fishing periods.

These dates have varied from year to year, and in recent years have allowed directed commercial fishing to begin sometime in March and end sometime in November or December for all IPHC Regulatory Areas with the exception of the IPHC Regulatory Area 2A.

DISCUSSION

The IPHC Secretariat proposes that the commercial fishing periods for all IPHC Regulatory Areas be set at 103rd Session of the IPHC Annual Meeting (AM103) in January 2027 following stakeholder input.

Moreover, with the transition of management authority of the IPHC Regulatory Area 2A non-tribal directed commercial Pacific halibut fishery from the IPHC to the Pacific Fishery Management Council (PFMC) and NOAA Fisheries (per final rule 87 FR 74322 published on 5 December 2022), the Commission no longer needs to consider setting dates for the 2A non-tribal directed commercial fishery and the dates will be set by the Contracting Party within the overall commercial fishing period dates.This is consistent with the IPHC Convention[1], which states that the Contracting Parties may implement fishery regulations that are more restrictive than those adopted by the IPHC.

Benefits/Drawbacks: This proposal clearly indicates that the decision on commercial fishing periods is within the Commission's mandate and the season dates can be changed annually. Moreover, it clarifies that more strict fishing periods can be implemented by the Contracting Parties.

Sectors Affected: Commercial Pacific halibut fisheries in each IPHC Regulatory Area.

Appendix A provides details on the suggested regulatory language.

[1] The Convention between Canada and the United States of America for the Preservation of the [Pacific] Halibut Fishery of the Northern Pacific Ocean and Bering Sea.

RECOMMENDATIONS

That the Commission:

1) **NOTE** regulatory proposal IPHC-2026-IM102-PropA2, which provides the Commission with an opportunity to recall the format of the IPHC Pacific Halibut Fishery Regulations: *Commercial Fishing Periods* (Sect. 9), to be populated at the 103rd Session of the IPHC Annual Meeting (AM103) in January 2027.

APPENDICES

Appendix A: Suggested regulatory language

APPENDIX A
SUGGESTED REGULATORY LANGUAGE

9. Commercial Fishing Periods

(1) The fishing periods for each IPHC Regulatory Area apply where the fishery limits specified in section 5 have not been taken.

(2) Unless the Commission specifies otherwise, commercial fishing for Pacific halibut in all IPHC Regulatory Areas may begin no earlier in the year than 06:00 local time on ~~26 March~~DD MMMM.

(3) All commercial fishing for Pacific halibut in all IPHC Regulatory Areas shall cease for the year at 23:59 local time on ~~7 December~~DD MMMM.

(4) Regulations pertaining to the non-tribal directed commercial fishing[2] periods in the IPHC Regulatory Area 2A will be promulgated by NOAA Fisheries and published in the Federal Register. This fishery will occur between the dates and times listed in paragraphs (2) and (3) of this Section.

(5) Notwithstanding paragraph (4) of this Section, an incidental catch fishery[3] is authorized during the sablefish seasons in IPHC Regulatory Area 2A in accordance with regulations promulgated by NOAA Fisheries. This fishery will occur between the dates and times listed in paragraphs (2) and (3) of this section.

(6) Notwithstanding paragraph (4) of this Section, an incidental catch fishery is authorized during salmon troll seasons in IPHC Regulatory Area 2A in accordance with regulations promulgated by NOAA Fisheries. This fishery will occur between the dates and times listed in paragraphs (2) and (3) of this section.

[2] The non-tribal directed fishery is restricted to waters that are south of Point Chehalis, Washington, (46°53.30′ N. latitude) under regulations promulgated by NOAA Fisheries and published in the Federal Register.

[3] The incidental fishery during the directed, fixed gear sablefish season is restricted to waters that are north of Point Chehalis, Washington, (46°53.30′ N. latitude) under regulations promulgated by NOAA Fisheries at 50 CFR 300.63. Landing restrictions for Pacific halibut retention in the fixed gear sablefish fishery can be found at 50 CFR 660.231.

IPHC Fishery Regulation Proposal:

Recreational (Sport) Fishing for Pacific Halibut - IPHC Regulatory Area 2B (Sect. 27) - Daily bag limit in IPHC Regulatory Area 2B

SUBMITTED BY: CANADA (FISHERIES AND OCEANS CANADA) (30 OCTOBER 2026)

Directed Commercial ☐ Recreational ☒ Subsistence ☐ Non-directed commercial ☐ All ☐

All Regulatory Areas ☐ All Alaska Regulatory Areas ☐ All U.S. Regulatory Areas ☐

2A ☐ 2B ☒ 2C ☐ 3A ☐ 3B ☐ 4A ☐ 4B ☐ 4C ☐ 4D ☐ 4E ☐

PURPOSE

To propose the daily bag limit of up to three fish per day per person in the recreational fishery in IPHC Regulatory Area 2B beginning on or after 1 August of each year.

EXPLANATORY MEMORANDUM

Canada is proposing to keep changes made to section 27 (Recreational (Sport) Fishing for Pacific Halibut – IPHC Regulatory Area 2B) of the IPHC Fishery Regulations to allow a maximum daily bag limit of three (3) fish per day, per person, beginning on or after 1 August. The purpose of the proposed change is to align IPHC fishery regulations with Canada's domestic sportfishing regulations, to simplify unnecessary regulatory complexity, and to retain Canada's ability and autonomy to manage its domestic fishery.

The Commission previously supported and approved an increase in the Canadian daily bag limit from two (2) per day, to three (3) per day, on a one-year basis from 1 April 2021 to 31 March 2022, again from 1 April 2022 to 31 March 2023, before approving the provision to be in effect from 2023-2025, inclusive, then again for the 2026 season. Annually the Sport Fishing Advisory Board (SFAB) works with Fisheries and Oceans Canada (DFO) to model a pre-season fishing plan with the objectives of maintaining a full recreational season (February to December) and supporting the recreational sector's access to the Total Allowable Catch (TAC) it is allocated. Canada has chosen to not utilize this conditional flexibility since it was put into place in 2023, though it was considered for the 2026 season. However, this flexibility has increased Canadian domestic benefits, whilst allowing for the effective in-season management of the resource.

The IPHC daily bag limit of two (2) fish per day constrains Canada's flexibility to make critical in-season changes to the fishing plan to support meeting TAC goals and Canadian domestic fishery objectives.

The SFAB has a long history of collaborating with DFO in Canada's endeavours to achieve IPHC objectives, while maximizing Canadian domestic objectives. DFO and SFAB meet monthly in-season to review timely and robust recreational catch estimates to consider and evaluate appropriate fishery management measures. Increased regulatory flexibility would augment the existing successful management tool kit to achieve improved fishery performance.

RECOMMENDATIONS

That the Commission:

1) **NOTE** IPHC Fishery Regulation proposal IPHC-2026-IM102-PropB2, which proposes the daily bag limit of up to three fish per day per person beginning on or after 1 August in the recreational fishery in IPHC Regulatory Area 2B.

APPENDICES

Appendix A: Suggested Regulatory Language.

APPENDIX A

SUGGESTED REGULATORY LANGUAGE

27. Recreational (Sport) Fishing for Pacific Halibut—IPHC Regulatory Area 2B

(1) In all waters off British Columbia:[6, 7]

(a) the recreational (sport) fishing season will open on 1 February;

(b) the recreational (sport) fishing season will close when the recreational (sport) fishery limit allocated by DFO is taken, or 31 December, whichever is earlier; and

(c) the daily bag limit is two (2) Pacific halibut of any size per day, per person, and may be increased to a daily bag limit of three (3) Pacific halibut per day, per person on or after 1 August. ~~This provision shall remain in effect through 2026, unless extended by a vote of the Commission.~~

(2) In British Columbia, no person shall fillet, mutilate, or otherwise disfigure a Pacific halibut in any manner that prevents the determination of minimum size or the number of fish caught, possessed, or landed.

(3) The possession limit for Pacific halibut in the waters off the coast of British Columbia is three Pacific halibut.[6, 7]

[6] DFO could implement more restrictive regulations for the recreational (sport) fishery, therefore anglers are advised to check the current Federal or Provincial regulations prior to fishing.

[7] For regulations on the experimental recreational fishery implemented by DFO check the current Federal or Provincial regulations.

IPHC Fishery Regulation Proposal:

Mortality and Fishery Limits (Sect. 5) - Incorporating Recreational Fishing Quota issued to the guided recreational fishery in IPHC Regulatory Area 2C and Area 3A into the IPHC Fishery Regulations table containing Contracting Party catch sharing arrangements and respective quantities

SUBMITTED BY: USA (NOAA FISHERIES) (30 OCTOBER 2026)

Directed Commercial ☒ Recreational ☒ Subsistence ☐ Non-directed commercial ☐ All ☐

All Regulatory Areas ☐ All Alaska Regulatory Areas ☐ All U.S. Regulatory Areas ☐

2A ☐ 2B ☐ 2C ☒ 3A ☒ 3B ☐ 4A ☐ 4B ☐ 4C ☐ 4D ☐ 4E ☐

PURPOSE

To propose incorporating Recreational Fishing Quota issued to the guided recreational fishery in IPHC Regulatory Area 2C and Area 3A into the IPHC Fishery Regulations table containing Contracting Party catch sharing arrangements and respective quantities.

EXPLANATORY MEMORANDUM

NOAA Fisheries expects to introduce a regulatory proposal at the IPHC Annual Meeting to modify the table following § 5(2) to include the amount of Recreational Fishing Quota (RFQ) issued to the Recreational Quota Entity in IPHC Regulatory Area 2C and Area 3A. RFQ is commercial Pacific halibut quota share that has been purchased and transferred from the directed commercial sector to the guided recreational sector, and 2027 will be the first year RFQ will be issued. For IPHC Regulatory Areas 2C and 3A, the respective annual charter Pacific halibut management measures will be based on the sum of the catch sharing plan allocation and the amount of RFQ issued each year.

RECOMMENDATIONS

That the Commission:

1) **NOTE** IPHC Fishery Regulation proposal IPHC-2026-IM102-PropB5, which proposes incorporating Recreational Fishing Quota issued to the guided recreational fishery in IPHC Regulatory Area 2C and Area 3A into the IPHC Fishery Regulations table containing Contracting Party catch sharing arrangements and respective quantities.

SUGGESTED REGULATORY LANGUAGE.

To be provided 30 days before the IPHC Annual Meeting.

IPHC Fishery Regulations:

Fishing Gear (Sect. 17) - Allowing for donation of Pacific halibut in the non-directed commercial sector through an Exempted Fishing Permit issued by NOAA Fisheries

SUBMITTED BY: USA (NOAA FISHERIES) (30 OCTOBER 2026)

Directed Commercial ☐ Recreational ☐ Subsistence ☐ Non-directed commercial ☒ All ☐

All Regulatory Areas ☐ All Alaska Regulatory Areas ☒ All U.S. Regulatory Areas ☐

2A ☐ 2B ☐ 2C ☒ 3A ☒ 3B ☒ 4A ☒ 4B ☒ 4C ☒ 4D ☒ 4E ☒

PURPOSE

To propose amending Section 17(11) of the IPHC Fishery Regulations so that, in addition to the NOAA Fisheries Prohibited Species Donation regulations, trawl-caught Pacific halibut may be retained and donated under certain Exempted Fishing Permits issued by NOAA Fisheries.

EXPLANATORY MEMORANDUM

This regulatory proposal would clarify the applicability of IPHC Fishery Regulations to certain exempted fishing permits issued by NOAA Fisheries at IPHC Fishery Regulations § 17(11).

By way of background, on 21 August 2026, NOAA Fisheries received an exempted fishing permit (EFP) application to allow Pacific halibut Prohibited Species Catch (PSC) from one catcher processor to be donated for hunger relief purposes through the prohibited species donation (PSD) program. The PSD program allows prohibited species caught as bycatch, including Pacific halibut, to be donated to hunger relief agencies, food bank networks, or food bank distributors instead of being discarded. Currently, the PSD program only allows for donation of Pacific halibut PSC delivered by catcher vessels using trawl gear to shoreside processors and stationary floating processors and does not allow for donation of Pacific halibut PSC from trawl catcher processors. Specifically, this EFP would allow a single trawl catcher processor operating in the Bering Sea trawl limited access yellowfin sole fishery to donate a portion of their Pacific halibut PSC to the PSD program that would otherwise be discarded. This would occur after deck sorting (to return live Pacific halibut to the sea) and catch accounting are complete. The amount of Pacific halibut PSC donated would continue to accrue to the U.S. allocation and would be capped at 3 metric tons. This EFP would not increase or otherwise modify any PSC or bycatch limits.

On 1 October 2026, NOAA Fisheries published a notice in the *Federal Register* seeking public comment (91 FR 62500), solicited input from the North Pacific Fishery Management Council, and sent a letter to the IPHC informing it of the opportunity to submit comments on the EFP application. The public comments received can be viewed here. After reviewing all feedback, NOAA Fisheries will determine whether to approve or deny the EFP application, including any required modifications.

This regulatory proposal would clarify the applicability of IPHC Fishery Regulations § 17(11) to a situation involving Pacific halibut PSC donation through an EFP.

RECOMMENDATIONS

That the Commission:

1) **NOTE** IPHC Fishery Regulation proposal IPHC-2026-IM102-PropB6, which proposes amending Section 17(11) of the IPHC Fishery Regulations so that, in addition to the NOAA Fisheries Prohibited Species Donation regulations, trawl-caught Pacific halibut may be retained and donated under certain Exempted Fishing Permits issued by NOAA Fisheries.

APPENDICES

Appendix A: Suggested Regulatory Language.

Appendix B: EFP application.

APPENDIX A: SUGGESTED REGULATORY LANGUAGE

17. Fishing Gear

[…]

(11) Notwithstanding any other provision in these Regulations, a person may retain, possess and dispose of Pacific halibut taken with trawl gear only as authorized by: ~~Prohibited Species Donation regulations of NOAA Fisheries.~~

(a) the Prohibited Species Donation regulations of NOAA Fisheries; or

(b) an Exempted Fishing Permit issued by NOAA Fisheries that allows donation of such Pacific halibut, which would otherwise be prohibited under NOAA Fisheries regulations.

APPENDIX B: EFP APPLICATION

Exempted Fishing Permit (EFP) Application
Sea Share, Inc. & Glacier Fish Co.

1. **Application Date of Revised Application (Incorporates AFSC Review)**

September 15, 2026

2. **Applicants and Timing**

Organization Name: SeaShare, Inc & Glacier Fish Co.
Attention: Hannah Lindoff, SeaShare, Inc. & Glenn Merrill, Glacier Fish Co.
Primary Contact Person(s): Hannah Lindoff; Glenn Merrill
Mailing Address: Primary Contact: POB 21087, Juneau, AK 99802
Email: hannah@seashare.org; glenn@glacierfish.com

Timing: Year one: May 1, 2027 – December 31, 2027, Year two: January 20, 2028 – December 31, 2028

3. **Purpose and Goals**

To test the necessary catch monitoring, handling, accounting, and logistical requirements for the donation of halibut that are encountered in the fish processing facilities on a trawl catcher/processor after catch has been sampled and recorded by onboard observers.

3.1 Background

Salmon and halibut incidentally caught in groundfish fisheries are defined as "prohibited species" and must be returned "to the sea immediately, with a minimum of injury, regardless of its condition" after allowing sampling by an observer.[1] Regulations require discards, and vessels must comply with those regulations. In an effort to minimize the waste of fish that are required to be discarded by regulation, industry participants in coordination with Terra Marine Resource and Education. Inc. (predecessor to SeaShare, Inc.) proposed a series of exempted fishing permits (EFPs) beginning in 1993 to test the feasibility of retaining and donating prohibited species to foodbanks.[2] These early EFPs developed the necessary catch handling, monitoring, and labeling requirements for the existing Prohibited Species Donation Program (PSD Program).

The North Pacific Fishery Management Council (Council) recommended and NMFS implemented the PSD Program in 1996.[3] The goal of the PSD Program recommended by the Council was, and remains, authorizing the distribution of incidental catch in the groundfish fisheries off Alaska to economically disadvantaged individuals by tax-exempt organizations through a NMFS-authorized distributor.[4]

In the 1990's, NMFS and International Pacific Halibut Commission (IPHC) regulations limited the retention of halibut by vessels using trawl gear. Permitting donations of halibut from trawl vessels required coordination between the two regulatory bodies. The initial 1993 EFP proposed allowing both salmon and halibut donations, but the IPHC did not support authorizing donations of halibut and indicated it would review the

[1] See definition of "prohibited species" at 50 CFR 679.2, and prohibitions on the retention of salmon and halibut while groundfish fishing at 50 CFR 679.21(a)(2)
[2] See initial prohibited species donation EFP approval on August 12, 1993 58 FR 42947-42948) available at: Federal Register :: Federal Register Citation
[3] The PSD Program was first implemented under Amendment 26 to the Fishery Management Plan (FMP) for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area (BSAI) and Amendment 29 to the Fishery Management Plan for Groundfish of the Gulf of Alaska (GOA). 96-18788.pdf
[4] This rationale is provided in the final rule for both to Amendment 26/29 (96-18788.pdf), and Amendment 50/50 (98-15595.pdf).

issue in future years.[5] EFP applicants continued efforts to include halibut in the PSD Program through subsequent EFPs.[6] Therefore, the initial PSD Program was limited to donations of incidentally caught salmon.

In 1996, IPHC approved a pilot program allow "the retention of 50,000 pounds (net weight) of halibut, landed by trawlers at shore plants in Dutch Harbor."[7] The initial pilot program was first implemented on a limited basis by NMFS under an EFP in 1996.[8] In 1997, the Council recommended regulations to allow the donation of incidentally caught halibut. In 1998, NMFS implemented that recommendation as Amendments 50/50 to the BSAI and GOA FMPs,[9] and IPHC revised its regulations to allow trawl vessels to participate in the PSD Program.[10]

Amendments 50/50 specifically limited donations to "[h]alibut delivered by catcher vessels using trawl gear to shoreside processors" but did not specifically include additional restrictions on the total amount that could be donated or the landing location as recommended by the IPHC in their 1996 pilot program.[11] A review of Amendments 50/50, and the accompanying analysis does not indicate that the Council or IPHC reconsidered allowing trawl catcher/processors or non-trawl vessels to participate in halibut donations under the PSD Program. The IPHC's recommendation to limit donations to trawl catcher vessels delivering to shoreside processors was carried through the NMFS rulemaking process. Limiting donation only to trawl catcher vessels is unique to halibut. Trawl catcher/processors participate in the salmon donation portion of the PSD Program.

The 1998 halibut PSD Program regulations had a three year sunset to allow NOAA Fisheries and IPHC to assess the effectiveness of the halibut donation program.[12] After review by the Council and IPHC, NMFS published regulations to remove the sunset date and make the program permanent in 2000.[13] In 2012, the PSD Program regulations were amended slightly to allow halibut donations from trawl vessels delivering to stationary floating processors "to implement the intent of the program to allow participation by all types of near shore, stationary processors for halibut donations."[14] Adding "stationary floating processors" as an additional donation location did not require amendment to IPHC regulations. The PSD Program regulations for halibut donation have not been revised since 2012.

SeaShare, Inc. (SeaShare) was founded as a non-profit in 1994 and has served as the NMFS-authorized distributor of incidentally caught salmon and halibut since the implementation of the PSD Program. SeaShare receives donations of incidentally caught salmon and halibut as well as other seafood products directly donated by numerous harvesters and processors. SeaShare serves dozens of communities throughout Alaska and hundreds of communities nationally. Since its inception, SeaShare has provided over 275 million servings of seafood.[15]

[5] Pp 10-11 of 1993 IPHC Annual Meeting Report, available at: iphc-1993-am069-r.pdf
[6] The EFP process used to develop current regulations is described in the preamble to the final rule of Amendment 50/50 available at: 98-15595.pdf
[7] P. 3 of Analysis (EA/RIR/IRFA) prepared for Amendment 50/50 available at: Final EA/RIR for Amendment 50 to the FMP for the Groundfish Fishery of the BSAI and Amendment 50 to the FMP for Groundfish of the GOA to Authorize Distribution of Halibut Bycatch in the Groundfish Fisheries off Alaska to the Economically Disadvantaged | NOAA Fisheries
[8] See Amendments 50/50 Final Rule at: 98-15595.pdf.
[9] See Amendments 50/50 Final Rule at: 98-15595.pdf.
[10] Section 17(11) of IPHC Regulations "Notwithstanding any other provision in these Regulations, a person may retain, possess and dispose of Pacific halibut taken with trawl gear only as authorized by Prohibited Species Donation regulations of NOAA Fisheries."
[11] See Amendments 50/50 Final Rule at: 98-15595.pdf.
[12] See Amendments 50/50 Final Rule at: 98-15595.pdf.
[13] See final rule permanently extending PSD halibut program on December 11, 2000 (65 FR 78119) at: 00-31917.pdf
[14] See Final Rule implementing Amendment 93 to the GOA FMP, Federal Register :: Fisheries of the Exclusive Economic Zone Off Alaska; Chinook Salmon Bycatch Management in the Gulf of Alaska Pollock Fishery; Amendment 93
[15] SeaShare website: Seafood Donation | Supporting Hunger Relief | SeaShare

Glacier Fish Company owns and operates the *Northern Glacier*, a trawl catcher/processor vessel that participates in the Western Alaska Community Development Program (CDQ) multi-species fisheries and the Trawl Limited Access Sector (TLAS) yellowfin sole fishery where halibut is incidentally encountered and is required to be discarded during fishing operations. The *Northern Glacier* has been authorized to participate in the PSD Program since its implementation.

3.2 Purpose and Goals

3.2.1 EFP Purpose

Current regulations limit the ability of trawl catcher/processors to donate halibut under the PSD Program. The current limitation on trawl catcher/processors was established nearly 30 years ago under a completely different regulatory regime. There have been numerous revisions to accounting and monitoring procedures on trawl catcher/processors to comprehensively track catch. Halibut bycatch limits and various catch share programs (e.g., American Fisheries Act, and Amendment 80 Program) constrain halibut bycatch far more comprehensively than was the case 30 years ago. In addition, regulated deck sorting procedures improved the ability of trawl catcher/processors to return larger and more viable halibut to the sea with a lower mortality rate than under the regulatory regime that existed in 1998.

Regulations lack a mechanism for trawl catcher/processors to donate food grade halibut that are incidentally encountered and are not able to be deck sorted and returned to sea. After deck sorting, some food grade halibut end up in monitored fish holds. These halibut (and groundfish) are weighed and sampled by observers, and the halibut are then returned to sea as required by regulation.

This EFP will test an alternative catch monitoring and management framework to allow halibut that remain in the catch after sampling by the observer to be retained and donated through the PSD Program. This EFP would be consistent with the long-standing practice of using EFPs to develop the necessary regulatory framework to ensure a well-monitored and effective PSD Program. This EFP would help the Council, the fishing industry, and SeaShare meet the intent of the PSD Program to minimize waste and allow the distribution of incidental catch in the groundfish fisheries off Alaska to economically disadvantaged individuals.

This EFP does not seek an exemption from existing halibut PSC limits. This EFP does not increase the overall amount of halibut PSC that is allocated. Instead, this EFP would rely on existing halibut PSC allocations that are provided by regulation and established annually through the harvest specifications process.

This EFP supports Executive Order 14276 on Restoring American Seafood Competitiveness.[16] The Executive Order seeks to "reduce regulatory burdens", and requests the fishing industry provide "innovative ideas to improve fisheries management and science within the requirements of the Magnuson-Stevens Fishery Conservation and Management Act". Importantly, section 4(iii)(C) of the Executive Order supports the expansion of "exempted fishing permit programs" to help meet these objectives.

3.2.2 EFP Goals

A. **To limit the retention of halibut ***only*** to those halibut that are not able to be deck sorted to minimize potential halibut mortality**. The goal of this EFP is to allow retention of only those halibut that are not able to be deck sorted and returned to sea with a minimum of injury. Only halibut present after being sampled below deck at the observer sampling station could be donated.

B. **To test the logistical and operational requirements on a single trawl catcher/processor vessel to retain and donate a maximum of 5,000 net pounds of headed and gutted halibut -- 3.0 mt of round weight equivalent**. The goal of this EFP is to test donation procedures while not compromising

[16] See Executive Order 14276 at: Restoring American Seafood Competitiveness – The White House

the goals of the deck sorting program that helps ensure a higher probability of survival. The upper bound limit of 3.0 mt would provide an adequate amount of halibut to test operational, labeling, and donation logistics while maintaining the overarching goal of minimizing bycatch. We anticipate that as the EFP is conducted there will be opportunities to improve the onboard accounting, handling, and labeling procedures. The 3.0 mt limit would provide for these in-season process improvements that could inform subsequent EFPs or potential future regulations. Depending on the rates of halibut encounters on the grounds, fishing conditions, and operational and logistical challenges halibut donations may be well-below the 3.0 mt limit.

C. **To reduce catch accounting complexities by limiting the use of halibut donations only while the vessel is participating in the Bering Sea trawl limited access (TLAS) yellowfin sole fishery**. The *Northern Glacier* participates in CDQ multi-species fisheries on behalf of several CDQ groups and the Bering Sea TLAS yellowfin sole fishery. To limit the potential complexities that could arise from applying EFP halibut mortality among multiple CDQ groups, this EFP would be limited to only those fishing conducted while the vessel is fishing under the Bering Sea TLAS fishery. All halibut mortality associated with this EFP would be deduced from the halibut mortality assigned to the TLAS yellowfin sole fishery category in the annual harvest specifications. This EFP would be limited to the Bering Sea.

D. **To ensure all donated halibut are properly accounted for by assigning a 100% mortality rate**. Under existing discard mortality rate (DMR) calculations conducted by observers and NMFS, a small percentage of halibut that are returned to sea after observer sampling remain viable. This EFP would apply a 100% mortality rate to all EFP donated halibut. This adjustment would not be expected to have a significant impact on total halibut mortality because no more than 3.0 mt of halibut could be retained under this EFP, and only 14% of halibut tested at the observer sampling station are estimated as viable.[17] If the full 3.0 mt of halibut were retained under this EFP, the difference between the current DMR and the EFP DMR would result in approximately 0.5 mt of additional halibut mortality. Total authorized round weight halibut mortality in the TLAS yellowfin sole fishery in 2026 was 153 mt, and this EFP would have a *de minimus* impact on halibut mortality in this fishery and overall in the Bering Sea.[18]

3.3 Proposed Exemption(s)

Based on our initial review, and preliminary discussions with NMFS Alaska Region and NOAA General Counsel, it does not appear that this regulation would require any exemption from IPHC regulations. IPHC regulations allow a person to "retain, possess and dispose of Pacific halibut taken with trawl gear only as authorized by Prohibited Species Donation regulations of NOAA Fisheries."[19] This EFP, if granted, would authorize the limited retention, possession, and disposition of halibut only as authorized by the PSD Program regulations established by NOAA Fisheries.

This EFP would require exemption from regulations at 50 CFR 679.26(a)(2) that limit halibut donations to "catcher vessels using trawl gear to shoreside processors and stationary floating processors."

Regulations that currently apply to handling and labeling requirements under 50 CFR 679.26 would continue to apply. An initial review of recordkeeping and reporting requirements, and prohibitions does not indicate additional exemptions would be required.

4. **Technical Details**

[17] See Table 20 in the 2026/2027 Annual Harvest Specifications for BSAI groundfish available at: Federal Register :: Fisheries of the Exclusive Economic Zone Off Alaska; Bering Sea and Aleutian Islands; 2026 and 2027 Harvest Specifications for Groundfish
[18] See Tables 16 and 17 in the 2026/2027 Annual Harvest Specifications for BSAI groundfish available at: Federal Register :: Fisheries of the Exclusive Economic Zone Off Alaska; Bering Sea and Aleutian Islands; 2026 and 2027 Harvest Specifications for Groundfish
[19] See section 17(11) in IPHC Fishery Regulations available at: IPHC-Fishery-Regulations-2026-4-Feb-2026.pdf

4.1 Amounts of Each Species, Including Prohibited Species

This EFP requests the donation of up to 3.0 mt roundweight equivalent of halibut to the PSD program. This amount would not be in addition to any halibut PSC limits established by regulation. Groundifsh catch limits would not be modified.

4.2 Marine Mammals and Endangered Species

This EFP would not alter fishing location, time, or harvest limits in any manner not previously considered and analyzed under biological opinions. This EFP would not be expected to result in any effects on marine mammals that differ from the status quo.

4.3(a) Timing

Typically, the Bering Sea TLAS yellowfin sole fisheries are conducted in conjunction with CDQ multi-species fisheries. We anticipate that donations under this EFP would be conducted between May and July when a significant proportion of Bering Sea TLAS yellowfin sole fisheries are conducted.

4.3(b) Area

The Bering Sea TLAS yellowfin sole fishery would occur only in those locations or are areas that are authorized for fishing. This EFP would not require fishing in locations or times not otherwise authorized. All EFP donations will be offloaded and transferred to cold storage facilities in Unalaska/Dutch Harbor at facilities directed by SeaShare.

4.4 Vessel and Gear

The *Northern Glacier* would be the sole designated vessel used under this EFP. This EFP would not require any change in currently authorized gear or equipment.

4.5 Funding

No additional funding would be required to conduct this EFP. The costs of processing, freezing, holding, and delivering the donated halibut to cold storage facilities identified by SeaShare would be borne by Glacier Fish Company.

4.6 Additional Permits

No additional permits from other agencies would be required.

4.7(a) Experimental Design and Analysis

This EFP does not require an experimental design in the sense of establishing control and experimental fishing. The EFP will require clear communication protocols between the vessel operator and the onboard observers to ensure that halibut that are retained for donation are clearly set-aside after the observer conducted sampling and are then processed and packed for donation.

Per guidance from the Alaska Fisheries Science Center in their review of this EFP, processing and handling of halibut for donation on the *Northern Glacier* would be conducted in a manner that minimizes potential conflict with the observer particularly near the observer sampling station. Processing the halibut (heading and gutting) would be conducted by processing crew and then packed and frozen with clear PSD labeling. Existing observer station regulatory cameras could monitor the partitioning of halibut for donation. For each haul where

donations occur, we anticipate recording the number and weight of headed and gutted halibut to ensure adequate tracking of the halibut product during offload. Vessel operators would create a clear and distinct process for processing, packing, freezing and casing halibut to ensure it is easily distinguished from product entering commerce.

Metrics of success for this EFP include clear tracking of donated halibut, and ensuring that logistics associated with this EFP do not create additional challenges in catch accounting and monitoring. The most critical metric of success would be minimizing the regulatory mandated discarding of fish and furthering the objectives of hunger relief under the PSD Program.

4.7(b) Reporting Requirements and Associated Timing

The Applicants will prepare an interim report midway through the EFP that includes a summary of the amount of catch donated, any problems and successes, and how well EFP objectives were accomplished. Within 6 months of the end of EFP fishing, the Applicants will prepare and submit to NMFS a final report that updates the interim report and summarizes the results of the EFP and how well EFP objectives were accomplished. The reports will be disclosed to the public and the Applicants understand that they may be asked to present EFP results to the Council.

4.8(c) Public Release of Information

The amount of halibut donation will be made available to the public. To the extent possible, the disposition of distributed product will be provided.

5. **Observers**

This application would not require additional observer coverage and would not be expected to increase observer duties other than the need for clear communication between vessel crew and the observer to ensure specific hauls are clearly designated as EFP hauls and the amount and weight of halibut donated and processed is clearly identified.

6. **Principal and coordinating parties**

Glenn Merrill, Director of Government Affairs – Glacier Fish Co. Responsible for coordination with vessel crew, NOAA, and SeaShare

Hannah Lindoff, Executive Director – SeaShare Inc. Responsible for donation and distribution management.

7. **Vessel Information (50 CFR 600.745(b)(2)(iv))**

Vessel Name: Northern Glacier, Glacier Fish Co.
EFP Contact: Glenn Merrill, POB 21087 Juneau AK 99802
Vessel Skipper: TBD
Vessel Federal Fisheries Permit Number. 661
USCG Documentation Number. 663457
Home Port Vessel: Seattle, WA
Length: 201 ft. LOA
Net Tonnage. Gross Tonnage. 1109 GRT

8. **Applicant Signatures**

/s/ Glenn Merrill

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Glenn Merrill, GFC

/s/ Hannah Lindoff

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Hannah Lindoff, SeaShare

9. **References**

See footnotes in text for citations to specific regulations and previous EFPs.

PUBLIC REPORTING BURDEN STATEMENT

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995 unless the information collection has a currently valid OMB Control Number. The approved OMB Control Number for this information collection is 0648-0206. Without this approval, we could not conduct this information collection. Public reporting burden for this information collection is estimated to average 100 hours per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Responses to this information collection are required to obtain or retain benefits and to manage exempted fishing in the Gulf of Alaska and Bering Sea and Aleutian Islands under 50 CFR 679 and under 402(a) of the Magnuson-Stevens Fishery Conservation and Management Act. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden, to NOAA, National Marine Fisheries Service, Alaska Region, Attn: Assistant Regional Administrator, Sustainable Fisheries Division, P.O. Box 21668, Juneau, AK 99802-1668.

PRIVACY ACT STATEMENT

Authority: The collection of this information is authorized under the Magnuson-Stevens Act, (16 U.S.C. 1801 *et seq.*).
Purpose: An EFP is issued by the NMFS Alaska Region to allow the target or incidental harvest of species managed under a fishery management plan or fishery regulations that would otherwise be prohibited. These permits are issued for limited experimental purposes to support projects that could benefit the fisheries and the environment. The Magnuson-Stevens Act specifically recognizes the need for permit issuance. The requirement of a permit for marine resource users is one of the regulatory steps taken to carry out conservation and management objectives. The issuance of a permit is an essential ingredient in the management of fishery resources needed for identification of the participants and expected activity levels and for regulatory compliance.
Routine Uses: The Department will use this information to determine permit eligibility, identify fishery participants, and regulatory compliance. All data collected by the permit holder on the vessel named on the Vessel Designation Sheet submitted to NMFS for fishing under this permit are disclosable to the public, except for haul-specific catch data and vessel-specific fishing locations and other proprietary business information not relevant to the studies, which are otherwise treated consistent with confidentiality provisions under the Magnuson-Stevens Act. Data collected by NMFS observers relevant to this EFP are disclosable to the public; otherwise, observer data will be treated consistent with data confidentiality provisions under the Magnuson-Stevens Act. All information collections by NMFS Alaska Region are protected under confidentiality provisions of section 402(b) of the Magnuson-Stevens Act as amended in 2006 (16 U.S.C. 1801, *et seq.*) and under NOAA Administrative Order 216-100, which sets forth procedures to protect confidentiality of fishery statistics. Disclosure of this information is permitted under the Privacy Act of 1974 (5 U.S.C. Section 552a), to be shared within NMFS offices, in order to coordinate monitoring and management of sustainability of fisheries and protected resources, as well as with the applicable State or Regional Marine Fisheries Commissions and International Organizations. Disclosure of this information is also subject to all of the published routine uses identified in the Privacy Act System of Records Notice COMMERCE/NOAA-19, Permits and Registrations for the United States Federally Regulated Fisheries.
Disclosure: Furnishing this information is required to obtain an EFP; failure to provide complete and accurate information may prevent or delay issuance of an EFP.