INTERNATIONAL PACIFIC HALIBUT COMMISSION

2026-28 FISS design evaluation

Agenda item 8.1

IPHC-2026-AM102-13

(R. Webster, I. Stewart, K. Ualesi, T. Jack, & D. Wilson)

Summary

The optimal long-term FISS design, the **Base Block design** (Option 1), is not financially viable for 2026, with a projected loss of over US$1 million.

At IM101, the Commission adopted a more cost-effective alternative, the **Supplemented Reduced Loss design** (Option 2) with a projected loss of close to US$0.5 million.

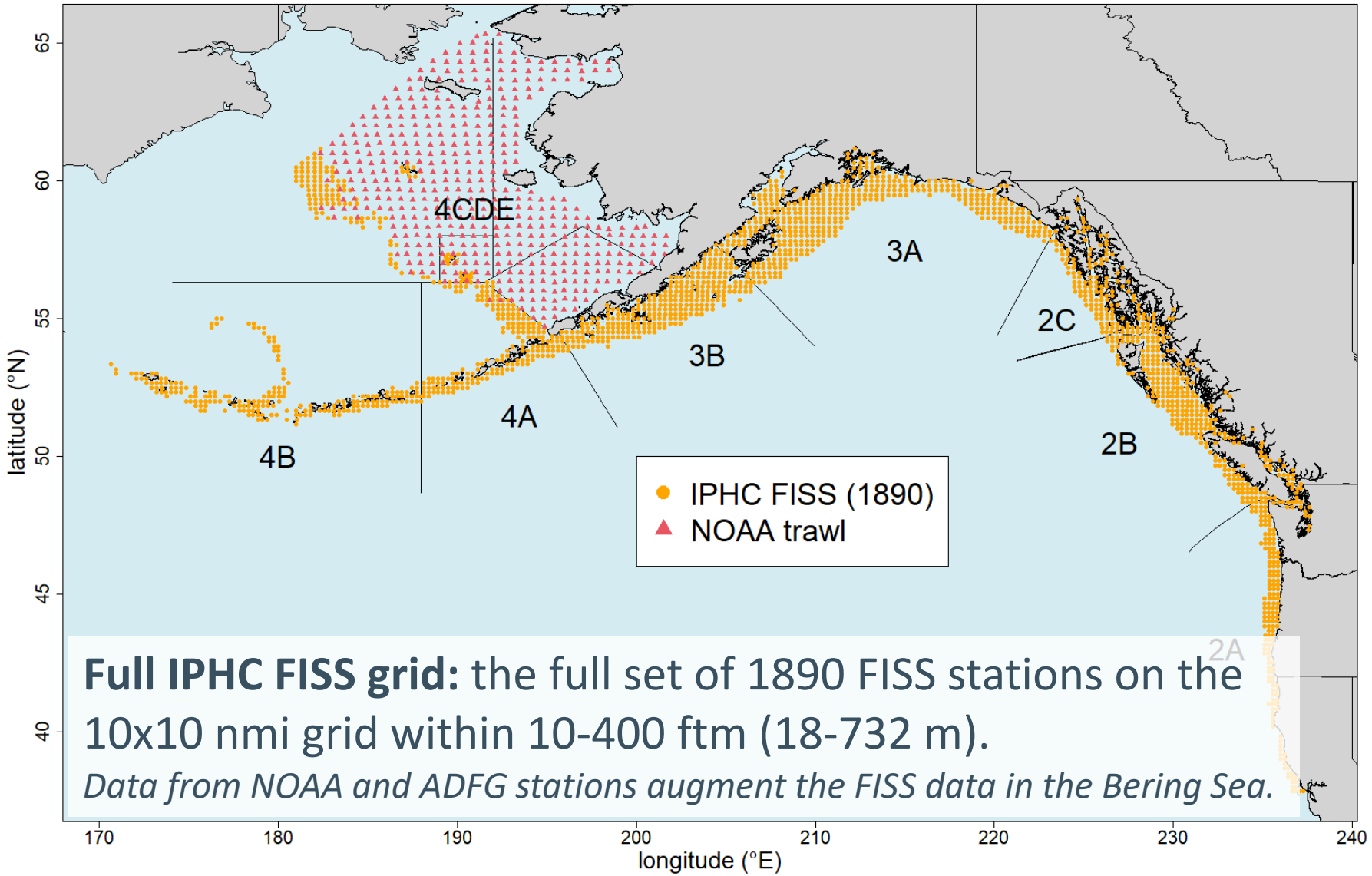
IPHC-2025-IM101-R, para. 33:

> *The Commission **ADOPTED** the Supplemented Reduced Loss design (Option 2) for the 2026 FISS as provided in Appendix IV, **NOTING** that other charter regions may be added before the end of January 2026.*

IPHC FISS

- Our most important source of data on Pacific halibut
- Provides data for estimating weight and numbers per unit effort (WPUE and NPUE) indices of density and abundance of Pacific halibut
  - Used to estimate stock trends
  - Used to estimate stock distribution
  - Important input in the IPHC stock assessment
- Provides biological data for use in the stock assessment
- An annual FISS has been undertaken since 1993
  - Design expanded from 1993-2000 to include sampling in all IPHC Regulatory Areas
  - Further expansion into previously unsampled waters during 2011-2019 period

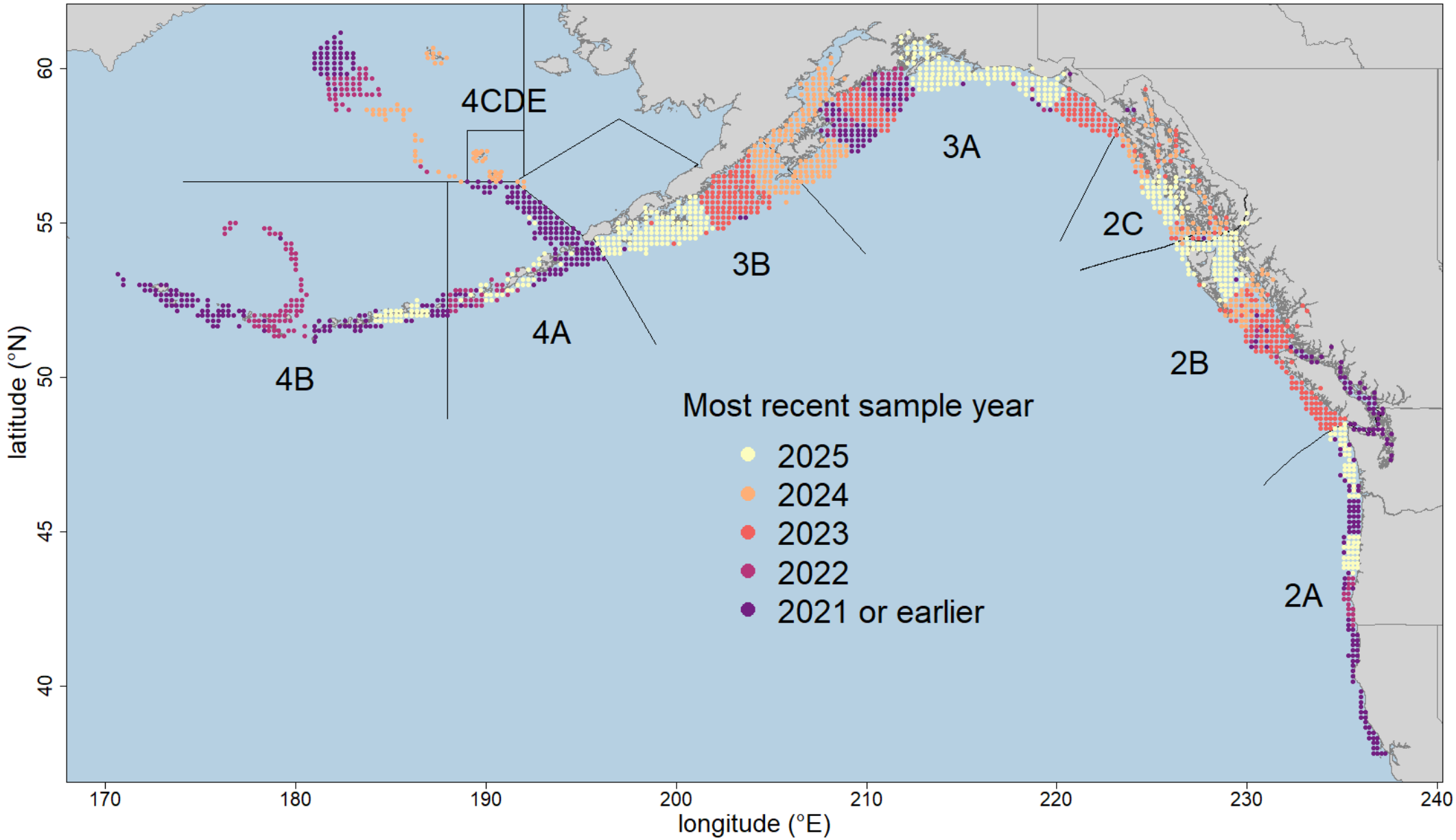
Full FISS grid



Full IPHC FISS grid: the full set of 1890 FISS stations on the 10x10 nmi grid within 10-400 ftm (18-732 m).

Data from NOAA and ADFG stations augment the FISS data in the Bering Sea.

Most recent sampling year by station

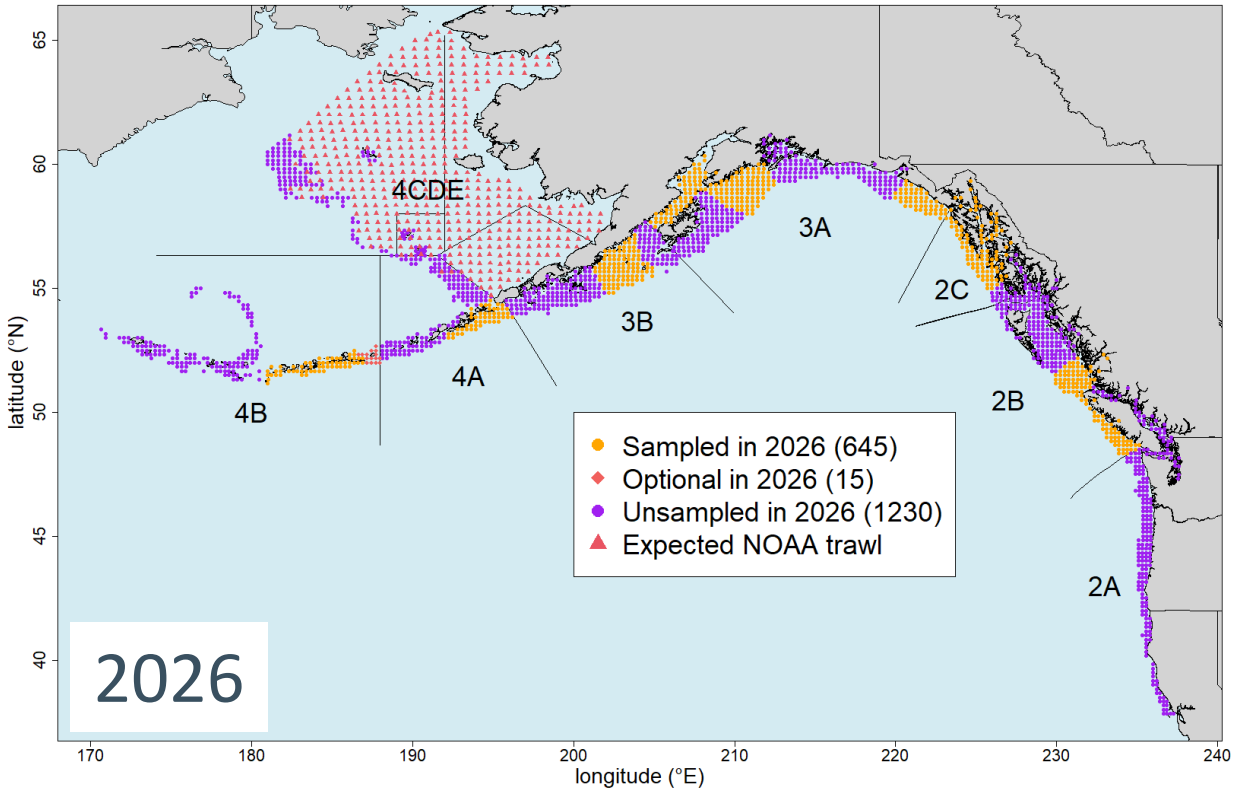


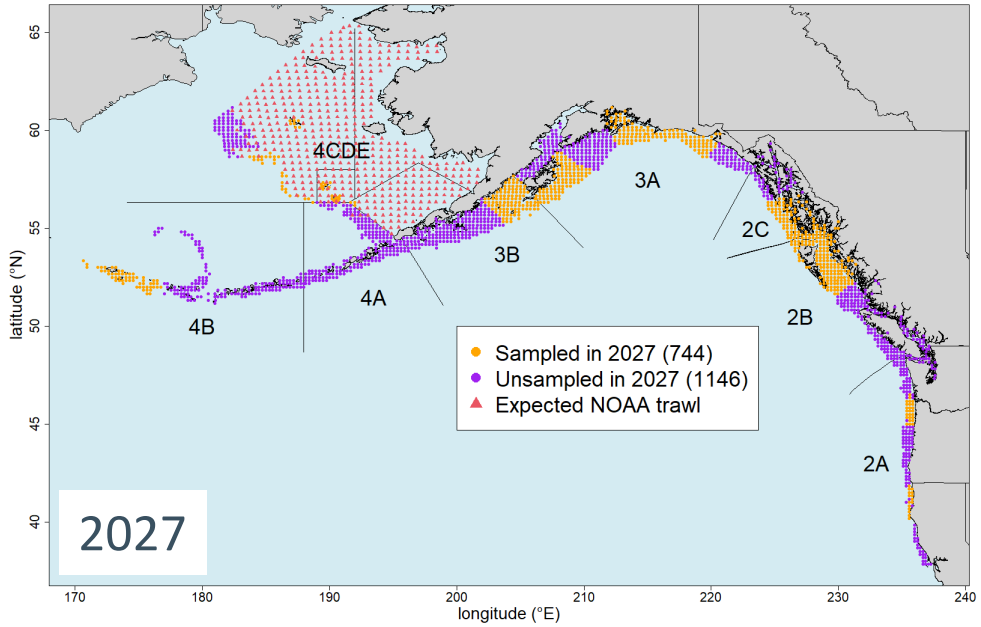
FISS objectives and design layers

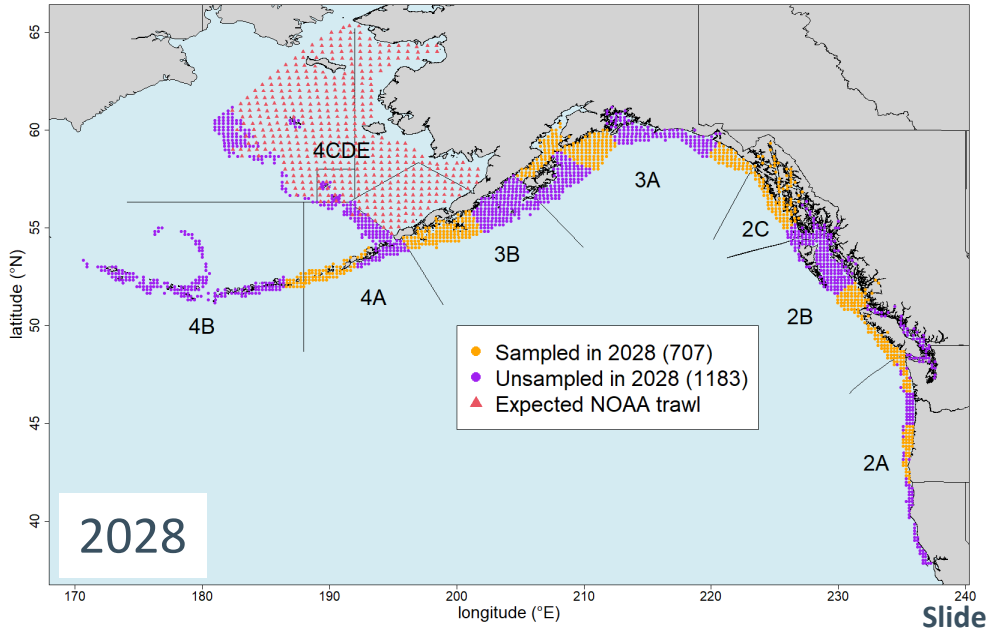
Priority	Objective	Design Layer
Primary	Sample Pacific halibut for stock assessment and stock distribution estimation	Minimum sampling requirements in terms of: • Station distribution • Station count • Skates per station
Secondary	Cost effectiveness without compromising the scientific integrity of the FISS design.	Balance operational feasibility/logistics, cost/revenue, and scientific needs. Includes an aspirational target reserve of US$2,000,000.
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

The Base Block design (Option 1)

- The **Base Block design** is considered the **optimal long-term FISS design** in terms of balancing scientific needs and cost-effectiveness and is referred to as **Option 1**:
  - Prioritizes some annual sampling in each Biological Region for stock assessment purposes.
  - Ensures all charter regions in the core of the stock (2B, 2C, 3A and 3B) are sampled over a three-year period
  - Coverage in other areas is prioritized to minimize bias potential and maintain relatively precise estimates
- The sampled blocks (charter regions) are rotated over time.





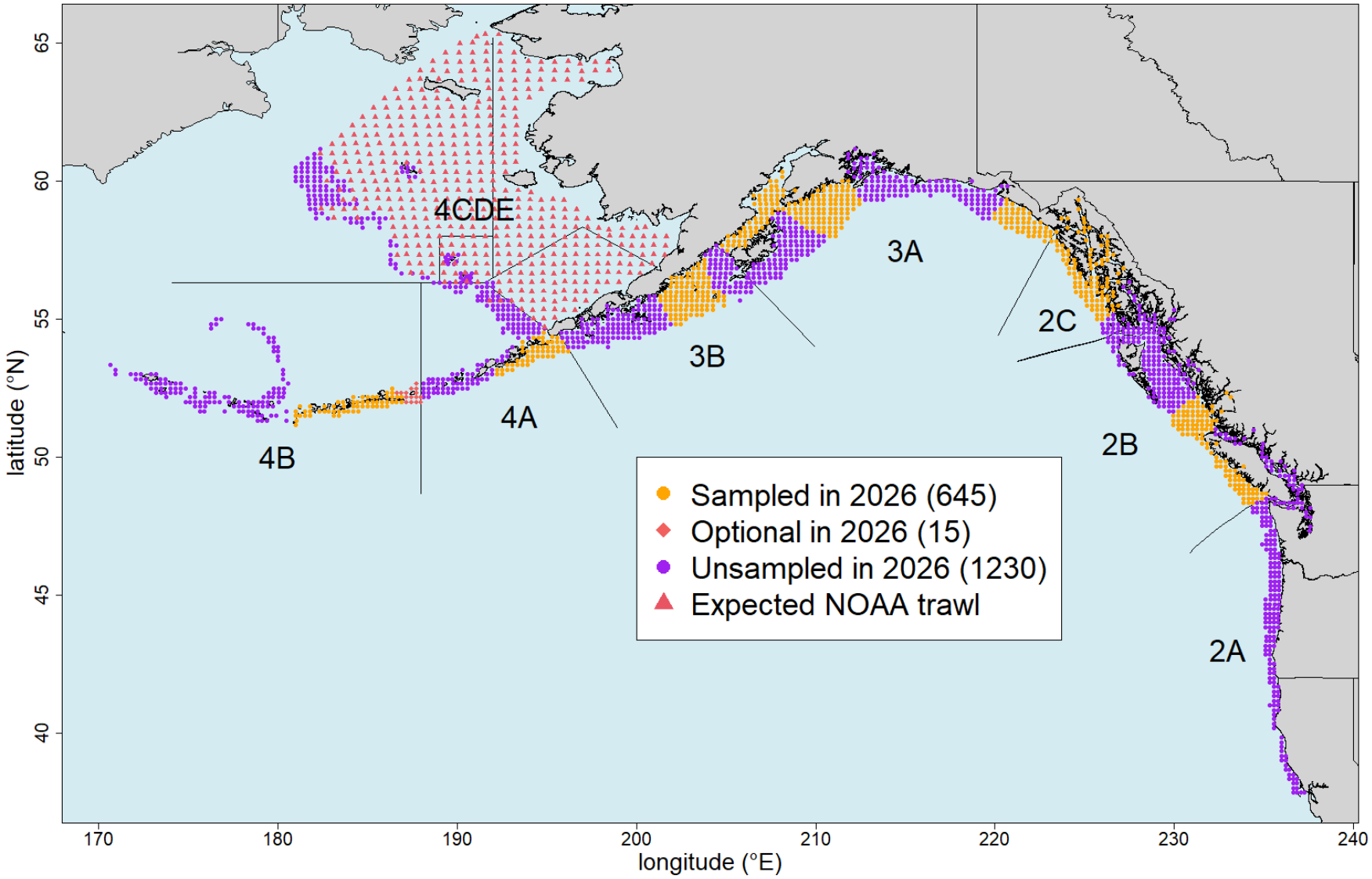


Potential Base Block designs 2026-28

Cost evaluation

- Projected costs for 2026 design options were estimated assuming:
  - Designs are optimized for numbers of skates, with 4, 6 or 8 skate-sets used, depending on projected catch rates and bait costs
  - Pacific halibut price will decline by 10% from 2025 values
  - Pacific halibut landings will decline by 5% from 2025 values
  - The price of chum salmon bait increases to US$2.50 per pound from $1.65 per pound in 2025
- Revenue projections include a US$513,000 voluntary contribution from the USA to support the 2026 FISS

Option 1: Base Block design



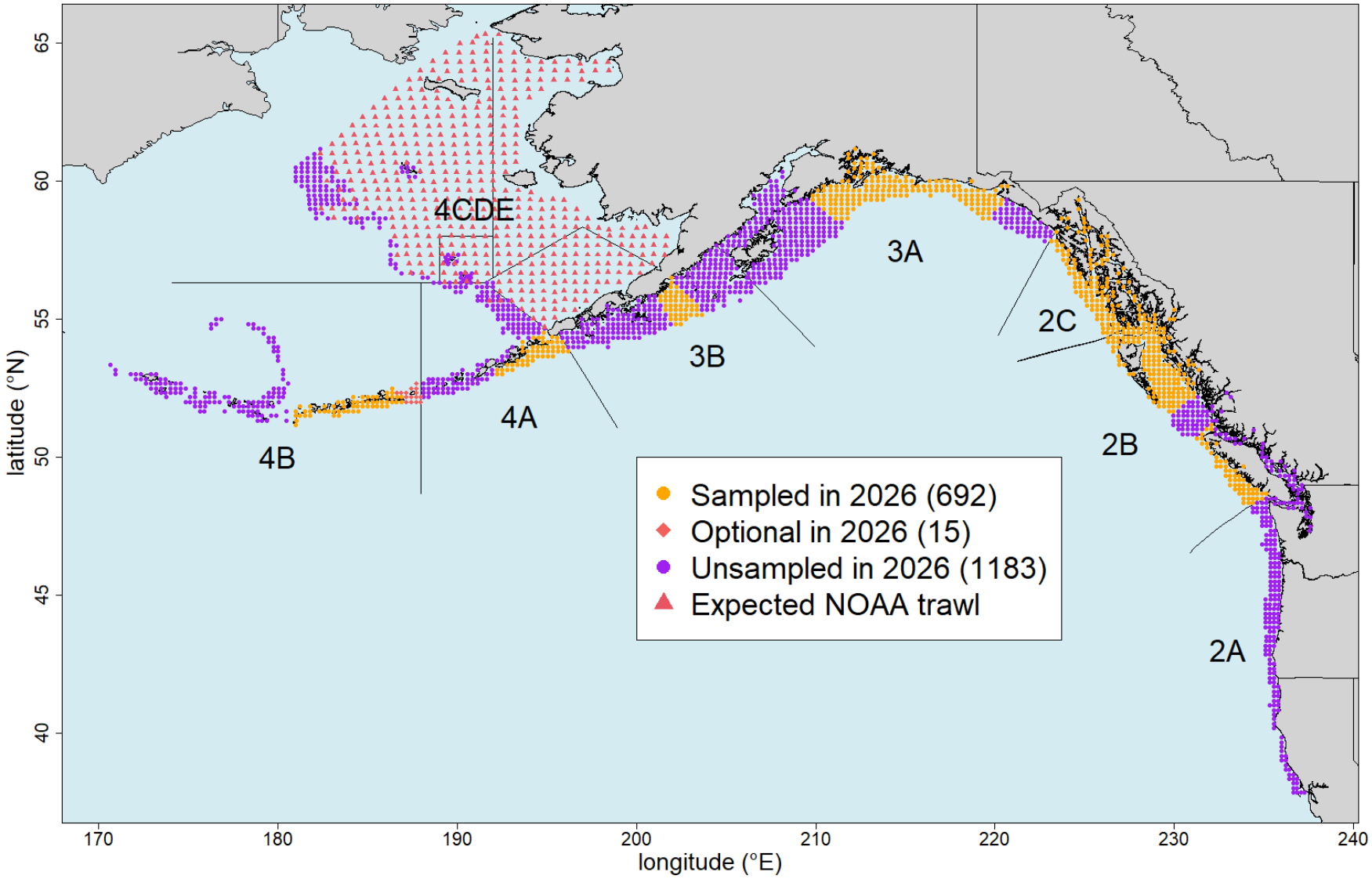
Projected net revenue (US$):
($1,155,000)

Income: $2,345,000
Expenses: ($3,500,000)

Supplemented Reduced Loss Design (Option 2)

- The **Base Block design** (Option 1) is projected to result in a **substantial operating loss** for the FISS and would require additional supplementary funding to be financially viable.
- The Commission-adopted **Supplemented Reduced Loss design** (Option 2) has a projected net operating loss of close to US$0.5 million, with the revenue again supplemented by the voluntary USA contribution of US$513,000.
- **Option 2** differs from **Option 1** as follows:
  - Replaces one revenue-negative charter region in IPHC Regulatory Area 2B with two regions projected to be revenue-positive
  - Adds one revenue-positive region to IPHC Regulatory Area 2C
  - Replaces three high-cost regions in IPHC Regulatory Area 3A with two regions that ensure projected overall losses are maintained close to US$0.5 million
  - Has one fewer charter region in IPHC Regulatory Area 3B

Option 2: Supplemented Reduced Loss design



Projected net revenue (US$):
($502,000)

Income: $3,134,000
Expenses: ($3,636,000)

Options 1 and 2: income and expense comparison

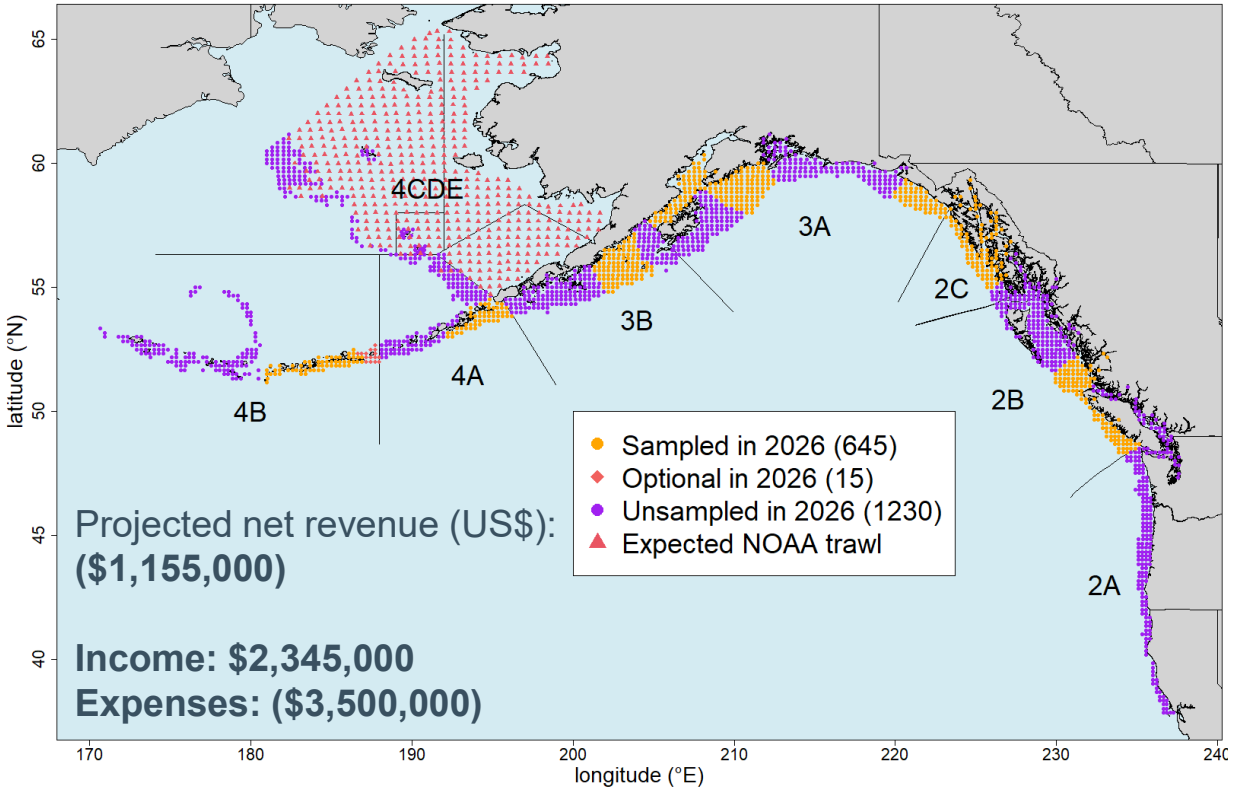
Design		Option 1 (Base Block)	Option 2 (Supplemented Reduced Loss)
Income (US$)	Pacific halibut sales	1,747,000	2,519,000
	Byproduct sales	85,000	102,000
	Voluntary contribution - USA	513,000	513,000
	Total	**2,345,000**	**3,134,000**
Expenses (US$)	Base HQ (staff salary and wages, and benefits x 4)	(534,000)	(534,000)
	Vessel contracts	(1,366,000)	(1,382,000)
	Field staff (salary and wages, and benefits)	(492,000)	(492,000)
	Bait	(414,000)	(457,000)
	Non-IPHC fish sales	(224,000)	(301,000)
	Other expenses*	(471,000)	(471,000)
	Total	**(3,500,000)**	**(3,636,000)**
Net revenue		**(US$1,155,000)**	**(US$502,000)**

Supplemented Reduced Loss Design

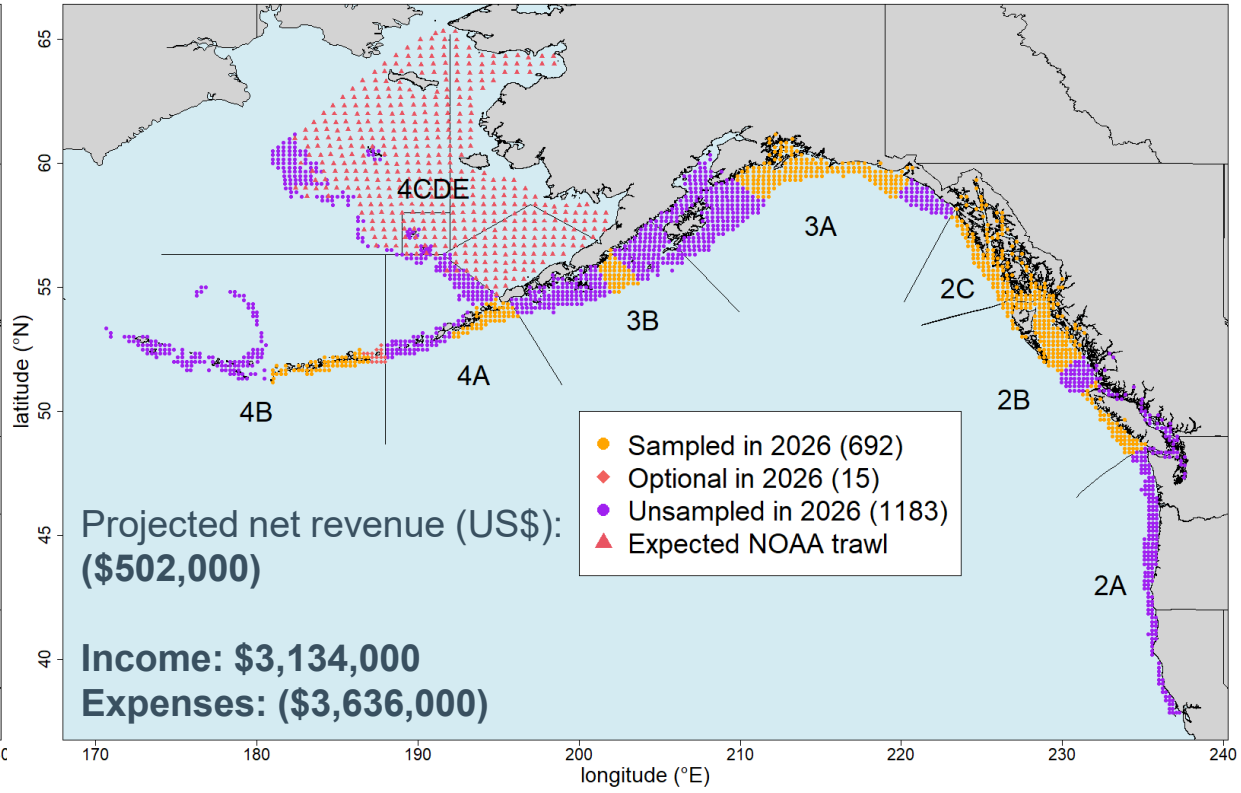
- **Option 2** prioritizes some regions that have been fished recently over others that were included in the Base Block design because they lacked recent sampling.
  - Helps ensure cost-effectiveness
  - Reduces spatial coverage in Region 3 over 2025-26, increasing the chance of bias in estimates for that region
- Nevertheless, **Option 2** represents a substantial improvement in coverage over the 2025 FISS, and complements the 2025 design by including seven charter regions not sampled this year:
  - Two each in 2B and 2C; one each in 3A and 3B; one in 4A.
- Compared with 2024 and 2025, **Option 2** will result in more representative biological data, more precise indices of abundance and stock distribution, and an assessment model that is less reliant on commercial data.

Comparison of Options 1 and 2

Option 1: Base Block design

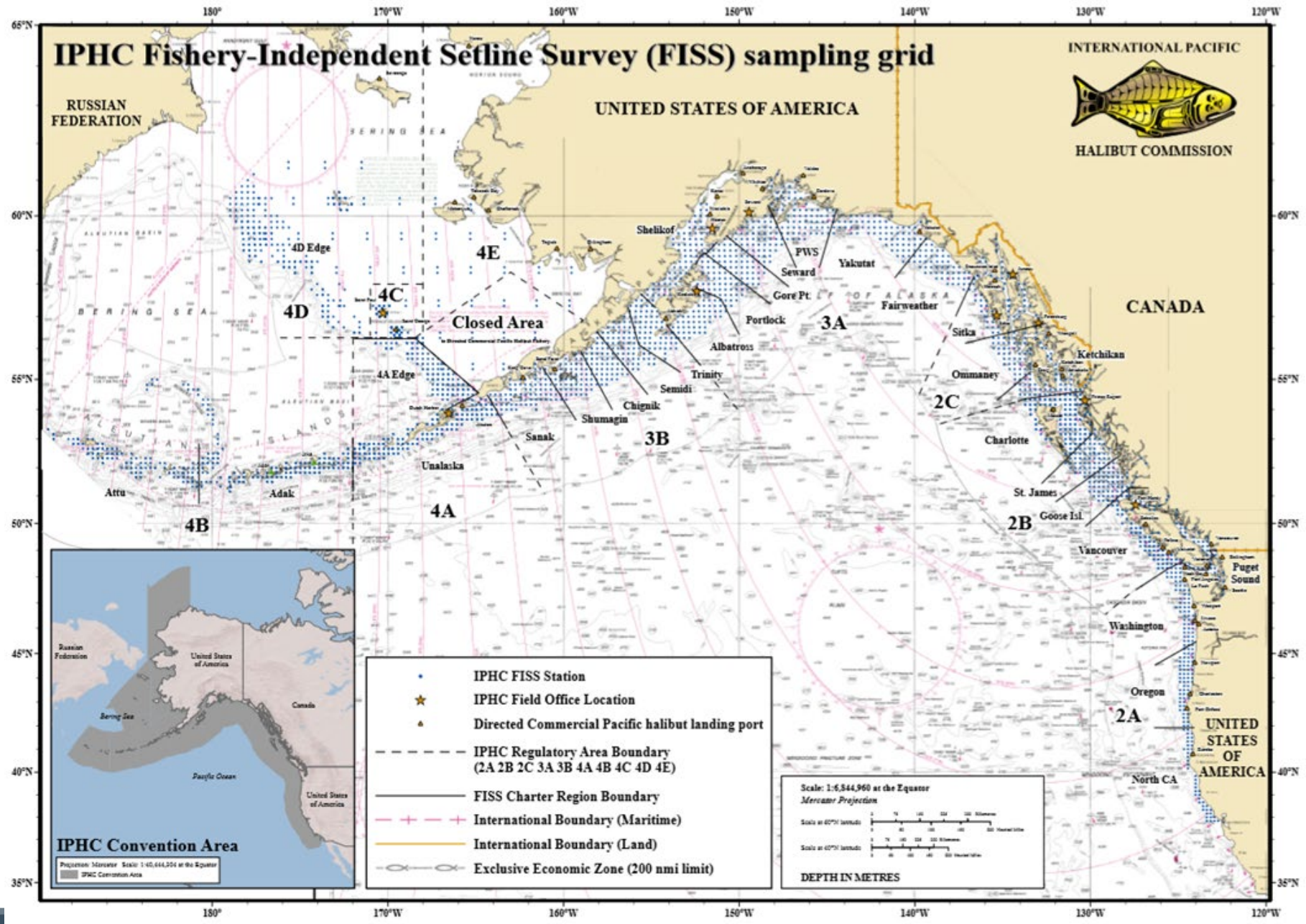


Option 2: Supplemented Reduced Loss design



Intermediate modular changes

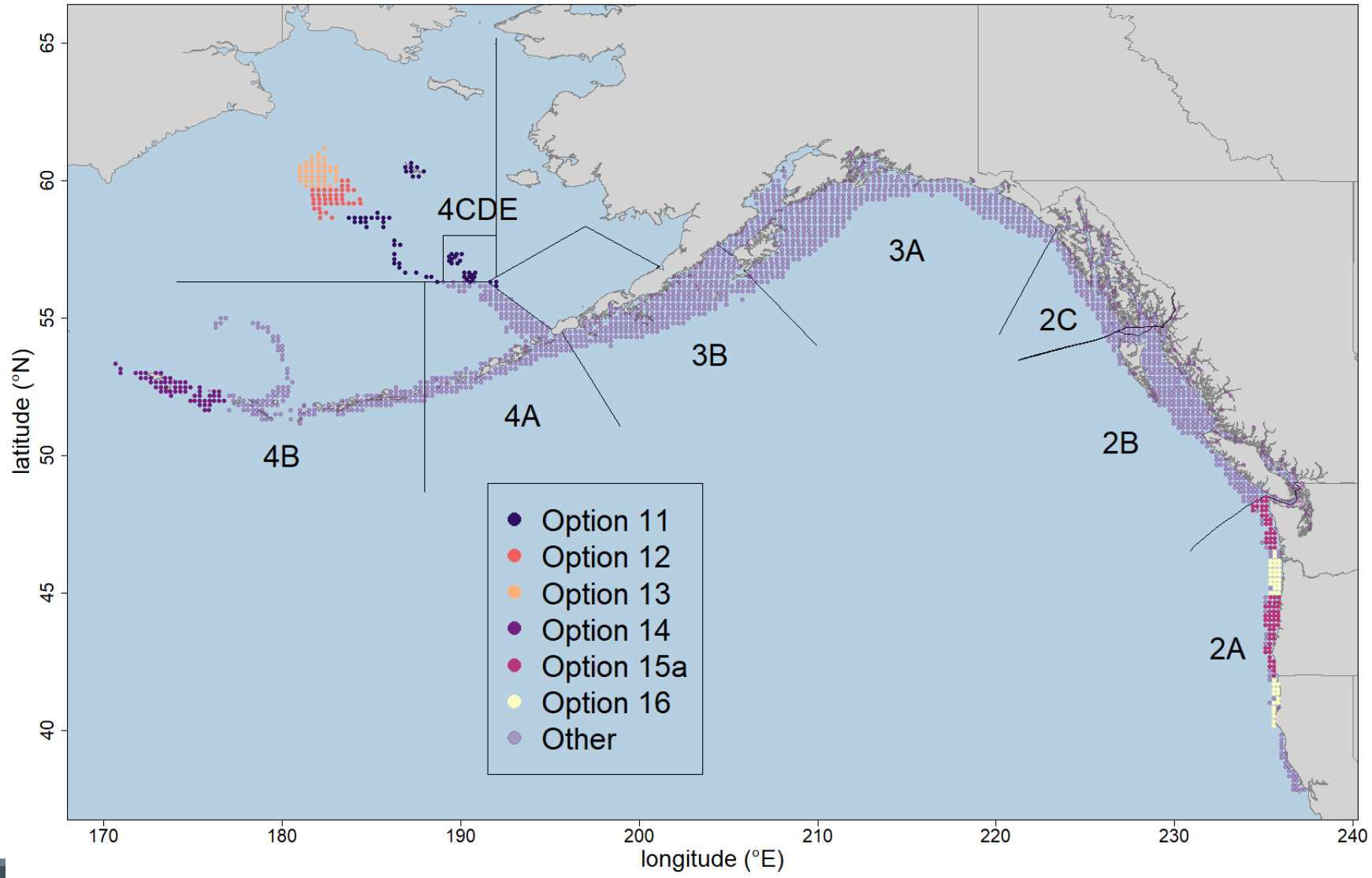
Option	Design	Sampled IPHC Regulatory Areas (with number of FISS charter regions)	Projected expenses (US$)	Projected income (US$)	Projected net revenue (US$)	Benefit/rationale
1	Base Block	2B(2), 2C(2), 3A(4), 3B(2), 4A(1), 4B(1)	($3,500,000)	$2,345,000	($1,155,000)	Optimal long-term design
2	Supplemented Reduced Loss	2B(3), 2C(3), 3A(3), 3B(1), 4A(1), 4B(1)	($3,636,000)	$3,134,000	($502,000)	Financially viable design using IPHC FISS reserve funds.
	Design change	**Change in sampling**	**Projected change in expenses (US$)**	**Projected change in income (US$)**	**Projected change in net revenue (US$)**	
3	Add Semidi	3B(+1)	($219,000)	$70,000	($150,000)	Improves 3B coverage. Last sampled 2023.
4	Replace Prince William Sound with Gore Pt	3A(+0)	$45,000	($109,000)	($64,000)	Gore Point last sampled 2023, PWS in 2025.
5	Replace Yakutat with Fairweather	3A(+0)	$25,000	($127,000)	($102,000)	Fairweather last sampled 2023, Yakutat in 2025.
6	Add Goose Island	2B(+1)	($244,000)	$138,000	($106,000)	Improves 2B coverage. Last sampled 2023.
7	Add Shelikof	3A(+1)	($250,000)	$150,000	($101,000)	Improves 3A coverage. Last sampled 2024.
8	Remove St James	2B(-1)	$246,000	($311,000)	($66,000)	Removes lower-priority revenue-positive region. Last sampled 2024.
9	Remove Ketchikan	2C(-1)	$218,000	($220,000)	($2,000)	Removes lower-priority revenue-positive region. Last sampled 2024.
10	Remove Charlotte	2B(-1)	$314,000	($379,000)	($65,000)	Removes lower-priority revenue positive region. Last sampled 2025.


IPHC Fishery-Independent Setline Survey (FISS) sampling grid
INTERNATIONAL PACIFIC HALIBUT COMMISSION
RUSSIAN FEDERATION
UNITED STATES OF AMERICA
CANADA
BERING SEA
4D Edge
4E
4C
4D
Closed Area
4A Edge
4B
4A
3B
3A
2C
2B
2A
Shelikof
PWS
Seward
Yakutat
Gore Pt.
Portlock
Albatross
Trinity
Semidi
Chignik
Shumagin
Sanak
Unalaska
Attu
Adak
Fairweather
Sitka
Ommaney
Ketchikan
Charlotte
St. James
Goose Isl
Vancouver
Puget Sound
Washington
Oregon
North CA
UNITED STATES OF AMERICA
IPHC Convention Area
IPHC FISS Station
IPHC Field Office Location
Directed Commercial Pacific halibut landing port
IPHC Regulatory Area Boundary (2A 2B 2C 3A 3B 4A 4B 4C 4D 4E)
FISS Charter Region Boundary
International Boundary (Maritime)
International Boundary (Land)
Exclusive Economic Zone (200 nmi limit)
DEPTH IN METRES

Modular add-ons to Options 1 and 2

Option	Design change	Change in sampling	Projected change in expenses (US$)	Projected change in income (US$)	Projected change in net revenue (US$)	Benefit/rationale	Next proposed sampling in Base Block design
11	Add 4CDE South (includes St George, St Paul and St Matthew)	4CDE(+1)	($240,000)	$34,000	($205,000)	Add FISS coverage to highest density part of 4CDE. Last sampled in 2024.	2027
12	Add 4CDE Central	4CDE(+1)	($184,000)	$28,000	($155,000)	Add FISS coverage to 4CDE. Last sampled in 2022.	2029
13	Add 4CDE North	4CDE(+1)	($178,000)	$8,000	($171,000)	Add FISS coverage to 4CDE. Last sampled in 2021.	2029
14	Add Attu	4B(+1)	($242,000)	$28,000	($214,000)	Improves 4B coverage. Last sampled in 2019.	2027
15a	Add highest-density stations in 2A	2A(+1)	($308,000)	$40,000	($268,000)	For comparison with 2025 (localized hypoxia). Partially sampled in 2025.	2028
15b	Repeat 2025 2A design	2A(+1)	($281,000)	$34,000	($247,000)	Smaller, more cost-effective comparison with 2025 than Option 15a.	N/A
16	Add medium-density stations in 2A	2A(+1)	($313,000)	$18,000	($295,000)	Last sampled in 2017-18.	2027

Modular Options 11 to 16



Recommendation

That the Commission **NOTE** paper IPHC-2026-AM102-13 that provides FISS design options for 2026, including the approved Supplemented Reduced Loss Design (Option 2)

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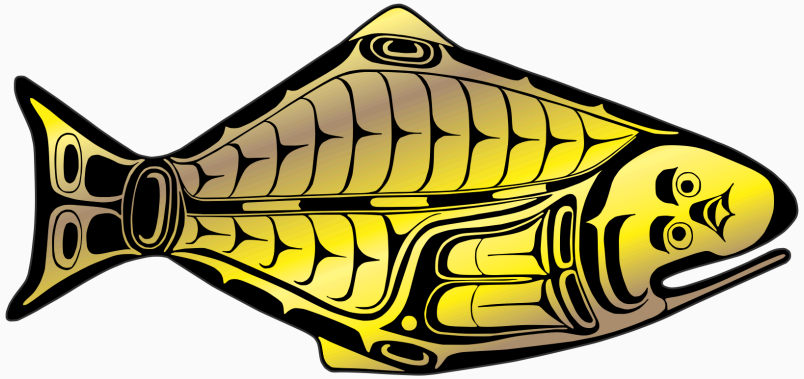

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