

Certified Seafood International (CSI)



U.S. Alaska Pacific Halibut and Sablefish Commercial Fisheries

Surveillance Report

Certification Body (CB):	Global Trust Certification
Assessment team:	Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor
Fishery client:	Alaska Fisheries Development Foundation
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Global Trust Certification

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Foreword

The Certified Seafood International (CSI) Certification program is a third-party sustainable seafood certification program for wild capture fisheries owned by the Certified Seafood International (CSI) Inc led by a diverse board of seafood and sustainability industry experts.

The Certified Seafood International (CSI) represents the latest stage in the evolution of the Alaska Responsible Fisheries Management (RFM) Program, which began in 2010 as a credible, ISO-based third-party certification system for sustainable wild-capture fisheries. Developed by the Alaska Seafood Marketing Institute (ASMI), the RFM Program was grounded in the UN FAO Code of Conduct for Responsible Fisheries and Eco-labelling Guidelines and operated under two core standards to ensure responsible practices and traceability.

In 2020, ownership of the RFM Program transitioned to the Certified Seafood Collaborative (CSC), a nonprofit organization focused on expanding the program to include other North American fisheries outside the State of Alaska while improving efficiency and reducing costs. This marked a key step in broadening the program's reach and impact.

In 2025, the program advanced further by transferring its name and assets to Certified Seafood International (CSI), a U.S.-based organization structured as a nonprofit and currently applying for 501(c) status nonprofit. This transition supports the program's global expansion, offering a cost-effective, credible certification option for wild-capture fisheries worldwide and reinforcing its commitment to responsible seafood sourcing on an international scale.

The Certified Seafood International (CSI) Responsible Fisheries Management (RFM) Standard is composed of Conformance Criteria based on the 1995 FAO Code of Conduct for Responsible Fisheries and the FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Marine Capture Fisheries adopted in 2005 and amended/extended in 2009. The CSI RFM Standard also includes full reference to the 2011 FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Inland Fisheries which in turn are now supported by a suite of guidelines and support documents published by the UN FAO. Further information on the CSI program may be found at: <https://csicertified.org/>.

1. Contents

Foreword	2
1. Contents	3
1.1. List of Figures	5
1.2. List of Tables.....	5
2. Glossary.....	6
3. Executive Summary	9
3.1. Brief intro and description of surveillance process.	9
3.2. Summary of main findings.....	10
3.3. Recommendation with respect to continuing Certification.....	10
3.4. Assessment Team Details	10
3.5. Details of Applicable CSI Documents	11
4. Client contact details	12
5. Unit(s) of Certification	13
5.1. Changes to the Unit(s) of Certification (if any)	13
6. Summary of site visits and/or consultation meetings	14
7. Summary findings.....	22
7.1. Update on topics that trigger immediate failure	22
7.2. Changes in the management regime and processes	22
7.3. Changes to the organizational responsibility of the main management agencies	24
7.4. New information on the status of stocks	24
7.5. Update on fishery catches	24
7.6. Significant changes in the ecosystem effects of the fishery	25
7.7. Violations and enforcement information	26
7.8. Other information that may affect the outcome of certification	30
7.8.1. Section A: The Fisheries Management System.....	31
7.8.1.1. Fundamental Clause 1. Structured and legally mandated management system	31
7.8.1.2. Fundamental Clause 2. Coastal area management frameworks	34
7.8.1.3. Fundamental Clause 3. Management objectives and plan	37
7.8.2. Section B: Science & Stock Assessment Activities, and the Precautionary Approach	40
7.8.2.1. Fundamental Clause 4. Fishery data	40
7.8.2.2. Fundamental Clause 5. Stock assessment.....	44
7.8.2.3. Fundamental Clause 6. Biological reference points and harvest control rule	47
7.8.2.4. Fundamental Clause 7. Precautionary approach.....	49
7.8.3. Section C: Management Measures, Implementation, Monitoring, and Control	53
7.8.3.1. Fundamental Clause 8. Management measures	53
7.8.3.2. Fundamental Clause 9. Appropriate standards of fishers' competence	57
7.8.3.3. Fundamental Clause 10. Effective legal and administrative framework.....	58
7.8.3.4. Fundamental Clause 11. Framework for sanctions	61
7.8.4. Section D: Serious Impacts of the Fishery on the Ecosystem.....	63
7.8.4.1. Fundamental Clause 12. Impacts of the fishery on the ecosystem	63
8. Update on compliance and progress with non-conformances and agreed action plans.....	97
8.1.1. Closed non-conformances	97
8.1.2. Progress against open non-conformances	97
8.1.3. New non-conformances	97
8.1.4. New or revised corrective action plans.....	97
8.1.5. Proposed surveillance activities.....	97
9. Recommendations for continued certification	98
9.1. Certification Recommendation.....	98
10. References.....	99
10.1. References for Fundamental Clauses 1,2,3 9,10,11,12	99
10.2. References: Fundamental Clauses 4,5,6,7,8	104

11.	Appendices.....	106
11.1.	Appendix 1 – Assessment Team Bios	106
11.1.1.	Assessment Team Bios	106

1.1. List of Figures

No table of figures entries found.

1.2. List of Tables

Table 1. Relevant CSI program documents including applicable versions.	11
Table 2. Client details and key contact information.	12
Table 3. Units of Certification, Pacific halibut.	13
Table 4. Units of Certification details, Sablefish.	13
Table 5. Summary of site visits and/or consultation meetings.	14

2. Glossary

Acronym	Full Name
AAF	Areas as Fleets
ABC	Allowable Biological Catch
ABOF	Alaska Board of Fisheries
ACOR	Alaska Coastal Observations and Research
ADEC	Alaska Department of Environmental Conservation
ADFG	Alaska Department of Fish and Game
ADP	Annual Deployment Plan
ADPS	Alaska Department of Public Safety
AFDF	Alaska Fisheries Development Foundation
AHO	Annual Harvest Objective
AKFIN	Alaska Fisheries Information Network
ASMI	Alaska Seafood Marketing Institute
AAV	Average Annual Variability
AWT	Alaska Wildlife Troopers
BSAI	Bering Sea and Aleutian Islands
BSFEP	Bering Sea Fishery Ecosystem Plan
CARE	Committee for Age Reading Experts
CCCABMS	Council Coordinating Committee Area-Based Management Subcommittee
CCTF	Climate Change Task Force
CDQ	Community Development Quota
CFEC	Commercial Fisheries Entry Commission
CPUE	Catch Per Unit Effort
CQE	Community Quota Entity
CSC	Certified Seafood Collaborative
CSP	Catch Sharing Plan
DFG	Derelict Fishing Gear
DMR	Discard Mortality Rate (Halibut)
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EM	Electronic Monitoring
ENGOS	environmental non-governmental organizations
ER	Electronic Reporting
FC	Fundamental Clause
FDA	U.S. Food and Drug Administration
FISS	Fishery-Independent Setline Survey
FMP	Fishery Management Plan
FY	Fiscal Year
GOA	Gulf of Alaska
HAL	Hook-and-line

Acronym	Full Name
HCRs	Harvest Control Rules
HSP	Harvest Strategy Policy
IFQ	Individual Fishing Quota
IPHC	International Pacific Halibut Commission
JEA	Joint Enforcement Agreement
MCS	Monitoring, Control, and Surveillance
MEY	Maximum Economic Yield
MSA	Magnuson-Stevens Act
MSAB	Management Strategy Advisory Board
MSE	Management Strategy Evaluation
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSL	Minimum Size Limit
MSY	Maximum Sustainable Yield
NIH	U.S. National Institute of Health
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOAA - OLE	National Oceanic and Atmospheric Administration Office Law Enforcement
NPFMC	North Pacific Fishery Management Council
NPOP	North Pacific Observer Program
NPUE	Numbers Per Unit Effort
NSEI	Northern Southeast Inside
OFL	Overfishing Level
OLE	Office of Law Enforcement (NOAA)
OM	Operating Model
PacFIN	Pacific Fisheries Information Network
PDO	Pacific Decadal Oscillation
PSC	Prohibited Species Catch
PSEIS	Programmatic Supplemental Environmental Impact Statement
PSTAT	Pacific Sablefish Transboundary Assessment Team
RAB	Research Advisory Board
RFM	Responsible Fisheries Management (Scheme)
SBLIM	Spawning Biomass Limit
SCAA	Statistical Catch-At-Age
SEIS	Supplemental Environmental Impact Statement
SIR	Supplementary Information Report
SPR	Spawning Potential Ratio
SRB	Scientific Review Board
SSC	Scientific and Statistical Committee
SSEI	Southern Southeast Inside
SST	Sea Surface Temperature

TAC	Total Allowable Catch
TCEY	Total Catch Equivalent Yield
TSC	Technical Subcommittee of the Canada-U.S. Groundfish Committee (TSC)
U32	Pacific halibut less than 32" (81.3 cm) in fork length
UoC	Unit of Certification
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
WPUE	Weight Per Unit of Effort

3. Executive Summary

3.1. Brief intro and description of surveillance process.

This Surveillance Report documents the 2nd surveillance assessment of the 1st cycle of recertification for the U.S. Alaska Pacific Halibut and Alaska Pacific Sablefish (Black cod) Commercial Fisheries (200nm EEZ) and presents the recommendation of the Assessment Team for continued CSI Certification.

The Alaska Pacific Halibut Commercial Fishery (200nm EEZ) and the Alaska Pacific Sablefish (Black cod) Commercial Fishery (200nm EEZ) were reassessed and recertified against the requirements of the RFM Certification Program on May 30, 2023. The request for reassessment was made by Alaska Fisheries Development Foundation, and was conducted by Global Trust Certification Ltd. The Alaska Pacific Halibut Commercial Fishery (200nm EEZ) was originally certified on 23rd April 2011, and recertified 9th January 2017. The Alaska Pacific Sablefish (Black cod) Commercial Fishery was originally certified originally certified on 11th October 2011, and recertified 9th January 2017.

This surveillance report documents the assessment results for the continued certification of the above fisheries to the CSI Certification Program. This is a voluntary program that has been supported by ASMI previously and now by Certified Seafood International (CSI) who wish to provide an independent, third-party certification that can be used to verify that these fisheries are responsibly managed.

The assessment was conducted according to the procedures of the Certified Seafood International (CSI) certification program using the fundamental clauses of the Certified Seafood International (CSI) Responsible Fisheries Management (RFM) standard 2.2 (October 2024) in accordance with ISO 17065 accredited certification procedures.

The assessment is based on 4 major components of responsible management derived from the FAO Code of Conduct for Responsible Fisheries (1995) and Guidelines for the Eco-labelling of products from marine capture fisheries (2009); including:

Section A. The Fisheries Management System

Section B. Science and Stock Assessment Activities and The Precautionary Approach

Section C. Management Measures and Implementation, Monitoring and Control

Section D. Serious Impacts of the Fishery on the Ecosystem

These four major components are supported by 12 fundamental clauses (+ 1 in case of enhanced fisheries) that guide the CSI Certification Program surveillance assessment.

The surveillance process included a desktop review of relevant new documentary information including but not limited to: the most current fishery assessment and stock evaluation reports; Groundfish Plan Team reports and meeting minutes; Council publications; relevant scientific publications; ecosystem status reports; fishery management plans and amendments thereof; changes to state and federal regulations; fishery enforcement statistics; environmental impact statements; marine mammal stock assessments; and strategic plans (see Section 10 - References for a more complete listing of documents reviewed).

The surveillance process also included substantive meetings with representatives from each of the key fishery management agencies charged with management of the AK Pacific halibut and AK sablefish commercial fisheries. Assessment team meetings included: International Pacific Halibut Commission, North Pacific Fishery Management

Council (NPFMC); Alaska Department of Fish & Game (ADFG); Alaska Fisheries Science Center (AKFSC-Seattle); and NOAA National Marine Fisheries Alaska Regional Office (NOAA Regional). The assessment team also met with the Alaska Fisheries Development Foundation (AFDF) fishery client and certificate holder. All meetings were held remotely via videoconferencing.

As described more fully in the following report sections, the assessment team did note some minor changes to the fishery management system. However, none of these changes were seen to undermine continued compliance with the fishery management system for AK Pacific halibut and AK sablefish commercial fisheries with requirements of the CSI RFM Standard.

A summary of the site meetings is presented in Section 6. Assessors included both externally contracted fishery experts and Global Trust internal staff.

3.2. Summary of main findings.

The Audit team has determined that the U.S. Alaska Pacific Halibut and Alaska Pacific Sablefish (Black cod) Commercial Fisheries operated within the defined Alaskan UoCs remained in compliance with the CSI RFM Fishery Standard's v 2.2 Fundamental Clauses for the Fisheries Management System component (Clauses 1, 2, and 3), Science & Stock Assessment Activities, and the Precautionary Approach component (Clauses, 4, 5, 6 ,7), Monitoring and Control component (Clauses 8,9,10 and 11) and Serious Impacts of the Fishery on the Ecosystem component (Clauses 12). No evidence exists to indicate that non-conformance situations arose during the 2nd Surveillance audit.

3.3. Recommendation with respect to continuing Certification.

Following this 2nd Surveillance Assessment, the assessment team recommends that continued Certification under the CSI Certification Program is maintained for the management system of the applicant fishery, the US Alaska Pacific Halibut commercial fishery, under international (IPHC), federal (NMFS/NPFMC) and state (ADFG) management, fished with benthic longline (within Alaska's 200 nm EEZ).

Following this 2nd Surveillance Assessment, the assessment team recommends that continued Certification under the CSI Certification Program is maintained for the management system of the applicant fishery, the US Alaska Sablefish commercial fishery, under federal (NMFS/NPFMC) and state (ADFG) management, fished with benthic longline, pots and bottom trawl (within Alaska's 200 nm EEZ).

3.4. Assessment Team Details

The Assessment Team for this assessment was as follows; further details are provided in [Appendix 1](#)):

- Dr. Ivan Mateo – Lead Assessor, Responsible for Fundamental Clauses 1, 2, 3, 9, 10, 11, 12.
- Dr. Robert Leaf – Assessor 1, Responsible for Fundamental Clauses 4, 5, 6, 7, 8

3.5. Details of Applicable CSI Documents

This assessment was conducted according to the relevant program documents outlined in Table 1 below.

Table 1. Relevant CSI program documents including applicable versions.		
Document title	Version number, Issue Date	Usage
CSI Procedure 2: Application to Certification Procedures for the CSI Fishery Standard	Version 6.3 April, 2025	Process
Certified Seafood International RFM Fisheries Standard	Version 2.2 October, 2024	Standard
Certified Seafood International Certification Program Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries	Version 2.2, October, 2024	Guidance to Standard

4. Client contact details

Table 2. Client details and key contact information.

Applicant Information

Organization/Company Name: Alaska Fisheries Development Foundation

Address: Street: PO Box 2205

City: Juneau

State: Alaska

Country: USA

Zip code 99802

Applicant Key Contact Information

Name: Kristy Clement

Position: Chief Executive Officer

E-mail: kclement@afdf.org

5. Unit(s) of Certification

The Units of Certification (i.e., what is covered by the certificate) are as described in

Table 3. Units of Certification, Pacific halibut.

Unit of Certification 1 (of 2)		
Species:	Common name:	Pacific halibut
	Latin name:	<i>Hippoglossus stenolepis</i>
Geographical area:	U.S. Federal and State fisheries within the Gulf of Alaska and the Bering Sea & Aleutian Islands.	
Stock(s):	Eastern Pacific	
Management system:	U.S. Federal and State fisheries within the Gulf of Alaska and the Bering Sea & Aleutian Islands managed by: • International Pacific Halibut Commission (IPHC) • National Marine Fisheries Service (NMFS) • North Pacific Fishery Management Council (NPFMC) • Alaska Department of Fish and Game (ADFG) and Board of Fisheries (BOF)	
Fishing gear/method:	Unique to each UoC	
UoC 1	Benthic longline	
UoC 2	Pots	
UoC 3	Troll	
All eligible fishery participants:	Eligible fishery participants are defined by membership of the client group.	

Table 4. Units of Certification details, Sablefish.

Unit of Certification 2 (of 2)		
Species:	Common name:	Sablefish (Black cod)
	Latin name:	<i>Anoplopoma fimbria</i>
Geographical area:	U.S. Federal and State fisheries within the Gulf of Alaska and the Bering Sea & Aleutian Islands.	
Stock(s):	Eastern Pacific	
Management system:	U.S. Federal and State fisheries within the Gulf of Alaska and the Bering Sea & Aleutian Islands managed by: • National Marine Fisheries Service (NMFS) • North Pacific Fishery Management Council (NPFMC) • Alaska Department of Fish and Game (ADFG) and Board of Fisheries (BOF)	
Fishing gear/method:	Unique to each UoC	
UoC 1	Benthic longline	
UoC 2	Pots	
UoC 3	Bottom trawl	
All eligible fishery participants:	Eligible fishery participants are defined by membership of the client group.	

5.1. Changes to the Unit(s) of Certification (if any)

There have not been any changes to the Units of Certification for the 2nd surveillance audit

6. Summary of site visits and/or consultation meetings

Desktop reviews are the preferred assessment vehicle within the CSI program. In general, on-site/off-site audits are required only if the Certification Body deems that a desktop review may be inadequate for determining whether the fishery is continuing to comply with the CSI RFM Fishery Standard, based on the performance of the fishery, status of non-conformances and related corrective actions.

Table 5. Summary of site visits and/or consultation meetings.

Meeting Date and Location	Personnel	Areas of discussion
Date: August 26, 2025 Location: Conference call	AK NOAA Regional Office Andrew Olson Joel Kraski Krista Milani Phil Ganz Molly Zaleski Dr. Jason Gasper Assessment Team Members Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor	▪ Management & Regulatory Updates ○ Halibut Abundance-Based Management: ○ Area 4 Vessel Use Caps for IFQ Halibut ○ Small Sablefish Release in IFQ/CDQ Fisheries ○ IFQ Program Review (Dec 2024): ▪ Monitoring & Fishing Gear ○ changes in observer coverage or discard monitoring. ○ updates to gear regulations; pot gear (especially slinky pots) remains standard. ○ changes in fleet capacity. ▪ Ecosystem & Environmental Impacts ○ Environmental factors affecting stocks ○ Bycatch or discard mortality ○ Seabird or ETP species interactions ○ ESA Section 7 Consultations: a) Gulf of Alaska BiOp b) Bering Sea/Aleutian Islands BiOp ○ Habitat & EFH a) Next EFH 5-Year Review to launch at October 2025 Council meeting. ○ Pot gear loss or ghost fishing ○ Bait utilization ○ Whale depredation mitigation.
Date: August 29, 2025 Location: Conference call	IPHC Ian Stewart Allan Hicks Assessment Team Members Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor	▪ Stock Status and Harvest ○ Harvest reductions: Commissioners reduced mortality limits by 15.7% for 2025 due to low productivity. ○ Regional harvest patterns: Lower catches in Aleutians due to processor closures and high costs; price rebound in 2025 may improve harvest.

		○ Stock remains above target level, similar to 2023–2024 assessments. ▪ Data Collection and Monitoring ○ Reduced survey design in 2023–2024 due to funding; expected improvement in 2026. ○ Observer program updates: Increased sampling for discard mortality viability assessments. ○ Importance of discard mortality rates and their sensitivity in stock assessment. ▪ Harvest Strategy and Reference Points ○ Draft Harvest Strategy Policy under development; expected adoption late 2025 or early 2026. ○ Current fishing intensity reduced from 43% SPR to ~52% SPR due to low productivity. ○ Possible new reference point recommendation: 46% SPR. ○ Clear definitions for overfishing and overfished status being formalized. ▪ Research and Science Updates ○ Maturity ogive update: Histological analysis shows 50% maturity at age 10 (previously 11). ○ Ongoing fecundity studies and research on weighted age. ○ Discard mortality studies for recreational fisheries (publication expected). ○ Genetic analysis: No significant stock structure differences across range; SNP-based study confirms high mixing. ○ Environmental factors: PDO incorporated into recruitment models; focus on productivity regimes. ▪ Ecosystem and Bycatch ○ No major new bycatch issues reported. ○ Continued reliance on observer programs for data.
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		○ Research on marine mammal depredation mitigation: Testing catch protection devices for longline gear. ▪ Socioeconomic and Stakeholder Engagement ○ No new economic studies since 2021 “hook-to-plate” analysis. ○ Ongoing stakeholder involvement through the Management Strategy Advisory Board.
Date: September 2, 2025 Location: Conference call	AFDF Kristy Clement Ann Robertson Assessment Team Members Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor	• Purpose of surveillance audit. • Updates on performance of the fishery
Date: September 2, 2025 Location: Conference call	Alaska Division Fish and Game Forrest Bowers Rhea Ehrisman Janet Rumble Spencer Weinstein Assessment Team Members Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor	▪ State-Level Management Changes (Since Jan 2025) ○ Logbook requirements expanded: a) Trip- and set-level details: gear deployment/retrieval times, coordinates, gear amount, depth. b) Record retained/released target and bycatch species, tag numbers. ○ Escape ring regulation: a) Minimum inside diameter reduced from 3.75" to 3.5" (based on 2019–2020 study). ○ Gear-use restriction: a) Sablefish permit holders cannot operate other commercial/subsistence/sport/personal-use halibut or groundfish gear during sablefish season (with limited exemptions). ○ Lingcod bycatch clarification: a) Excess lingcod must be released at sea; retention beyond limits subject to enforcement. ▪ Emergency Orders & Advisory Announcements ○ Standard annual EOs issued: a) Bycatch limits for lingcod. b) Halibut IFQ reminders on state water boundaries. c) Quota announcements for Clarence and Chatham sablefish. ○ No new or unusual emergency orders reported. ▪ Discard Monitoring & Mortality ○ No changes in onboard monitoring. ○ New logbook rules require reporting retained and released species. ○ Discard mortality assumptions: a) Halibut fishery prior to Aug 15: sablefish discard mortality = 25%.

		a) Sablefish fishery: discard mortality = 16% (aligned with federal assessment). ▪ Stock Status & Reference Points ○ Sablefish assessment (2024 terminal year): a) Survey CPUE ↑; fishery CPUE slightly ↓ but above long-term average. b) ABC and allowable catch for 2025 increased; stock considered healthy. c) Reference points unchanged; align with federal metrics. ▪ Research & Monitoring ○ Southern Southeast longline survey comparison: a) Ongoing since 2023; 6 surveys completed; 2 more years planned. ○ Bycatch composition: a) No updated analysis yet; data available upon request. ○ Lost gear: a) 127 pots lost in 2023; 64 in 2024 (some recovered later). b) New regulation: slinky/collapsible pots must have two biodegradable escape openings to reduce ghost fishing. ▪ Ecosystem & Gear Impacts ○ Increased pot gear use: a) Reduced bycatch and whale depredation compared to hook gear. ○ Protected habitat: a) Only one coral area (Cape Ommaney) affected by Chatham fishery. ▪ Socioeconomic & Climate Adaptation ○ No major new economic/social studies identified. ○ Climate adaptation workshops (NOAA + Alaska Longline Fishermen's Association): a) Topics: market stability, value-added processing, traceability, local partnerships. ○ Possible NOAA economic analysis (Mauritia, NMFS contact).
Date: September 2, 2025 Location: Conference call	NMFS AKFSC MESA Group Chris Lunsford Dan Goethel Assessment Team Members Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor	▪ Stock Status & Catch ○ Catch trends: Quotas increased after strong recruitment events; now stabilizing. ○ No major surprises in recent survey results; stock remains healthy. ▪ Survey & Data Collection ○ 2024 longline survey canceled (budget, vessel availability, market collapse). ○ 2025 survey completed but only covered Gulf of Alaska; Bering Sea/Aleutians planned for 2026. ○ Loss of 2024 survey adds uncertainty but minimal impact due to sablefish longevity. ○ CPUE index discontinued after 2022; minimal effect on assessment given reliance on longline survey.

		○ Electronic monitoring (EM) coverage increasing → reduced biological sampling. ○ Observer data limited; electronic logbook program under development. ▪ Bycatch & Depredation ○ Pot gear now accounts for ~80% of sablefish catch, reducing: Rockfish bycatch. ○ Whale depredation (sperm whale issues largely mitigated). ○ Killer whale depredation persists in Bering Sea; no new research planned. ▪ Harvest Strategy & Reference Points ○ No changes to reference points; still using max ABC approach. ○ Management Strategy Evaluation (MSE) project: a) Explores alternative harvest control rules for better economic performance. b) Tool developed with UAF; paper in final stages (Canadian Journal of Fisheries and Aquatic Sciences). c) Stakeholder workshops completed; council may consider results in future. ▪ Research & Model Improvements ○ Model updates for 2025 assessment: a) Sex-disaggregated age data. b) Updated error matrices and growth parameters. ○ Ongoing research: ○ Density-dependent growth and recruitment dynamics. ○ Spatial stock assessment to understand regional recruitment and biomass patterns. ○ Environmental drivers linked to recruitment (PDO, climate variability). ○ Future goal: integrate spatial and ecosystem drivers into MSE framework. ▪ Ecosystem & Climate ○ Monitoring marine heatwave impacts; sablefish appear resilient. ○ No major ecosystem concerns currently identified. ▪ Socioeconomic & Policy ○ Council considering small sablefish release policy; economic analyses ongoing. ○ Ecosystem Socioeconomic Profile (ESP) available for sablefish (covers economics and social aspects). ○ Market collapse in recent years influenced survey funding and fishery dynamics. ▪ International & Cooperative Research ○ Pacific Sablefish Transboundary Group inactive (funding ended). ○ Recent publication on sablefish movement across boundaries (Maya Kapur, Fisheries Research).
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		▪ Key Risks & Considerations ○ Survey design change (rotating regions) could affect long-term assessment consistency. ○ Heavy reliance on strong 2014–2021 cohorts for spawning biomass; age structure sustainability under review. ○ Potential skip spawning could bias SSB estimates if not accounted for.
Date: September 3, 2025 Location: Conference call	North Pacific Fisheries Management Council David Witherell Sara Evans Dr. Diana Stram Sarah Cleaver Ana Henry Sarah Marrison Assessment Team Members Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor	▪ Management Measures & Regulatory Updates ○ Small Sablefish Release Action: ○ Council took final action to allow voluntary discard of small sablefish in IFQ fishery. ○ Secretarial review draft in progress; implementation may take 1–2 years. ○ Expected implications: i. Lower ABCs to account for uncertainty. ii. Catch accounting: discarded sablefish accrue to incidental catch allowances. ○ Monitoring gap: No new monitoring requirements; voluntary discard creates uncertainty in size selectivity. ○ Halibut Vessel Use Caps: a) Interim removal of caps in Area 4 remains through 2027. b) Final action taken to adjust caps; implementation timeline uncertain. ○ IFQ Program Review: a) Final review posted; no major changes recommended. b) Minor adjustments (e.g., transfer provisions) under discussion for October meeting. ▪ Harvest Strategy & Climate Integration ○ Climate-Ready Harvest Control Rules (HCRs): a) Work initiated to incorporate climate considerations into HCRs. b) Preliminary plan presented June 2025; check-ins scheduled with plan teams. c) Full analysis expected by June 2026; still early-stage, not actionable yet. d) Motivation: Sablefish recruitment variability and market-driven underutilization prompted interest in adaptive HCRs. ▪ Stock Status & Utilization ○ Sablefish: a) ABC utilization dropped below 50% in 2024 due to market conditions. b) Council exploring ways to integrate socioeconomic realities into management (e.g., MEY-based approaches), but progress is slow. ○ Halibut: a) Managed under abundance-based PSC limits; no major changes in the past year.

		▪ Observer Coverage & Monitoring ○ Partial coverage deployment plan revised in 2025: a) Aimed to improve distribution of observers and EM. b) Initial feedback: deployment goals met, but insufficient data for multi-year trend analysis. c) Coverage rates for IFQ fisheries largely unchanged; confidence in sufficiency remains under review. ▪ Bycatch & Ecosystem Impacts ○ Bycatch trends: a) Increased pot gear use in sablefish fishery significantly reduced bycatch and whale depredation. b) Current bycatch mainly grenadiers; small sablefish bycatch in trawl fisheries no longer an issue. ○ ETP species: a) No new data on whale depredation; estimates unchanged since 2022. b) Observer reports on seabird bycatch continue; periodic updates available. ○ Habitat: a) No new EFH updates since last review (2023); next 5-year review underway, focused on fishing effects. ○ Ecosystem: a) Annual Ecosystem Status Reports and Sablefish ESP provide context; no major methodological changes. ▪ Key Emerging Issues ○ Survey Gaps: a) 2024 longline survey canceled; 2025 survey limited to Gulf of Alaska. b) Rotating survey design (Gulf vs. Bering Sea) raises concerns for long-term apportionment and ABC setting. ○ Age Structure & Recruitment: a) 81% of projected 2025 spawning biomass from 2014–2021 cohorts. b) Council considering whether HCR revisions should address age diversity and spawning portfolio resilience. ○ Gear Transition: a) Shift from longline to pots affects selectivity and spawning biomass composition. b) Research underway on pot escape ring size selectivity. ▪ Socioeconomic Considerations ○ Underutilization of sablefish ABC linked to market collapse. ○ Council interested in integrating economic performance into HCRs but lacks resources for immediate action.
Date: September 3, 2025	Alaska Fisheries Development Fund Kristy Clement Ann Robertson	• Discussion Surveillance Findings

Location: Conference call	Assessment Team Members Dr. Ivan Mateo, Lead Assessor Dr. Robert Leaf, Assessor	
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7. Summary findings

Surveillance audits are summary audits intended to evaluate continued compliance with the CSI RFM Fishery Standard. Each aspect of the fishery they are intended to focus on is addressed below.

7.1. Update on topics that trigger immediate failure

The following fisheries management issues cause a fishery to immediately fail RFM assessment:

- Dynamiting, poisoning, and other comparable destructive fishing practices.
- Significant illegal, unreported, and unregulated (IUU) fishing activities in the country jurisdiction.
- Shark finning.
- Slavery and slave labor on board fishing vessels.
- Any significant lack of compliance with the requirements of an international fisheries agreement to which the U.S. is signatory. A fishery will have to be formally cited by the International Governing body that has competence with the international Treaty in question, and that the US has been notified of that citation of non-compliance.

The Assessment Team has, as part of this surveillance, carried out a review of any new evidence with respect to these issues and found no evidence that any of the above issues are occurring

7.2. Changes in the management regime and processes

Since 2024, the management regimes for Alaska's commercial Pacific halibut and sablefish fisheries have seen several notable adjustments. Most significantly, the Individual Fishing Quota (IFQ) fisheries for both species now allow for the careful release of small, low-value fish in certain situations.

Alaska Pacific Halibut commercial fisheries (since 2024)

Management changes for the commercial Halibut fishery have focused on operational adjustments and accounting for halibut bycatch in other groundfish fisheries. Key updates include:

- **Abundance-based bycatch limits:** New regulations, effective January 1, 2024, set the halibut prohibited species catch (PSC) limit for the Bering Sea's Amendment 80 fisheries based on the most recent International Pacific Halibut Commission (IPHC) and National Marine Fisheries Service (NMFS) survey data¹. This replaces the previous static limit of 1,745 metric tons with an annual, abundance-driven calculation².
- **Catch Limits Reduced (2025):**
 - The coastwide catch limit for all users was reduced by 15.76%, and the commercial catch limit dropped by 18.02% to 19.7 million pounds³. These reductions reflect concerns over declining stock biomass and poor catch rates across most regions.
- **Revised opening time:** For the 2024 season, the IPHC changed the commercial fishery opening time from noon to 6:00 a.m. Alaska local time on March 15. This was in response to industry feedback to provide a full day of fishing, improving efficiency and market access.

¹<https://www.federalregister.gov/documents/2024/03/18/2024-05481/pacific-halibut-fisheries-catch-sharing-plan-2024-annual-management-measures>

²<https://www.federalregister.gov/documents/2024/03/11/2024-05093/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2024-and#:~:text=in%20the%20AI-,Halibut%20Abundance%20Based%20Management%20for%20the%20Amendment%2080%20Program%20PSC,regulations%20effective%20January%201%2C%202024.>

³ <https://alaskafish.news/03/2025/pacific-halibut-fishery-opens-march-20-to-reduced-catches/>

- **Logbook requirements:** The IPHC updated its regulations in 2024 to clarify logging requirements for commercial harvesters. Fishermen now must record their location using latitude and longitude and submit logs to the IPHC within 30 days of the season's end if they were not collected earlier.
- **Annual Harvest Specifications:** In March 2024, NMFS finalized the annual harvest specifications and apportionments for Gulf of Alaska groundfish, including prohibited species catch limits for Pacific halibut⁴⁵.
- **Rebuilding Plan Proposal:**
 - A spatially explicit control rule was proposed to rebuild halibut stocks, suggesting area-specific biomass thresholds and dynamic quota adjustments⁶.
 - The proposal emphasizes precautionary management and inter-regional quota considerations

Alaska Sablefish commercial fisheries (since 2024)

Changes to the sablefish (or black cod) management regime centered on addressing the low value of small sablefish and enhancing fishery efficiency.

- **Careful release of small sablefish⁷:**
 - In April 2025, the North Pacific Fishery Management Council (NPFMC) took final action on a new rule to allow for the careful release of small sablefish.
 - Fixed-gear catcher vessels (CVs) in the Gulf of Alaska and Bering Sea/Aleutian Islands may now carefully release sablefish shorter than 22 inches.
 - Fixed-gear catcher-processors (CPs) are now permitted to discard sablefish of any size, aligning their rules with existing IFQ regulations. This measure was developed in response to low prices for small sablefish and is expected to improve the economic viability of the fishery by avoiding the harvest of low-value fish.
- **Annual Harvest Specifications⁸:**
 - As with halibut, NMFS published the final harvest specifications for 2024 and 2025 for Gulf of Alaska and Bering Sea groundfish, which sets the total allowable catch for sablefish
- **Season coordination⁹:**
 - For 2024, NMFS adjusted the sablefish season opening time for the IFQ and Community Development Quota (CDQ) fisheries to coordinate with the IPHC's new halibut season opening time. The sablefish season opened on March 15 at noon, six hours after the halibut opening, to accommodate fixed-gear vessels that target both species
- **Management Adjustments¹⁰:**
 - The 2025 ABC increased slightly to 47,605 t, but utilization remains low (~50% in 2024).
 - The survey-based apportionment strategy continues, using a 5-year moving average of biomass by region. This dynamic approach adjusts regional allocations annually
- **Research Related to Management**
 - A Management Strategy Evaluation (MSE) tool was developed to assess the adequacy of the current harvest control rule (F40%).

⁴<https://www.federalregister.gov/documents/2024/03/18/2024-05481/pacific-halibut-fisheries-catch-sharing-plan-2024-annual-management-measures>

⁵[https://www.federalregister.gov/documents/2024/03/04/2024-04516/fisheries-of-the-exclusive-economic-zone-off-alaska-gulf-of-alaska-final-2024-and-2025-harvest#:~:text=NMFS%20announces%20final%202024%20and,\(Magnuson%2DStevens%20Act\).](https://www.federalregister.gov/documents/2024/03/04/2024-04516/fisheries-of-the-exclusive-economic-zone-off-alaska-gulf-of-alaska-final-2024-and-2025-harvest#:~:text=NMFS%20announces%20final%202024%20and,(Magnuson%2DStevens%20Act).)

⁶ <https://iphc.int/uploads/2024/12/IPHC-2025-AM101-PropC4-Pacific-halibut-Rebuilding-Plan.pdf>

⁷ <https://www.npfmc.org/april-2025-newsletter/>

⁸<https://www.federalregister.gov/documents/2024/03/11/2024-05093/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2024-and#:~:text=in%20the%20AI.->

[Halibut%20Abundance%20Based%20Management%20for%20the%20Amendment%2080%20Program%20PSC,regulations%20effective%20January%201%2C%202024.](https://www.federalregister.gov/documents/2024/03/11/2024-05093/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2024-and#:~:text=in%20the%20AI.-)

⁹<https://www.fisheries.noaa.gov/bulletin/ib-24-15-nmfs-announces-march-15-2024-season-opening-sablefish-fixed-gear-fisheries#:~:text=IPHC%20regulations%20close%20the%20halibut,action%20in%20the%20Federal%20Register.>

¹⁰https://www.adfg.alaska.gov/static/fishing/PDFs/commercial/southeast/meetings/groundfish/04.23.2025_sablefish_assessment_summary.pdf

7.3. Changes to the organizational responsibility of the main management agencies

There have been no significant changes in the organizational responsibilities of the main agencies managing the Alaska Pacific Halibut commercial fishery and the Alaska Sablefish commercial fishery since 2024. There were no transfers of authority, restructuring, or new entities added to the halibut and sablefish management framework in the past year.

7.4. New information on the status of stocks

Both stocks had quantitative stock assessments concluded during the performance period and stock status did not change. The assessment team concluded that Pacific Halibut had a spawning biomass at the start of 2025 was estimated at about 149 Mlb (~67.5 kt), roughly 38% of unfished, with probabilities near 0.30 of being below the SB30% trigger and 0.11 below SB20% (Stewart et al., 2025). This indicates that the stock above continues to be above the limit reference point and is not overfished and not approaching an overfished state. For sablefish, the 2025 SAFE update indicated that the stock status remains strong, with total biomass around 705 kt (age 2+) and SSB about 191 kt (~63% of unfished) in 2024, and a projected female SSB of roughly 219.7 kt in 2025 (~73% of B100%) (Goethel and Cheng, 2024). Tier 3a reference points for 2025 are FOFL $\approx$ 0.102 and FABC $\approx$ 0.087, yielding ABCw of 50,111 t and OFLw of 58,532 t; the stock is neither overfished nor subject to overfishing, and recent utilization remains below ABC.

7.5. Update on fishery catches

In 2024, Pacific halibut removals totaled about 32.7 million pounds (~14,800 t) ~5% below 2023, with most regulatory areas harvesting under their limits (e.g., Area 2B at 98%, Area 4A at 63%); recreational catches declined slightly overall, with Washington exceeding its allocation while Oregon and California remained below theirs, and discards were tracked through observer and EM programs with updated mortality estimates pending review. Alaska sablefish catches remained below allowable limits, averaging ~71% of ABC in recent years and projected at under 50% in 2024. State-managed inside fisheries set conservative 2025 guideline harvest levels—1.16 million lb in NSEI, 592,000 lb in SSEI, and 134,000 lb in PWS—corresponding to exploitation rates below 5% of biomass.

7.6. Significant changes in the ecosystem effects of the fishery

Alaska Pacific Halibut – Ecosystem Effects

Key Changes Since 2024:

- Habitat Impacts from Bottom Trawling:
 - Increased concern over bottom trawling in the Bering Sea, which disrupts benthic habitats critical for juvenile halibut. This includes destruction of coral reefs and sponge beds, and sediment resuspension that can release pollutants^{11, 12}.
- Declining Size-at-Age and Recruitment:
 - Continued decline in size-at-age and recruitment, attributed to environmental stressors and interspecies competition (e.g., with arrowtooth flounder) (Barnes et al., 2018; Planas and Hurst, 2020; Thompson et al., 2023; Planas, 2025)
- Discard Mortality and Gear Innovations:
 - IPHC research is focused on reducing discard mortality and developing gear modifications to minimize bycatch and depredation impacts¹³.
- Environmental Shifts:
 - Shifts in ocean temperature and currents are altering halibut distribution, especially in nursery grounds, affecting growth and survival¹⁴.

Alaska Sablefish – Ecosystem Effects

Key Changes Since 2024:

- Juvenile Recruitment and Size Composition:
 - The fishery is experiencing an influx of juvenile sablefish, particularly from the strong 2014–2021 year classes. This has led to increased discards and a small sablefish release action by NPFMC to mitigate impacts¹⁵.
- Gear Transition to Reduce Whale Depredation:
 - Rapid shift from longline to pot gear continues, driven by persistent whale depredation (killer and sperm whales), which affects catch rates and fish condition¹⁶.
- Habitat and Trophic Interactions:
 - Spatial overlap between sablefish and arrowtooth flounder has decreased, reducing competition. However, bottom temperatures remain above average, influencing growth and distribution (Goethel and Cheng, 2024; Shotwell and Dame, 2024a).
- Zooplankton and Prey Availability:
 - Declines in zooplankton size and abundance in the Gulf of Alaska may be affecting early life stages and growth of young sablefish (Shotwell and Dame, 2024a)

¹¹ <https://strikeandcatch.com/halibut-on-the-brink-shocking-new-data-from-alaskas-bering-sea/>

¹² <https://alaskafish.news/05/2025/pacific-halibut-fewer-and-smaller-as-nursery-grounds-take-a-pounding-in-the-bering-sea/>

¹³ <https://iphc.int/uploads/2024/10/IPHC-2024-RAB025-06-Report-on-research-activities.pdf>

¹⁴ <https://strikeandcatch.com/halibut-on-the-brink-shocking-new-data-from-alaskas-bering-sea/>

¹⁵ https://www.adfg.alaska.gov/static/fishing/PDFs/commercial/southeast/meetings/groundfish/04.23.2025_sablefish_assessment_summary.pdf

¹⁶ <https://www.npfmc.org/wp-content/PDFdocuments/SAFE/2024/Sablefish.pdf>

7.7. Violations and enforcement information

On September 22, 2025, Global Trust contacted NOAA OLE Alaska Enforcement Division. Alex Perry, the Compliance Analyst Liaison reported that in calendar year 2024, OLE conducted 263 boardings of Commercial IFQ Halibut and or Sablefish vessels. Across the fleet, OLE created 568 total incidents in its Electronic Case Management System (ECMS) and detected 480 total potential violations in these fisheries. 27 incidents remain open, 17 with a status of “investigation ongoing.”

BSAI:

25 incidents with potential violations

22 potential violations

GOA:

543 incidents

458 potential violations.

For reference, in 2024, there were a total of 5,586 IFQ landings. Of the allocations, 81% of the halibut were caught, and 60% of the allocated sablefish were caught. OLE detected potential violations at a rate of 0.086 per trip.

The most commonly detected violation types included:

- Recordkeeping and Reporting (vessels and processors)
- IFQ overages in excess of 10%
- Gear Violations (Marking, Biodegradable Panel, Tunnel Opening Size, etc)
- Fishing federal waters without a Federal Fisheries Permit issued and in possession
- Observer Declare and Deploy System Issues (monitoring programs: observer and Electronic Monitoring):
 - o trips not logged
 - o incorrect information submitted
 - o fishing without observer or operable EM system
- No VMS (when required)
- Failure to Retain Improved Retention/Improved Utilization species
- Prohibited Species mishandling
- EM Issues (not following VMP, no hard drive, data loss)
- No Prior Notice of Landing/ Incorrect PNOL
- FFP/ IFQ Permit Holder not onboard/not present at landing

Lesser-frequency violation types include:

- Illegal Discard of IFQ Species
- Permit Holder not present for landing
- Closed Area fishing/ landing/ multi-area violations
- Quota fished on wrong class/size vessel
- Seabird Avoidance insufficient
- Soak Time Violations (sablefish)
- Vessel Cap Exceeded
- MRA Overage
- Retain Undersized Halibut
- Fail to Offload All Fish
- MCA Overage

- Other Observer Program Issues (Fail to provide Reasonable Assistance/ impede duties/ inadequate accommodations; Intimidation/ Hostile Work Environment, assault/SASH; Observer safety: no wheelwatch, watertight hatches, etc.; Fail to notify observer of gear retrieval).

NOAA Fisheries Office of Law Enforcement - Alaska Enforcement Division (NOAA, 2025)

Patrol and Boardings

In 2024, AKD personnel spent over 3,628 hours conducting patrols to deter potential violators, monitor fishing and other marine activities, detect violations, provide compliance assistance, and provide outreach and education to halibut fishery participants. AKD boarded 653 vessels with 443 of those boardings being related to halibut.

Table 6. Number of Vessel Boardings in 2024

2024	
Categories	Vessel Boardings
Subsistence Halibut	12
Commercial Halibut	256
Charter Halibut	114
Sport Halibut	61
<u>Total</u>	<u>443</u>

Incidents

In 2024, AKD opened 748 halibut-related incidents, including outreach, vessel boardings, dockside monitoring, and compliance assistance. Of those incidents, agents and officers identified 394 halibut-related violations, which were resolved by the following action levels, in order from least to most punitive: Compliance Assistance, Summary Settlement, Notice of Violation Assessment (NOVA).

Table 7. Alaska Halibut Violations for 2024

Categories	2024
Subsistence Halibut	5
Commercial Halibut	255
Charter Halibut	86
Sport Halibut	29
Commercial Groundfish Involving Halibut	19
<u>Total</u>	<u>394</u>

2024 Halibut-Related Violations documented by NOAA in Alaska:

5 Subsistence halibut fishing violations; most common violations include:

- Unqualified person applied for a SHARC
- Subsistence halibut with sport-caught halibut
- Subsistence halibut fishing without a SHARC
- Gear marking

255 Commercial IFQ/CDQ halibut violations; most common violations include:

- IFQ halibut overages greater than 10%
- Recordkeeping and reporting violations (fail to submit/timely submit a Prior Notice Of Landing (PNOL), Landing Report, Logbook, PTR, or Production Reports)
- Gear marking violations
- Failure to release undersized halibut with a minimum of injury by allowing fish to hit the crucifier, remain on deck for a prolonged period of time, and other mishandling issues (e.g., lifting fish solely by caudal peduncle).
- Hired master and permit holder violations
- Vessel cap overages
- Misreporting IFQ area fished or fishing in an area with no IFQ available
- Fishing without an FFP
- Unreported halibut found after offloads.
- Class D vessel size limit violations (vessels over 36 ft. LOA fishing D class quota).

19 Commercial groundfish violations involving halibut; most common violations include:

- Failure to carefully release halibut or allow halibut to contact a crucifier or hookstripper
- Puncture halibut with a gaff or other device

29 Sport halibut violations; most common violations include:

- Sale or attempted sale of sport-caught halibut
- Exceeding bag and/or possession limits
- Filleting, mutilating or skinning halibut onboard a vessel, other than 2 ventral pieces, 2 dorsal pieces, and 2 cheek pieces, with a patch of skin on each piece, naturally attached
- Sport-caught halibut onboard with commercial caught salmon

86 Charter halibut fishing violations; most common violations include:

- Failure to report GAF in the required time period or submitting inaccurate information
- Logbook violations
- Fishing on closed days
- Unreported halibut
- Illegal guiding - no CHP or Guide permits
- Filleting, mutilating or skinning halibut onboard a vessel, other than 2 ventral pieces, 2 dorsal

- pieces, and 2 cheek pieces, with a patch of skin on each piece, naturally attached
- Not retaining carcasses for size restricted halibut
- Exceeding bag limit, possession limit, size limits, or annual limits
- Charter fish without a CHP/without an original copy of CHP
- Halibut remained not within slot limit size

US Coastguard

Halibut Enforcement (NOAA, 2025)

In Calendar Year 2024, the USCG distributed its enforcement assets throughout the Alaska IPHC Areas, with boarding numbers listed in Table 8. The USCG's enforcement focus is to protect the resource in accordance with the Fishery Management Plan, to ensure equal economic opportunity for all participants, and to ensure safety of life at sea.

Table 8. 2024 Geographic Distribution of Boardings on Vessels Targeting Halibut. (Source: NOAA, 2025)

IPHC Area	2024 Boardings
2C	370
3A	177
3B	0
4A	5
4B	1
4C	0
4D	0
4E	1
Total	554

Violations and Enforcement Summary

In 2024, USCG assets boarded a total of 554 vessels and detected 15 violations on 6 vessels. The USCG documented these violations and referred them to NOAA OLE or Alaska Wildlife Troopers for final action as appropriate. Table 9 shows at-sea boardings and violations in 2024.

Table 9. 2024 Boardings and Violations Summaries by Industry Sector (Source:NOAA,2025)

2024 Boardings/Violations	
Total At-Sea Boardings.....	554
Commercial	84
Charter	132
Recreational/Subsistence	338
Fisheries Violations	16
Commercial	15
Charter	0
Recreational/Subsistence	0
Fisheries Compliance Rates	98.9%
Commercial	92.9%
Charter	100%
Recreational/Subsistence	100%

In Area 3A:

- One commercial vessel was cited for improper logbooks and failure to retain incidental rockfish while fishing for halibut.
- One commercial vessel was cited for not keeping a logbook.

In Area 4A:

- One commercial vessel was cited for failure to retain incidental Pacific Cod while fishing for halibut, failure to maintain proper logbooks, improper buoy markings, and failure to retain incidental rockfish.
- One commercial vessel was cited for improper logbooks and improper buoy markings.
- One commercial vessel was cited for failure to retain incidental Pacific Cod while fishing for halibut and failure to retain incidental rockfish

In Area 4E:

- One commercial vessel was cited for not having a Limited License Permit (LLP) onboard and not having a hired master permit while commercially fishing for halibut.

The USCG transferred detected violations to NOAA OLE for disposition, and outcomes included compliance assistance, summary settlements, or catch seizures.

In addition to the IPHC violations summarized in Table 9, USCG assets documented 95 safety violations on 65 vessels including insufficient fire extinguishers, expired visual distress signals, and expired hydrostatic releases for survival craft and/or EPIRB. Two commercial vessels' voyages, three charter vessels' voyages, and 13 recreational vessels' voyages were terminated for safety.

Sablefish Updates

NOAA OLE

In calendar year 2024, NOAA Fisheries' Alaska Enforcement Division (AKD) reported no violations on activities related to sablefish.

Alaska Division of Wildlife Troopers

On March 7, 2025 Global Trust contacted Alaska Division of Wildlife Troopers for information on law enforcement related to sablefish in Alaska's State waters. Captain Derek DeGraaf reported that for IFQ commercial fishing activity for 2024, the Alaska Wildlife Troopers made 6 contacts with commercial fishery participants. However, no warnings were given during these contacts, and nobody was charged with offenses.

7.8. Other information that may affect the outcome of certification

There is no other information that may affect the outcome of certification.

7.8.1. Section A: The Fisheries Management System

7.8.1.1. Fundamental Clause 1. Structured and legally mandated management system

1. There shall be a structured and legally mandated management system based upon and respecting international, State, and local fishery laws, for the responsible utilization of the stock under consideration and conservation of the marine environment.	
Summary of relevant changes:	<u>SC 1.1. There shall be an effective legal and administrative framework established at international, State and local levels appropriate for fishery resource conservation and management.</u> No new laws have been passed since Dec. 2024. Pacific halibut and sablefish continue to be managed under the longstanding U.S.–Canada bilateral halibut treaty and Magnuson–Stevens Act framework. NOAA Fisheries confirms that halibut management remains coordinated through the International Pacific Halibut Commission (IPHC) and the North Pacific and Pacific Fishery Management Councils. State (ADFG) and federal laws still mandate sustained yield management, and there have been no major changes to this framework^{17,18} Halibut Updates: Compliance with SC 1.1 is continuously confirmed by the publication of the Final Rule for the 2025 Pacific Halibut Catch Sharing Plan, which implements the IPHC's annual management measures and regulations¹⁹, including those published in the Federal Register (90 FR 26931). This demonstrates that the established legal and administrative framework is active. Sablefish Updates: Compliance with SC 1.1 is confirmed by the publication of the final 2025/2026 groundfish harvest specifications by NOAA Fisheries²⁰, which supersedes the previous year's specifications. This action is necessary to establish harvest limits for the remainder of 2025 and the start of 2026 15, demonstrating the framework is continually updated to reflect current stock conditions <u>SC 1.2 Management measures shall consider (1) stock status (i.e., overfished, biomass) and genetic diversity (stock structure) over its entire area of distribution, and (2) other biological characteristics of the fish stock (stock) including age of maturity and reproductive potential.</u> Halibut Updates: The responsiveness of the system to biological data is evident in the 2025 Halibut management cycle. The IPHC adopted a substantial 15.8% reduction in the coastwide Total Constant Exploitation Yield (TCEY) for 2025²¹. This decision was a direct response to updated scientific assessments conducted at the end of 2024, which indicated that spawning biomass was lower than previously estimated, primarily due to low weight-at-age and reduced recruitment through at least 2016. This immediate, precautionary reduction in fishing intensity demonstrates that management measures directly consider stock status and biological factors.

¹⁷<https://www.fisheries.noaa.gov/species/pacific-halibut#:~:text=Since%201923%2C%20the%20United%20States,for%20allocating%20allowable%20catch%20among>

¹⁸<https://www.fisheries.noaa.gov/species/sablefish/wild-caught-fishery>

¹⁹<https://www.fisheries.noaa.gov/action/pacific-halibut-catch-sharing-plan-and-annual-management-measures-federal-register-rules-and>

²⁰<https://www.federalregister.gov/documents/2025/03/18/2025-04406/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2025-and>

²¹https://www.dfw.state.or.us/agency/commission/minutes/25/04_April/Exhibit%20D%20Halibut/Ex%20D%20Att%204%20IPHC%20Media%20Release%202025.pdf

1. There shall be a structured and legally mandated management system based upon and respecting international, State, and local fishery laws, for the responsible utilization of the stock under consideration and conservation of the marine environment.

Sablefish Updates:

The Alaska Department of Fish and Game (ADFG) and NPFMC maintain a precautionary approach to setting harvest limits, accounting for inherent variance and uncertainty in age-structured assessments, even though spawning stock biomass estimates show increases due to strong recent recruitments (2015–2019)²². This systematic incorporation of the latest scientific assessment results in annual harvest limits validating compliance.

SC 1.3 Where transboundary, shared, straddling, highly migratory, or high seas stocks are exploited by two or more States (neighboring or not), the applicant and appropriate management organizations concerned shall cooperate and take part in the formal fishery commission or arrangements appointed to ensure effective conservation and management of the stock(s) in question and their environment

SC 1.3.1 Conservation and management measures established for the stock under consideration within the jurisdiction of the relevant States for transboundary, shared, straddling, highly migratory, or high seas stocks, shall be compatible in a manner consistent with the rights, competence, and interests of the States concerned.

Halibut Updates:

For Pacific Halibut, which is a transboundary, highly migratory stock, the requirement for cooperation (1.3) is met through mandatory participation in the IPHC. The IPHC recommended an overall fishing period for the directed commercial halibut fisheries from March 20 to December 7, 2025²³.¹² The US domestic management actions (NPFMC/NOAA) for 2025 implement the IPHC-mandated TCEY recommendations²⁴, ensuring conservation and management measures are compatible across the US and Canada jurisdictions (1.3.1).

Sablefish Updates:

A granular illustration of continuous compatibility refinement is the NPFMC Advisory Panel (AP) recommendation in 2025 to initiate a regulatory amendment aligning the time-of-day for the start and end of the Sablefish IFQ/CDQ commercial fishing season with the time established by the IPHC for Halibut²⁵. This operational harmonization (1.3.1) minimizes confusion and streamlines regulatory enforcement across the co-managed fixed-gear fleets²⁶.

SC 1.5 The applicant's fishery management system, when appropriate for the stock under consideration, shall actively foster cooperation between States with regard to (1) information gathering and exchange, (2) fisheries research, (3) fisheries management, and (4) fisheries development

Although Halibut and Sablefish are managed under separate legislative mandates (IPHC convention and MSA, respectively), the fixed-gear fleets prosecuting both stocks benefit greatly from coordinated scheduling. This operational harmonization minimizes confusion, streamlines regulatory enforcement, and represents a management effort toward maximizing compatibility beyond just harvest limits (1.3.1). The established structure also actively fosters cooperation (1.5) through the

²² <https://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2025.23.pdf>

²³ <https://www.iphc.int/2025/01/31/iphc-2025-mr-003-completion-of-the-101st-session-of-the-iphc-annual-meeting-am101/>

²⁴ <https://www.federalregister.gov/documents/2025/03/21/2025-04803/pacific-halibut-fisheries-catch-sharing-plan-2025-annual-management-measures>

²⁵ <https://meetings.npfmc.org/CommentReview/DownloadFile?p=96947302-74bf-425a-8f42-6cae3dd47467.pdf&fileName=E+AP+Report.pdf>

²⁶ <https://www.fisheries.noaa.gov/bulletin/ib-25-14-nmfs-announces-march-20-2025-season-opening-sablefish-fixed-gear-fisheries>

1.	There shall be a structured and legally mandated management system based upon and respecting international, State, and local fishery laws, for the responsible utilization of the stock under consideration and conservation of the marine environment.
	sharing of data and research results, formalized through the IPHC technical working groups and the publication of detailed stock assessments (e.g., IPHC data overview and stock assessment reports for AM101²⁷). <u>SC 1.7 Within the fishery management system, procedures shall be in place to keep the efficacy of current conservation and management measures and their possible interactions under continuous review, and to revise or abolish them in the light of new information</u> <u>SC 1.8 The management arrangements and decision-making processes for the fishery shall be organized in a transparent manner.</u> Halibut Updates: The final 2025/2026 Harvest Specifications supersede those previously set for 2025, ensuring the efficacy of current conservation and management measures (1.7) is continuously reviewed based on new scientific information prior to measure renewal²⁸. Transparency (1.8) is rigorously maintained via public domain access to management documents and Final Rules detailing 2025 allocations²⁹. Sablefish Updates: The final 2025/2026 Harvest Specifications explicitly link to the goals of the Fishery Management Plan for Groundfish³⁰, ensuring the efficacy of current conservation and management measures (1.7) is under continuous review. Transparency (1.8) is rigorously maintained via public domain access to management documents, meeting motions, and draft rules, such as those published in the NPFMC June 2025 newsletter concerning gear innovation research³¹ No updates noted for Sub-clauses (SC 1.4., 1.4.1, SC 1.6, SC 1.6.1) The following Supporting clauses are not applicable (SC 1.9)
References:	
Statement of consistency to the CSI RFM Fishery Standard	The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fisheries Standard

²⁷ <https://www.iphc.int/uploads/2025/01/IPHC-2025-AM101-11-ppt-Stock-assessment.pdf>

²⁸ <https://www.federalregister.gov/documents/2025/03/18/2025-04406/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2025-and>

²⁹ <https://www.federalregister.gov/documents/2025/03/21/2025-04803/pacific-halibut-fisheries-catch-sharing-plan-2025-annual-management-measures>

³⁰ <https://www.federalregister.gov/documents/2025/03/18/2025-04406/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2025-and>

³¹ <https://www.npfmc.org/june-2025-newsletter/>

7.8.1.2. Fundamental Clause 2. Coastal area management frameworks

2. Management organizations shall participate in coastal area management, decision-making processes and activities related to the fishery and its users, supporting sustainable and integrated resource use, and conflict avoidance.	
Summary of relevant changes:	<u>SC 2.1 Within the fisheries management organization’s jurisdiction, an appropriate policy, legal, and institutional framework shall be adopted in order to achieve sustainable and integrated use of living marine resources, (1) taking into account the fragility of coastal ecosystems and finite nature of their natural resources, (2) allowing for determination of the possible uses of coastal resources and governing access to them, and (3) recognizing the rights and needs of coastal communities and their customary practices to the extent compatible with sustainable development. In setting policies for the management of coastal areas, States shall take due account of the risks and uncertainties involved.</u> Halibut and Sablefish Alaska’s fishery managers still operate under existing coastal and habitat laws (e.g. Clean Water Act, EFH provisions of the MSA, Alaska Coastal Management Program references). Federal NEPA and Essential Fish Habitat (EFH) processes continue to ensure multiple ocean uses are evaluated before permits are issued. For example, NOAA and ADFG still participate in coastal planning and habitat protection (as noted for salmon fisheries), and there have been no major new coastal management plans or policies introduced specifically for halibut/ sablefish since late 2024. <u>SC 2.1.1 States shall establish mechanisms for cooperation and coordination in planning, development, conservation, and management of coastal areas.</u> <u>SC 2.1.2 The fisheries management organization shall ensure that the authority or authorities representing the fisheries sector and fishing communities in the coastal management process have the appropriate technical capacities and financial resources.</u> Halibut and Sablefish The Alaskan management framework includes explicit legal structures designed to integrate coastal resource use and recognize the rights and needs of communities (2.1.1). The IFQ program, implemented in 1995, includes the establishment of Community Quota Entities (CQE), which act as mechanisms to secure harvest opportunities for Gulf of Alaska and Bering Sea/Aleutian Islands coastal communities highly dependent on these resources³². The maintenance of the CDQ program also allocates quotas directly to qualifying Western Alaska communities, ensuring resource benefits are distributed³³. The fisheries management organizations—specifically the NPFMC and NOAA Fisheries—employ dedicated scientific and technical staff and rely on input from specialized bodies like the Scientific and Statistical Committee (SSC) and Plan Teams to ensure that the authorities representing the fisheries sector possess the appropriate technical capacities (2.1.2). The scheduled NPFMC Plan Team meetings (e.g., September 2025 Groundfish Plan Teams) confirm the continuous functioning of this institutional framework³⁴.

³² <https://www.npfmc.org/fisheries-issues/catch-shares-allocations/ifq/>

³³ <https://www.federalregister.gov/documents/2025/03/21/2025-04803/pacific-halibut-fisheries-catch-sharing-plan-2025-annual-management-measures>

³⁴ <https://meetings.npfmc.org/Meeting/Details/3099>

2. Management organizations shall participate in coastal area management, decision-making processes and activities related to the fishery and its users, supporting sustainable and integrated resource use, and conflict avoidance.

SC 2.2 Representatives of the fisheries sector and fishing communities shall be consulted in the decision-making processes involving activities related to coastal area management planning and development. The public, as well as others affected, shall also be kept aware of the need for protection and management of coastal resources, and shall participate in the coastal management process.

Council and state rulemaking remains open to public input. The North Pacific Council and Alaska Board of Fish solicit fishery stakeholder comments at meetings. U.S. NEPA reviews continue to require consultation and public notice for projects in the coastal zone. In practice, halibut/sablefish management actions (catch limits, vessel permits, habitat impacts) still undergo the usual public comment processes. There have been no new statutory requirements, but Council staff continue to engage communities (e.g. through the Subsistence Halibut Registration Certificate program) and state coastal resource agencies remain involved

Halibut Updates:

Stakeholder participation (2.2) is mandatory for setting harvest allocations. The process for setting the 2025 charter halibut management measures in Areas 2C and 3A explicitly relied on input from the Charter Halibut Management Committee, a formalized stakeholder advisory body composed of industry representatives who began their annual process in October 2024 to provide input on the preferred range of management measures.²

The NPFMC April 2025 Newsletter³⁵ (Published April 30, 2025) discusses stakeholder consultations on Halibut vessel caps in Area 4.

Sablefish Updates:

The NPFMC utilizes its IFQ Committee, whose membership is intended to represent a broad range of stakeholders across both the halibut and sablefish fishing and processing sectors 21, ensuring diverse interests are consulted before major regulatory actions (2.2).

The NPFMC April 2025 Newsletter³⁶ (Published April 30, 2025): Discusses stakeholder consultations, small sablefish release measures, and maximum retainable amount (MRA) adjustments for groundfish

SC 2.3 Fisheries practices that avoid conflict among fishers and other users of the coastal area (e.g., fisheries enhancement facilities, tourism, energy) shall be adopted, and fishing shall be regulated in such a way as to avoid risk of conflict among fishers using different vessels, gear, and fishing methods. Procedures and mechanisms shall be established at the appropriate administrative level to settle conflicts that arise within the fisheries sector and between fisheries resource users and other coastal users

No new conflicts have arisen that require new policies. Existing mechanisms (Board of Fish allocation decisions, time/area closures, conflict-resolution through BOF appeals and courts) remain operative. For example, gear conflicts in ADFG-managed fisheries continue to be resolved by separate seasons or areas when needed, as before. The North Pacific Council also conducts public meetings (open to all stakeholders) on groundfish bycatch and community issues; this process continues unchanged.

³⁵ <https://www.npfmc.org/april-2025-newsletter/>

³⁶ <https://www.npfmc.org/april-2025-newsletter/>

2. Management organizations shall participate in coastal area management, decision-making processes and activities related to the fishery and its users, supporting sustainable and integrated resource use, and conflict avoidance.

Halibut Updates:

Inter-sector conflicts between commercial, charter, and recreational halibut users are managed annually through the Catch Sharing Plan (CSP). The 2025 Halibut Catch Sharing Plan adjustments (e.g., the 21.7% decrease in the Area 3A commercial and charter allocations) represent the tangible regulatory output of mechanisms designed to settle conflicts and allocate the available resource among user groups.

Sablefish Updates:

Conflict avoidance among fishing sectors and users (2.3) is addressed primarily through the Individual Fishing Quota (IFQ) system, which eliminated the destructive "race-for-fish" that previously caused conflicts among commercial operators for both sablefish and halibut.²¹

SC 2.4 States' fisheries management organizations and sub-regional or regional fisheries management organizations and arrangements shall give due publicity to conservation and management measures and ensure that laws, regulations, and other legal rules governing their implementation are effectively disseminated.

SC2.5 The economic, social, and cultural value of coastal resources shall be assessed by the appropriate fisheries management organization in order to assist decision making on their allocation and use.

Agencies continue active outreach. ADFG and NOAA Fisheries websites and newsletters still publish conservation rules and news (e.g. BOF regulatory changes, IPHC meeting outcomes). ADFG's educational programs (school curricula, outreach at sport shows) remain active, and NOAA provides information on catch quotas. No new dissemination tools have been launched since 2024, but existing channels continue.

Social and economic impacts of halibut/sablefish remain assessed in the usual way. The federal ADFG and NOAA processes (e.g. Alaska Commercial Fisheries Entry Commission reports, federal subsistence policy, NEPA socioeconomic analyses) are still used in management decisions. No new valuation studies specific to halibut or sablefish have been published since the last audit. Subsistence halibut harvest levels continue to be formally accounted for (via the federal Subsistence Halibut Registration program) in setting harvest limits, as before.

Halibut Updates:

The 2025 Halibut seasons, allocations, and specific operational rules are rigorously disseminated through Federal Register Final Rules³⁷ and readily accessible documents, typically explaining the basis and purpose of the measures (2.4)³⁸.

Sablefish Updates:

The management organizations meet the requirement to give due publicity to conservation and management measures (2.4) via Federal Register Final Rules³⁹ and NOAA Fisheries Information Bulletins detailing the synchronized season opening⁴⁰. The commitment to assessing economic value

³⁷ <https://www.federalregister.gov/documents/2025/03/21/2025-04803/pacific-halibut-fisheries-catch-sharing-plan-2025-annual-management-measures>

³⁸ <https://www.federalregister.gov/documents/2025/03/18/2025-04406/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2025-and>

³⁹ <https://www.federalregister.gov/documents/2025/03/18/2025-04444/fisheries-of-the-exclusive-economic-zone-off-alaska-sablefish-managed-under-the-individual-fishing>

⁴⁰ <https://www.fisheries.noaa.gov/bulletin/ib-25-14-nmfs-announces-march-20-2025-season-opening-sablefish-fixed-gear-fisheries>

2.	Management organizations shall participate in coastal area management, decision-making processes and activities related to the fishery and its users, supporting sustainable and integrated resource use, and conflict avoidance.
	(2.5) is embedded within the IFQ structure, with NOAA Fisheries continually publishing annual reports on the ex-vessel prices and volume for both Halibut and Sablefish. No updates noted for Sub-clauses (SC 2.6, SC2.7)
References:	
Statement of consistency to the CSI RFM Fishery Standard	The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fisheries Standard

7.8.1.3. Fundamental Clause 3. Management objectives and plan

3.	Management objectives shall be implemented through management rules and actions formulated in a plan or other framework.
Summary of relevant changes:	<u>SC 3.1 Long-term management objectives shall be translated into a plan or other management document (taking into account uncertainty and imprecision) and be subscribed to by all interested parties</u> Halibut and sablefish management objectives remain set by the IPHC/ Coastwide Framework and the North Pacific Council's Fishery Management Plans. The Council's Groundfish FMP (and associated Plan Team documents) encode long-term objectives (e.g. rebuild a stock if needed, maintain safe biological limits). These objectives continue to be embodied in annual Harvest Specifications and Area Apportionments. No new "plan" has supplanted the existing FMPs; updates to objectives occur through normal Council amendments (nonspecific to halibut/sablefish were adopted in 2024–25). One ongoing initiative is the Halibut/Sablefish IFQ Program Review (as scheduled for 2024–2025), which will evaluate objectives and program performance, but no regulatory changes have been finalized yet Halibut Updates: The long-term management objective of optimal utilization and conservation, grounded in the MSA and IPHC agreements, is translated into tangible annual management actions through the Harvest Specifications process. The management system's decision to enact a precautionary 15.8% reduction in the Halibut TCEY for 2025⁴¹ confirms that long-term conservation objectives are being met, taking into account the uncertainty and reduction in estimated spawning biomass (Stewart et al., 2025a). Sablefish Updates: The Final 2025/2026 Harvest Specifications explicitly state that the action is necessary to establish harvest limits and accomplish the goals and objectives of the Fishery Management Plan (FMP)⁴². This process confirms that long-term objectives account for uncertainty (3.1), as management is maintaining a precautionary approach to harvest limits despite recent signs of increased spawning stock biomass due to strong recruitments (Goethel and Cheng 2024).

⁴¹ <https://www.iphc.int/2025/01/31/iphc-2025-mr-003-completion-of-the-101st-session-of-the-iphc-annual-meeting-am101/>

⁴² <https://www.federalregister.gov/documents/2025/03/18/2025-04406/fisheries-of-the-exclusive-economic-zone-off-alaska-bering-sea-and-aleutian-islands-final-2025-and>

3. Management objectives shall be implemented through management rules and actions formulated in a plan or other framework.

SC 3.1.1 There shall be management objectives seeking to ensure that ETP species are protected from adverse impacts resulting from interactions with the unit of certification and any fisheries enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible

Management objectives for Endangered/Threatened species (e.g. Steller sea lions, whales) have not changed. Halibut/sablefish regulations already include protections (for example, federal halibut law requires avoiding impacts on listed species). There were no new ESA listings or halibut-specific ETP measures proposed since late 2024. NOAA continues to monitor interactions; the latest Marine Mammal Protection Office reports have not identified new halibut related risks.

Halibut Updates:

No updates from Halibut

Sablefish Updates:

Management objectives seeking to protect ETP species (3.1.1) from adverse, irreversible impacts are enforced through legal and monitoring mechanisms. The efficacy of this objective was definitively validated in March 2025 by the criminal prosecution and sentencing of a fisherman to prison and a commercial fishing ban for the illegal taking of an endangered sperm whale and falsifying sablefish fishing records⁴³. This outcome confirms that severe, high-level legal consequences are available for non-compliance.

Other updates since December 2024:

Seabird Working Group:

Alaska Groundfish and Halibut Seabird Working Group continued activities under the 2015 biological opinion of short-tailed albatross effects⁴⁴.

ESA Consultations:

Ongoing Section 7 consultations to evaluate effects of GOA and BSAI groundfish fisheries on ESA-listed species and critical habitats⁴⁵

SC 3.1.2 There shall be management objectives seeking to avoid, minimize, or mitigate impacts of the unit of certification on the stock under consideration's essential habitats, and on habitats that are highly vulnerable to damage by the unit of certification's fishing gear.

Halibut/Sablefish

Existing habitat conservation objectives continue under EFH and ESA frameworks. For example, Alaska Essential Fish Habitat and Section 7 consultations remain in force. There were no new critical habitat designations or closures affecting halibut/sablefish fisheries in 2024–25. The North Pacific Council did complete a reevaluation of coral and sponge protections in some areas (a 2023–24 project), but this did not change core halibut management. In short, objectives to protect benthic habitat remain as before.

The objectives seeking to minimize or mitigate impacts on essential fish habitats (EFH) and highly vulnerable habitats (3.1.2) are demonstrated by the NPFMC's commitment to continuously improving the underlying scientific basis for habitat management. In June 2025, the Council requested that new baseline information on bottom contact estimates from Alaska fishing gears be integrated into the peer-reviewed Fishing Effects model⁴⁶. This action is a necessary step to obtain

⁴³ <https://www.justice.gov/usao-ak/pr/commercial-fisherman-sentenced-6-months-prison-falsifying-fishing-records-and-taking>

⁴⁴ <https://www.fisheries.noaa.gov/bulletin/ib-24-13-noaa-fisheries-reports-take-short-tailed-albatross-gulf-alaska>

⁴⁵ <https://www.fisheries.noaa.gov/insight/endangered-species-act-section-7-alaska-region#:~:text=ESA%20Section%207%20consultations%20can,page%20Letter%20of%20Concurrence%20response.>

⁴⁶ <https://www.npfmc.org/june-2025-newsletter/>

3. Management objectives shall be implemented through management rules and actions formulated in a plan or other framework.

the best scientific evidence available. The resulting updated model data will inform potential regulatory options in 2026 to revise gear performance standards and develop management measures to further minimize bottom impacts⁴⁷. This progressive commitment to integrating new, high-quality scientific data directly confirms active steps toward achieving habitat protection objectives.

SC 3.1.3 There shall be management objectives seeking to minimize adverse impacts of the unit of certification (including any fishery enhancement) on the structure, and function of the ecosystems that are likely to be irreversible or very slowly reversible.

Halibut/Sablefish

Ecosystem-based objectives (e.g. maintain trophic balance) are still embodied in Council's Fishery Ecosystem Plans (Aleutian Islands, Bering Sea, GOA). The Council has continued developing ecosystem analyses (e.g. updated climate impact reports in 2024), but no new halibut-specific ecosystem strategy was adopted. Halibut remains recognized as an important predator/prey in the Aleutian-GOA ecosystem; management continues to avoid severe ecosystem impacts through existing bycatch rules and cautious harvest limits.

SC 3.2.1 Excess fishing capacity shall be avoided, and exploitation of the stocks shall remain economically viable

SC 3.2.4 Biodiversity of aquatic ecosystems shall be conserved and ETP species shall be protected.

Where relevant, there shall be pertinent objectives, and as necessary, management measures

Halibut Updates:

Regarding the economic and biodiversity balance (3.2.1, 3.2.4), the severe 2025 cut in commercial allocations (e.g., 21.7% in Area 3A)⁴⁸ directly demonstrates the management system's prioritization of biological sustainability (conserving biodiversity) over maximizing short-term economic viability. When updated science indicates that stock status requires conservation (due to lower spawning biomass estimates) (Stewart et al., 2025a), the system mandates deep cuts to ensure the resource is maintained. This adherence to the conservation imperative over temporary economic pressure is a core element of responsible fisheries management. Protection of biodiversity (3.2.4) is further implemented through the annual setting of Prohibited Species Catch (PSC) limits for Halibut in the non-trawl fisheries⁴⁹ and strict legal penalties for interactions with protected species⁵⁰.

Sablefish Updates:

Management measures are confirmed to control fishing capacity (3.2.1) through the IFQ system, which limits access and quantity of harvest rights for the Sablefish fixed-gear fishery⁵¹. Compliance for Sablefish is also upheld by the severe legal penalties against non-compliance, reinforcing the system's commitment to ETP protection and biodiversity (3.2.4)⁵².

No relevant changes were reported on supporting clauses (SC3.2.2, SC3.2.3)

References:

Statement of consistency to the CSI RFM Fishery Standard

The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fisheries Standard

⁴⁷ <https://www.npfmc.org/june-2025-newsletter/>

⁴⁸ <https://www.federalregister.gov/documents/2025/03/21/2025-04803/pacific-halibut-fisheries-catch-sharing-plan-2025-annual-management-measures>

⁴⁹ <https://www.fisheries.noaa.gov/alaska/commercial-fishing/2025-2026-alaska-groundfish-harvest-specifications>

⁵⁰ <https://www.justice.gov/usao-ak/pr/commercial-fisherman-sentenced-6-months-prison-falsifying-fishing-records-and-taking>

⁵¹ <https://www.npfmc.org/fisheries-issues/catch-shares-allocations/ifq/>

⁵² <https://www.justice.gov/usao-ak/pr/commercial-fisherman-sentenced-6-months-prison-falsifying-fishing-records-and-taking>

7.8.2. Section B: Science & Stock Assessment Activities, and the Precautionary Approach

7.8.2.1. Fundamental Clause 4. Fishery data

4.	There shall be effective fishery data (dependent and independent) collection and analysis systems for stock management purposes.
Summary of relevant changes:	Supporting clauses that are relevant include <u>Clause 4.1.1: Timely, complete, and reliable catch/effort statistics are compiled to international standards, updated and verified; research results inform objectives, reference points, and performance criteria, and analyses are disseminated for conservation and management.</u> <u>Clause 4.2: An observer scheme is established to collect accurate data for research and to support compliance.</u> <u>Clause 4.2.1: Observer programs are sufficient to provide quantitative estimates of total catch, discards, and incidental takes.</u> <u>Clause 4.3: Data are compiled and made available in a timely, agreed format consistent with confidentiality.</u> <u>Clause 4.4: States stimulate the research required to support fish-as-food policies.</u> <u>Clause 4.5: Economic, social, marketing, and institutional information is collected and analyzed with comparable time series to support monitoring and policy.</u> <u>Clause 4.6: Traditional fisheries knowledge and technologies are investigated and documented to assess applicability to sustainable management.</u> <u>Clause 4.7: Scientific research conducted in another State's waters complies with that State's laws and international law.</u> Pacific Halibut The most recent complete stock assessment was completed at the end of 2024 by the International Pacific Halibut Commission (IPHC) (Stewart et al., 2025). Fishery removals and mortality used in this statistical assessment are compiled from multiple quality-controlled sources and undergo regular internal IPHC and external peer review; the 2024 update retained the 2022 assessment structure, applied an ensemble of long/short time-series models, and documented data quality, uncertainty, and indices (e.g., FISS NPUE/WPUE, commercial WPUE). The 2024 modelled FISS NPUE increased 3% from 2023 while the O32 WPUE decreased 9%, and commercial WPUE decreased ~2% coastwide, reflecting mixed size-at-age trends and shifting cohort dominance (2012- and 2016-year classes). In-season and strategic risk controls for 2025 explicitly bracketed status-quo and ± 5–25% alternatives; Commissioners ultimately reduced coastwide mortality limits by 15.7% for 2025 to align with continued low productivity and risk objectives. Fishery-independent data in 2024 followed the optimized “revenue-positive” FISS design endorsed in February 2024. Subareas were sampled in Areas 2B, 3A, 3B, and 4CDE, while Area 2C again received full coverage of the grid. Of 525 planned stations, 507 (97%) were effectively sampled, with three not permitted due to Glacier Bay NP and Hecate MPA restrictions. Five chartered longline vessels completed 29 trips and 275 charter days; 5,771 otoliths were collected, and ~153 t of halibut, 22 t of Pacific cod, and 27 t of rockfish were landed under retain-for-sale protocols. The IPHC continued integrating snap gear into survey tenders to maintain survey–fishery comparability, and individual weights have been collected coastwide since 2019 to improve WPUE and weight-at-age estimates. Although the FISS footprint has been reduced since 2023 due to survey cost economics, it continues to sample all biological regions, and model-based methods are being developed to produce coastwide indices. Fishery-dependent data in 2024 included commercial fishery records, port sampling, and discard mortality estimation. Historical data series remain consistent: reported landings began in 1888,

4. There shall be effective fishery data (dependent and independent) collection and analysis systems for stock management purposes.

landings from 1935–1980 are aggregated, and since 1981 records have been fully delineated by Regulatory Area via fish tickets. Coastwide fishery landings increased between 2014 and 2017, the first sustained increases since 2003, but declined thereafter through 2024 in response to reduced mortality limits⁵³. Commercial fishery data in 2024 included detailed catch records, otolith and tissue sampling, discard estimates, and mortality projections. Ports such as Dutch Harbor, Homer, and Juneau had sampling rates of 1–7.5%, depending on area and fishery type, with age subsample targets of ~500–750 fish in Areas 2A–3C and up to 1,500 fish in Areas 4A–4E. Preliminary mortality estimates showed most Regulatory Areas harvested less than their allocated limits; for example, in Area 2B, 2024 mortality was ~6.3 million pounds out of a limit of 6.47 million (98%), while Area 4A harvested ~63% of its limit. Recreational removals declined slightly in 2024, with variation by state; Washington exceeded its allocation, while Oregon and California attained lower percentages. These removals are informed by bag limits, gear restrictions, and NOAA-published season regulations. Discard viability sampling by the Alaska Observer Program increased sample sizes, and updated two-year DMRs are scheduled for Council review as part of the biennial process.

Data governance, QA/QC, and review remain integral to the Pacific Halibut process. IPHC’s production, maintenance, update, and verification of statistical data are documented in the annual assessment and supporting technical papers, with explicit terms of reference to evaluate availability, quality, and adequacy. Peer review of data quality is a standard feature of the process, ensuring data sufficiency for management. IPHC has also developed minimum data collection standards for observer programs to ensure training, QAQC, and statistically robust methods. Studies of discard mortality and viability (Loher et al. 2022, Kaimmer et al. 1998, Trumble et al. 2000, Rose et al. 2019, Davis and Olla 2001) continue to inform DMR estimation. Longline and pot gear generally result in fewer injuries and better condition at release than trawl capture, though careful release methods are critical. These findings are incorporated into observer programs to improve mortality estimation. Observer coverage on vessels greater than 40 ft is considered representative of overall fleet activity, with overlap in fishing areas with the <40 ft fleet. IPHC’s collaboration with NMFS ensures observer data feed into quota monitoring, stock assessments, and bycatch mitigation.

Alaska Pacific Sablefish

The most recent sablefish stock assessment, with terminal year 2024, documents all fishery-independent and fishery-dependent data collection activity (Goethel and Cheng, 2024). The 2021 benchmark assessment remains the last full benchmark, with 2024 representing an update that incorporated new time series data and ageing results. The assessment includes all sources of catch, including landings and bycatch (assumed at 100% mortality) as well as removals from minor state-managed fisheries in the northern Gulf of Alaska and Aleutian Islands, which averaged ~180 t annually from 1995–1998, or ~1% of the total catch. Catches from state areas with their own assessments and guideline harvest levels (Prince William Sound, Chatham Strait) are not included. Historical catches prior to 1993 were adjusted using Japanese import records and discard estimates from 1994–1997. Research catches of sablefish, recorded since 2009, remain important, including removals from the AFSC longline survey funded by catch sales. Additional removals come from bottom trawl surveys and IPHC longline surveys. State-managed sport fishery catches have been increasing, though non-directed removals have remained below 1% of ABC since 2006.

⁵³ <https://www.pcouncil.org/documents/2025/02/c-1-a-iphc-report-1-report-of-the-101st-session-of-the-iphc-annual-meeting.pdf/>

4. There shall be effective fishery data (dependent and independent) collection and analysis systems for stock management purposes.

In 2024, no NOAA domestic longline survey was conducted due to the declining price of sablefish affecting the cost-recovery nature of the program; the most recent survey data are from 2023⁵⁴. RPN indices from the 2023 survey represented some of the highest in the series, though declines were observed in the western GOA and BS. The GOA trawl survey index, which reached its lowest point in 2013 before quadrupling through 2021, declined by ~50% in 2023. No trawl survey occurred in 2024, as it was an off year. Data input changes for the 2024 SAFE were limited to updating existing series, with no new survey or CPUE indices, as CPUE data are no longer available. Otolith ageing from the 2023 survey, completed in 2024, added ~1,000 additional age samples, though coverage was slightly reduced due to high demand across species.

Commercial fishery landings continue to be reported via the eLandings system required by ADFG, which feeds into the NMFS Catch Accounting System (CAS) and is compiled by AKFIN. Effective June 27, 2025, new ADFG logbook requirements will require longline and pot vessels to provide more detailed information, including gear deployment, geographic coordinates, fishing depth, retained and released catch, bycatch, and tag data⁵⁵. These logbooks improve the granularity of commercial fishery data while maintaining the broader monitoring framework of observers, electronic monitoring, and discard mortality estimation. Discard monitoring methods remain consistent, with discard mortality rates continuing at 25% for sablefish caught in the halibut fishery prior to August 15 and 16% for sablefish released in other fisheries.

The following supporting clauses were determined to be not relevant for the fisheries under examination: 4.1.2 (use of generic evidence), because stock-specific data are comprehensive and the clause was therefore scored in full conformance as not applicable; 4.8 (uniform high-seas research guidelines), because these fisheries have no high-seas activities; 4.9 (building research capacity in developing countries), because operations are limited to the U.S. and Canada and not in developing countries; 4.10 (support for research on previously unfished or lightly fished stocks), because these fisheries are fully developed; and 4.11 (international support to States—especially developing, least-developed, or small island States), again not relevant given operations are limited to the U.S. and Canada.

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⁵⁴ <https://www.npfmc.org/wp-content/PDFdocuments/SAFE/2024/Sablefish.pdf>

⁵⁵ <https://www.adfg.alaska.gov/static/applications/dcfnewsrelease/1665505953.pdf>

4. There shall be effective fishery data (dependent and independent) collection and analysis systems for stock management purposes.

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4. There shall be effective fishery data (dependent and independent) collection and analysis systems for stock management purposes.

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Statement of consistency to the CSI RFM Fishery Standard

The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

7.8.2.2. Fundamental Clause 5. Stock assessment

5. There shall be regular stock assessment activities appropriate for the fishery, its range, the species biology, and the ecosystem, undertaken in accordance with acknowledged scientific standards to support its optimum utilization.

Summary of relevant changes:

Supporting clauses that are relevant include

- Clause 5.1: an institutional framework is established to determine applied research needs and how they are used for fishery management;
- Clause 5.1.2: management ensures research across biology, ecology, technology, environmental science, economics, and enhancement, with timely dissemination and provision of facilities, training, and staffing;
- Clause 5.2: research capacity is in place to monitor climate and environmental effects, stock status, and ecosystem impacts from fishing, pollution, or habitat alteration;
- Clause 5.3: organizations cooperate internationally to encourage research for optimum utilization; Clause 5.4: collaborative technical and research programs with other States improve understanding of transboundary, shared, straddling, highly migratory, and high-seas stocks;
- Clause 5.5: research data are analyzed and published with appropriate respect for confidentiality.

Halibut

The International Pacific Halibut Commission (IPHC) maintains a mature institutional framework (Supporting Clause 5.1) in which an ensemble Stock Synthesis assessment is updated annually and fully rebuilt on a ~3-year cycle, with methods and inputs reviewed twice yearly by an independent Scientific Review Board and documented for the Commission (AM101) (regularity, peer review, acknowledged standards). The 2024 update (Stewart et al., 2025) incorporated final 2023 information and all available 2024 fishery-dependent and -independent inputs as of 31 Oct 2024, with late-season fishery totals refreshed in November; no methodological structural changes were made, consistent with the IPHC's planned "update-year" process. The assessment explicitly compiles and analyzes all significant sources of removals and mortality (Supporting Clause 4.1): directed commercial landings and discards, non-directed discard mortality (bycatch), recreational and subsistence harvests, and research removals. For 2024 the IPHC estimated total mortality at ~32.7

5. There shall be regular stock assessment activities appropriate for the fishery, its range, the species biology, and the ecosystem, undertaken in accordance with acknowledged scientific standards to support its optimum utilization.

MLb ($\approx 14,800$ t), the lowest in a century, with non-directed discard mortality ~ 4.1 MLb ($\approx 1,900$ t) and recreational mortality ~ 5.9 MLb ($\approx 2,700$ t). These statistics were integrated with modelled FISS indices (NPUE up $\sim 3\%$ coastwide; O32 WPUE down $\sim 9\%$) and preliminary logbook WPUE (down $\sim 2\%$ coastwide), together with current length- and age-composition, to estimate spawning biomass at the start of 2025 of ~ 149 MLb ($\approx 67,500$ t) and relative SB $\approx 38\%$ —all within the IPHC’s risk-based harvest decision framework using reference SPR(F43%) and biomass triggers (SB30%, SB20%). This evidence is timely, verified, and regularly updated statistics consistent with international practice, the presence of robust observer/logbook and survey programs that quantify total catch and discards, and a management body that compiles and disseminates data while honoring confidentiality constraints. The assessment explicitly notes the role of economic and ecosystem information (e.g., fishery performance indicators, stock condition via WPUE, and projections conditioned on catch sharing plans), demonstrating that socioeconomic knowledge is considered alongside biology for policy formulation (Supporting Clause 4.5). Where stock-specific information is uncertain, the ensemble spans alternative hypotheses (e.g., natural mortality and environmental recruitment effects), aligning with the allowance for generic evidence under appropriate risk (Supporting Clause 4.1.2). Overall, the 2024 assessment demonstrates regular, standards-based activities, with results and risks used directly to support optimum utilization in 2025.

Alaska sablefish

For Alaska sablefish, NOAA Fisheries (AFSC) and the NPFMC provide the institutional framework to determine applied research needs and to execute, peer-review, and publish the SAFE assessment annually. The 2024 update (Goethel and Cheng, 2024) retained the author-recommended 2023 model (23.5) without methodological changes, added 2023 fishery lengths/ages and finalized 2023 catch, and included preliminary 2024 catch and constant (2022-level) whale-depredation adjustments. Although the cost-recovery longline survey did not occur in 2024 (first gap since 1979), the assessment updated all available time series (fishery catch and composition, trawl survey through 2023) and transparently documented data limitations and diagnostic performance, keeping risk at non-elevated levels. Consistent with Supporting Clause 4.1, all significant removals are accounted for (landings, discards/bycatch at 100% mortality for accounting, non-commercial removals, research catch), together with explicit adjustments for killer and sperm whale depredation. Data are compiled, QA/QC-ed, and made accessible through SAFE documentation and repositories, respecting confidentiality (Supporting Clauses 4.1.1 and 4.3). Observer and electronic monitoring programs (and survey designs) quantify total catch, discards, and incidentals (Supporting Clauses 4.2, 4.2.1), while socioeconomic and fishery-performance information (e.g., quota under-utilization averaging $\sim 71\%$ over the past three years, rapid gear shifts to pots, market effects) is synthesized in the Ecosystem and Socioeconomic Profile to inform policy⁵⁶ (Supporting Clause 4.5). The 2024 assessment estimates total biomass ~ 705 kt (age-2+), SSB ~ 191 kt ($\approx 63\%$ of B100) and Tier 3a status with a 2025 maximum permissible ABCw of 50,111 t and OFLw of 58,532 t; projections indicate the stock is not overfished nor subject to overfishing, with continued rebuilding of age structure from strong 2014–2019 cohorts. In the absence of new 2024 survey indices, the assessment neither introduced generic stand-ins nor changed control rules; rather, it documented uncertainty, held certain inputs constant per SSC guidance, and pointed to planned full-assessment improvements (e.g., sex-disaggregated ageing)—all consistent with acknowledged scientific standards and with the allowance for carefully conditioned evidence when stock-specific inputs are

⁵⁶ https://apps-afsc.fisheries.noaa.gov/Plan_Team/2023/sablefish_appC.pdf

5. There shall be regular stock assessment activities appropriate for the fishery, its range, the species biology, and the ecosystem, undertaken in accordance with acknowledged scientific standards to support its optimum utilization.	temporarily unavailable. These regular, transparent activities support optimum utilization in 2025 via Tier 3a harvest control rules and area apportionment unchanged from 2023 in light of the 2024 survey gap. The following supporting clause was determined to be not relevant for the fisheries under examination: 5.1.1 (use of less-elaborate methods for small-scale or low-value fisheries requiring extra precaution), because these fisheries are data-rich and not small-scale or low-value, so the clause does not apply.
References:	Alaska Fisheries Information Network (AKFIN). https://www.fisheries.noaa.gov/inport/organization/AKFIN Cahalan, J., Gasper, J., & Mondragon, J. 2014. Catch Sampling and Estimation in the Federal Groundfish Fisheries off Alaska, 2015 Edition. NOAA Fisheries. eLandings. Alaska Interagency Electronic Reporting System. https://elandings.alaska.gov/ Goethel, D.R. and Cheng, M.L.H. 2024. Assessment of the sablefish stock in Alaska. North Pacific Fishery Management Council, Anchorage, AK available at https://files.npfmc.org/SAFE/2024/Sablefish.pdf Goethel, D. R., Cheng, M. L., Echave, K. B., Marsh, C., Rodgveller, C. J., Shotwell, K., et al. 2023. Assessment of the Sablefish Stock in Alaska. NOAA Fisheries. Goethel, D. R., Hanselman, D. H., Rodgveller, C. J., Echave, K. B., Williams, B. C., Shotwell, S. K., et al. 2021. Assessment of the Sablefish Stock in Alaska. IPHC. 2023. Fishery-Independent Setline Survey Seabird Observations, IPHC-2023-FISS-SBD-000. IPHC. Fishery-Independent Setline Survey (FISS). NOAA. NAO 216-100: Protection of Confidential Fisheries Statistics. https://www.noaa.gov/organization/administration/nao-216-100-protection-of-confidential-fisheries-statistics NOAA Fisheries. Alaska Catch Accounting System. https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/alaska-catch-accounting-system NOAA Fisheries. Electronic Reporting in Alaska Fisheries. https://www.fisheries.noaa.gov/alaska/resources-fishing/electronic-reporting-alaska-fisheries Ryall, P., Kurland, J., Davis, N., Alverson, R., Degreef, P., Yamada, R., et al. 2024. IPHC Fishery-Independent Setline Survey Sampling Manual, IPHC-2024-VSM01. International Pacific Halibut Commission. Shotwell, S.K., and Dame, R. 2024a. Appendix 3D. Ecosystem and Socioeconomic Profile of the Sablefish stock in Alaska - Report Card. In: Goethel, D.R., and Cheng, M.L.H. 2024. Assessment of the Sablefish stock in Alaska. North Pacific Fishery Management Council, Anchorage, AK. Available from https://files.npfmc.org/SAFE/2024/Sablefish_appD.pdf Soderlund, E., Randolph, D. L., & Dykstra, S. C. 2012. Technical Report No. 58: IPHC Setline Charters 1963 through 2003. International Pacific Halibut Commission. Stewart, I., Hicks, A., Webster, R. and Wilson, D., 2025. Data overview and stock assessment for Pacific halibut (<i>Hippoglossus stenolepis</i>) at the end of 2024. IPHC-2025-AM101-11. Seattle: International Pacific Halibut Commission. [pdf] Available at: https://www.iphc.int/uploads/2024/12/IPHC-2025-AM101-11-Data-overview-and-stock-assessment.pdf

5. **There shall be regular stock assessment activities appropriate for the fishery, its range, the species biology, and the ecosystem, undertaken in accordance with acknowledged scientific standards to support its optimum utilization.**

Statement of consistency to the CSI RFM Fishery Standard

The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

7.8.2.3. Fundamental Clause 6. Biological reference points and harvest control rule

6. **The current state of the stock shall be defined in relation to reference points, relevant proxies, or verifiable substitutes that allow effective management objectives and targets to be set. Remedial actions shall be available and taken where reference points or other suitable proxies are approached or exceeded.**

Summary of relevant changes:

Supporting clauses that are relevant include

- Clause 6.1: safe target reference points (or proxies) are established and aligned with MSY or suitable lower fishing mortality when appropriate;
- Clause 6.2: scientifically based limit reference points are set and paired with measures to prevent exceeding them;
- Clause 6.3: data and assessment procedures are in place to measure stock status against those reference points and adjust fishing levels accordingly;
- Clause 6.4: pre-agreed management actions and contingency plans are triggered if reference points are exceeded; and
- Clause 6.5: measures exist to identify/protect depleted or threatened stocks and to restore critical resources and habitats.

Pacific Halibut

Full, age-structured, statistical stock assessments are conducted annually, and fisheries management and conservation are based on precautionary and ecosystem-based approaches, including the use of reference points for spawning biomass and harvest rate. Since 1985, the IPHC followed a constant harvest rate policy to determine annual available yield, termed the Constant Exploitation Yield (CEY). A biological target level for total removals from each regulatory area is calculated yearly by applying a fixed area-specific harvest rate to the estimate of exploitable biomass in each IPHC regulatory area. The apportionment percentages and the target harvest rates for each regulatory area together result in a target distribution for the annual TCEY. The scale of this distribution is based on the estimate of the coastwide exploitable biomass at the beginning of year t+1 from the stock assessment in year t.

The IPHC's current interim management procedure specifies a reference level of fishing intensity of F43%, based on the Spawning Potential Ratio (SPR), with biomass-based triggers at SB30% and SB20% (Stewart et al., 2025). At the start of 2025, spawning biomass was estimated at ~149 million pounds (~67,500 t), about 38% of unfished levels. The probability of being below the SB30% trigger was around 30%, and about 11% for SB20%. These values are somewhat more pessimistic than the prior year, where SB was estimated near 42% of unfished. Fishery-independent FISS data showed mixed signals in 2024, with a 3% increase in NPUE offset by a 9% decline in O32 WPUE, while fishery-dependent commercial logbooks indicated a further 2–7% decline in CPUE. These downward trends were important in pulling down the biomass estimates in 2025, and they underscore the sensitivity of the assessment to both survey and fishery data. Fishing mortality in 2024 was estimated to be about 5% lower than in 2023, with total removals (landings and discards)

6. The current state of the stock shall be defined in relation to reference points, relevant proxies, or verifiable substitutes that allow effective management objectives and targets to be set. Remedial actions shall be available and taken where reference points or other suitable proxies are approached or exceeded.

at ~20.5 million pounds, the lowest level in a century. Recruitment continues to be shaped by the 2012 and 2016 cohorts, which are near average in strength but smaller than the dominant 2005-year class. Two long-term models continue to provide contrasting views of current stock size relative to historical lows, reflecting uncertainties in pre-1970s data. Projections in the 2025 assessment suggest elevated risk of further stock decline at higher catch levels, making the precautionary harvest control rules essential to keep exploitation aligned with reference points.

Alaska Pacific Sablefish

Under the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act, the Secretary of Commerce is required to report annually on the status of each U.S. fishery with respect to overfishing. The official catch for 2022 was 26,900 t, well below the OFL of 34,500 t, confirming that the stock was not subject to overfishing. In more recent assessments, sablefish spawning stock biomass has continued to improve. The 2025 SAFE report projects female spawning biomass at ~219,700 t, or about 73% of unfished B100%, placing the stock well above the B35% threshold that defines an overfished state (Goethel and Cheng, 2024). This means sablefish are neither overfished nor approaching that condition.

Sablefish remain under Tier 3 of the NPFMC harvest control rule, which uses B40% as the MSY proxy. The updated point estimate of B40% is 121,069 t. The 2025 reference points set FOFL = 0.102 and FABC = 0.087, leading to an author-recommended ABC of 50,111 t (after whale depredation adjustments) and an OFL of 58,532 t. These values are higher than in 2024, reflecting the strong biomass trajectory of the stock. Utilization in recent years has been well below ABC, further reducing short-term risk. The assessment in 2024 did not involve methodological changes—Model 23.5 was retained—but data were updated with 2023 catches, length and age compositions, and survey indices. The NOAA longline survey did not occur in 2024 due to cost-recovery limits, and the trawl survey was off-year, so apportionment relied on the five-year average. Even with fewer indices, model projections remained robust and continue to indicate a healthy stock condition.

For state-managed sablefish fisheries, such as those in Cook Inlet, Prince William Sound, and the Aleutian Islands, guideline harvest levels (GHLs) are derived from NMFS assessment data, historical effort and catch, and yield-per-unit-area models. In the Southern Southeast Inside (SSEI) Subdistrict, the 2024 annual harvest objective (AHO) was unchanged from 2023 at 643,360 round pounds, with 22 permit holders each receiving an equal quota share of 29,244 pounds⁵⁷ (Ehresmann, 2025). Adjustments to individual quota shares continue to be made for over- or underages from prior years. ADFG bases these harvest objectives on fishery CPUE, biological data, and stock trends in adjacent areas. Longline CPUE increased sharply from 2022 to 2023 (+40%) but then showed a preliminary 21% decline into 2024; pot fishery CPUE rose by 10% from 2022 to 2023. The absence of older, larger fish, particularly fecund females, remains a concern, though strong recruitment from the 2014, 2016, 2017, and 2018 cohorts is promising for future spawning potential.

⁵⁷ <https://www.adfg.alaska.gov/FedAidPDFs/RIR.1J.2025.01.pdf>

6.	The current state of the stock shall be defined in relation to reference points, relevant proxies, or verifiable substitutes that allow effective management objectives and targets to be set. Remedial actions shall be available and taken where reference points or other suitable proxies are approached or exceeded.
	For both halibut and sablefish, reference points are clearly defined and aligned with MSY or suitable proxies, with precautionary buffers built in. The IPHC uses SB20% and SB30% thresholds to control fishing mortality, while the NPFMC's Tier 3 harvest control rule for sablefish ties reference points directly to B40%. Both systems are tested through simulation and peer review, and both have demonstrated responsive management when stocks approach trigger points. In both cases, 2024 did not involve structural model changes—only updated data streams—but the 2025 outcomes highlight diverging trajectories: halibut biomass showing signals of decline, and sablefish biomass remaining strong and above targets.
References:	Goethel, D.R., and Cheng, M.L. 2024. Goethel, D.R. and Cheng, M.L.H. 2024. Assessment of the sablefish stock in Alaska. North Pacific Fishery Management Council, Anchorage, AK. Available at https://www.npfmc.org/wp-content/PDFdocuments/SAFE/2024/Sablefish.pdf Stewart, I., Hicks, A., Webster, R. and Wilson, D., 2025. Data overview and stock assessment for Pacific halibut (<i>Hippoglossus stenolepis</i>) at the end of 2024. IPHC-2025-AM101-11. Seattle: International Pacific Halibut Commission. [pdf] Available at: https://www.iphc.int/uploads/2024/12/IPHC-2025-AM101-11-Data-overview-and-stock-assessment.pdf Ehresmann, R. 2025. 2024 Southern Southeast Inside Subdistrict sablefish fishery management plan. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 1J25-01, Douglas
Statement of consistency to the CSI RFM Fishery Standard	The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

7.8.2.4. Fundamental Clause 7. Precautionary approach

7.	Management actions and measures for the conservation of stock and the ecosystem shall be based on the precautionary approach. Where information is deficient a suitable method using risk management shall be adopted to consider uncertainty.
Summary of relevant changes:	Relevant: Supporting Clauses 7.1 and 7.1.1 are relevant—both fisheries apply explicit precautionary harvest procedures with biomass triggers and risk-based decision tools, and management explicitly considers uncertainties (stock productivity, reference points, bycatch, ecosystem and socioeconomic factors). Pacific Halibut The IPHC interim management procedure applies explicit precautionary triggers at 30% of unfished spawning biomass and a limit reference point at 20%, where directed fishing is closed. The 2025 stock assessment indicates spawning biomass at the start of 2025 of ~149 million pounds (≈67,500 t), corresponding to about 38% of unfished levels, which remains safely above these thresholds (Stewart et al., 2025). Relative spawning biomass increased modestly compared with 2023 estimates and

7. Management actions and measures for the conservation of stock and the ecosystem shall be based on the precautionary approach. Where information is deficient a suitable method using risk management shall be adopted to consider uncertainty.

continues to track higher than the long-term low observed in the 1970s, though the exact scaling depends on whether the coastwide or areas-as-fleets model is emphasized.

The assessment is based on an ensemble of four age-structured models in Stock Synthesis, integrating both fishery-independent data from the annual FISS setline survey and fishery-dependent information such as commercial logbooks, length and age compositions, and bycatch estimates. No structural methodological changes were introduced in 2024; the update instead incorporated new 2024 FISS results and commercial CPUE data. Legal-size WPUE from the survey declined 9% compared with 2023, and commercial CPUE decreased about 2%, though overall fishing mortality was estimated to be ~5% lower. Decision tables quantify the probability of breaching the SB30% trigger under alternative harvest levels, which provides transparency and risk-based guidance for managers when setting the TCEY each year.

Meetings with IPHC staff confirmed that these reference points and procedures remain robust, with no new changes to the harvest policy introduced in 2024. The management procedure continues to be applied consistently, and uncertainty in longer-term historical scaling is acknowledged, particularly in differences between coastwide and area-specific models. Managers noted that while these uncertainties persist, they are explicitly considered in risk evaluation and decision-making each year.

Alaska Pacific Sablefish

Under the BSAI Fishery Management Plan (FMP), for Tier 3 stocks, B35% is used as a proxy for BMSY. However, Sablefish are managed under a different Tier 3 of the NPFMC control rule, where B40% serves as the MSY proxy and the stock is categorized into sub-tiers depending on current spawning biomass levels. The 2024 stock assessment retained Model 23.5 without methodological changes, updating inputs with 2023 final catches, preliminary 2024 catches, age and length compositions, and whale depredation adjustments (Goethel and Cheng, 2024). Female spawning biomass for 2025 is projected at ~219,714 t, about 73% of unfished B100% (302,672 t), well above the B35% threshold for being considered overfished. This places sablefish in Tier 3a, with point estimates of $F_{40\%} = 0.087$ and $F_{35\%} = 0.102$. These translate into a 2025 ABC of ~50,111 t and an OFL of ~58,532 t after whale adjustments.

The assessment concluded that sablefish are not overfished, not experiencing overfishing, and not approaching an overfished state. Recruitment continues to benefit from strong 2014, 2016, 2017, and 2018 cohorts, which have been observed in multiple surveys and fisheries. However, there are ongoing concerns regarding truncated age structure, particularly the lack of older, large females in the population. This has been highlighted in SSC-required risk tables, which capture potential issues related to model assumptions, environmental influences, and fishery performance. Most risk factors for sablefish remain at “level 1 – normal,” though population dynamics were rated “level 2 – increased concern” due to uncertainty in the magnitude and survival of recent strong cohorts.

The 2024 NOAA longline survey was suspended due to cost-recovery issues, which reduced availability of fishery-independent indices. Managers relied more heavily on trawl survey data (conducted on a biennial basis) and fishery CPUE to inform the assessment. State-managed fisheries (SSEI, NSEI, PWS, Cook Inlet, and Aleutian Islands) continue to use guideline harvest limits informed by CPUE, tagging, and biological data, with adjustments to gear regulations aimed at mitigating whale depredation and reducing bycatch. In 2025, the Council also advanced a rule to allow “small sablefish

7. Management actions and measures for the conservation of stock and the ecosystem shall be based on the precautionary approach. Where information is deficient a suitable method using risk management shall be adopted to consider uncertainty.

release” under the IFQ program (pending Secretarial review), which may change discard patterns and be incorporated into future assessments.

Overall, the evidence shows that sablefish remain well above limit reference points, assessments continue to incorporate a wide array of biological and fishery data, and management adjustments are being made as needed to address uncertainties such as whale depredation and truncated age structure.

Not relevant: Supporting Clauses 7.1.2 and 7.2 are not relevant here—the fisheries are data-rich with mature, annually updated assessments (so not operating “in the absence of adequate information”) and they are long-established rather than new or exploratory.

References:

Cahalan, J., & Gasper, J. 2022. The Commercial Size Limit for the Pacific Halibut Fishery off Alaska and Its Relationship to Observer-Derived Estimates of At-Sea Discard. NOAA Fisheries. doi:10.25923/8XHP-7Q20

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7. Management actions and measures for the conservation of stock and the ecosystem shall be based on the precautionary approach. Where information is deficient a suitable method using risk management shall be adopted to consider uncertainty.

<https://www.iphc.int/uploads/2024/12/IPHC-2025-AM101-11-Data-overview-and-stock-assessment.pdf>

Statement of consistency to the CSI RFM Fishery Standard

The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

7.8.3. Section C: Management Measures, Implementation, Monitoring, and Control

7.8.3.1. Fundamental Clause 8. Management measures

8. Management shall adopt and implement effective management measures designed to maintain stocks at levels capable of producing maximum sustainable yields, including harvest control rules and technical measures applicable to sustainable utilization of the fishery, and based upon verifiable evidence and advice from available objective scientific and traditional sources.	
Summary of relevant changes:	Supporting clauses that are relevant include <u>Clause 8.1: conservation and management measures are designed for long-term sustainability and optimum utilization using verifiable scientific and traditional knowledge; Clause 8.1.1: alternative measures are evaluated for cost-effectiveness and social impact; Clause 8.1.2: bycatch and discards are actively managed and reduced consistent with the precautionary approach and best available science;</u> <u>Clause 8.2: destructive practices such as dynamiting and poisoning are prohibited;</u> <u>Clause 8.3: domestic stakeholders—including indigenous communities—are identified and consulted in decisions;</u> <u>Clause 8.4: fleet capacity is measured, monitored, and reduced when necessary through limited access/IFQ systems and maintained authorizations;</u> <u>Clause 8.4.1: studies are promoted to understand costs, benefits, and effects of rationalization and excess effort;</u> <u>Clause 8.5: technical measures on size, gear, seasons/areas, and protection of juveniles/spawners are applied;</u> <u>Clause 8.5.1: measures minimize catch, waste, and discards of non-targets and reduce impacts on associated, dependent, and endangered species;</u> <u>Clause 8.6: gear is marked per law so owners can be identified;</u> <u>Clause 8.7: agencies and industry develop, implement, and use selective, environmentally safe, cost-effective gear and techniques to minimize waste and bycatch;</u> <u>Clause 8.8: technologies and operating methods are applied to minimize gear loss, ghost-fishing, pollution, and waste;</u> <u>Clause 8.9: the intent of selectivity/impact regulations is not circumvented and new requirements are broadly communicated;</u> <u>Clause 8.11: international cooperation on gear selectivity, methods, dissemination, and technology transfer is encouraged (e.g., through the IPHC);</u> <u>Clause 8.12: managers and institutions collaborate on standard methodologies for research into gear selectivity, fishing strategies, and species–gear interactions to inform decisions and reduce non-utilized catch.</u> Halibut The Pacific halibut fishery continues to be assessed annually with a full, age-structured, statistical model ensemble using Stock Synthesis. The International Pacific Halibut Commission (IPHC) maintains an ensemble of four equally weighted models—long and short time series, each configured in coastwide and disaggregated forms—so that alternative hypotheses about mortality, recruitment, and environmental drivers are explicitly carried into the assessment outcomes. This ensemble approach provides a robust distribution of uncertainty and helps ensure that management advice incorporates a wide range of structural assumptions. Since 1985, the IPHC has managed harvests through a constant exploitation yield framework, which has been refined into the interim management procedure in recent years. The procedure specifies a reference fishing intensity of F43%, which corresponds to reducing lifetime spawning output per

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recruit to 43% of the unfished level. The harvest control rules include biomass triggers: if spawning biomass falls to SB30%, the reference fishing intensity is reduced, and at SB20% all directed fishing is halted. These thresholds ensure precautionary management in line with international best practices.

At the start of 2025, spawning biomass was estimated at about 149 million pounds (67,500 t), up slightly from 145 million pounds at the start of 2024 (Steward et al., 2025). This equates to approximately 38% of unfished levels (95% credible interval: 18–55%). The probability of being below the SB30% trigger is ~30% in 2025, while the probability of being below SB20% is ~11%. Although halibut biomass has remained relatively stable, this continues to place the stock near a threshold where caution is warranted.

Survey and fishery indices provide mixed signals. The modelled coastwide Fishery-Independent Setline Survey (FISS) NPUE increased 3% from 2023 to 2024, suggesting localized improvement in catch rates, but the FISS weight-per-unit-effort of legal-size fish (O32 WPUE) dropped 9%. Preliminary commercial logbook CPUE fell 2% from 2023, and subsequent updates suggest the decline may be closer to 7% (Ualesi et al. 2025). The downward revisions to logbook data also reduced the estimated scale of stock biomass relative to previous assessments. Fishing mortality from all sources decreased 5% from 2023, with total removals in 2024 estimated at 32.7 million pounds (14,800 t), which represents the lowest annual removal in the past century.

Biological sampling indicates a shift away from the once-dominant 2005 year-class, toward the 2012 (age 12) and 2016 (age 8) cohorts, which are now important contributors to the fishery. Both are considered average-strength cohorts compared to the strong recruitment events of the late 1990s and early 2000s, and recruitment since 2006 has generally been weaker than in those earlier decades. The projections suggest at least a 43% probability of further decline in 2025 under catch scenarios above status quo, and a 26–29% one-year risk of falling below SB30% across the suite of management alternatives. This highlights the continued importance of precautionary harvest strategies, adaptive management, and maintaining strong stock assessment practices to avoid breaching biological reference points.

Sablefish

Sablefish, managed federally under the North Pacific Fishery Management Council (NPFMC), also underwent a full assessment update in 2024 (Goethel and Cheng, 2024). Sablefish remain classified under Tier 3 of the NPFMC harvest control rule, targeting B40% as the spawning biomass proxy. The 2025 SAFE assessment (model 23.5) was carried forward from 2023 with updated data streams but no methodological changes. The model incorporated finalized 2023 catch, preliminary 2024 catch, and new length and age compositions. However, the 2024 NOAA longline survey was canceled for the first time in more than 40 years due to poor market conditions, and the Gulf of Alaska trawl survey was in its off-year, which increased overall uncertainty.

Despite those gaps, the model shows that sablefish biomass remains high. Total biomass reached ~705,000 t in 2024, tripling from a 2015 low of 234,000 t, while spawning biomass doubled from 83,000 t in 2018 to 191,000 t in 2024. The 2025 projected female spawning stock biomass is 219,714 t, equivalent to ~73% of unfished levels (B100% ≈ 302,672 t). This places sablefish in Tier 3a, with

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FABC = 0.087. The 2025 maximum permissible ABC is 50,283 t, reduced to 50,111 t after whale depredation adjustments, while the OFL is 58,731 t (OFLw = 58,532 t). These values reflect the strong position of the stock in biomass terms.

Recruitment dynamics are encouraging but concentrated. Strong year classes from 2014 through 2018 now dominate the population, with the 2014 cohort estimated to be 90% mature at age 10 and the 2016 cohort 67% mature at age 8. Together, these cohorts comprise more than 80% of the projected 2025 spawning stock biomass, but the overall age structure is truncated, with relatively few older fish in the stock. The 2022 cohort also shows indications of strength, which may further reinforce spawning potential in coming years. Projections indicate spawning biomass will continue increasing into 2026.

Catch levels have been well below ABC in recent years, averaging about 71% utilization, and in 2024 projected to be under 50%. This shortfall is primarily due to weak market demand, a shift in fishing methods from longline to pot gear, and the influx of small, low-value fish. Fishermen and managers alike have expressed concern over market conditions, and management strategy evaluations are underway to consider alternative harvest control rules that can stabilize age structure and market outcomes while retaining precautionary reference points. Overall, sablefish are not overfished, overfishing is not occurring, and the stock is not approaching an overfished state. The biomass trajectory remains upward, though the heavy dependence on just a few cohorts emphasizes the need for careful monitoring.

In addition to the federally managed EEZ fishery, three state-managed inside sablefish fisheries—Northern Southeast Inside (NSEI), Southern Southeast Inside (SSEI), and Prince William Sound (PWS)—are assessed independently. These fisheries operate under separate harvest control rules, relying on survey indices, mark–recapture biomass estimates, and age and length data rather than being directly linked to the federal assessment.

In NSEI, management relies on mark–recapture biomass estimates and applies a fixed harvest rate. The 2025 guideline harvest level (GHL) is set at 1,155,000 lb, unchanged from 2024, reflecting stable biomass signals and conservative exploitation rates. Survey and fishery data indicate that recruitment of small sablefish has been strong in recent years, aligning with the trends identified in the federal assessment.

In SSEI, the fishery is managed with greater precaution due to its smaller biomass and greater variability. The 2025 GHL is set at 592,000 lb, also unchanged from 2024. Management is informed by survey catch-per-unit-effort and biological sampling, which suggest stable trends, although growth rates of sablefish in SSEI remain lower than those observed in NSEI.

In Prince William Sound, management applies a fixed GHL approach based on longline survey indices. For 2025, the GHL is set at 134,000 lb, consistent with the recent five-year average. Biological sampling indicates that the strong 2014–2016 cohorts observed in federal waters are also contributing significantly in PWS.

Across all three state-managed inside fisheries, exploitation rates are highly conservative, generally below 5% of estimated biomass. The harvest control rules are explicitly designed to protect spawning

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biomass and to buffer against environmental or recruitment variability. Managers continue to report an influx of small sablefish into survey catches, consistent with federal observations, but also note that the influx of small fish has presented ongoing economic challenges due to lower market value.

Taken together, the Pacific halibut and sablefish stocks remain under active, precautionary management that relies on extensive stock assessment activities appropriate to the fisheries, their biology, and their ecosystems. The halibut assessment indicates stability but with continued risks of crossing biological reference thresholds, underscoring the need for adaptive management. The sablefish assessment reflects a stock that has recovered strongly in terms of biomass, supported by several recent strong year classes, but still dependent on limited cohorts and subject to market and operational challenges. The state-managed inside fisheries reinforce this picture, with conservative management measures that align with federal precautionary frameworks while responding to local biological and economic conditions.

The following supporting clauses were determined not relevant for the fisheries under examination: Clause 8.10 (impact assessment before commercial-scale introduction of new gear), because no new gear has been introduced in the last three years; and Clause 8.13 (policies for artificial structures/reefs), because these are not enhanced fisheries and artificial structures are not applicable.

References:

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8.	Management shall adopt and implement effective management measures designed to maintain stocks at levels capable of producing maximum sustainable yields, including harvest control rules and technical measures applicable to sustainable utilization of the fishery, and based upon verifiable evidence and advice from available objective scientific and traditional sources.
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Statement of consistency to the CSI RFM Fishery Standard	The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

7.8.3.2. Fundamental Clause 9. Appropriate standards of fishers' competence

9.	Fishing operations shall be carried out by fishers with appropriate standards of competence in accordance with international standards, guidelines and regulations.
Summary of relevant changes:	<u>SC 9.1 States shall advance, through education and training programs, the education and skills of fishers and, where appropriate, their professional qualifications. Such programs shall take into account agreed international standards and guidelines.</u> Halibut/Sablefish No new mandatory training programs for halibut or sablefish fishermen have been established. General safety and handling training (e.g. USCG courses on small vessel safety, fish handling workshops at industry meetings) continue on schedule. The North Pacific Observer Program continues training observers (not fishermen), but vessel operators still receive only existing outreach material. NOAA has not announced any new licensing or certification requirements for halibut/sablefish gear beyond standard state and federal permits. <u>SC 9.2 States, with the assistance of relevant international organizations, shall endeavour to ensure, through education and training, that all those engaged in fishing operations be given information on the most important provisions of the FAO CCRF (1995), as well as provisions of relevant international conventions and applicable environmental and other standards that are essential to ensure responsible fishing operations.</u> Halibut/Sablefish Information on new regulations is still conveyed through the usual channels. NOAA and ADFG publish annual briefing books and notices to IFQ holders; the Halibut Catch Sharing Plan meetings are open to angler education. In 2024–25, NOAA published the Area 2A Recreational Rule (catch plan) for West Coast anglers, but Alaska's Area 2C/3A seasons remain on their established schedule (set by IPHC).

9. Fishing operations shall be carried out by fishers with appropriate standards of competence in accordance with international standards, guidelines and regulations.

Thus, fishermen are informed through existing rulemakings; no new training requirements have been issued^{58,59}.

Fisher competence is also addressed through the continuous issuance of updated regulations and specific requirements relating to fish handling and reporting. The NPFMC's recommendation to adopt and implement careful release procedures for IFQ sablefish caught with hook-and-line gear⁶⁰ directly mandates that fishers possess appropriate skills to ensure minimal injury and maximize survival of discards, thereby linking regulatory changes to required operational competence.

SC 9.3 The fishery management organization shall, as appropriate, maintain records of fishers which shall, whenever possible, contain information on their service and qualifications, including certificates of competency, in accordance with their State's laws.

Halibut/Sablefish

The fisheries management organization maintains robust records of all participants through the IFQ/CDQ program structure, which tracks Quota Share (QS) holders, IFQ transfers, vessel ownership, and required landing reports (e.g., IFQ/CDQ Landing Reports)⁶¹. No new credentialing systems were introduced. (ADFG continues to issue Sablefish/Shellfish permits and NOAA issues Halibut IFQ permits as before.) There have been no changes to U.S. certification or record-keeping beyond routine updates to permit databases.

The judicial actions in 2025 underscore the reliance of the enforcement system on these records. For instance, related criminal cases involving illegal fishing frequently utilize locational data from the Vessel Monitoring System (VMS) and detailed Daily Fishing Logbooks to track non-compliant vessel activities and expose falsified reports⁶². The ability of the enforcement arm to successfully prosecute violations using these specific records validates the comprehensiveness and integrity of the record-keeping system required by this clause.

References:

Statement of consistency to the CSI RFM Fishery Standard

The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

7.8.3.3. Fundamental Clause 10. Effective legal and administrative framework

10. An effective legal and administrative framework shall be established, and compliance ensured, through effective mechanisms for monitoring, surveillance, control, and enforcement for all fishing activities within the jurisdiction.

Summary of

relevant changes:

SC 10.1. Effective mechanisms shall be established for fisheries monitoring, surveillance, control, and enforcement measures including, where appropriate, observer programs, inspection schemes, and vessel monitoring systems, to ensure compliance with the conservation and management measures for the fishery in question.

On September 22, 2025, Global Trust contacted NOAA OLE Alaska Enforcement Division. Alex Perry, the Compliance Analyst Liaison reported that in calendar year 2024, OLE conducted 263 boardings of

⁵⁸ <https://www.fisheries.noaa.gov/action/2024-pacific-halibut-recreational-fishery>

⁵⁹ <https://www.fisheries.noaa.gov/action/2025-pacific-halibut-recreational-fishery>

⁶⁰ <https://meetings.npfmc.org/CommentReview/DownloadFile?p=ee6e1d8d-6839-49ee-ad4c-b5c789c83411.pdf&fileName=C2+AP+Report.pdf>

⁶¹ <https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/alaska-fisheries-management-reports>

⁶² <https://www.justice.gov/usao-ak/pr/commercial-fisherman-sentenced-6-months-prison-falsifying-fishing-records-and-taking>

10. An effective legal and administrative framework shall be established, and compliance ensured, through effective mechanisms for monitoring, surveillance, control, and enforcement for all fishing activities within the jurisdiction.

Commercial IFQ Halibut and or Sablefish vessels. Across the fleet, OLE created 568 total incidents in its Electronic Case Management System (ECMS) and detected 480 total potential violations in these fisheries. 27 incidents remain open, 17 with a status of “investigation ongoing.”

BSAI:

25 incidents with potential violations

22 potential violations

GOA:

543 incidents

458 potential violations.

For reference, in 2024, there were a total of 5,586 IFQ landings. Of the allocations, 81% of the halibut were caught, and 60% of the allocated sablefish were caught. OLE detected potential violations at a rate of 0.086 per trip.

The most commonly detected violation types included:

- Recordkeeping and Reporting (vessels and processors)
- IFQ overages in excess of 10%
- Gear Violations (Marking, Biodegradable Panel, Tunnel Opening Size, etc)
- Fishing federal waters without a Federal Fisheries Permit issued and in possession
- Observer Declare and Deploy System Issues (monitoring programs: observer and Electronic Monitoring):
 - o trips not logged
 - o incorrect information submitted
 - o fishing without observer or operable EM system
- No VMS (when required)
- Failure to Retain Improved Retention/Improved Utilization species
- Prohibited Species mishandling
- EM Issues (not following VMP, no hard drive, data loss)
- No Prior Notice of Landing/ Incorrect PNOL
- FFP/ IFQ Permit Holder not onboard/not present at landing

Lesser-frequency violation types include:

- Illegal Discard of IFQ Species
- Permit Holder not present for landing
- Closed Area fishing/ landing/ multi-area violations
- Quota fished on wrong class/size vessel
- Seabird Avoidance insufficient
- Soak Time Violations (sablefish)
- Vessel Cap Exceeded
- MRA Overage
- Retain Undersized Halibut
- Fail to Offload All Fish
- MCA Overage
- Other Observer Program Issues (Fail to provide Reasonable Assistance/ impede duties/ inadequate accommodations; Intimidation/ Hostile Work Environment, assault/SASH; Observer safety: no wheelwatch, watertight hatches, etc.; Fail to notify observer of gear retrieval).

10. An effective legal and administrative framework shall be established, and compliance ensured, through effective mechanisms for monitoring, surveillance, control, and enforcement for all fishing activities within the jurisdiction.

Halibut Updates⁶³

Enforcement activities continued steadily in 2024–25. The U.S. Coast Guard and NOAA Office of Law Enforcement (OLE) both conducted patrols under existing programs (NOAA, 2025a)

In 2024, NOAA Fisheries' Alaska Enforcement Division (AKD) dedicated over 3,628 hours to patrols aimed at deterring violations, monitoring marine activities, and providing outreach and compliance assistance, particularly within the halibut fishery. AKD boarded 653 vessels, with 443 boardings specifically related to halibut fisheries. These included 256 commercial, 114 charter, 61 sport, and 12 subsistence halibut vessels. Throughout the year, AKD opened 748 halibut-related incidents, identifying 394 violations. The majority of these violations occurred in the commercial sector (255), followed by charter (86), sport (29), subsistence (5), and commercial groundfish operations involving halibut (19). Common infractions included IFQ overages, recordkeeping failures, gear marking issues, mishandling of undersized halibut, and fishing without proper permits.

The U.S. Coast Guard complemented NOAA's efforts by conducting 554 vessel boardings across Alaska's IPHC areas, with the highest activity in Area 2C (370 boardings) and Area 3A (177 boardings)⁶⁴. They detected 16 fisheries violations on 6 vessels, all within the commercial sector, resulting in a 98.9% overall compliance rate. Charter and recreational/subsistence sectors showed full compliance. Violations included improper logbooks, failure to retain incidental catch (rockfish and Pacific cod), and missing permits. Additionally, the USCG documented 95 safety violations across 65 vessels, leading to voyage terminations for 2 commercial, 3 charter, and 13 recreational vessels. All detected fisheries violations were referred to NOAA OLE or Alaska Wildlife Troopers for resolution, which ranged from compliance assistance to catch seizures.

Sablefish Updates

NOAA OLE

In calendar year 2024, NOAA Fisheries' Alaska Enforcement Division (AKD) reported no violations on activities related to sablefish.

Alaska Division of Wildlife Troopers

On March 7, 2025 Global Trust contacted Alaska Division of Wildlife Troopers for information on law enforcement related to sablefish in Alaska's State waters. Captain Derek DeGraaf reported that for IFQ commercial fishing activity for 2024, the Alaska Wildlife Troopers made 6 contacts with commercial fishery participants. However, no warnings were given during these contacts, and nobody was charged with offenses.

SC 10.2 Fishing vessels shall not be allowed to operate on the stock under consideration in question without specific authorization

All vessels still require valid IFQ/CDQ permits and licenses to fish halibut/sablefish. No new license categories or exemptions were created. Alaska state regulations (e.g. for charter halibut) remain unchanged. In 2024–25, NOAA published annual Federal regulations for halibut season dates (e.g. delayed openings in some areas) via the Federal Register, but the

⁶³ https://www.iphc.int/uploads/2025/01/IPHC-2025-AM101-NR02-Rev_1-National-report-USA.pdf

⁶⁴ https://www.iphc.int/uploads/2025/01/IPHC-2025-AM101-NR02-Rev_1-National-report-USA.pdf

10. An effective legal and administrative framework shall be established, and compliance ensured, through effective mechanisms for monitoring, surveillance, control, and enforcement for all fishing activities within the jurisdiction.		
	requirement that any vessel in the U.S. waters must hold an IFQ permit (or valid CDQ allocation) has not changed. The following Supporting clauses are not applicable. Clauses 10.3, 10.3.1, 10.4, 10.4.1	
References:	NOAA Fisheries, 2025. National Report: United States of America. IPHC-2025-AM101-NR02 Rev_1. Prepared for the 101st Session of the IPHC Annual Meeting. [pdf] Seattle: International Pacific Halibut Commission. Available at: https://www.iphc.int/uploads/2025/01/IPHC-2025-AM101-NR02-Rev_1-National-report-USA.pdf	
Statement of consistency to the CSI RFM Fishery Standard	The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard	

7.8.3.4. Fundamental Clause 11. Framework for sanctions

11. There shall be a framework for sanctions for violations and illegal activities of adequate severity to support compliance and discourage violations.	
Summary of relevant changes:	There were no significant changes in relation to conformance with Fundamental Clause 11. As summarized below, the evidence viewed during surveillance confirms that the certified Alaska Pacific Halibut and Alaska Sablefish fisheries are in conformance with CSI RFM Standard Fundamental Clause 11. A framework for sanctions remains in place and is an effective means to support compliance and discourage violations. <u>SC 11.1 State laws of adequate severity shall be in place that provide for effective sanctions.</u> <u>SC 11.2 Sanctions applicable to violations and illegal activities shall be adequate in severity to be effective in securing compliance and discouraging violations wherever they occur. Sanctions shall also be in force to affect authorization to fish and/or to serve as masters or officers of a fishing vessel in the event of non-compliance with conservation and management measures.</u> Halibut/Sablefish U.S. laws (Magnuson-Stevens Act, Northern Pacific Halibut Act) already provide penalties for violations. No new penal statutes were passed. NOAA’s Civil Administrative Penalty policy still applies to halibut/sablefish offenses. Enforcement reports from 2024–25 (NOAA OLE press releases) show continued use of these authorities (e.g. penalties for illegal charter fishing or possession), but no changes in the sanction framework itself. <u>SC 11.3 Fisheries management organizations shall ensure that sanctions for IUU fishing by vessels and, to the greatest extent possible, nationals under its jurisdiction are of sufficient severity to effectively prevent, deter, and eliminate IUU fishing and to deprive offenders of the benefits accruing from such fishing.</u> The U.S. continues to enforce sanctions for any Illegal, Unreported, or Unregulated (IUU) fishing as part of international commitments. U.S. vessels are required to catch report, and illegal entry into other EEZs is addressed by Coast Guard patrols (e.g. near the Russia EEZ). There have been no specific IUU incidents reported in the Halibut fishery, and no change to sanction rules; the existing framework (port-state measures, name-based IUU list under the Halibut Act) continues. Based on the NOAA Civil

11. There shall be a framework for sanctions for violations and illegal activities of adequate severity to support compliance and discourage violations.	
	Administrative Enforcement Actions website⁶⁵, there were no IUU incidents reported in the sablefish fishery either. The following Supporting clauses are not applicable. Clause 11.4
References:	
Statement of consistency to the CSI RFM Fishery Standard	The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

⁶⁵ <https://www.noaa.gov/general-counsel/gc-enforcement-section/enforcement-charging-information>

7.8.4. Section D: Serious Impacts of the Fishery on the Ecosystem

7.8.4.1. Fundamental Clause 12. Impacts of the fishery on the ecosystem

	12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.
Summary of relevant changes:	SC 12.1 The fishery management organization shall assess the impacts of environmental factors on target stocks and associated or dependent species in the same ecosystem, and the relationship among the populations in the ecosystem Halibut <u>Assessment of environmental effects on target stocks and ecosystem.</u> Since its establishment, the IPHC has an extensive history of research focused on elucidating the biology of the Pacific halibut (<i>Hippoglossus stenolepis</i>)⁶⁶. The primary objectives of the Biological and Ecosystem Science Research Program at IPHC are to 1) identify and evaluate significant knowledge deficiencies regarding the biology of the Pacific halibut; 2) comprehend the impact of environmental conditions on the biology of the Pacific halibut and its fishery; and 3) utilize the acquired knowledge to mitigate uncertainty in existing stock assessment models. The IPHC 2024 Report on Research Activities (IM100-15)⁶⁷ provides an update on progress under the Five-Year Program of Integrated Research and Monitoring (2022–2026) (Planas, 2024). The program is designed to reduce uncertainty in stock assessments by filling biological knowledge gaps and providing inputs for both stock assessment (SA) and management strategy evaluation (MSE). Research is organized into five main areas: migration and population dynamics, reproduction, growth, mortality and survival, and fishing technology. In the area of migration and population dynamics, a population genomics study using low-coverage whole-genome resequencing of 570 fish (10.2 million SNPs) found no evidence of distinct genetic groups. This supports the current panmictic, coastwide management approach. Complementary tagging and larval transport studies also confirmed high connectivity across regions, reinforcing the validity of a single-stock assessment model. Research on reproduction has updated maturity schedules using histological analysis of more than 3,200 ovaries collected between 2022 and 2024. The new coastwide estimate shows that 50% of females reach maturity at 10.3 years, younger than the previous estimate of 11.6 years. This suggests a higher spawning potential than previously modeled. In addition, fecundity studies have been initiated to replace spawning biomass with egg output as a more accurate reproductive metric, using auto-diametric fecundity estimation methods with training support from NOAA. Work on growth has completed an NPRB-funded study that identified 23 genetic and protein markers linked to temperature-driven growth suppression and 10 linked to growth stimulation. Ongoing studies are examining density- and stress-induced growth effects, which are particularly relevant for

⁶⁶ <https://www.iphc.int/research/biological-and-ecosystem-science-research/>

⁶⁷ <https://iphc.int/uploads/2024/10/IPHC-2024-IM100-15-Report-on-research-activities.pdf>

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

understanding discard and crowding impacts. These findings may help distinguish environmental from fishery-driven effects on stock productivity.

In the field of mortality and survival assessment, a longline discard mortality study has been completed and published, while a recreational discard mortality study has produced the first experimental estimate of 1.35% mortality for halibut released in excellent condition on circle hooks. This is lower than the currently assumed 3.5% rate, which could reduce estimated removals in stock assessments. A manuscript is in preparation to further analyze correlations between injury, stress, and survival.

Finally, research on fishing technology has focused on whale depredation mitigation. Two gear designs were tested: an underwater shuttle and a sliding shroud. The underwater shuttle performed well, proving safe, effective, and comparable in catch rates, while the sliding shroud faced logistical challenges. A full-scale test of the shuttle in whale depredation hotspots is planned for 2025, funded by NOAA's Bycatch Reduction Engineering Program. This work has the potential to reduce unaccounted mortality and improve assessment accuracy.

Overall, the report highlights several important implications for stock assessment and management. The younger maturity age points to higher spawning biomass estimates, while the lower recreational discard mortality rate suggests reduced removals. Genomic confirmation of panmixia supports the coastwide model, and new reproductive, growth, and mortality data will enhance management strategy evaluations. Looking ahead, the program will emphasize fecundity studies, stress-growth links, and whale depredation mitigation in 2025–2026.

Monitoring Environmental Conditions

The International Pacific Halibut Commission (IPHC) continues to enhance its Fishery-Independent Setline Survey (FISS), which spans a 10×10 nautical mile grid from Oregon through the Gulf of Alaska, the Aleutian Islands, and into the Bering Sea, at depths ranging from 30 to 500 meters. This extensive survey, one of the largest of its kind globally, provides standardized biological data independent of commercial fishing, including catch rates, sex, length, age, and maturity of Pacific halibut (Ualesi, 2025). Since 2009, the IPHC has integrated oceanographic data collection into the FISS using water column profilers deployed at each station prior to gear retrieval. These profiles capture pressure, temperature, salinity, dissolved oxygen, pH, and chlorophyll-a concentration, offering a seasonal snapshot of environmental conditions across the North Pacific continental shelf (Ualesi, 2025). The resulting time series is invaluable for assessing the influence of environmental factors on halibut distribution and productivity. Recent updates confirm that these data are now routinely used in stock assessments and harvest strategy evaluations, with the 2025 assessment incorporating PDO-linked environmental covariates and refined maturity estimates based on histological analysis (Ualesi, 2025). This integration of fishery-independent biological and environmental data strengthens the scientific foundation for adaptive, ecosystem-based management of Pacific halibut.

Effects of environmental factors and somatic growth

Over the past century, the size-at-age (SAA) of Pacific halibut has undergone substantial fluctuations, with notable increases from the 1940s to the 1990s followed by a persistent decline in recent decades. This reduction in SAA, coupled with weak recruitment from cohorts spawned during the

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initial decline, has significantly diminished the exploitable biomass available to fisheries⁶⁸. For example, the average weight of a 12-year-old female halibut has dropped by approximately 20 pounds over the last 40 years. Although the implications of this decline for fisheries management are well recognized, the underlying causes remain only partially understood. Several hypotheses have been proposed, including fisheries-dependent effects such as size-selective harvesting, density-dependent population dynamics, and environmentally driven changes in somatic growth (Sullivan et al., 2019). Among environmental factors, temperature has emerged as a primary driver of somatic growth variability. IPHC research has focused on evaluating temperature effects on spatial, temporal, and age-specific growth patterns, using physiological markers to monitor somatic development in natural habitats (Planas et al., 2025). Recent studies have identified molecular biomarkers in skeletal muscle and liver tissues that respond to temperature-induced growth plasticity, offering insights into the mechanisms regulating growth and resilience under changing environmental conditions (Planas et al., 2025). These findings are critical for refining management strategies and understanding how climate variability may influence halibut productivity and sustainability.

Pacific Decadal Oscillation (PDO) and Pacific Halibut Recruitment

Studies have long shown a strong link between the Pacific Decadal Oscillation (PDO) and Pacific halibut recruitment, with positive PDO phases generally coinciding with stronger average recruitment (Mantua et al., 1997; Clark and Hare, 2002; Clark et al., 1999). Negative PDO conditions persisted from 2006 to 2013, the longest such stretch since the late 1970s—followed by positive values from 2014 to 2019 and negative values again from 2020 to 2023. Because recruitment is only observed 6–8 years after each cohort is born, PDO indices remain the only early indicator of abundance, and the correlation is re-estimated annually in stock assessments to account for potential shifts in phase or variability

Recent analyses in 2025 continue to confirm the importance of the Pacific Decadal Oscillation (PDO) as a covariate influencing Pacific halibut recruitment, building on the findings of Stewart et al., (2024). The updated stock assessment incorporated the latest PDO time series and retained it as a key explanatory variable in the stock–recruit relationship (Stewart et al., 2025a, Stewart et al., 2025b). However, the assessment now uses a random-walk approach for recruitment deviations, rather than reverting immediately to long-term means, to better reflect uncertainty and recent trends. This adjustment was recommended by the Scientific Review Board (SRB) to constrain short-term recruitment forecasts around observed values rather than equilibrium assumptions (Stewart et al., 2025a, Stewart et al., 2025b).

Climate outlooks for 2025 indicate that the cool PDO phase persists, with projections suggesting a gradual shift toward neutral conditions by 2027^{69,70}. Historically, cool PDO phases have correlated with lower halibut recruitment, and this pattern is reflected in the risk tables of the 2025 assessment (Stewart et al., 2025a). Despite this, the assessment emphasizes that climate anomalies in the Bering Sea and Gulf of Alaska may not fully mirror historical PDO-driven productivity regimes, introducing additional uncertainty under climate change scenarios (Stewart et al., 2025a).

⁶⁸ <https://www.iphc.int/research/growth/>

⁶⁹ <https://climateimpactcompany.com/june-2025-monthly-enso-pdo-amo-and-iod-outlook-2-2/>

⁷⁰ <https://climateimpactcompany.com/pacific-decadal-oscillation-outlook-are-we-due-for-a-cycle-change-of-the-pacific-decadal-oscillation-2-2/>

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Recruitment remains dominated by the 2012 and 2016 cohorts, with recent years showing continued weakness. While PDO correlations remain statistically significant, the 2025 assessment cautions that their predictive strength could diminish as oceanographic conditions diverge from historical norms (Stewart et al., 2025a). Exceptional circumstance checks under the Harvest Strategy Policy were conducted, and although spawning biomass and recruitment remain low, recent observations fell within simulated ranges, so no exceptional circumstance was declared (Stewart et al., 2025a).

Assessment of the impact of environmental factors and fishing operations on Pacific halibut on stock dynamics

Recent updates to the Pacific halibut Management Strategy Evaluation (MSE) framework have reinforced the importance of integrating environmental variability—particularly the Pacific Decadal Oscillation (PDO)—into harvest strategy development (IPHC, 2025a). The International Pacific Halibut Commission (IPHC) has confirmed that relative reference points such as spawning potential ratio (SPR) and relative spawning biomass (RSB) remain stable across different environmental regimes, suggesting that SPR-based management strategies are robust under both high and low PDO conditions (IPHC, 2025b). Simulations using the MSE framework revealed that while the median RSB at SPR 43% was comparable across PDO scenarios, the probability of falling below critical thresholds (e.g., RSB < 36%) was higher under low PDO conditions. Furthermore, the Total Catch Equivalent Yield (TCEY) was found to be 22% lower under sustained low PDO and 26% higher under sustained high PDO, compared to baseline simulations with cyclical PDO transitions (IPHC, 2025b). Regionally, the distribution of spawning biomass was influenced more by environmental conditions than by fishing intensity within the SPR range of 40–46%, with Region 2 showing greater biomass under low PDO and Region 4B under fishing pressure and low PDO (IPHC, 2025b). These findings underscore the need for adaptive management that accounts for environmental drivers and supports ecosystem-based approaches, especially as the IPHC continues to refine its Harvest Strategy Policy and evaluate exceptional circumstances that may warrant reconditioning of operating models (IPHC, 2025b; IPHC, 2025c, IPHC, 2025d).

Sablefish

The 2024 sablefish stock assessment by Goethel and Cheng (2024) incorporated updated ecosystem indicators from the Gulf of Alaska (GOA) and Bering Sea, highlighting nuanced environmental influences on sablefish recruitment and growth. Temperatures across shelf regions were within or slightly cooler than optimal ranges for young-of-the-year and juvenile sablefish, which is generally favorable for early development (Goethel & Cheng, 2024). However, spring chlorophyll-a concentrations were the lowest in the time series in the GOA and second lowest in the Bering Sea, with delayed peak bloom timing in the GOA. These conditions may negatively affect the prey base for larval sablefish, particularly during critical early life stages (Ferris, 2024). Despite this, juvenile and pre-recruit sablefish benefited from an adequate zooplankton and forage fish prey base, although levels were reduced compared to 2022. Above-average condition factors for large female sablefish suggest that adult food supply remained sufficient (Goethel & Cheng, 2024). Predation pressure from other groundfish species was low, but competition for zooplankton may have increased due to high pink salmon returns and rising groundfish populations in the GOA and BSAI⁷¹. Based on the 2024 Ecosystem Status Reports and the sablefish Ecosystem and Socioeconomic Profile (ESP), the

⁷¹ <https://www.fisheries.noaa.gov/feature-story/few-surprises-alaskas-marine-environment-2024>

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environmental and ecosystem-related concern level for sablefish remains at ‘level 1 – no concern’, indicating stable conditions for stock sustainability (Shotwell and Dame, 2024a; Ferris, 2024).

Ecosystem Status Report Bering Sea

The 2024 Ecosystem Status Reports for the Bering Sea reveal continued ecological transitions following the unprecedented warm stanza from 2014 to 2021. In the Eastern Bering Sea (EBS), sea ice extent during winter 2023–2024 returned to near the long-term average, yet the cold pool extent—a critical habitat feature—was 12.7% smaller than in 2023 and remained below historical norms (Siddon, 2024)). Spring chlorophyll-a concentrations were among the lowest recorded, and euphausiid biomass declined to the second-lowest level in the time series, suggesting reduced prey availability for forage fish and juvenile groundfish⁷². Large copepod abundance remained below average, continuing a trend since 2015. These conditions contributed to mixed fish condition indicators, with age-0 and adult pollock showing declines, while Togiak herring and Bristol Bay sockeye salmon biomass remained high⁷³.

In the Southeastern Bering Sea, coccolithophore blooms—generally associated with low productivity—were prominent, with 2023 marking the largest bloom since 2017. Jellyfish abundance was average, indicating stable competitive pressure for zooplankton prey. Benthic habitat indicators were mixed: epifauna like sea stars and brittle stars remained abundant, while sponges continued to decline. Several flatfish species, including yellowfin sole and flathead sole, showed reduced condition, likely due to prey limitations (Siddon, 2024).

The Northern Bering Sea (NBS) also remained in a transitional state. Sea surface temperatures cooled, and adult pollock condition reached its highest level since 2017, although juvenile pollock condition continued to decline. Chlorophyll-a levels were among the lowest recorded, and harmful algal blooms (HABs) increased in frequency and intensity, raising concerns for wildlife and human health (AFSC, 2024; Overland et al., 2024). Benthic indicators showed low biomass for anemones and continued declines in poachers and eelpouts. Seabird success varied, with crested auklets near St. Lawrence Island performing well. Slight increases were observed in juvenile Chinook and chum salmon indices, offering a modestly positive signal amid broader declines in Western Alaska salmon runs (AFSC, 2024).

Management Uses

In the 2024 assessment cycle, ecosystem and stock assessment scientists continued to integrate environmental and ecosystem indicators into management advice for Bering Sea and Aleutian Islands (BSAI) groundfish stocks. Ecosystem information was explicitly considered in seven full assessments, including walleye pollock, yellowfin sole, and Alaska-wide sablefish. Two of these—eastern Bering Sea pollock and yellowfin sole—were classified at ecosystem risk level 2, reflecting consistent adverse signals across multiple indicators such as declining juvenile and adult condition, reduced primary productivity, and shifts in prey availability. The Aleutian Islands Pacific cod assessment also received a risk level 2 classification (Siddon, 2024).

The Scientific and Statistical Committee (SSC) applied Tier 1a of the Fishery Management Plan to set the maximum acceptable biological catch (max ABC) for eastern Bering Sea pollock. However, due to multiple ecosystem indicators showing adverse signals, the SSC reduced the max ABC by 18% for

⁷² <https://apex.psmfc.org/akfin/r/akfin/esr/eatarn-bering-sea-report-card>

⁷³ <https://www.fisheries.noaa.gov/feature-story/few-surprises-alaskas-marine-environment-2024>

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2024, aligning it with the Tier 3 estimate. This precautionary reduction mirrors similar adjustments made in past years when ecosystem conditions were unfavorable (Siddon, 2024). Several other BSAI stocks without full assessments in 2023—such as northern rock sole, black-spotted/rougheye rockfish, and sharks—also had recommended reductions from max ABC, though these were not directly tied to ecosystem dynamics. For other eastern Bering Sea stocks, including Pacific cod and yellowfin sole, no additional ecosystem-related reductions were recommended, as existing precautionary buffers were deemed sufficient to address uncertainty (Siddon, 2024).

Overall, the 2024 ESR emphasizes that ecosystem considerations are now a routine part of the harvest specification process, with risk levels and ecosystem signals directly influencing ABC recommendations. This reflects a continued shift toward ecosystem-based fisheries management, where climate and productivity indicators are explicitly factored into catch advice alongside stock assessment outputs (Siddon, 2024).

2024 Aleutian Islands Ecosystem Status Report

The 2024 Aleutian Islands Ecosystem Status Report highlights continued warming trends across the region, with the winter of 2023–2024 ranking among the ten warmest since 1900. These persistent warm conditions, observed since 2013–2014, are consistent with broader North Pacific warming and have contributed to reduced ecosystem productivity. Spring phytoplankton abundance in 2023 remained below the long-term average (1998–2022), reinforcing a declining trend in primary productivity (Ortiz and Zador, 2024).

Oceanographic conditions were marked by a deeper upper mixed layer compared to 2022, which likely influenced prey distribution throughout the water column. Additionally, eddy kinetic energy was below average across the Aleutian chain, suggesting reduced transport of heat and nutrients through key passes such as Unimak and Samalga. These physical changes have implications for nutrient availability and biological productivity, particularly in the western and central Aleutians where marine heatwaves persisted into fall 2024 (Ortiz and Zador, 2024).

Biological indicators reflect these environmental shifts. Groundfish such as Pacific cod and northern rockfish showed poor body condition, likely due to increased metabolic demands and reduced prey quality. Rockfish, including Pacific Ocean perch and northern rockfish, continue to dominate as pelagic foragers, replacing Atka mackerel and pollock, which were more prevalent in the early 1990s. This shift has implications for predator diets, as rockfish are less commonly consumed by higher trophic level species (Ortiz and Zador, 2024).

Seabird reproductive success varied regionally. In the eastern Aleutians, fish-eating seabirds such as tufted and horned puffins had above-average success, feeding chicks primarily squid, Pacific saury, and Atka mackerel. Capelin comprised 86% of forage fish in tufted puffin chick meals, indicating favorable foraging conditions. In contrast, the western Aleutians saw mixed outcomes, with parakeet auklets experiencing below-average success, suggesting localized zooplankton scarcity. Planktivorous auklets at Buldir Island had average reproductive success, pointing to sufficient zooplankton availability for some species (Ortiz and Zador, 2024).

Pink salmon abundance in Eastern Kamchatka remained high, with 2024 levels comparable to 2022, continuing a biennial pattern of increased abundance in odd-numbered years. Although even-year numbers remain lower, they are trending upward. This pattern is mirrored in other ecosystem indicators, such as satellite chlorophyll-a concentrations and puffin chick hatching dates, which also show biennial variability (Ortiz and Zador, 2024).

Overall, the report underscores the complex interplay between climate, oceanographic processes, and biological responses in the Aleutian Islands. The continued warming and reduced nutrient

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transport are reshaping food web dynamics, with implications for fisheries management and conservation strategies.

Management Use

In 2024, ecosystem information was formally integrated into seven full stock assessments for Bering Sea and Aleutian Islands (BSAI) groundfish stocks, as well as the Alaska-wide sablefish stock. For the Aleutian Islands, ecosystem dynamics for Pacific cod remained at risk level 2 (on a scale of 1 to 3), reflecting moderate concern. This classification was based on multiple adverse indicators, including reduced fish content in cod diets, lower prey quality, and elevated winter sea surface temperatures coinciding with the spawning season. These conditions prompted stock assessment authors to recommend an 8% reduction from the maximum acceptable biological catch (max ABC). However, the Scientific and Statistical Committee (SSC) opted for a more precautionary approach, recommending a 10% reduction due to the severity of environmental signals (Ortiz and Zador, 2024). In the Bering Sea, similar ecosystem risk levels were assigned to walleye pollock and yellowfin sole, both of which were also categorized at level 2. Although several other BSAI stocks—such as northern rock sole, black-spotted/rougheye rockfish, and sharks—received reductions from max ABC for 2024, these decisions were not driven by ecosystem dynamics but rather by concerns noted in previous assessments (Ortiz and Zador, 2024).

For four remaining stocks, no ecosystem-related reductions were recommended. In these cases, existing precautionary measures embedded in the catch-setting process were deemed sufficient to account for ecosystem uncertainties. This reflects a growing emphasis on ecosystem-based fisheries management, where environmental indicators are increasingly used to inform stock status and harvest decisions (Ortiz and Zador, 2024).

2024 Gulf of Alaska (GOA) Ecosystem Status Report

The 2024 Gulf of Alaska (GOA) Ecosystem Status Report indicates that the shelf marine ecosystem experienced average productivity in 2023, continuing a multi-year trend. However, this stability is expected to shift in 2024 due to El Niño conditions and associated warming of surface waters. These changes may negatively affect zooplankton availability and quality, which are critical prey for larval and juvenile groundfish such as Pacific cod, walleye pollock, and northern rock sole. While warm surface waters can benefit larval rockfish and sablefish, deeper habitats—where adult groundfish reside—are not expected to warm unless the El Niño persists long enough to mix heat to depth (Ferris, 2024).

In 2023, zooplankton biomass was below average in spring but improved in summer, with increased abundance of large copepods and euphausiids. Despite this, the overall prey base for zooplankton-eating adult groundfish remained limited. Indicators of restricted prey availability include skinnier adult pollock, average to below-average seabird reproductive success, and low energy density in juvenile salmon. Juvenile pink salmon diets were dominated by gelatinous prey such as jellyfish and tunicates, which are less nutritious than typical zooplankton. These conditions suggest that 2024 pink salmon returns may be poor, based on juvenile catch-per-unit-effort (CPUE), length, and energy density observed in 2023 (Ferris, 2024).

For fish-eating groundfish species like Pacific cod, sablefish, arrowtooth flounder, and yelloweye rockfish, prey availability was approximately average but showed signs of reduced abundance. Notably, capelin populations began to rebound for the first time since their decline during the 2014–2016 marine heatwave. Herring biomass remains elevated but is declining due to the aging of the strong 2016 year class. In contrast, age-0 pollock, a key prey species in the western GOA, had very low abundance. This scarcity likely contributed to reproductive failure among seabirds such as black-

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legged kittiwakes on Chowiet Island, where the absence of age-0 pollock and Pacific sandlance may have limited chick survival (Ferris, 2024).

Ocean temperatures in the GOA were average to cooler than average during winter and spring, but above average in late summer, ranging from 5.8°C in the western GOA to 10.5°C in southeast Alaska. These cooler early spring temperatures were favorable for egg and larval survival of species like pollock and cod, while warmer late spring conditions supported rockfish larval development. However, spring chlorophyll-a concentrations—a proxy for primary production—continued a below-average trend, with late peak blooms in the western GOA. This delay may be attributed to a deeper mixed layer and weaker stratification, which reduces nutrient mixing and limit phytoplankton growth (Ferris, 2024).

Management Uses

In 2023, ecosystem information was formally considered in eight full groundfish stock assessments for the Gulf of Alaska (GOA), along with one statewide assessment for sablefish. Despite moderately productive ecosystem conditions, no ecosystem-related reductions from the assessment catch (ABC) were applied to GOA groundfish stocks, continuing the approach taken in 2022. This suggests that the environmental indicators did not reach thresholds warranting precautionary reductions for most stocks (Ferris, 2024).

However, the ABC for GOA walleye pollock was reduced by 33% from the assessment author's recommendation, despite being an increase relative to the previous year's ABC. This adjustment was made to account for variable recruitment, reflecting uncertainty in stock productivity and resilience under changing environmental conditions. For the remaining seven groundfish stocks, existing precautionary measures embedded in the catch-setting process were deemed sufficient to address ecological uncertainty (Ferris, 2024).

During deliberations, the North Pacific Fishery Management Council noted that ecosystem conditions and population dynamics were expected to support the persistence of adult Pacific cod through the warming conditions predicted for 2024. As a result, further reductions from author-recommended ABCs were considered unnecessary. The total allowable catch (TAC) for 2024 across all GOA groundfish stocks, including sablefish, was set at 520,020 metric tons, remaining well below the optimal yield cap of 800,000 metric tons, thereby maintaining a conservative approach to resource management (Ferris, 2024).

ACLIM

In 2024, the Alaska Climate Integrated Modeling Project (ACLIM) entered Phase 3-A, marking a significant advancement in its mission to deliver climate-integrated decision support systems for ecosystem-based fisheries management (EBFM) in the Bering Sea. This phase builds on over seven years of interdisciplinary collaboration and refinement, involving more than 50 scientists from NOAA Fisheries, NOAA PMEL, the University of Washington, and other partners. The project continues to link downscaled global climate and socioeconomic projections with regional oceanographic models, climate-enhanced biological models, and harvest and adaptation scenarios to assess climate risks and guide fisheries management (NOAA Climate Program Office, 2024).

Phase 3-A focuses on five key objectives. First, it aims to advance oceanographic modeling and improve characterization of uncertainty and climate risk in linked climate, oceanographic, and socio-ecological projections. Second, it will project changes in fish and crab biomass, including condition, size, and growth, to inform harvest portfolio planning. Third, the project will evaluate carrying capacity shifts in the northern and southeastern Bering Sea under future climate scenarios, identifying phenological bottlenecks and trophic lags. Fourth, ACLIM will expand its food security

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assessments for remote coastal Alaskan communities, helping evaluate climate impacts and the efficacy of adaptation strategies. Finally, the project will deliver its findings through an interactive risk and adaptation dashboard (ADAPT), participatory workshops, and offline tools to support decision-making across individuals, industries, and communities (NOAA Climate Program Office, 2024).

These efforts are designed to support NOAA's broader mission of building a climate-ready nation, providing regionally tailored information to help decision-makers and stakeholders understand the cumulative risks posed by climate change to ecosystems, food security, and coastal economies. The integration of climate-informed advice into fisheries management is expected to enhance resilience and sustainability under varying carbon policy futures (NOAA Climate Program Office, 2024).

Gulf of Alaska Integrated Modeling Project (GOA-CLIM)

The GOA-CLIM project continues to advance as a key interdisciplinary initiative aimed at understanding and forecasting the impacts of climate change on the Gulf of Alaska marine ecosystem. In 2024, researchers expanded the modeling framework to include regional socio-economic and oceanographic data, integrated with biological models—ranging from single-species to multispecies and full ecosystem models. These models are combined into a regional multi-model ensemble, designed to provide quantitative guidance for fisheries management under both short-term climate variability and long-term change⁷⁴.

GOA-CLIM Phase 2, launched in 2023 and continuing through 2024, emphasizes the transition “from climate to communities.” This phase focuses on evaluating climate adaptation and resilience strategies for fishing-dependent communities in the Gulf of Alaska. Key research pathways include the development and application of the Atlantis end-to-end ecosystem model, Ecopath with Ecosim food web models, and the CEATTLE multispecies model, all driven by climate projections from Earth System Models (ESMs). These tools aim to assess the Optimum Yield (OY) range in the Groundfish Fishery Management Plan under future climate conditions^{75,76}.

Socioeconomic dimensions of GOA-CLIM have also expanded. Researchers are conducting fleet dynamics modeling, assessing community vulnerability, and exploring adaptation potential through interviews and workshops with stakeholders from ten Gulf of Alaska fishing communities. These efforts are helping to identify the tools and strategies needed to build resilient fisheries and communities. The project also supports the NOAA Fisheries Climate Science Strategy and the Gulf of Alaska Climate Science Regional Action Plan, aligning scientific research with policy and management needs⁷⁷.

In 2024, the GOA-CLIM Socioeconomics initiative continues to deepen its understanding of how climate change affects fishing-dependent communities in the Gulf of Alaska. Researchers from NOAA Fisheries, the University of Washington, and the Pacific States Marine Fisheries Commission are examining how individuals, families, and fleets adapt to ecological and economic changes driven by climate variability. This work is part of Theme 3 of GOA-CLIM, titled “From Climate to Communities,” which focuses on identifying adaptation pathways and the tradeoffs associated with those choices (NOAA Fisheries, 2024a).

⁷⁴ <https://www.fisheries.noaa.gov/alaska/ecosystems/gulf-alaska-climate-integrated-modeling-project>

⁷⁵ <https://www.fisheries.noaa.gov/alaska/ecosystems/gulf-alaska-climate-integrated-modeling-project>

⁷⁶ https://cpo.noaa.gov/funded_projects/gulf-of-alaska-climate-integrated-modeling-project-go-clim-phase-2-from-climate-to-communities-in-the-gulf-of-alaska-an-integrated-modeling-approach-to-support-the-climate-adaptation-and-resilience

⁷⁷ <https://www.fisheries.noaa.gov/alaska/socioeconomics/gulf-alaska-climate-integrated-modeling-socioeconomics-climate-communities>

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The project integrates fleet dynamics models, regional economic models, and adaptation frameworks to assess how climate-induced changes in fisheries affect community well-being. Fleet responses—such as shifts in effort, diversification, or changes in target species—are modeled to predict future catch and ex-vessel revenue. These outputs are then linked to a 10-region multi-regional social accounting matrix (10MRSAM) to estimate economic impacts on fishing communities. In turn, these socioeconomic models feed back into biological models, creating a dynamic system that reflects the interconnected nature of ecological and human responses (NOAA Fisheries, 2024a). Stakeholder engagement is central to this work. Since 2021, researchers have conducted interviews and workshops with stakeholders from ten Gulf of Alaska fishing communities, including Cordova, Kodiak, and Sitka. These sessions have helped identify vulnerabilities across six community capitals—natural, human, social, financial, built, and cultural—and have informed the development of resilience strategies. Public comments submitted to fisheries management bodies have also been analyzed to understand how climate discourse intersects with policy and resource allocation debates⁷⁸.

Recent studies highlight the complexity of adaptation. For example, fishing families continue to rely on traditional strategies such as portfolio diversification and increased effort but are also adopting new approaches in response to changing demographics, technologies, and governance systems. In the sablefish fishery, a historically large juvenile recruitment class following the 2014–2016 marine heatwave has created economic challenges due to the lower market value of small fish and ongoing whale depredation. These dynamics are being studied using qualitative network models (QNMs) and quantitative indicators to assess well-being and adaptive behavior⁷⁹.

Fishery Ecosystem Plans

In 2024, the North Pacific Fishery Management Council (NPFMC) continued to advance its use of Fishery Ecosystem Plans (FEPs) as strategic tools to integrate ecosystem science into fisheries management. These plans are designed to enhance existing Council processes by providing adaptive, focused ecosystem assessments that inform—but do not mandate—management actions. The Council’s FEPs aim to improve decision-making by offering a structured framework for evaluating policy options, trade-offs, and risks across Fishery Management Plans (FMPs), particularly in the Bering Sea and Aleutian Islands ecosystems⁸⁰.

The Bering Sea FEP, in particular, has matured into a dynamic, living document that supports Ecosystem-Based Fisheries Management (EBFM). It includes action modules that allow the Council to concentrate efforts on pressing issues. In 2024, the Climate Change Action Module continued to assess the vulnerability of key species and fisheries to climate change. This module has produced a Climate Readiness Synthesis, which evaluates the preparedness of current management systems to address long-term climate impacts, beyond natural variability. The synthesis outlines opportunities to enhance resilience through updated policies, improved data integration, and stakeholder engagement⁸¹.

The Council also held a Climate Scenarios Workshop in Kodiak, Alaska, in June 2024, which brought together over 200 participants to explore hypothetical climate futures and their implications for fisheries management. Discussions focused on identifying climate-resilient strategies, improving the

⁷⁸ <https://www.fisheries.noaa.gov/alaska/socioeconomics/gulf-alaska-climate-integrated-modeling-socioeconomics-climate-communities>

⁷⁹ <https://www.fisheries.noaa.gov/alaska/socioeconomics/gulf-alaska-climate-integrated-modeling-socioeconomics-climate-communities>

⁸⁰ <https://www.npfmc.org/library/feps/>

⁸¹ <https://www.npfmc.org/wp-content/uploads/Climate-Change-Task-Force-final-report- Feb2025.pdf>

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integration of ecosystem indicators into harvest specifications, and expanding the use of risk tables and Ecological and Socioeconomic Profiles in stock assessments⁸².

Looking ahead, the Council plans to use funding from the Inflation Reduction Act to support the development of a climate-resilient management policy across all FMPs. This initiative will include a programmatic evaluation of Alaska's federal fisheries and the creation of a workplan to implement new ecosystem-based objectives. These efforts reflect the Council's commitment to proactive, science-informed management that can adapt to evolving environmental and socio-economic conditions⁸³.

In 2024, the North Pacific Research Board (NPRB) advanced its plans for a fourth Integrated Ecosystem Research Program (IERP) focused on the Northern Bering Sea, building on previous IERPs in the Bering Sea, Gulf of Alaska, and Arctic marine ecosystems. This new initiative responds to growing concerns about ecosystem transitions driven by warming conditions, sea ice loss, and species redistribution in the Bering and Chukchi Seas. The Northern Bering Sea IERP will investigate how environmental processes influence species of commercial, ecological, and subsistence importance, and assess the implications for state and federal fisheries management and coastal communities that depend on these resources⁸⁴.

The program has received a commitment of \$6.5 million from NPRB, with an additional \$2.5 million in Congressionally-Directed Spending requested in the FY25 appropriations bill. Research is scheduled to begin in fall 2025 and continue through September 2031. The geographic scope includes not only the Northern Bering Sea but also upstream and downstream ecosystems in the southeastern Bering Sea, western Bering Sea, and Chukchi Sea, reflecting the interconnected nature of these marine systems⁸⁵.

In September 2024, NPRB completed its pre-proposal review process, inviting selected applicants to submit full proposals by April 2025⁸⁶. These proposals will be evaluated for funding decisions in September 2025. Notably, NPRB has awarded \$10,000 grants to support proposal development with Indigenous Co-Investigators, emphasizing the importance of local knowledge and community collaboration in ecosystem research⁸⁷ (NPRB, 2024a).

The Northern Bering Sea IERP is designed to foster interdisciplinary collaboration across oceanography, fisheries science, social science, and marine biology. It promotes integration across ecosystem components—from physical and chemical processes to plankton, fish, marine mammals, and human communities. This holistic approach aims to improve forecasting capabilities and support resilient, informed management of Alaska's marine resources in the face of rapid environmental change (NPRB, 2024a).

12.2.1 The fishery management organization shall consider the most probable adverse impacts of the unit of certification on main associated species (Appendix 1, Part 3 and 7), by assessing and, where appropriate, addressing and or/correcting them, taking into account the best

⁸² <https://www.npfmc.org/issues/climate-readiness/>

⁸³ <https://www.npfmc.org/issues/climate-readiness/>

⁸⁴ <https://nprb.org/northern-bering-sea-ierp/>

⁸⁵ <https://nprb.org/northern-bering-sea-ierp/>

⁸⁶ <https://nprb.org/northern-bering-sea-ierp/>

⁸⁷ <https://nprb.org/northern-bering-sea-ierp/>

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

scientific evidence available and local knowledge.

Shark Complex in BSAI

1. Spawning Biomass and Stock Trends

The BSAI shark complex includes Pacific sleeper sharks, salmon sharks, spiny dogfish, and other/unidentified sharks. No new assessment was conducted in 2024; the most recent full assessment was in 2022. Catch data through November 2024 show a decline in total catch from 320 mt in 2023 to 173 mt in 2024, well below the ABC (Tribuzio et al., 2024a).

2. Tier Determination and ABC/OFL

The complex remains under Tier 6, which uses historical catch data to set harvest limits. The OFL is 689 mt, and the ABC is 450 mt, unchanged from previous years (Tribuzio et al., 2024a).

3. Assessment of Status

The stock is not subject to overfishing, and there is no indication of overfishing status. Due to data limitations, the status relative to overfished thresholds cannot be determined (Tribuzio et al., 2024a).

Shark Complex in GOA

1. Spawning Biomass and Stock Trends

The GOA shark complex includes the same species as BSAI. Like BSAI, no new assessment was conducted in 2024. Catch data through November 2024 show a decline in catch from 1,963 mt in 2023 to 1,288 mt in 2024, again well below the ABC (Tribuzio et al., 2024a).

2. Tier Determination and ABC/OFL

The GOA shark complex is also managed under Tier 6. The OFL is 6,521 mt, and the ABC is 4,891 mt, unchanged from previous years (Tribuzio et al., 2024a).

3. Assessment of Status

The stock is not subject to overfishing, and the status relative to overfished thresholds remains undetermined due to data limitations (Tribuzio et al., 2024a).

Skate Complex in GOA

1. Spawning Biomass and Stock Trends

The GOA skate complex includes Big skate, Longnose skate, and Other skates. The most recent full assessment was in 2023, and 2024 specifications were rolled over. Biomass estimates from the 2023 bottom trawl survey show stable trends, with some regional variation (Cronin-Fine, 2023).

2. Tier Determination and ABC/OFL

All GOA skates are managed under Tier 5. The 2024 ABCs are:

Big skate: 745 mt (WGOA), 1,749 mt (CGOA), 341 mt (EGOA)

Longnose skate: 104 mt (WGOA), 1,894 mt (CGOA), 538 mt (EGOA)

Other skates: 665 mt GOA-wide

The OFL for the complex is 1,311 mt (Cronin-Fine, 2023).

3. Assessment of Status

Directed fishing is prohibited, but skates are considered “in the fishery” due to high incidental catch. The stock is not overfished and not subject to overfishing (Cronin-Fine, 2023).

Skate Complex in BSAI

1. Spawning Biomass and Stock Trends

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

The BSAI skate complex includes Alaska skate (Tier 3) and other skates (Tier 5). The 2024 assessment was a harvest projection, not a full operational update. Biomass trends remain stable, and catch is well below ABC (Tribuzio et al., 2024b).

2. Tier Determination and ABC/OFL

The Tier 3 Alaska skate component uses an age-structured model. The Tier 5 Other skates component uses a REMA model. The combined ABC and OFL values were carried over from 2023:

ABC: 28,799 mt (Alaska skate), 9,858 mt (Other skates)

OFL: 38,657 mt total (Tribuzio et al., 2024b)

3. Assessment of Status

The stock is not overfished and not subject to overfishing. Catch remains well below ABC, and no changes were made to harvest specifications (Tribuzio et al., 2024b).

MAIN SPECIES on POT fishery targeting Halibut and Sablefish

There were no main species in the Pot fishery targeting Halibut and Sablefish

12.2.2 The fishery management organization shall consider the most probable adverse impacts of the fishery under assessment on minor associated species, by assessing and, where appropriate, addressing and or/correcting them, taking into account available scientific information and local knowledge.

BSAI Longnose Skate

1. Spawning Biomass and Stock Trends

Longnose skate is part of the Other Skates group in the BSAI, managed under Tier 5. Biomass was estimated at 131,446 mt, with stable trends across the EBS and AI regions (Tribuzio et al., 2023).

2. Tier Determination and ABC/OFL

The ABC was set at 9,858 mt and the OFL at 13,145 mt. These values were derived using the REMA framework (Model 23.0) (Tribuzio et al., 2023).

3. Assessment of Status

The stock is not subject to overfishing and catch remains well below ABC. However, species-specific data are limited due to identification challenges (Tribuzio et al., 2023).

GOA Longnose Skate

1. Spawning Biomass and Stock Trends

GOA Longnose skate biomass was estimated at 33,804 mt, a 6.5% decline from 2023. Regional biomass declined in WGOA and CGOA but increased slightly in EGOA (Cronin-Fine, 2023).

2. Tier Determination and ABC/OFL

Managed under Tier 5, the ABC was set at 104 mt (WGOA), 1,894 mt (CGOA), and 538 mt (EGOA). The OFL was 3,380 mt GOA-wide (Cronin-Fine, 2023).

3. Assessment of Status

The stock is not overfished and not subject to overfishing, though EGOA catch exceeded ABC for the first time since 2005 (Cronin-Fine, 2023).

BSAI Big Skate

1. Spawning Biomass and Stock Trends

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

Big skate is part of the Other Skates group in the BSAI. Biomass trends are stable, with estimates included in the Tier 5 complex (Tribuzio et al., 2023).

2. Tier Determination and ABC/OFL

Harvest specifications are included in the Other Skates ABC/OFL values: ABC = 9,858 mt, OFL = 13,145 mt. Species-specific data are limited (Tribuzio et al., 2023).

3. Assessment of Status

Big skate is not subject to overfishing, though survey limitations in the Aleutians affect biomass precision (Tribuzio et al., 2023).

GOA Big Skate

1. Spawning Biomass and Stock Trends

GOA Big skate biomass was estimated at 37,804 mt, a 1.1% decline from 2023. Regional biomass increased in WGOA and CGOA but declined 57% in EGOA (Cronin-Fine, 2023).

2. Tier Determination and ABC/OFL

Managed under Tier 5, the ABC was set at 745 mt (WGOA), 1,749 mt (CGOA), and 341 mt (EGOA). The OFL was 3,780 mt GOA-wide (Cronin-Fine, 2023).

3. Assessment of Status

The stock is not overfished and not subject to overfishing, though EGOA biomass is at its lowest since 1990 and exploitation rates are rising (Cronin-Fine, 2023).

Eastern Bering Sea Pacific Cod

1. Spawning Biomass and Stock Trends

The 2024 assessment for EBS Pacific cod indicates a continued decline in spawning biomass from its peak in 2018. Model 24.1 estimates the 2025 female spawning biomass at 215,747 t, placing the stock at B38%, below the B40% threshold (224,767 t), but above B35% (196,671 t), thus qualifying it for Tier 3b management (Barbeaux et al., 2024). Recruitment has been below average for 8 of the last 10 cohorts, with the 2018 year class being the most prominent recent contributor.pdf). [EBSpcod (1)]

2. Tier Determination and ABC/OFL

Under Tier 3b, the recommended ABC for 2025 is 153,617 t and OFL is 183,509 t. Fishing mortality rates are set at $F_{ABC} = 0.35$ and $F_{OFL} = 0.43$. These values are derived from Model 24.1, which was preferred over Model 24.3 due to better fit to survey length composition and consistency with previous assessments.

3. Assessment of Status

The stock is not overfished, not subject to overfishing, and not approaching an overfished condition. However, ecosystem indicators suggest Level 2 concern due to declining prey availability, increased predation pressure, and shifting spatial distribution linked to thermal anomalies (Barbeaux et al., 2024). Despite these concerns, no reduction in ABC was recommended.

Gulf of Alaska Pacific Cod

1. Spawning Biomass and Stock Trends

The GOA Pacific cod stock remains at low levels but above B20%, with the 2024 spawning biomass estimated at B29.7% (51,959 t), below the B40% threshold (70,075 t), placing it in Tier 3b (Hulson et al., 2023). The stock experienced a sharp decline post-2014, with slight increases in 2021–2022, but is projected to decline again in 2023–2025.

2. Tier Determination and ABC/OFL

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

For 2024, the ABC is set at 32,272 t and OFL at 38,712 t, with $F_{ABC} = 0.42$ and $F_{OFL} = 0.52$. These values represent a 31% increase from 2023, attributed to a 53% rise in bottom trawl survey population numbers and a 32% increase in longline survey RPN index.

3. Assessment of Status

The stock is not overfished, not subject to overfishing, and not approaching an overfished condition. The risk table rates assessment-related, environmental, and fishery performance considerations at Level 1 (no concern), while population dynamics are rated Level 2 (major concern) due to persistent low recruitment since 2014 (Hulson et al., 2023). Despite this, the Plan Team did not recommend reducing ABC below the maximum permissible.

Aleutian Islands Pacific Cod

1. Spawning Biomass and Stock Trends

The preferred age-structured model (Model 24.1) estimated the spawning biomass for 2025 at 25,078 metric tons, with a total biomass of 73,679 t and an exploitable biomass of 58,208 t. These values reflect a continued decline in stock size, consistent with long-term survey trends. The 2024 survey biomass was 50,382 t, which is 2% lower than the 2022 estimate, marking a new low in the time series (Spies et al., 2024).

2. Tier Determination and Harvest Specifications

Historically, Aleutian Islands Pacific cod has been managed under Tier 5, but the 2024 assessment recommends transitioning to Tier 3 using Model 24.1. This model incorporates more biological data, including fishery and survey length compositions and updated maturity curves, allowing for more robust status determination under the Fishery Management Plan (FMP). The Tier 3 ABCs (Acceptable Biological Catch) were 13,376 t for 2025 and 12,973 t for 2026, while the OFLs (Overfishing Limits) were 16,782 t and 16,273 t, respectively (Spies et al., 2024).

In contrast, Tier 5 models (13.4 and 24.2) estimated lower exploitable biomass (51,504 t) and produced different harvest specifications. Model 13.4 yielded ABCs of 13,133 t and OFLs of 17,511 t, while Model 24.2, which used an updated natural mortality rate ($M = 0.417$), resulted in higher ABCs (16,107 t) and OFLs (21,477 t) (Spies et al., 2024).

3. Assessment of Stock Status

Model 24.1's projections indicate that the Aleutian Islands Pacific cod stock has shifted from above the MSY spawning biomass level in 1991 to below it in recent years. A Kobe plot analysis showed a 96.4% probability that the stock status lies between 12% and 35% of SSB_{MSY} , with fishing mortality remaining below F_{40} . This suggests the stock is not currently overfished and not experiencing overfishing, although it is near the threshold for concern (Spies et al., 2024).

Bering Sea Shortraker Rockfish

1. Spawning Biomass and Stock Trends

The 2024 assessment incorporated new data from the 2023 Aleutian Islands bottom trawl survey, 2023 longline survey relative population weights (RPWs), and updated fishery length compositions. The estimated exploitable biomass declined from 23,547 t in 2024 to 21,018 t in 2025, indicating a 10.7% decrease. This decline is attributed to reduced biomass in the Southern Bering Sea (SBS) and Eastern Bering Sea (EBS) slope regions (Shotwell & Sullivan, 2024).

2. Tier Determination and ABC/OFL

Shortraker rockfish in the BSAI is managed under Tier 5. The 2025 ABC is 473 t, and the OFL is 631 t, representing an 11% reduction from the 2024 ABC of 530 t. The assessment used a REMA model to estimate biomass and harvest specifications (Shotwell & Sullivan, 2024).

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

3. Assessment of Status

The stock is not subject to overfishing, and there is no indication of overfished status. However, the assessment-related risk category was rated Level 2 (increased concern) due to unresolved issues in estimating region-specific process errors. All other risk categories were rated Level 1 (normal) (Shotwell & Sullivan, 2024).

Gulf of Alaska Shortraker Rockfish

1. Spawning Biomass and Stock Trends

No new assessment was conducted in 2024; the 2023 assessment was rolled over. The REMA model estimated a gulfwide biomass using bottom trawl and longline survey data from 1990–2023. Biomass estimates remain stable, with no significant changes reported (Echave et al., 2023).

2. Tier Determination and ABC/OFL

GOA shortraker rockfish is managed under Tier 5. The 2025 ABC is 647 t, and the OFL is 863 t, unchanged from 2024. These values were retained from the previous assessment due to the biennial schedule (Echave et al., 2023).

3. Assessment of Status

The stock is not overfished and not subject to overfishing. Catch in 2024 was 343 t, well below the ABC. The next full assessment is scheduled for 2025 (Echave et al., 2023).

Aleutian Islands Shortraker Rockfish

The Aleutian Islands component is included in the BSAI assessment. Biomass trends in the AI contributed to the overall decline in exploitable biomass for the BSAI complex. The same Tier 5 management applies, with the ABC of 473 t and OFL of 631 t for 2025. The stock is not overfished, and not subject to overfishing (Shotwell & Sullivan, 2024).

BSAI Thornyhead Rockfish

1. Spawning Biomass and Stock Trends

Thornyhead rockfish in the BSAI are part of the Other Rockfish complex, which includes shortspine thornyhead (SST) and a group of non-SST species. SST comprises approximately 95% of the exploitable biomass. The 2024 assessment incorporated new data from the Aleutian Islands bottom trawl survey, Eastern Bering Sea shelf survey, and longline survey RPWs. Biomass estimates for SST and non-SST species were updated, with SST biomass remaining relatively stable (Sullivan & Ortiz, 2024).

2. Tier Determination and ABC/OFL

The complex is managed under Tier 5, with SST and non-SST species having different natural mortality rates ($M = 0.03$ for SST, $M = 0.09$ for non-SST). The recommended model (Model 22) was retained for the update assessment. The 2025 ABC for the complex is 1,260 t, and the OFL is 1,680 t, unchanged from 2024 (Sullivan & Ortiz, 2024).

3. Assessment of Status

The stock is not overfished and not subject to overfishing. Catch remains below ABC, and no additional reductions were recommended. The assessment was classified as an update, meaning no changes were made to the model structure (Sullivan & Ortiz, 2024).

GOA Thornyhead Rockfish

1. Spawning Biomass and Stock Trends

The GOA thornyhead complex includes shortspine thornyhead (*Sebastolobus alascanus*) and longspine thornyhead (*S. altivelis*). The 2024 assessment incorporated new biomass estimates from the 2023 bottom trawl survey and 2023 longline survey RPWs. The updated model (Model 22.a)

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

showed a decline in abundance indices, particularly in the western and central GOA, contributing to a lower biomass estimate (Siwicke, Echave & Ferriss, 2024).

2. Tier Determination and ABC/OFL

The complex is managed under Tier 5. The 2025 ABC was set at 1,338 t, a 17.8% decrease from the 2024 ABC of 1,628 t. The OFL is 1,784 t. The decrease was attributed to:

- 81% from declines in survey indices
- 3% from data updates
- 16% from changes in model structure (Siwicke et al., 2024)

3. Assessment of Status

The stock is not overfished and not subject to overfishing. Catch remains below ABC, and exploitation rates are within acceptable limits. The assessment explored transitioning from three area-specific process errors to a single shared process error, but retained Model 22.a for specifications (Siwicke, et al., 2024).

Arrowtooth Flounder – Bering Sea and Aleutian Islands (BSAI)

1. Spawning Biomass and Stock Trends

The 2024 assessment for BSAI arrowtooth flounder was an off-cycle harvest projection, not a full operational update. The last full assessment was conducted in 2022. The projection model incorporated updated catch data from 2021–2023 and estimated catches for 2024–2025. Biomass trends remain stable, and no new survey data was added. The base model used was Model 18.9, a statistical age-structured model (Shotwell et al., 2023a).

2. Tier Determination and ABC/OFL

Arrowtooth flounder in the BSAI is managed under Tier 3. The 2025 ABC is 76,000 t, and the OFL is 91,000 t, unchanged from 2024. These values were derived from the projection model using the 2022 assessment base (Shotwell et al., 2023a).

3. Assessment of Status

The stock is not overfished and not subject to overfishing. Catch remains well below ABC, and recruitment trends are stable. No changes were made to model parameters or biological reference points in 2024 (Shotwell et al., 2023a).

Arrowtooth Flounder – Gulf of Alaska (GOA)

1. Spawning Biomass and Stock Trends

The 2024 GOA assessment was also an off-cycle harvest projection, with the last full assessment conducted in 2021. The projection model used updated catch data through 2023 and estimated catches for 2024–2025. Biomass trends remain stable, and no new survey data were added. The base model used was Model 19.0, updated in 2021 (Shotwell et al., 2024a).

2. Tier Determination and ABC/OFL

Arrowtooth flounder in the GOA is managed under Tier 3a. The 2025 ABC is 89,000 t, and the OFL is 106,000 t, unchanged from 2024. These values were derived from the projection model using the 2021 assessment base (Shotwell et al., 2024a).

3. Assessment of Status

The stock is not overfished and not subject to overfishing. Catch remains below ABC, and exploitation rates are within acceptable limits. No changes were made to model structure or biological reference points in 2024 (Shotwell et al., 2024a).

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

Blackspotted/Rougheye Rockfish Complex – BSAI

1. Spawning Biomass and Stock Trends

The 2024 assessment incorporated updated catch data through 2023 and projected catch for 2024. The Aleutian Islands (AI) survey biomass estimate, and length composition were updated, and the 2022 AI survey length composition was replaced with age composition. The model estimates a very large 2011-year class of 27.93 million, which is over 8 times larger than the next-largest year class (2002). This significantly increased the estimate of B40% by 47% compared to 2022, affecting the relative stock status (Spencer et al., 2024).

2. Tier Determination and ABC/OFL

The complex is managed under Tier 3. The Aleutian Islands portion uses an age-structured model, while the Eastern Bering Sea portion uses a non-age-structured model. The large 2011-year class affects the calculation of reference points, increasing B40% and reducing the ratio of current biomass to B40%, even if actual biomass is stable (Spencer et al., 2024).

3. Assessment of Status

The stock is not overfished and not subject to overfishing. However, the assessment notes instability in year class strength estimates and cautions that the large recruitment estimates may distort biomass reference points. These concerns were also present in the 2022 assessment (Spencer, Ianelli & Laman, 2024).

Blackspotted/Rougheye Rockfish Complex – GOA

1. Spawning Biomass and Stock Trends

The 2024 assessment was a harvest projection update, not a full model re-run. The base model from 2023 (Model 23.1b) was used, incorporating updated catch estimates for 2023 and projected catches for 2024–2026. The 2023 catch was 434 t, slightly lower than the previous estimate of 487 t. The 2024 catch was estimated at 348 t using an expansion factor based on recent catch trends (Sullivan, 2024).

2. Tier Determination and ABC/OFL

The GOA complex is managed under Tier 3. Due to concerns in the assessment and population dynamics categories of the risk table, the 2025 ABC was reduced from the maximum allowable to 1,180 t, following the same method used in 2023. This ABC was calculated as the mean of the 2025 ABC specified last year and the 2025 maximum ABC estimated this year (Sullivan, 2024).

3. Assessment of Status

The stock is not overfished and not subject to overfishing. However, the risk table flagged major concerns in assessment reliability and population dynamics, prompting a precautionary reduction in ABC (Sullivan, 2024).

SC 12.2.4 The fishery management organization shall consider the most probable adverse impacts of the unit of certification on ETP species (Appendix 1, Part 4 and 7), by assessing and, where appropriate, addressing and or/correcting them, taking into account the best scientific evidence available and local knowledge.

SC 12.2.5 There shall be outcome indicator(s) consistent with achieving management objectives seeking to ensure that ETP species are protected from adverse impacts resulting from interactions with the unit of certification and any associated enhanced fishery activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible.

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

Several federal policies and associated laws establish management guidelines and legal protections for endangered species that may be affected by the Alaskan commercial halibut and sablefish fisheries. These include the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Marine Mammal Protection Act (MMPA), and the U.S. Endangered Species Act (ESA). Additionally, the Alaska Department of Fish and Game (ADFG) provides further protection for species and stocks of concern⁸⁸.

The ESA aims to conserve threatened and endangered species and their ecosystems. Over 1,900 species are listed under the ESA, which defines an endangered species as one in danger of extinction throughout all or a significant portion of its range, and a threatened species as one likely to become endangered in the foreseeable future. The U.S. Fish and Wildlife Service (USFWS) and NOAA's National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. NMFS oversees 94 marine species, including whales, sea turtles, salmon, and Johnson's seagrass⁸⁹.

Once a species is listed as endangered, it becomes illegal to "take" that species—defined broadly to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting. Similar prohibitions typically apply to threatened species. Federal agencies may be permitted limited take through Section 7 consultations with NMFS or USFWS, while non-federal entities may obtain special permits with conservation plans. These consultations are designed to minimize impacts and, where necessary, require conservation efforts to offset adverse effects⁹⁰.

NOAA's Protected Resources Program supports ESA implementation through several key actions⁹¹:

- Listing species and designating critical habitat (Section 4)
- Developing recovery plans (Section 4)
- Providing grants and cooperative agreements to states (Section 6)
- Consulting on federal actions (Section 7)
- Partnering internationally to prevent trade-related threats (Section 8)
- Investigating violations (Section 9)
- Authorizing research and conservation plans with non-federal partners (Section 10) (NOAA Fisheries, 2024b)

U.S. fisheries management, including Alaskan groundfish fisheries, must comply with the MSA, MMPA, and ESA. These laws collectively establish science-based management objectives and legal protections for endangered, threatened, and protected (ETP) species⁹².

Interactions between Alaskan halibut and sablefish fisheries with marine mammals and seabirds are monitored through NMFS' Alaska Marine Mammal Observer Program and the North Pacific Observer Program. These programs document incidental take and provide data on species composition, fishing effort, and location. Observers also record specific interactions with seabirds and marine mammals⁹³.

⁸⁸ <https://www.fisheries.noaa.gov/topic/laws-policies/magnuson-stevens-act>

⁸⁹ <https://www.fws.gov/media/usfws-bird-species-concern>

⁹⁰ <https://www.fws.gov/sites/default/files/documents/ESA-Section-4-Listing.pdf>

⁹¹ <https://www.fisheries.noaa.gov/topic/laws-policies/magnuson-stevens-act>

⁹² <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-policies-guidance-and-regulations>

⁹³ <https://www.fisheries.noaa.gov/alaska/fisheries-observers/alaska-marine-mammal-observer-program>

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

Under the MMPA, all Category I and II fisheries must register with the Marine Mammal Authorization Program and report any marine mammal injuries or mortalities to NMFS within 48 hours. These fisheries are also liable for incidental take of ESA-listed species⁹⁴.

NOAA's NMFS annually updates estimates of seabird bycatch in Alaska's commercial groundfish fisheries. There is no evidence of adverse interactions between halibut/sablefish fisheries and ESA-listed birds such as the short-tailed albatross, Steller's eider, spectacled eider, or Eskimo curlew. The USFWS does not identify these fisheries as threats to these species, and no interactions with Eskimo curlew have been reported, likely due to the offshore nature of these fisheries⁹⁵.

In 2024, NOAA Fisheries continued its annual monitoring of marine mammal interactions with U.S. commercial fisheries, as required under the Marine Mammal Protection Act (MMPA). The Marine Mammal Stock Assessment Reports (SARs) provide updated information on population estimates, trends, and human-caused mortality and serious injury (M/SI) across 261 stocks, including 21 revised assessments⁹⁶. These reports are essential for evaluating the impact of fisheries on marine mammal populations and determining appropriate management responses.

Fisheries are classified into three categories under the MMPA based on the frequency and severity of marine mammal interactions. Category III fisheries are those with a remote likelihood of or no known incidental mortality or serious injury of marine mammals, defined as annual M/SI less than or equal to 1% of the Potential Biological Removal (PBR) level. The AK Bering Sea, Aleutian Islands halibut and sablefish longline fisheries, as well as the AK Gulf of Alaska halibut longline fishery, are listed as Category III in the Federal Register, indicating minimal impact on marine mammal stocks⁹⁷.

However, the AK Gulf of Alaska sablefish longline fishery is classified as Category II due to documented interactions with North Pacific sperm whales. The estimated mean annual M/SI of sperm whales in this fishery exceeds the threshold for Category III classification. As a result, NOAA Fisheries concluded that the plain language definition for Category III—"a remote likelihood of or no known incidental mortality or serious injury of marine mammals"—is not appropriate. Instead, the Category II definition—"occasional incidental mortality and serious injury of marine mammals"—better reflects the observed interactions⁹⁸.

Supporting this classification, NOAA Fisheries also published a detailed report on human-caused mortality and injury of Alaska marine mammal stocks, covering data from 2018 to 2022. This report includes species-specific assessments of M/SI incidents, which are used to inform SAR updates and fishery classifications⁹⁹.

In 2024, the NOAA Alaska Onboard Observer Program continued to play a critical role in monitoring interactions between commercial fisheries and endangered, threatened, and protected (ETP) species. Observers deployed across groundfish and halibut fisheries collected data on catch

⁹⁴ <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-authorization-program>.

⁹⁵ <https://www.fws.gov/service/technical-assistance-prevent-bird-vessel-strike-alaska-marine-environment>

⁹⁶ <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports>

⁹⁷ <https://www.fisheries.noaa.gov/action/mmpa-list-fisheries-2024>

⁹⁸ <https://www.fisheries.noaa.gov/national/marine-mammal-protection/ak-gulf-alaska-sablefish-longline-fishery-mmpa-list-fisheries>

⁹⁹ <https://www.fisheries.noaa.gov/resource/publication-database/human-caused-mortality-and-injury-nmfs-managed-alaska-marine-mammal>

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composition, fishing effort, and interactions with marine mammals and seabirds. These data are essential for in-season management and long-term ecosystem assessments¹⁰⁰.

Under the Marine Mammal Protection Act (MMPA), stock assessment reports for strategic stocks—those with human-caused mortality exceeding the Potential Biological Removal (PBR) level—must be evaluated annually. Stocks with materially new information are also reviewed annually, while all other stocks are assessed at least once every three years. Each stock assessment includes data on geographical range, population estimates, productivity rates, and human-caused mortality and serious injury due to interactions with fisheries and subsistence hunting (Young et al., 2024,).

The 2024 Ecosystem Status Reports for the Aleutian Islands and Eastern Bering Sea provide additional outcome indicators relevant to monitoring ETP species. These include assessments of stock abundance and ecological indicators for marine mammals such as Steller sea lions, northern fur seals, harbor seals, arctic ice seals (bearded, ribbon, ringed, and spotted seals), and bowhead whales (Ortiz and Zador, 2024; Siddon, 2024). For example, Steller sea lion non-pup and pup counts in the eastern Aleutians showed a steady increase from 2008 to 2023, while counts in the western and central Aleutians continued to decline, suggesting regional differences in prey availability and ecosystem productivity (Ortiz and Zador, 2024).

The Eastern Bering Sea Ecosystem Status Report also includes an Integrated Seabird Information section, which synthesizes data from agency and university researchers, citizen science groups, coastal communities, and long-term monitoring projects such as the Alaska Maritime National Wildlife Refuge. The 2023 Seabird Report Card indicated mixed reproductive success across colonies, with higher success at St. George Island and reduced success at St. Paul Island due to bald eagle disturbances (Siddon, 2024).

Seabird bycatch monitoring in 2023 revealed generally low interaction rates with ESA-listed species. According to the NMFS Seabird Report (2024)¹⁰¹, estimated seabird bycatch in Alaska groundfish and halibut fisheries was 4,125 birds—below the 2014–2022 average of 6,014 birds. Notably, there were no reported takes of ESA-listed spectacled eiders or Steller’s eiders in 2023, and only one lethal take of a short-tailed albatross in the Gulf of Alaska Pacific cod fishery. This was the first such incident since 2020 and remains within the limits set by the 2021 USFWS Biological Opinion.

The shift toward pot gear in the sablefish Individual Fishing Quota (IFQ) fishery has contributed to reduced seabird bycatch. Pot gear is associated with significantly lower seabird interactions compared to hook-and-line gear, and no seabird takes have been reported from pot gear in recent years.

Overall, the likelihood that halibut and sablefish fisheries will negatively affect marine mammals or ESA-listed seabirds remains low. Continuous monitoring and gear modifications, combined with robust observer coverage and ecosystem assessments, support the conclusion that these fisheries are operating within acceptable ecological limits.

¹⁰⁰ <https://www.fisheries.noaa.gov/alaska/fisheries-observers/north-pacific-observer-program>

¹⁰¹ <https://meetings.npfmc.org/CommentReview/DownloadFile?p=cf9e8c9d-8fa2-4599-8684-9d51e224f5cf.pdf>

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SC 12.2.6 The fishery management organization shall consider the most probable adverse impacts of the unit of certification on habitats (Appendix1, Part 5 and 7), by assessing and, where appropriate, addressing and or/correcting them, taking into account the best scientific evidence available and local knowledge.

SC 12.2.7 There shall be knowledge of the essential habitats for the stock under consideration and potential fishery impacts on them. Impacts on essential habitats, and on habitats that are highly vulnerable to damage by the fishing gear involved, shall be avoided, minimized, or mitigated. In assessing fishery impacts, the full spatial range of the relevant habitat shall be considered, not just the part of the spatial range that is potentially affected by fishing.

In 2024, the North Pacific Fishery Management Council (NPFMC) finalized amendments to the BSAI Groundfish, GOA Groundfish, BSAI Crab, and Arctic Fishery Management Plans (FMPs) to incorporate findings from the 2023 Essential Fish Habitat (EFH) 5-Year Review. These updates support management goals to avoid, reduce, or mitigate habitat impacts from sablefish and halibut fisheries on EFH and Habitat Areas of Particular Concern (HAPCs). The Council selected Alternative 2 as the preferred alternative, which integrates updated EFH maps, revised prey species tables, fishing effects analyses, and new research priorities into the FMPs¹⁰².

The 2023 EFH 5-Year Review modernized the EFH mapping approach by transitioning from single-species distribution models (SDMs) to ensemble SDMs. This method was used to describe and map EFH for 31 groundfish species in the Bering Sea, 24 in the Aleutian Islands, and 41 in the Gulf of Alaska across multiple life stages. EFH was also mapped for four crab species and one octopus species. Notably, EFH was described for pelagic early life stages (PELS) of Pacific cod and sablefish in the GOA using biophysical life-stage integrated individual-based models (IBMs), providing Level 2 and Level 3 EFH maps based on survival rates (Shotwell In Prep).

The Fishing Effects (FE) Model was updated in 2022 and formally published in 2024. Enhancements included corrections to model structure, incorporation of extended habitat recovery durations, and comparisons of VMS data from observed versus all trips. These updates improved the model's ability to assess habitat disturbance from fishing activities (Zaleski et al., 2024).

For Bering Sea sablefish, the FE model showed that 12.8% of core EFH area was disturbed in 2022, exceeding the 10% threshold used to flag significant habitat impacts. This disturbance was linked to increased fishing effort coinciding with large juvenile year classes from 2014, 2016, and 2018. The EBS shelf is likely a nursery area for juvenile sablefish when large year classes are present. Fishery effects tend to increase when juveniles interact with trawl gear, as seen in the late 2000s and recent years. However, analyses from the 2020 and 2021 SAFE reports concluded that these impacts were largely limited to juveniles and unlikely to exceed natural mortality rates or affect the population-wide EFH due to sablefish mobility and inter-area movement (Goethel et al., 2020; Zaleski et al., 2024).

When considered in combination with EFH disturbance in the Aleutian Islands and Gulf of Alaska, it is unlikely that there is a strong impact on sablefish, as population-wide Core EFH Area (CEA) disturbance is likely below 10% (Zaleski et al., 2024). Specifically, habitat disturbance in the Aleutian Islands was estimated at less than 4.8%, and in the Gulf of Alaska at less than 1.8%. In both regions, habitat impacts on sablefish growth-to-maturity, spawning success, breeding success, and feeding success were not detectable, and no changes to management were recommended¹⁰³.

¹⁰² <https://www.fisheries.noaa.gov/s3/2024-07/Final-EFH-EA-Omnibus-Amendment-2024.pdf>

¹⁰³ <https://www.fisheries.noaa.gov/s3/2024-07/Final-EFH-EA-Omnibus-Amendment-2024.p>

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Looking ahead to the 2028 EFH 5-Year Review, NMFS has prioritized five EFH components for further analysis: EFH descriptions and identification, fishing effects, conservation and enhancement, prey species and habitat, and review and revision of EFH components¹⁰⁴. The review will apply updated SDMs and spatio-temporal models (STMs) to map EFH for key groundfish and crab species, including sablefish, Pacific cod, pollock, and snow crab. New prey habitat maps will also be developed, informed by studies funded during the previous review cycle (Siple et al., in prep). The FE Model will be refined with additional fishing effort data and updated gear and habitat parameters. Conservation recommendations will be revisited, and the Council may consider new Habitat Areas of Particular Concern (HAPCs) based on emerging ecological priorities (Limpinsel et al., 2023). The NMFS Alaska EFH Research Plan, now in its fourth edition, will continue to guide research and data development to support these efforts (Pirtle et al., 2024). A summary report of the 2028 review will be presented to the Council, and any proposed FMP amendments will follow the standard analytical and public review process¹⁰⁵.

Federal Monitoring Indicators

NOAA Fisheries compiles annual Ecosystem Status Reports for the Gulf of Alaska, Bering Sea and Aleutian Islands^{106,107,108}. At least four of these outcome indicators are useful for monitoring of adverse impacts to habitats

Habitat – Structural epifauna

a) Status and trends

Structural epifauna (e.g., corals, sponges, large benthic invertebrates) remain uneven across regions, reflecting persistent west-to-east productivity and energy gradients. In the AI, continued below-average eddy kinetic energy and reduced cross-pass transport align with lower phytoplankton biomass and suggest limited benthic energy flow supporting epifaunal structure in western subregions, with relatively better conditions in the east (Ortiz & Zador, 2024). In the EBS, long-term warming and shifting sea-ice phenology continue to reshape benthic pathways; while recent summers were cooler than the peak heatwave years, benthic recovery remains partial and spatially variable, with areas of stable structural epifauna juxtaposed against zones experiencing attrition (Siddon, 2024). In the GOA, late spring/early summer warmth and multiyear below-average spring chlorophyll-a trends indicate pressure on benthic–pelagic coupling; however, localized rebounds in forage fish and larger copepods point to pockets of improved energy supply that may support structural epifauna stability in some shelf habitats (Ferris, 2024).

b) Factors influencing observed trends

Physical forcing: Reduced eddy kinetic energy and lower nutrient flux through Aleutian passes limit benthic production in the AI, especially westward; variable stratification and deeper mixed layers can

¹⁰⁴<https://meetings.npfmc.org/CommentReview/DownloadFile?p=86e6aa68-5c92-4001-9b9a-f63a41d585ab.pdf&fileName=D3%202023%20EFH%205-year%20Review%20Final%20Summary%20-%20FOR%20REFERENCE.pdf>

¹⁰⁵<https://meetings.npfmc.org/CommentReview/DownloadFile?p=86e6aa68-5c92-4001-9b9a-f63a41d585ab.pdf&fileName=D3%202023%20EFH%205-year%20Review%20Final%20Summary%20-%20FOR%20REFERENCE.pdf>

¹⁰⁶<https://files.npfmc.org/SAFE/2024/GOAecosys.pdf>

¹⁰⁷<https://files.npfmc.org/SAFE/2024/EBSecosys.pdf>

¹⁰⁸<https://files.npfmc.org/SAFE/2024/Alecosys.pdf>

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delay blooms and weaken surface–benthic linkage in GOA; changing sea-ice extent and timing alter benthic energy delivery in the EBS (Ortiz & Zador, 2024; Siddon, 2024; Ferris, 2024).

Primary production timing and magnitude: Below-average or delayed spring blooms reduce organic matter export to the seafloor, constraining epifaunal growth and recruitment (Ferris, 2024).

Trophic pathways and prey fields: Biennial and regime-scale variability in zooplankton and forage fish affects benthic–pelagic coupling, with downstream impacts on sessile structural taxa (Ortiz & Zador, 2024; Siddon, 2024).

c) Implications

Habitat features formed by structural epifauna are foundational for biodiversity and fish refuge; degradation reduces nursery function and resilience of demersal stocks. Management should prioritize habitat protections in areas with demonstrated epifaunal persistence (e.g., eastern AI corridors) and consider adaptive spatial measures in regions facing chronic energy limitation (western AI, parts of GOA shelf), integrating ESR signals into Essential Fish Habitat reviews and gear-specific mitigation (Ortiz & Zador, 2024; Siddon, 2024; Ferris, 2024).

Time trends in non-target species catch

a) Status and trends

Across regions, non-target catch reflects shifting species distributions and fleet behavior under variable recruitment and prey fields. In AI, persistent warmth and altered prey availability continue to favor longer-lived pelagic foragers (e.g., rockfish), with knock-on effects for bycatch composition in groundfish fisheries; signals remain stronger in the west than east (Ortiz & Zador, 2024). In the EBS, gradual community reorganization tied to thermal regimes has produced multi-year changes in incidental catch profiles, with some taxa increasing in encounter rates while others retract (Siddon, 2024). In GOA, low age-0 pollock in parts of the western shelf and variable forage fish led to localized shifts in non-target catch, while overall moderation in ecosystem stress limited extreme bycatch anomalies (Ferris, 2024).

b) Factors influencing observed trends

Climate-driven distribution shifts: Species track thermal and prey isoclines, altering overlap with fishing effort and elevating or reducing incidental catch risk (Ortiz & Zador, 2024; Siddon, 2024).

Recruitment variability and prey scarcity: Weak cohorts (e.g., age-0 pollock in western GOA) change predator behavior and fleet targeting, reshaping non-target catch composition (Ferris, 2024).

Fleet response and management measures: Spatial/temporal effort shifts, gear choices, and bycatch rules influence realized non-target catch trends, sometimes dampening climate effects (Siddon, 2024; Ferris, 2024).

c) Implications

Non-target catch trends are an early-warning lens for ecosystem reorganization and bycatch risk. Managers can leverage ESR insights to fine-tune bycatch avoidance (move-on rules, hotspot closures), align observer coverage with emerging risk areas, and adjust bycatch caps where sustained

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trends indicate heightened vulnerability for non-target taxa (Ortiz & Zador, 2024; Siddon, 2024; Ferris, 2024).

Maintaining and restoring fish habitats

a) Status and trends

The ESRs indicate continued pressure on habitat quality stemming from persistent warmth, altered stratification, and changing nutrient transport, with regionally variable resilience. AI shows chronic constraints in western segments due to reduced cross-pass flux and lower phytoplankton, while eastern segments retain stronger productivity and habitat support for forage and groundfish (Ortiz & Zador, 2024). EBS habitats are influenced by long-term thermal regimes and sea-ice shifts; recent moderation has not fully reversed prior benthic stress, though some areas exhibit stabilization (Siddon, 2024). GOA habitats reflect delayed spring blooms and mixed-layer dynamics, with select areas seeing improved prey fields that support habitat functions for juvenile fish despite broader multiyear chlorophyll-a deficits (Ferris, 2024).

b) Factors influencing observed trends

Hydrography and mixing: Deeper mixed layers and weaker stratification can delay or dampen spring production, limiting habitat-supportive energy delivery (Ferris, 2024).

Cross-shelf/passage transport: Lower eddy kinetic energy in AI constrains nutrient inflow and downstream habitat quality (Ortiz & Zador, 2024).

Regime-scale warmth and heatwaves: Decadal warmth since 2013–14 continues to depress productivity in parts of AI/EBS, challenging habitat recovery trajectories (Ortiz & Zador, 2024; Siddon, 2024).

c) Implications

Maintaining and restoring habitats under climate stress requires prioritizing spatial refugia, protecting structural epifauna, and enhancing benthic–pelagic coupling where feasible (e.g., gear restrictions, area-based management). Incorporating ESR habitat signals into Essential Fish Habitat updates, stock assessment habitat covariates, and adaptive management (dynamic closures, effort shifts) will improve resilience of juvenile nurseries and demersal communities (Ortiz & Zador, 2024; Siddon, 2024; Ferris, 2024).

SC 12.2.9 The fishery management organization shall consider the most probable adverse impacts of the fishery under assessment on the ecosystem (Appendix 1, Part 6), by assessing and, where appropriate, addressing and or/correcting them, taking into account available scientific information and local knowledge

SC 12.2.10 There shall be outcome indicator(s) consistent with achieving management objectives seeking to minimize adverse impacts of the unit of certification (including any fishery enhanced activities) on the structure, processes, and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. Any modifications to the habitat for enhancing the stock under consideration must be reversible and not cause serious or irreversible harm to the natural ecosystem's structure, processes, and function

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Between 2024 and early 2025, the NPFMC continued to advance its Fishery Ecosystem Plans (FEPs) for the Bering Sea and Aleutian Islands, reinforcing their role as non-regulatory, action-informing frameworks that integrate ecosystem science into fisheries management. The Council reaffirmed that FEPs are designed to enhance existing decision-making processes, provide focused ecosystem assessments, and support strategic planning without mandating direct management actions¹⁰⁹. The Bering Sea FEP, in particular, saw notable developments through the Climate Scenarios Workshop held in 2024, which explored long-term strategies for climate resilience in fisheries. This workshop contributed to the Council's broader goal of incorporating climate science into ecosystem-based management¹¹⁰.

The Council also updated the Eastern Bering Sea Regional Action Plan to align with NOAA's Climate Science Strategy, identifying priority actions through 2024 such as ecosystem modeling, socio-economic assessments, and habitat monitoring (Shotwell et al., 2023b). Meanwhile, the Aleutian Islands FEP continued to serve as a pilot for ecosystem integration, with the release of the 2024 Aleutian Islands Ecosystem Status Report. This report synthesized climate and fishing impacts across shelf and slope regions and highlighted key ecosystem indicators and research priorities (Ortiz and Zador, 2024). Both FEPs emphasize the importance of identifying interrelated ecosystem components and their relevance to specific management questions, including species interactions, habitat vulnerability, and socio-economic linkages¹¹¹.

Looking forward, the Council is evaluating how to operationalize FEPs across all FMPs, including refining ecosystem indicators, prioritizing research needs, and considering new Habitat Areas of Particular Concern (HAPCs). These efforts reflect a commitment to adaptive, science-informed management that supports ecosystem sustainability and resilience in the face of environmental change¹¹².

In 2024 and early 2025, the North Pacific Fishery Management Council (NPFMC) continued to refine its harvest specifications procedure by integrating ecosystem-based assessments into the annual decision-making process. During each December meeting, the Council reviews the Ecosystem Status Reports for the Bering Sea and Aleutian Islands, which provide insight into prevailing environmental conditions, biological trends, and socio-economic factors. These reports are accompanied by a concise four-page "in-brief" summary that highlights key ecosystem indicators and their relevance to harvest decisions¹¹³. Groundfish stock assessments now include standardized risk tables that evaluate the likelihood of the Acceptable Biological Catch (ABC) exceeding the true, but unknown, Overfishing Limit (OFL). Each stock is assessed across four dimensions—assessment quality, population dynamics, ecosystem concerns, and fishery performance—on a scale from Level 1 (low concern) to Level 4 (high concern), guiding potential reductions in ABC from its maximum allowable level¹¹⁴. Additionally, an increasing number of assessments incorporate Ecological and Socioeconomic Profiles (ESPs), which summarize stock-specific environmental and human-use variables to support more holistic management decisions¹¹⁵.

¹⁰⁹ <https://www.npfmc.org>

¹¹⁰ <https://www.npfmc.org/april-2024-newsletter>

¹¹¹ <https://www.npfmc.org/wp-content/PDFdocuments/Publications/AIFEP.pdf>

¹¹² <https://www.npfmc.org>

¹¹³ <https://www.npfmc.org/fisheries-issues/issues/harvest-specs>.

¹¹⁴ <https://www.npfmc.org/october-2024-newsletter>

¹¹⁵ https://files.npfmc.org/SAFE/2024/Sablefish_appD.pdf

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Parallel to these efforts, the Council advanced its climate readiness initiatives through the Bering Sea FEP Climate Change Action Module. The Climate Change Task Force (CCTF), established in 2019, finalized its work plan in late 2024 and presented a comprehensive report in early 2025. The report outlines three key elements for building climate resilience: expanding inclusive partnerships and knowledge systems, evaluating management tools that incorporate climate data, and establishing a dedicated review group to assess climate information entering Council processes (Stram et al., 2025). The Council also hosted a Climate Scenarios Workshop in Kodiak in June 2024 to explore adaptive strategies for fisheries management under future climate conditions¹¹⁶. These efforts are supported by funding from the Inflation Reduction Act, which enables the Council to develop a climate-resilient fishery management policy and conduct a programmatic evaluation of Alaska's federal fisheries.¹¹⁷ The Climate Change Action Module is part of a broader ecosystem-based management framework that informs policy options and trade-offs affecting Fishery Management Plan (FMP) species and the wider Bering Sea ecosystem¹¹⁸.

The National Marine Fisheries Service (NMFS) Alaska Region continues to advance an ecosystem-based fisheries management (EBFM) approach to Essential Fish Habitat (EFH), recognizing habitat science as a foundational element of sustainable fisheries management. EBFM is geographically specific, adaptive, and integrates ecosystem knowledge, uncertainties, and external influences to balance ecological and societal objectives (NMFS, 2016). Within this framework, NMFS evaluates the ten EFH components of Fishery Management Plans (FMPs) across Alaska's five large marine ecosystems: the Gulf of Alaska (GOA), Aleutian Islands (AI), Eastern Bering Sea (EBS), northern Bering Sea and Chukchi Sea, and Beaufort Sea. This regional approach supports habitat-informed consultations, research prioritization, and the iterative five-year EFH review process (Peters et al., 2018).

The 2023 EFH 5-Year Review, completed in February 2023, identified new habitat and life history data that warranted revisions to EFH descriptions and maps (EFH Component 1)¹¹⁹. These updates were formally incorporated into the GOA and BSAI FMPs on July 19, 2024, though they did not trigger regulatory changes or alter the conclusions of the 2005 EFH Environmental Impact Statement¹²⁰. The updated species distribution models (SDMs) used in Component 1 represent a significant advancement in habitat science, supporting stock assessments and ecosystem socioeconomic profiles (Shotwell et al., 2022), while also improving understanding of climate-driven changes in habitat and recruitment.

EFH Component 2 evaluates the effects of fishing gear on habitat and contributes annually to the Ecosystem Status Reports for the GOA, AI, and EBS. This evaluation could be further strengthened by incorporating ecological modeling approaches. Component 4 addresses non-fishing impacts and now includes climate-informed conservation recommendations, recognizing climate change as a transformative force on habitat from a species perspective (Limpinsel et al., 2023). Future

¹¹⁶ <https://www.npfmc.org/issues/climate-readiness>

¹¹⁷ https://www.iattc.org/GetAttachment/7ecf6989-fb95-4a30-9cd3-385971bd494c/WSCC-01-PRES_5a-Development-of-a-Climate-resilient-fisheries-work-plan.pdf.

¹¹⁸ NPFMC. (2024e). Bering Sea Fishery Ecosystem Plan Team Overview. North Pacific Fishery Management Council. Available at: <https://www.npfmc.org/about-the-council/plan-teams/bering-sea-fishery->

¹¹⁹ [https://www.fisheries.noaa.gov/alaska/habitat-conservation/alaska-essential-fish-habitat-omnibus-amendments#:~:text=NPFMC%20revised%20the%20EFH%20sections,2024%20\(89%20FR%2058632\).](https://www.fisheries.noaa.gov/alaska/habitat-conservation/alaska-essential-fish-habitat-omnibus-amendments#:~:text=NPFMC%20revised%20the%20EFH%20sections,2024%20(89%20FR%2058632).)

¹²⁰ <https://www.govinfo.gov/content/pkg/FR-2024-04-23/pdf/2024-08629.pdf>

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enhancements to Components 3 (non-MSA fishing effects), 5 (cumulative impacts), and 7 (prey species habitat) offer additional pathways to integrate habitat science into EBFM. Component 9 outlines research priorities aligned with management needs and EBFM objectives, while Component 10 ensures EFH information is reviewed and updated publicly every five years, with input from diverse stakeholders¹²¹.

SC 12.6 Research shall be promoted on the environmental and social impacts of fishing gear especially the impact of such gear on biodiversity and coastal fishing communities.

In 2024 and early 2025, the North Pacific Fishery Management Council (NPFMC), NOAA Fisheries, and the International Pacific Halibut Commission (IPHC) implemented several updates to halibut and sablefish management. The IPHC adopted new 2025 catch sharing plans and mortality limits for Pacific halibut, which became effective in March 2025. These measures reflect updated biomass estimates and aim to enhance conservation while accounting for whale depredation and gear-related mortality¹²². Notably, halibut bycatch limits for the Amendment 80 fleet were reduced from 1,396 metric tons in 2024 to 1,309 metric tons in 2025, based on declining halibut abundance¹²³. The IPHC also continued research into gear modifications to reduce whale depredation and improve mortality estimates, which may be incorporated into future stock assessments¹²⁴.

For sablefish, NOAA Fisheries announced the 2025 season opening for fixed gear fisheries under the Individual Fishing Quota (IFQ) and Community Development Quota (CDQ) programs. The season runs from March 20 to December 7, 2025, aligning with halibut seasons but with different gear deployment timing to ensure compliance with retention rules¹²⁵. These operational updates are part of broader efforts to improve gear selectivity and reduce habitat impacts, supported by ongoing research at NOAA's Auke Bay Laboratory in collaboration with the University of Alaska and ADFG¹²⁶.

On the socioeconomic front, the 2024 Economic Status Report for Alaska Groundfish Fisheries was finalized in February 2025. It includes updated metrics on catch, ex-vessel value, processing, and community participation, and supports regulatory analyses under the Magnuson-Stevens Act, NEPA, and other laws (Fissel et al., 2024). The NOAA AFSC Economic and Social Sciences Research Program also documented the impacts of trade policy, climate change, and market shifts on Alaska's seafood sector, and continued developing regional economic models and behavioral analyses of fishing operations¹²⁷. These efforts inform management decisions and help balance ecological sustainability with economic resilience.

In early 2025, the International Pacific Halibut Commission (IPHC) continued its research into gear modifications aimed at reducing whale depredation and bycatch in Pacific halibut fisheries. The IPHC's 5-Year Program of Integrated Research and Monitoring includes projects focused on developing catch protection strategies and evaluating halibut behavioral responses to gear, with the goal of improving mortality estimates and stock productivity assessments¹²⁸. The 2025 stock

¹²¹ <https://www.fisheries.noaa.gov/s3/2024-07/Final-EFH-EA-Omnibus-Amendment-2024.pdf>

¹²² <https://www.federalregister.gov/documents/2025/03/21/2025-04803>

¹²³ <https://alaskafish.news/12/2024/npfmc-redux-more-on-bering-sea-halibut-and-snow-crab-bycatch-for-2025>.

¹²⁴ https://www.iphc.int/uploads/2025/01/IPHC-2025-AM101-08-Rev_2-2024-fisheries-data-overview.pdf.

¹²⁵ <https://www.fisheries.noaa.gov/bulletin/ib-25-14-nmfs-announces-march-20-2025-season-opening-sablefish-fixed-gear-fisheries>

¹²⁶ <https://www.fisheries.noaa.gov/alaska/science-data/2025-alaska-fisheries-science-center-field-season-and-program-updates>

¹²⁷ <https://www.fisheries.noaa.gov/s3/2025-03/economic-social-sciences-research-flyer-afsc.pdf>.

¹²⁸ <https://iphc.int/uploads/2024/12/IPHC-2025-AM101-06-5-yr-Prog-Inte-Res-and-Monit.pdf>

12. Considerations of fishery interactions and effects on the ecosystem shall be based on the best scientific evidence available, local knowledge where it can be objectively verified, and a risk assessment-based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

assessment incorporates updated mortality projections and new biological data, including sex-ratio trends and histology-based maturity estimates, which may lead to the inclusion of whale depredation as an explicit source of mortality in future assessments¹²⁹.

Meanwhile, NOAA Fisheries announced the opening of the 2025 sablefish fixed gear season under the Individual Fishing Quota (IFQ) and Community Development Quota (CDQ) programs, aligning with halibut season dates but with different gear deployment rules to avoid retention violations.¹³⁰ Research at NOAA's Auke Bay Laboratory, in collaboration with the University of Alaska and the Alaska Department of Fish and Game (ADFG), continues to examine gear impacts on benthic habitats. These studies fall into three categories: assessing gear-specific habitat effects, linking fishing disturbance to population dynamics, and developing mitigation strategies¹³¹. A recent risk assessment study also quantified longline gear contact with sensitive benthic habitats, including corals and sponges, across sablefish fishing grounds from 1990 to 2024. The study produced spatial maps of habitat contact and uncertainty estimates, supporting ecosystem-based fisheries management and informing marine protected area planning (Doherty et al., 2025)

12.7 The fishery management organization shall make use, where appropriate, of Marine Protected Areas (MPAs). The general objectives for establishing MPAs shall include ensuring sustainability of fish stocks and fisheries, and protecting marine biodiversity and critical habitats

In 2024 and early 2025, NOAA Fisheries and the North Pacific Fishery Management Council (NPFMC) continued to advance area-based conservation strategies in Alaska's marine ecosystems (Limpinsel et al., 2025). The Council reaffirmed its commitment to ecosystem-based fisheries management (EBFM), emphasizing the role of MPAs and spatial closures in sustaining biodiversity, fish stocks, and coastal communities^{132,133}. As of 2025, approximately 200 conservation areas remain in effect, covering 666,497 nm² closed to bottom trawling year-round—about 61% of the North Pacific Exclusive Economic Zone (EEZ)—with 148,165 nm² permanently closed to all bottom-tending gear¹³⁴. These closures are designed to protect sensitive benthic habitats, deep-sea corals, and key prey species such as Atka mackerel, cod, and pollock, particularly in areas critical to Steller sea lions. Recent updates also reflect the Council's response to climate-driven shifts in species distributions (Barnes et al., 2022).

For example, Pacific cod has expanded into the northern Bering Sea, historically limited by the cold pool barrier, which has weakened due to warming bottom temperatures¹³⁵. This shift has prompted reevaluation of fixed spatial closures, especially in light of the Council's adaptive management approach to salmon by-catch. The Chinook and Chum Salmon Savings Areas, originally established in 1995, were replaced with dynamic closures that can be opened or closed for 5–7 days based on real-time bycatch rates¹³⁶. These adaptive spatial tools are increasingly important as environmental variability challenges the effectiveness of static MPAs.

¹²⁹ <https://www.iphc.int/uploads/2025/08/IPHC-2025-SRB027-07-Assessment-development.pdf>

¹³⁰ <https://www.fisheries.noaa.gov/bulletin/ib-25-14-nmfs-announces-march-20-2025-season-opening-sablefish-fixed-gear-fisheries>

¹³¹ https://www.adfg.alaska.gov/static/fishing/PDFs/commercial/southeast/meetings/groundfish/04.23.2025_sablefish_assessment_summary.pdf

¹³² <https://meetings.npfmc.org/CommentReview/DownloadFile?p=1439cfd8-2b95-4d28-906f-5c3847675b0a.pdf&fileName=D3%20Action%20Memo.pdf>

¹³³ <https://www.npfmc.org/fisheries-issues/issues/habitat-protections>

¹³⁴ <https://www.npfmc.org/wp-content/PDFdocuments/newsletters/CCC-ABM-Press-Release.pdf>

¹³⁵ <https://www.fisheries.noaa.gov/feature-story/few-surprises-alaskas-marine-environment-2024>

¹³⁶ <https://salmonstate.org/ocean-justice/february-2025-npfmc-toolkit>

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The 2024 Ecosystem Status Reports for the Gulf of Alaska, Aleutian Islands, and Bering Sea highlight warming trends, altered prey availability, and increased competition among species such as Pacific cod, arrowtooth flounder, and pollock¹³⁷. These findings underscore the need for flexible, climate-informed conservation strategies. NOAA's Habitat Conservation Division also emphasized the importance of integrating climate resilience into MPA planning and habitat consultations, aligning with broader federal goals under the 2024–2027 Climate Adaptation Plan^{138,139} (NOAA Fisheries, 2025a; EPA, 2024).

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¹³⁷ <https://www.fisheries.noaa.gov/alaska/ecosystems/ecosystem-status-reports-gulf-alaska-bering-sea-and-aleutian-islands>

¹³⁸ <https://www.fisheries.noaa.gov/s3/2025-01/FY2024-HCD-Accomplishment-Report.pdf>

¹³⁹ <https://www.epa.gov/newsreleases/epa-publishes-its-2024-2027-climate-adaptation-plan-0>.

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Statement of consistency to the CSI RFM Fishery Standard

The fishery continues to meet the requirements of this Fundamental Clause of the CSI RFM Fishery Standard

8. Update on compliance and progress with non-conformances and agreed action plans

This section details compliance and progress with non-conformances and agreed action plans including:

- A. A review of the performance of the Client specific to agreed corrective action plans to address non-conformances raised in the most recent assessment or re-assessment or at subsequent surveillance audits including a summary of progress toward resolution.
- B. A list of pre-existing non-conformances that remain unresolved, new nonconformances raised during this surveillance, and non-conformances that have been closed during this surveillance.
- C. Details of any new or revised corrective action plans including the Client's signed acceptance of those plans.
- D. An update of proposed future surveillance activities.

8.1.1.Closed non-conformances

There are no closed non-conformances

8.1.2.Progress against open non-conformances

There are no open non-conformances.

8.1.3.New non-conformances

There are no new non-conformances.

8.1.4.New or revised corrective action plans

There are no new corrective action plans or pre-existing plans that have been revised as well as Client-signed acceptance of the action plan.

8.1.5.Proposed surveillance activities

This fishery will be assessed again on the 3rd surveillance.

9. Recommendations for continued certification

No recommendations were added.

9.1. Certification Recommendation

Following this surveillance audit, the Assessment Team recommends that the fishery, the U.S. Alaska Pacific Halibut commercial fishery, under international (IPHC), federal (NMFS/NPFMC) and state (ADFG) management, fished with benthic longline, pots and troll (within Alaska's 200 nm EEZ) fishery be awarded continuing certification under the Certified Seafood International Certification Program.

Following this surveillance audit, the Assessment Team recommends that the fishery, the U.S. Alaska Sablefish commercial fishery, under federal (NMFS/NPFMC) and state (ADFG) management, fished with benthic longline, pots and troll (within Alaska's 200 nm EEZ) be awarded continuing certification under the Certified Seafood International Certification Program.

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11. Appendices

11.1. Appendix 1 – Assessment Team Bios

11.1.1. Assessment Team Bios

Based on the technical expertise required to carry out this assessment, an Assessment Team was selected as follows.

Dr. Ivan Mateo, Lead Assessor

Dr. Ivan Mateo has over 25 years' experience working with natural resources population dynamic modeling. His specialization is in fish and crustacean population dynamics, stock assessment, evaluation of management strategies for exploited populations, bioenergetics, ecosystem-based assessment, and ecological statistical analysis. Dr. Mateo received a Ph.D. in Environmental Sciences with Fisheries specialization from the University of Rhode Island. He has studied population dynamics of economically important species as well as candidate species for endangered species listing from many different regions of the world such as the Caribbean, the Northeast US Coast, Gulf of California, and Alaska. He has done research with NMFS Northeast Fisheries Science Center Ecosystem Based Fishery Management on bio-energetic modelling for Atlantic cod. Dr. Mateo has also been working as environmental consultant in the Caribbean doing field work and looking at the effects of industrialization on essential fish habitats and for the Environmental Defense Fund developing population dynamics models for data poor stocks in the Gulf of California. In addition, Dr. Mateo worked as National Research Council postdoc at the NOAA National Marine Fisheries Services Ted Stevens Marine Research Institute on population dynamic modelling of Alaska sablefish and as a research associate on early life history/recruitment dynamics of Pacific Ocean perch.

Dr. Robert Leaf, Assessor

Dr. Robert Leaf has 20 years of experience working in the field of natural resource management of fin and shellfish. He specializes in the evaluation of management strategies of harvested species and the identification of environmental drivers that impact their population dynamics. Dr. Leaf received his master's degree in marine science at Moss Landing Marine Laboratories and his PhD in Fisheries and Wildlife Sciences from Virginia Polytechnic and State Institute. His last professional post was as a post-doc under Dr. Kevin Friedland at the Northeast Fishery Science Center's Narragansett Laboratory. There, he worked on understanding the impact of environmental conditions on fish stock productivity and recruitment. He has worked in the Gulf of Mexico for the last three years working on fish stock assessment of commercially and recreationally important species in that area. Dr. Leaf is a member of the Gulf of Mexico Fishery Management Council's Red Drum working group and NOAA's Marine Fisheries and Climate Taskforce. He currently supervises four master's level students working on various state and federally managed fish stocks.