WHEN TRUST MATTERS

SURVEILLANCE NO. 1

RESPONSIBLE FISHERIES MANAGEMENT CERTIFICATION SCHEME, VERSION 2.1

Alaska Pollock Fishery

Certification Body	DNV Business Assurance USA
Assessment team	Jodi Bostrom, Giuseppe Scarcella, Paul Knapman
Fishery client	At-sea Processors Association
Date	May 22, 2024

Certified Sustainable
ALASKA RFM

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ABBREVIATIONS AND ACRONYMS

ABC	Allowable biological catch
ADFG	Alaska Department of Fish and Game
AFDF	Alaska Fisheries Development Foundation
AFSC	Alaska Fisheries Science Center
APA	At-sea Processors Association
ATS	Acoustic-trawl survey
BOF	Board of Fisheries
BSAI	Bering Sea and Aleutian Islands
BTS	Bottom-trawl survey
CCRF	Code of Conduct for Responsible Fisheries
CITES	Convention on International Trade in Endangered Species
CSC	Certified Seafood Collaborative
CV	Catcher vessel
EBS	Eastern Bering Sea
EIS	Environmental impact statement
EEZ	Exclusive economic zone
EFH	Essential fish habitat
EFP	Exempted fishing permit
EM	Electronic monitoring
ESA	Endangered Species Act
ETP	Endangered, threatened, and protected (species)
FAO	Food and Agriculture Organization of the United Nations
FMP	Fishery management plan
GOA	Gulf of Alaska
IUCN	International Union for the Conservation of Nature
IUU	Illegal, unreported, and unregulated (fishing)
MMPA	Marine Mammal Protection Act
mt	Metric tons
MSY	Maximum sustainable yield
NEPA	National Environmental Policy Act
nm	Nautical miles
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of intent
NPFMC or the Council	North Pacific Fishery Management Council
OFL	Overfishing level
PBR	Potential biological removal
PEIS	Programmatic environmental impact statement
PSC	Prohibited species catch
RFM	Responsible Fisheries Management
SAFE	Stock Assessment and Fishery Evaluation (Report)
SSB	Spawning stock biomass
SSC	Scientific and Statistical Committee
TAC	Total allowable catch
USCG	U.S. Coast Guard

1 EXECUTIVE SUMMARY

Table 1. General information and the fishery

Fishery name	Alaska Pollock Fishery		
Fishery being assessed	**Applicant Group:** At-sea Processors Association (APA) **Product Common Name (*Species*):** Alaska pollock (*Gadus chalcogrammus*) **Geographic Location:** Gulf of Alaska (GOA) and Bering Sea and Aleutian Islands (BSAI) within Alaska jurisdiction (200 nautical miles [nm] exclusive economic zone [EEZ]) **Gear Types:** Pelagic Trawl (main), other gears (bottom trawl, jig, longline, pot) from other non-directed pollock fisheries legally landing pollock **Principal Management Authority:** National Marine Fisheries Service (NMFS); North Pacific Fishery Management Council (NPFMC); Alaska Department of Fish and Game (ADFG); Alaska Board of Fisheries (BOF)		
Date certified	December 6, 2011; recertified December 6, 2017; second recertification February 6, 2023	Date of certificate expiry	February 5, 2028
Surveillance type	Offsite surveillance		
Date of surveillance audit	March 8, 2024		
Surveillance stage	1st Surveillance	X	
	2nd Surveillance		
	3rd Surveillance		
	4th Surveillance		
	Other (expedited etc)		
Surveillance team	Lead assessor: Jodi Bostrom Assessors: Giuseppe Scarcella, Paul Knapman		

The Responsible Fisheries Management (RFM) Certification Program is a voluntary program that is owned and managed by the Certified Seafood Collaborative (CSC) to provide an independent, third-party certification that can be used to verify that these fisheries are responsibly managed according to the RFM standard. Additionally, application to the RFM is only available for fisheries operating within the North American fisheries operating in the U.S. and Canadian 200 nm EEZ.

The RFM Certification Program uses the fundamental clauses of the RFM Fisheries Standard Version 2.1 and is in accordance with ISO 17065 accredited certification procedures. The assessment is based on the fundamental clauses specified in the RFM Fisheries Standard Version 2.1. It is based on four key components of responsible management derived from the Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fisheries (CCRF) (1995) and Guidelines for the Eco-labeling of products from marine capture fisheries (2009).

A The Fisheries Management System
B Science, Stock Assessment Activities, and the Precautionary Approach
C Management Measures, Implementation, Monitoring, and Control
D Serious Impacts of the Fishery on the Ecosystem

The purpose of this annual surveillance report is to:

1. Establish and report on any material changes to the circumstances and practices affecting the original complying assessment of the fishery
2. Monitor any actions taken in response to non-conformances raised in the original assessment of the fisheries
3. Rescore any clauses where practice or circumstances have materially changed since the last audit

1.1 Audit conclusion

Fishery	Status of certification	Comment

Alaska pollock (*Gadus chalcogrammus*) caught by vessels within APA using pelagic trawl and other gears (bottom trawl, jig, longline, and pot) from other non-directed pollock fisheries legally landing pollock caught in the GOA and BSAI within Alaska jurisdiction (200 nm EEZ) managed by the NMFS, NPFMC, ADFG, and Alaska BOF	**Certified**	During the first surveillance audit conducted on March 8, 2024, the surveillance team concluded that the non-conformance has been closed. Given the results of this audit, the team recommends the continued certification of this fishery according to the RFM Fisheries Standard v2.1.

2 ASSESSMENT TEAM DETAILS

Jodi Bostrom
DNV Lead Assessor and main area of responsibility
Fundamental clause D (Serious Impacts of the Fishery on the Ecosystem)

Jodi Bostrom is a senior assessor and team leader for MSC Fisheries and RFM Fisheries at DNV Business Assurance. She earned an M.Sc. in Environmental Science from American University and a B.Sc. in Zoology from the University of Wisconsin. She has over five years of experience in MSC fisheries assessment services. Prior to that, she worked for five years at the MSC as a Senior Fisheries Assessment Manager. Among other things, she developed the MSC's benthic habitats policy and the Consequence Spatial Analysis (a risk-based framework for assessing habitat impacts in data-deficient situations) as part of the MSC Standard revision. Prior to the MSC, Jodi spent 11 years with the US National Academy of Sciences' Ocean Studies Board where she worked on various projects from fisheries management and policy to bycatch and dredging impacts to eutrophication and sea level rise.

Paul Knapman
Main areas of responsibility
Fundamental clause A (Fisheries Management System) and C (Science, Stock Assessment Activities, and the Precautionary Approach)

Paul is an independent consultant based in Halifax, Nova Scotia, Canada. Paul began his career in fisheries more than 30 years ago as a fisheries officer in the UK, responsible for the enforcement of UK and EU fisheries regulations. He then joined the UK government's nature conservation advisors, establishing and managing their marine fisheries program. He developed an extensive program of work with fisheries managers, scientists, the fishing industry and ENGOs to integrate national and European fisheries and nature conservation requirements. He also helped lead a national four-year project contributing to the 2002 review of the Common Fisheries Policy. He then became Head of the largest inshore fisheries management organization in England, with responsibility for managing an extensive area of inshore fisheries on the North Sea coast. The organization's responsibilities and roles included: stock assessments; habitat monitoring; setting and ensuring compliance with total allowable catches and quotas; establishing and applying regional fisheries regulations; the development and implementation of fishery management plans; the lead authority for the largest marine protected area in England. In 2004, Paul moved to Canada and established his own consultancy providing analysis, advisory and developmental work on fisheries management policy in Canada and Europe. He drafted the first management plan for one of Canada's marine protected areas, undertook an extensive review on illegal, unreported, and unregulated fishing in the Baltic Sea and was appointed as rapporteur to the European Commission's Baltic Sea Regional Advisory Council. In 2008, Paul joined Moody Marine as their Americas Regional Manager, responsible for managing and developing their regional MSC business. He became General Manager of the business in 2012. Paul returned to consultancy in 2015.

Giuseppe Scarcella
Main area of responsibility
Fundamental clause B (Science, Stock Assessment Activities, and the Precautionary Approach)

Giuseppe Scarcella is an experienced fishery scientist and population analyst and modeler, with wide knowledge and experience in the assessment of demersal stocks. He holds a first degree in Marine Biology and Oceanography (110/110) from the Unversità Politecnica delle Marche, and a Ph.D. in marine Ecology and Biology from the same university, based on a thesis "Age and growth of two rockfish in the Adriatic Sea". After his degree he was offered a job as project scientist in several research programs about the structure and composition of fish assemblage in artificial reefs, off-shore platform and other artificial habitats in the Italian Research Council – Institute of Marine Science of Ancona now Institute for Biological Resources and Marine Biotechnologies. During the years of employment, he has gained experience in benthic ecology, statistical analyses of fish assemblages evolution in artificial habitats, fisheries ecology and impacts of fishing activities, stock assessment, otolith analysis, population dynamic and fisheries management. During the same years he attended courses of uni-multivariate statistics and stock assessment. He is also actively participating in the scientific advice process of FAO GFCM in the Mediterranean Sea and Scientific, Technical and Economic Committee for Fisheries for the European Commission. He is author and co-author of more than 50 scientific paper peer reviewed journals and more than 200 national and

international technical reports, most of them focused on the evolution of fish assemblages in artificial habitats and stock assessment and fishery management.

3 BACKGROUND ON THE FISHERY

3.1 Fishery description

Following the fourth surveillance audit of the last certification cycle, a non-conformance was placed on Fundamental Clause 3. All information on this fishery could be obtained from the original full assessment report, subsequent surveillance reports, and recertification reports available for download at http://www.alaskaseafood.org/rfm-certification/certified-fisheries/alaska-pollock/. Recent catch is similar to previous years, and recent data are presented in Table 2.

Table 2. Total allowable catch (TAC) and catch data for 2023

Species	Latin name	2023 TAC (metric ton; mt)	2023 Total Catch (mt)
Pollock in BSAI	*Gadus chalcogrammus*	1,300,000	1,260,431
Pollock in GOA	*Gadus chalcogrammus*	156,578	132,687

3.2 Previous assessments and surveillance audits

The Alaska BSAI and GOA pollock fisheries were first certified under the requirements of the Alaska RFM standard v1.2 on December 6, 2011. The initial certification and four annual surveillance audits were carried out by the certification body Global Trust.

On April 15, 2017, the certificate for this fishery was transferred from Global Trust to DNV GL (now DNV). The certificate transfer and the fourth surveillance audit were carried out by DNV. During June-December 2017, the fishery went through the full reassessment against a newer version of the standard, v1.3. This reassessment did not result in any changes in the compliance of the fishery with the RFM standard, and no non-conformances were raised. The new certificate was, therefore, issued with the validity date until December 5, 2022.

In January 2021, the fourth surveillance of the recertification took place via an off-site surveillance audit, which was done in conjunction with the reassessment site visit, and the surveillance report was issued on May 27, 2022. Following the results of the second reassessment, the fishery was recertified against the RFM Fisheries Standard v2.1 with one non-conformance. The certificate was issued with the validity date until February 5, 2028.

4 THE ASSESSMENT PROCESS

The RFM assessment/reassessment evaluates the fishery against the conformance criteria outlined in the RFM's Fishery Standard v2.1, which contains clauses that are categorized into four sections:

- Section A – The Fishery Management System
- Section B – Science and Stock Assessment Activities and the Precautionary Approach
- Section C – Management Measures, Implementation, Monitoring, and Control
- Section D – Serious Impacts of the Fishery on the Ecosystem

Scoring of each clause is based on a series of Evaluation Parameters: Process, Current Status/Appropriateness/Effectiveness, and Evidence Basis. The scoring guidelines, which are used for all clauses, are as follows:

- If all Evaluation Parameters are satisfied, the clause is scored in full conformance.
- If any single Evaluation Parameter is not satisfied, the clause is scored in minor non-conformance.
- If any two Evaluation Parameters are not satisfied, the clause is scored in major non-conformance.
- If any three or more Evaluation Parameters are not satisfied,the clause is scored in critical non-conformance.

During the assessment/reassessment, the fishery is assigned a confidence rating for each clause, which signifies the confidence of the assessment team that the fishery is demonstrated to be in conformity to the requirements of that clause. Clauses are scored according to the following confidence ratings:

- Low confidence rating (critical non-conformance level) – Information and/or evidence is completely absent or contradictory to whether an element of the fishery complies with the given requirements of a supporting clause. In these cases, a low confidence rating, equivalent to a critical non-conformance, is assigned.
- Medium confidence rating (major non-conformance) – Information and/or evidence is limited. In these cases, major improvement is needed to achieve full conformance, and a medium confidence rating with a major non-conformance is assigned.
- Medium confidence rating (minor non-conformance) – Information and/or evidence is broadly available; however, there are some information gaps. In these cases, minor improvement is needed to achieve full conformance, and a medium confidence rating with a minor non-conformance is assigned.
- High confidence rating (full conformance) – Sufficient information and/or evidence is available to demonstrate full conformance. In these cases, a high confidence rating is assigned.

Annual surveillance audits are undertaken to review any changes in the fishery since the last assessment, reassessment, or surveillance audit. Progress toward closing any non-conformances is also evaluated.

4.1 Surveillance audit meetings

The surveillance announcement was announced publicly on CSC's website (https://rfmcertification.org/certified-fishery-species/alaska-pollock/) on February 7, 2024. The audit took place via Microsoft Team on March 8, 2024. (Note that the RFM surveillance audit was held in conjunction with the fishery's audit against the MSC Standard.)

4.2 Stakeholder input

Table 3 provides the agenda and list of participants. (Note that this RFM surveillance audit was held in conjunction with the fishery's audit against the MSC Standard.) DNV received no written stakeholder input before the audit and no requests to meet with the team. The team did receive an update on the fishery, including the latest catch data, from the client after the audit.

Table 3. Surveillance audit agenda and participants

Time	Activity	Participants
8:00-8:15 am PST	Opening meeting • Introductions, surveillance audit goals, etc. • Overview of the surveillance process	Jodi Bostrom, DNV team leader Giuseppe Scarcella, DNV and MSC team member Paul Knapman, DNV team member Austin Estabrooks, APA Erin Wilson, MSC team leader Amanda Stern-Pirlot, MSC team member

8:15-9:30 am PST	Topics for discussion: • General review of the fishery, including number of vessels, companies, etc. that are included on the certificate or part of the sharing agreement • Any changes in management/regulation, or recent reviews (e.g. updates on EFH, protected species, bycatch mitigation (crabs, chum, etc.)) • Changes to the observer program/EM • Notable changes to the stocks, stock assessment methods, TAC, etc. • Changes in personnel, both in the management agencies, APA, etc. • Any enforcement updates, both at the state (if applicable) and federal level • Any changes in traceability • News related to American Seafoods and the EPA fines for dumping and the recent compliance checks • Check in on bycatch or unusual events	Jodi Bostrom, DNV team leader Giuseppe Scarcella, DNV and MSC team member Paul Knapman, DNV team member Austin Estabrooks, APA Erin Wilson, MSC team leader Amanda Stern-Pirlot, MSC team member
9:30-9:45 am PST	Discussion of RFM non-conformance progress	Jodi Bostrom, DNV team leader Giuseppe Scarcella, DNV and MSC team member Paul Knapman, DNV team member Austin Estabrooks, APA Erin Wilson, MSC team leader Amanda Stern-Pirlot, MSC team member
9:45-10:00 am PST	Closing meeting, wrap up, and summary • Remaining questions from team • Points needing clarification • Overview of surveillance outcomes • Questions from client • Next steps • Timing	Jodi Bostrom, DNV team leader Giuseppe Scarcella, DNV and MSC team member Paul Knapman, DNV team member Austin Estabrooks, APA Erin Wilson, MSC team leader Amanda Stern-Pirlot, MSC team member

5 UPDATES TO AND CHANGES WITHIN THE FISHERY

5.1 Scientific stock assessment

5.1.1 Eastern Bering Sea (EBS) Alaska pollock

Relative to 2022 year's BSAI Stock Assessment and Fishery Evaluation (SAFE) report, the following substantive changes have been made in the EBS pollock stock assessment. This includes the 2023 NMFS bottom-trawl survey (BTS) covering the EBS and Northern Bering Sea. As before, these data were treated with a spatio temporal model for index standardization. Age data from this survey effort was compiled and included (also with an extensive spatio-temporal model treatment). The NMFS acoustic-trawl survey (ATS) age composition data was revised from the preliminary estimates developed in 2022. The BTS chartered boats also collected acoustic data and the series was updated this year (AVO).

In terms of data inputs used in the 2023 model, the following changes occurred:

1. Observer data for catch-at-age and average weight-at-age from the 2022 fishery were finalized and included.
2. Total catch as reported by NMFS Alaska Regional office was updated and included through 2023.
3. In summer 2023, the Alaska Fisheries Science Center (AFSC) conducted the bottom trawl survey in the EBS and extended into the Northern Bering Sea. A Vector Autoregressive Spatio-Temporal model evaluation (including the cold-pool extent) was used as the main index.
4. Refined estimates of weight-at-age data used to compute spawning stock biomass (SSB) (Ianelli et al. 2023a).
5. New time series from the acoustic data collected from the bottom trawl survey covering 2006-2023 (except for 2020) as presented in Ianelli et al. (2023a).
6. Updated age-composition from the 2022 ATS survey (last year a preliminary estimate was used based on the BTS age-length data plus a juvenile sample from the ATS.

In terms of change in the assessment methods, the following modifications have been carried out:
The assessment method changes were presented in September 2023 (Ianelli et al. 2023a). In that document the re-evaluated relative weights specified as input variances and sample sizes has been used. Also, different tuning approaches which achieved a balance between the observation errors and model process errors, specifically for the acoustic time series were applied. Additional model sensitivities under development that included an exploration of using a generalized Gamma distribution for the bottom trawl index, age-determination errors, and simplified error structures for the bottom trawl index were explored. Alternative estimates of weight-at-age applied to the SSB calculations were utilized. The modified estimates are intended to reflect data available closest to the peak spawning season.

In the 2023 assessment, the results from the 2022 assessment have largely been confirmed: the 2018 year class appears to be one of the most abundant on record. Nonetheless, BTS was lower than expected (about 28% below the long-term mean and the tenth lowest over the 41-year survey period). The new acoustic vessel of opportunity index (presented in September 2023) expanded the area covered by acoustics and provided more precision (lower coefficient of variation in the point estimates) than in the past. Ancillary data indicate that the pollock in 2023 are substantially skinnier than average given their length. The average weight-at-age was about average for the 2018 year class, but lighter for most other ages.

Table 4 is based on results from the selected model ("Model 23.0") based on changes presented in Ianelli et al. (2023a). The allowable biological catch (ABC) recommendation is based on Tier 3 calculation as a proxy for Tier 1 because of the variability indicated by the very high value based on the F_{MSY} estimate and the large but uncertain 2018 year class The stock is not subject to overfishing, is not currently overfished, nor is it approaching a condition of being overfished.

Table 4. Summary of the assessment results of EBS pollock. Source: Ianelli et al., 2023a

	As estimated or *specified* *last* year for:		As estimated or *recommended* *this* year for:	
Quantity	2023	2024	2024	2025
M (natural mortality rate, ages 3+)	0.3	0.3	0.3	0.3
Tier	1a	1a	1a	1a
Projected total (age 3+) biomass (t)	12,389,000 t	11,445,000 t	10,184,000 t	9,437,000 t
Projected female spawning biomass (t)	4,171,000 t	3,944,000 t	3,518,000 t	3,255,000 t
B_0	6,653,000 t	6,653,000 t	6,728,000 t	6,728,000 t
B_{msy}	2,674,000 t	2,674,000 t	2,689,000 t	2,689,000 t
F_{OFL}	0.491	0.491	0.422	0.422
$maxF_{ABC}$	0.434	0.434	0.379	0.379
F_{ABC}	0.365	0.365	0.33	0.33
OFL	3,381,000 t	4,639,000 t	3,162,000 t	3,449,000 t
$maxABC$	2,987,000 t	4,099,000 t	2,837,000 t	3,095,000 t
ABC	1,910,000 t	2,275,000 t	2,313,000 t	2,401,000 t
Status	2021	2022	2022	2023
Overfishing	No	n/a	No	n/a
Overfished	n/a	No	n/a	No
Approaching overfished	n/a	No	n/a	No

5.1.2 Aleutian Islands Alaska pollock

The Aleutian Islands (AI) pollock stock assessment is on a biennial cycle with full assessments in even years timed with the Aleutian Islands bottom trawl survey, and harvest projections in odd years. In 2023 for AI pollock in harvest projection years, only the harvest levels for the next two years are presented (Barbeaux et al., 2023). A full assessment was conducted in 2022 and can be found at (https://apps-afsc.fisheries.noaa.gov/Plan_Team/2022/AIpollock.pdf). A full stock assessment document with updated assessment and projection model results will be presented in 2024 SAFE report.

The AI pollock assessment consists of a population model, which uses survey and fishery data to generate a historical time series of population estimates, and a projection model, which uses results from the population model to predict future population estimates and recommended harvest levels. The Aleutian Islands walleye pollock stock assessment uses the Assessment Model for Alaska, which is a variation of the “Stock Assessment Toolbox” model presented to the Plan Team in the 2002 Atka mackerel stock assessment (Lowe et al. 2002). The data sets used in this assessment include total catch biomass, fishery age compositions, AI bottom trawl survey abundance estimates, and AI bottom trawl survey age compositions. For a harvest projection year, the assessment model is not re-run; the projection model is updated with new catch data. This incorporates the most current catch information without re-estimating model parameters and biological reference points. The stock remains at tier 3b.

In 2023, there were no changes made to the assessment model inputs since this was a harvest projection year. New data added to the projection model included an updated 2022 catch estimate (3,058 t) and new catch estimates for 2023. The 2024 catch was set at the three-year average for 2020-2022 of 2,701 t. There were no changes in assessment methodology.

For the 2024 fishery, the maximum allowable ABC of 51,516 t from the updated projection model was recommended. This ABC is down slightly from the 2023 ABC of 52,383 t and last year’s projected 2024 ABC of 52,043 t due to the increase of catch over what had been projected catch in 2023. Reference values for AI pollock are summarized in Table 5, with the recommended ABC and overfishing level (OFL) values for 2024.

Table 5. Summary of the assessment results of AI pollock. Source: Barbeaux et al., 2023

Quantity	As estimated or *specified last* year for: 2023	2024	As estimated or *recommended this* year for: 2024	2025*
M (natural mortality rate)	0.21		0.21	
Tier	3a		3a	
Total (age 1+) biomass (t)	264,173	281,618	279,764	302,068
Female spawning biomass (t)				
Projected	78,628	80,432	79,747	81,3352
$B_{100\%}$	174,218		174,218	
$B_{40\%}$	69,687		69,687	
$B_{35\%}$	60,976		60,976	
F_{OFL}**	0.380	0.380	0.380	0.380
$maxF_{ABC}$	0.305	0.305	0.305	0.305
F_{ABC}	0.305	0.305	0.305	0.305
OFL (t)	52,383	52,043	51,516	53,030
maxABC (t)	43,413	43,092	42,654	43,863
ABC (t)	43,413	43,092	42,654	43,863
Status	As determined this year for: 2021	2022	2022	2023
Overfishing	no	n/a	no	n/a
Overfished	n/a	no	n/a	no
Approaching overfished	n/a	no	n/a	no

* Projection based on estimated catches of 3,663 t for 2023 and 2,701 t for 2024, the three-year average (2020-2022), used in place of maximum permissible ABC.

** Long-term equilibrium F_{OFL} and F_{ABC} were 0.380 and 0.305, respectively.

The stock is not subject to overfishing, is not currently overfished, nor is it approaching a condition of being overfished. The tests for evaluating these three statements on status determination require examining the official total catch from the most recent complete year and the current model projections of SSB relative to B35% for 2023 and 2024. The official total catch for 2022 is 3,058 t, which is a small fraction of the 2022 OFL of 61,264 t; therefore, the stock is not being subjected to overfishing. The estimates of SSB for 2023 and 2024 from last year's assessment model (Barbeaux et al. 2022) and the current year (2023) projection model are 78,628 t and 80,432 t, respectively. The 2023 estimate from the current year projection is above B35% at 60,976 t and the 2024 estimate is above ½ B35% and the stock is expected to be above B35% in 2035 under projection Scenario 7, therefore, the stock is not currently overfished nor approaching an overfished condition.

Updated catch data (t) for AI pollock as of September 28, 2023 are available in NMFS Alaska Regional Office Catch Accounting System via the Alaska Fisheries Information Network database (http://www.akfin.org). Although open to fishing, there continues to be very little directed fishing for pollock in the Aleutian Islands. In 2022 there was a total of 217 t of pollock landed from pollock targeted fisheries and in 2023 there was a total of 8 t of pollock landed in targeted fisheries as of September 25.

5.1.3 GOA Alaska pollock

Relative to 2022 SAFE report (Monnahan et al., 2022), the following changes have been made in the 2023 GOA pollock stock assessment (Monnahan et al., 2023):

- Fishery: 2022 total catch was updated and catch at age added. The 2023 TAC was used for catch in 2023.
- Shelikof Strait acoustic survey: 2023 biomass index and age composition.
- NMFS bottom trawl survey: 2023 index and length compositions
- Summer acoustic survey: 2023 index and length compositions
- ADF&G crab/groundfish trawl survey: 2023 biomass index

In 2023, there was no change in model structure, but there was a transition to a new modeling platform named Template Model Builder (Kristensen et al. 2016). A bridging analysis showed that the former 19.1a ADMB model and Template Model Builder model were equivalent, with differences of less than 0.02% in estimates and uncertainty of SSB and recruitment. Given a change in modeling platform, the previous model 19.1a was renamed to 23.0. Moving to Template Model Builder allows for more flexibility in modeling process errors due to its ability to efficiently apply the Laplace approximation to get the marginal likelihood in complex, non-linear hierarchical models. A suite of alternative fisheries selectivity models has been explored but did not bring any relevant output. The

advantages of this flexibility will be explored in depth in future years, but the focus this year was to transition the assessment to the new platform.

The base model projection of female SSB in 2024 is 274,141 t, which is 54.3% of unfished SSB (based on average post-1977 recruitment) and above B40% (202,000 t), thereby placing GOA pollock in sub-tier "a" of Tier 3. New surveys in 2023 include the winter Shelikof Strait acoustic survey, summer acoustic survey, summer NMFS bottom trawl survey, and the ADFG bottom trawl survey. These survey indices showed somewhat divergent trends, with large increases in the summer NMFS bottom trawl (79.4%) and summer acoustic (71.7%) from 2021 but decreases in the winter acoustic (-29.2%) and ADF&G bottom trawl survey (-22.5%) from 2022. Together the new data led to an increased spawning population relative to the prediction from last year.

The risk matrix table recommended by the Scientific and Statistical Committee (SSC) was used to determine whether to recommend an ABC lower than the maximum permissible. The table is applied by evaluating the severity of four types of considerations that could be used to support a scientific recommendation to reduce the ABC from the maximum permissible. Some concerns about the stock assessment have been identified, but none for population dynamics, environment/ecosystem, or fisheries performance categories. Therefore, no reduction from maximum permissible ABC has been recommended.

The recommended 2024 ABC for pollock in the Gulf of Alaska west of 140° W long. (W/C/WYK regions) is 232,543 t, which is an increase of 56.1% from the 2023 ABC. The recommended 2025 ABC is 157,687 t. The OFL in 2024 is 269,916 t, and the OFL in 2025 if the ABC is taken in 2024 is 182,891 t. These calculations are based on a projected 2023 catch of 145,215 t and the ABC for years 2024 and 2025. The estimated scale of the stock increased about 40% compared to previous years, driven by new data, particularly the new high biomass indices from summer surveys. For pollock in southeast Alaska (Southeast Outside region, east of 140° W long.), the ABC recommendation for both 2024 and 2025 is 9,749 t and the OFL recommendation for both 2024 and 2025 is 12,998 t. These recommendations are based on a Tier 5 assessment using the projected biomass in 2024 and 2025 from a random effects model fit to the 1990-2023 bottom trawl survey biomass estimates of the assessment area.

Reference values for GOA pollock are summarized in Table 6 and Table 7, with the recommended ABC and OFL values for 2024. The stock is not subject to overfishing, is not currently overfished, nor is it approaching a condition of being overfished.

Table 6. Summary of the assessment results of GOA pollock in W/C/WYK Areas. Source: Monnahan et al., 2023

	As estimated or *specified last* year for:		As estimated or *recommended this* year for:	
Quantity/Status	2023	2024	2024*	2025*
M (natural mortality)	0.300	0.300	0.300	0.300
Tier	3a	3a	3a	3a
Projected total (age 3+) biomass (t)	1,137,330	850,404	1,154,403	1,430,029
Projected female spawning biomass (t)	204,554	188,277	274,141	227,091
$B_{100\%}$	469,000	469,000	505,000	505,000
$B_{40\%}$	188,000	188,000	202,000	202,000
$B_{35\%}$	164,000	164,000	177,000	177,000
F_{OFL}	0.304	0.302	0.307	0.307
$maxF_{ABC}$	0.257	0.257	0.260	0.260
F_{ABC}	0.257	0.257	0.260	0.260
OFL (t)	173,470	186,101	**269,916**	182,891
*max*ABC (t)	148,937	161,080	232,543	157,687
ABC (t)	148,937	161,080	**232,543**	157,687
	As determined *last* year for:		As determined *this* year for:	
Status	2022	2023	2023	2024
Overfishing	No	n/a	No	n/a
Overfished	n/a	No	n/a	No
Approaching overfished	n/a	No	n/a	No

*Projections are based on an estimated catch of 145,215 t for 2023 and estimates of 232,543 t and 157,687 t used in place of maximum permissible ABC for 2024 and 2025.

Table 7. Summary of the assessment results of GOA pollock in Southeast outside Area. Source: Monnahan et al., 2023

	As estimated or *specified last* year for:		As estimated or *recommended this* year for:	
Quantity/Status	2023	2024	2024	2025
M (natural mortality)	0.30	0.30	0.30	0.30
Tier	5	5	5	5
Biomass (t)	50,505	50,505	43,328	43,328
F_{OFL}	0.30	0.30	0.30	0.30
$maxF_{ABC}$	0.23	0.23	0.23	0.23
F_{ABC}	0.23	0.23	0.23	0.23
OFL (t)	15,150	15,150	12,998	12,998
*max*ABC (t)	11,363	11,363	9,749	9,749
ABC (t)	11,363	11,363	9,749	9,749
	As determined *last* year for:		As determined *this* year for:	
Status	2022	2023	2023	2024
Overfishing	No	n/a	No	n/a

5.2 Management practices of the competent management authority

5.2.1 Regulatory changes

Currently, the only two fishery management plans (FMPs) amendments pertinent to pollock fisheries are the Amendment 126 (BSAI) and Amendment 114 (GOA) Trawl Electronic Monitoring (EM), which is currently in the final rule making process after the proposed rule and comment period closes on April 5, 2024. The Council intent in recommending Amendments 126/114 is to improve salmon accounting, reduce monitoring costs, improve the quality of monitoring data, and modify current retention and/or discard requirements as necessary to achieve these objectives in association with catcher vessels (CVs) using trawl gear in the BS, AI, and GOA Pollock fisheries along with associated tender vessels and processors.

The essential fish habitat (EFH) five-year review is a mechanism to ensure NOAA Fisheries and Fishery Management Councils incorporate the most recent and best science available into fishery management for EFH. EFH regulations state that the Council and NOAA Fisheries should conduct a complete review of EFH provisions of FMPs at least once every five years and revise or amend the EFH provisions as warranted based on available information. The purpose of the review is to evaluate: 1) published scientific literature, 2) unpublished scientific reports, 3) information solicited from interested parties, and 4) previously unavailable or inaccessible data.

The 2023 five-year review was presented to the Council in February 2023 and at the December 2023 meeting, the Council confirmed that the EFH sections of its FMPs will be updated and revised to address the results of the 2023 five-year review. The updates improved species distribution mapping using a more uniform approach as well as an update to the fishing effects model to remove a coding error that omitted unobserved catch events. All groundfish species had EFH impacts that were determined to be minimal and temporary.

5.2.2 Management changes

At the last reassessment of the fishery a minor non-conformity was imposed on the fishery owing to the lack of long-term management objectives within Alaska state managed pollock fisheries. This resulted in a medium confidence rating and application of a minor conformity. The same score, medium confidence rating and minor conformity, were applied to the Pacific cod fishery that was also reassessed in parallel with the pollock fishery. The pollock and Pacific cod client groups worked together and submitted a proposal (Proposal 161) to ADFG, BOF to include objectives that would encompass all groundfish species, and all gear types managed at the state level with the intent of documenting the broad goals and objectives that the BOF use to guide groundfish management. At the BOF Statewide Finfish and Supplemental Issues meeting in March 2023 the BOF approved proposal 161 (RC055) and Section 5 AAC 28.015 has been amended to include explicit and measurable short- and long-term objectives:

As stated in 5 AAC 28.015. Guiding policy on groundfish fisheries resource management:
The BOF and the department when taking actions regarding the management of groundfish fisheries should be based on the following principles and criteria:

1. conservation of the groundfish resource to ensure sustained yield, which requires that the TAC in any fishery be based upon the biological abundance of the stock;

2. minimization of bycatch of other associated fish and shellfish and prevention of the localized depletion of stocks; (3) protection of the habitat and other associated fish and shellfish species from non-sustainable fishing practices with consideration of ecosystem interactions;
3. maintenance of slower harvest rates by methods and means and time and area restrictions to ensure adequate reporting and analysis necessary for management of the fishery and ensuring adherence to annual and seasonal TAC limits;
4. extension of the length of fishing seasons by methods and means and time and area restrictions to provide for the maximum benefit to the state and to regions and local areas of the state;
5. harvest of the resource in a manner that emphasizes the quality and value of the fishery product;
6. provide opportunities for subsistence, sport, commercial and personal use fisheries;
7. cooperation with federal agencies associated with groundfish fisheries;
8. management of the groundfish fisheries are based on information that, in the commissioner's discretion, will tend to promote the purposes of Alaska statutes pertaining to fisheries management.

5.2.3 Programmatic environmental impact statement (PEIS)[1]

In June 2023, the Council initiated the development of a PEIS for all Council managed fisheries in the GOA and BSAI (NPFMC, June 2023, Newsletter). The intent of the proposed action is to develop new fisheries management policies, goals, and objectives for all federally managed fisheries in the North Pacific, i.e., those included in the FMPs for BSAI and GOA groundfish, BSAI crab, scallop, salmon, and the halibut fisheries. The following is the draft purpose and need statement and two alternatives as stated in the June 2023 Council motion:

> *The federal action under consideration is to clarify the management policy and objectives for all federal fisheries managed under the Magnuson-Stevens Act and the Halibut Act under the jurisdiction of the North Pacific Fishery Management Council (Council) in the Gulf of Alaska, the Bering Sea, and Aleutian Islands, including objectives for adapting to the effects of climate change. The purpose of this action is to ensure that the management framework of the Council is adequate to meet current and forthcoming challenges in the federal fisheries, and to describe and implement that framework in a comprehensive manner to improve the Council's ecosystem-based management approach. Given changing conditions in the fisheries, new Council efforts, and significant climate-related impacts on the marine ecosystem, there is a need to evaluate the management policy and objectives for federal fishery management to be adaptable and responsive in order to better meet the objectives of the Magnuson-Stevens Act and Halibut Act, to ensure long-term sustainability of the stocks managed under those statutes, and to sustain participation in and benefits from the fisheries over time. The Council intends to ensure that the management framework is structured to use the best available science, which includes climate science and local and traditional knowledge, and also recognizes Alaska tribes and communities that rely on subsistence resources.*
>
> *Alternative 1: Maintain current ecosystem-based management policy and objectives for Council- managed fisheries (status quo)*
>
> *Alternative 2: Adopt a more adaptive ecosystem-based management policy and objectives for Council- managed fisheries which would enable the Council to develop and implement climate-resiliency tools; new pathways to incorporate indigenous, local, and traditional knowledge; and new tools to assess and adapt to risk in the face of additional uncertainty in stock status and distribution due to climate driven marine ecosystem changes.*

At the February 2024 Council meeting, the next steps for the programmatic process were reviewed. As part of the preparation of an environmental impact statement (EIS), the National Environmental Policy Act (NEPA) requires that there is an early and open process for determining the scope of the issues to be addressed, this is commonly known as "NEPA scoping". In order to provide for meaningful public and Tribal engagement in this process, including the alternatives and scope of the action, the Council chose to extend the PEIS timeline. The Council will use the additional time to consider whether to alter the previously adopted alternatives, and what to include in the formal NEPA notice of intent (NOI) to prepare a PEIS, currently scheduled to be published in fall 2024. The Council must intend to complete a final PEIS within two years of publishing the NOI.

5.2.4 Chum salmon bycatch

The Council is considering action to minimize chum bycatch in the Bering Sea pollock fishery. Chum salmon returns to Western and Interior Alaska rivers and subsistence fisheries have declined substantially in recent years, negatively impacting the subsistence way of life for many communities and Tribal members across Western Alaska.

[1] PEIS documents the first phase of a NEPA decision-making process that evaluates the environmental impacts of broad agency actions, such as the development of programs or the setting of national policies.

Scientific reports indicate recent declines in chum salmon populations across many regions of the North Pacific appear to be driven by warmer water temperatures in both the marine and freshwater environments, which impact juvenile survival, prey availability and quality, metabolism and growth rates, and reproductive rates. The majority of the chum salmon encountered by the Bering Sea pollock fishery are of Russia and Asia origin and are predominantly hatchery released fish. However, the pollock fishery also encounters chum salmon originating from Western Alaska river systems, and the Council is focused on minimizing the bycatch of Western Alaska origin chum salmon (a genetic group that extends from Norton Sound to Bristol Bay). Any additional chum salmon returning to Alaska river systems improves the ability to meet the State of Alaska's spawning escapement goals which is necessary for the long-term sustainability of chum salmon fisheries.

In April 2023, the Council adopted a purpose and need statement for the action as well as a set of preliminary alternatives to be analyzed for their relative feasibility. The set of preliminary alternatives were based on concepts for management measures put forward from the Council's Salmon Bycatch Committee composed of representatives of the pollock industry and Tribal and in-river salmon users.

At its October 2023 meeting, after reviewing the Preliminary Review Analysis, the Council approved analyzing changes to chum salmon bycatch management measures. The next step will be an impact analysis of the potential environmental, social and cultural, and economic impacts of the proposed management measures relative to the status quo. The Council analysis will evaluate the following management measures to change the *status quo*:

- Alternative 1: *Status quo*. All action alternatives apply to the entire Bering Sea pollock B season, the season in which chum salmon are taken as bycatch (prohibited species catch [PSC]).
- Alternative 2: A bycatch cap on the total number of chum salmon taken in the pollock fishery. The potential caps range from 200,000 to 550,000 total chum salmon, using annual run strength indicators from the Yukon River, Kuskokwim River, and Norton Sound region to trigger various bycatch cap levels.
- Alternative 3: An annual cap on Western Alaska origin chum salmon bycatch ranging from 40,000 to 53,000 Western Alaska chum salmon. This Alternative would need to be implemented in conjunction with Alternative 2 because real-time, in-season genetic information is not available.
- Alternative 4: Additional regulatory requirements and management measures for the pollock fleet to avoid chum salmon bycatch by closing areas in near real-time throughout the season in response to when chum are on the pollock fishing grounds.

The first review of the impact analysis is scheduled to occur by mid-2024.

5.2.5 Climate change workshop

In December 2023, the Council endorsed and agreed to sponsor a proposal by the Climate Change Task Force to hold a two-day Climate Scenario Workshop during the June 2024 Council meeting in Kodiak. The overarching objective of the workshop is to synthesize and summarize the critical needs, resources, and process to develop and maintain a robust and inclusive decision-making process to respond to climate change effects in the North Pacific. The workshop will be focused on regional management process with attendees and participants invited to:

- Think broadly about potential solutions and tools within the existing process (incremental) but also beyond existing approaches (transformational); and,
- Identify the bigger picture changes that could be effective to address large climate impacts and changes.

5.2.6 Orca mortalities in BSAI trawl fisheries

NMFS's Protected Resources Division in Alaska issued a public information statement regarding mortality of 11 orca in Bering Sea trawl fisheries. Most encounters occurred in deepwater flatfish bottom trawl fisheries (Greenland turbot) although a previously deceased orca was caught in a catcher-processor pollock trawl. NMFS notes that the mortalities do not exceed the potential biological removal (PBR) authorized under the U.S. Marine Mammal Protection Act (MMPA) and the orca population affected is not listed under the Endangered Species Act (ESA). In October 2023, the Center for Biological Diversity launched a lawsuit against the federal government in response to the incidental orca mortalities. No further information was available at the time of this audit to know how this has progressed. In December 2023, NOAA published a technical memorandum summarizing 37 orca entanglement reports from 1991-2022. NMFS stated that these entanglements demonstrate the need for more research and development of orca depredation deterrents or other mitigation measures for commercial fisheries.

5.2.7 Crab avoidance in the BSAI

As reported by the client, owing to the drastic decline in recent years of red king crab stocks and the fishery, the primary challenge for the pollock pelagic trawl fisheries in this auditing period has been crab avoidance in the BSAI. At the NPFMC December 2023 meeting all fishing sectors were invited to provide a status report on the voluntary crab avoidance measures that were put in place within their respective sectors for the 2023 season. The pollock catcher-processor fleet presentation can be seen here and includes informing skippers of crab stock status and density information, monitoring of and communication between vessels when crab is encountered and industry led research into better understanding fishing behavior and pelagic trawl gears in relation to bottom contact.

At the February 2024 Council meeting, the Council evaluated the efficacy of closing the Bristol Bay Red King Crab Savings Area (Figure 1) to commercial fishing with pelagic trawl, pot, and longline gear to help address the Bristol Bay red king crab stock and fishery declines. An Environmental Assessment/Regulatory Impact review was provided to the Council to help in their evaluation. The review included results of new and ongoing research on the abundance and movement of Bristol Bay red king crab and the network of existing closed areas in the BSAI for all trawl gears to protect crab, Steller sea lions, and benthic habitat (Figure 1). The review also showed there is a minimal overlap between the presence of crab and the areas where most of the pelagic trawl fishing occurs, and that the core areas occupied by female crab were further east where trawling is already prohibited.

The Council concluded to not move forward with continued evaluation of fixed/permanent area closures at this time because the benefits to red king crab were uncertain and unquantifiable, and that there would likely be no effect on the crab population. Also critical to the Council's decision was the analysis' finding that the proposed closures would result in increased bycatch of salmon, herring, halibut, and other crab species, as some fishing that currently occurs in the proposed closure area has yielded low bycatch and high catch of target species (NPFMC, February 2024, Newsletter). The NPFMC did however initiate action to evaluate modifications to the pelagic trawl gear definition (see section 5.2.8 below) with several objectives, including minimizing impacts on species such as crab and benthic habitat.

The Council intends to use ongoing research to develop closures and crab avoidance measures that change in space and time to respond to seasonal crab movement and will be adaptable to evolving ecosystem conditions that affect crab distribution and abundance.

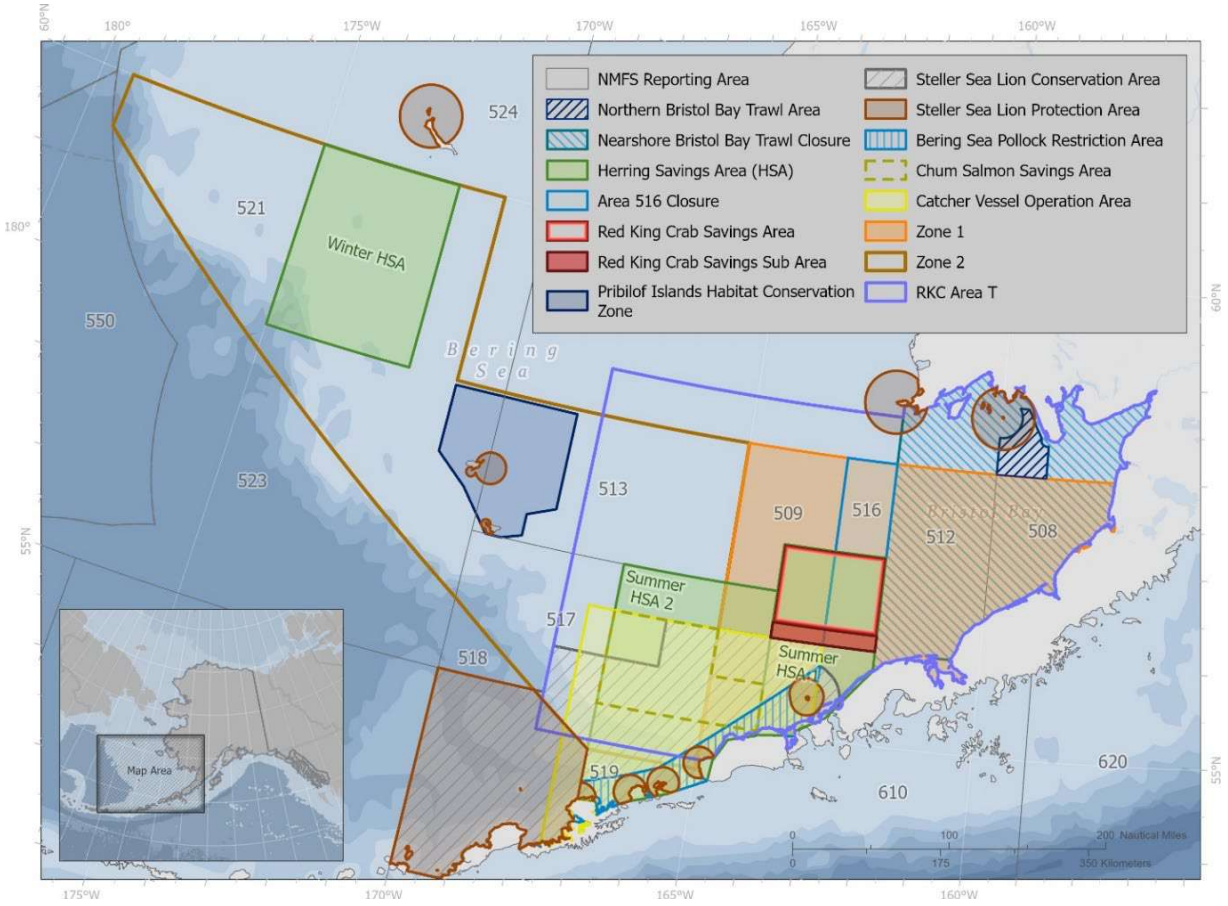

Figure 1. Closed / Protected Areas in the Bering Sea, noting the "Red King Crab Savings Area" in red outline and other relevant groundfish management boundaries in the Bering Sea. Source: Cunningham and Olson 2024

5.2.8 Definition of pelagic trawl gear

At the February 2024 Council meeting, the Council initiated an analysis of changes to the definition of pelagic trawl gear to align regulations with current practices in Alaska, and to remove outdated regulatory text defined in 1993 that does not reflect innovations in gear performance over time. The Council also noted that the approach is aligned with a process to incentivize gear innovation that minimizes pelagic trawl impacts on sensitive benthic habitat and unobserved fishing mortality. The action will revise the pelagic trawl gear definition (50 CFR 679.2) in any of four ways (options):

1. Exclude the codend from limitations applicable to the trawl net.
2. Remove outdated text related to "parallel line" trawls,
3. Allow the use of flotation for bycatch excluder devices;
4. Allow hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl.

5.2.9 Monitoring, control, and surveillance

In the latest enforcement report from the U.S. Coast Guard (USCG) (April 2024) Appendix B shows boarding and violation data. There were six enforcement action reports completed for pollock fishing (species code 270), four in the EBS and two in the GOA. The violations against fisheries regulations are listed below:

- Misinterpretation of statistical area in logs
- No endorsement for pollock trawl on fisheries federal permit
- Violating terms of an EM permit
- Discarding must retain species

The latest NMFS Office for Law Enforcement report (December 2023) highlights two Notices of Violation and Assessment in civil administrative cases pertinent to the pollock fishery. An appendix also summarizes general recent trends in violations reporting. The American Fisheries Act pollock statements and actions have decreased through the years, though the number of cases resulting in Summary Settlements is generally increasing. For Open Access pollock fisheries (GOA), the numbers of statements for the category and proportion that generated incidents is relatively stable.

The most recent analysis of the observer program deployment from May 2023 highlights the 100% coverage in the BSAI pollock fisheries and a ~30% coverage rate in the GOA fisheries.

An exempted fishing permit (EFP) was issued in January 2020 to evaluate the efficacy of EM systems and shoreside observers for pollock CVs using pelagic trawl gear in the EBS and GOA. The goal for EM is compliance monitoring of maximized retention. Catch accounting for the vessel's catch and bycatch is done via eLandings reports and shoreside plant observers. There were 41 participating CVs in 2020, 71 vessels in 2021, and 80 vessels in 2022. The EFP includes CVs in the partial and full coverage categories. In January 2023, the EFP was extended through 2024, with expected regulatory implementation of the Trawl EM program by 2025.

5.3 Impacts of fishery on ecosystem

5.3.1 Associated and endangered, threatened, and protected (ETP) species

"The 'Main' and 'Minor' bycatch classification together makes up 95% of the associated species bycatch profile of a given target fishery. The top 95% is assessed, while the bottom 5% is not assessed. Of the 95% assessed, the top 80% is classified as Main Associated Species Catch, while the bottom 15% is classified as Minor Associated Species Catch" (RFM Guidance to Performance Evaluation v2.0). In the case of the Alaska pollock fishery, the target catch is above 300,000 tons so, as per the RFM requirements, the main associated species constitute 85% instead of 80%, and the minor associated species constitute the bottom 10% instead of 15%.

Additionally, "ETP species must be acknowledged as such when recognized by national legislation adopted at the state and federal level in Alaska, or when recognized through a binding international agreement. Alternatively, species listed under Appendix 1 of the Convention on International Trade in Endangered Species (CITES) or under the International Union for the Conservation of Nature (IUCN) Red List and impacted negatively[2] by the fishery (i.e., direct or indirect mortality) shall be assessed as ETP unless it can be proven that their status in Alaska waters is above the point where recruitment is impaired or where other similar proxies indicate that the species is not biologically depleted" (RFM Guidance to Performance Evaluation v2.0).

It is known that certain gear types are more impacting on certain species (e.g., longline are more likely to catch seabirds than demersal trawl). While gear-specific bycatch data are not available (except for seabirds and marine mammals), Section 6.1.2 provides details on the observer program and level of coverage.

Table 8 and Table 9 show catch data for the BSAI pollock and GOA pollock fisheries, respectively. None of the species are listed in CITES Appendix 1 or the IUCN Red List; however, the ones labeled as PSC (ETP) are protected by federal management measures limiting bycatch of these species. Overall, these catches and interactions are similar to previous years. Refer to Section 6.1.4 for more details.

[2] "For ETP species, interactions with the stock under consideration shall not cause departure from agreed management measures, such as those designed to allow for species restoration across a given geographical area. In other words, any interaction with or bycatch of ETP species shall be minimal and not considered significant, and/or disruptive in terms of ensuring the effectiveness of agreed management measures set up in order to achieve the management and conservation objectives for the ETP species in question." (RFM's Guidance to Performance Evaluation v2.0)

Table 8. Catch data of target, non-target, PSC/ETP, and habitat species for 2019-2023 by the BSAI pollock fishery. Blue = target species, green = main associated species, orange = minor associated species, yellow = PSC/ETP species, purple = habitats. Source: observer data

Species	Target, Main Associated, Minor Associated, Other Bycatch, PSC/ETP, or Habitat	Catch (in metric tons)						Percent of Total Average	Percent of Total Average Bycatch
		2019	2020	2021	2022	2023	Five-Year Average		
Pollock	Target	1,366,152.99	1,321,270.48	1,338,192.49	1,062,010.35	1,262,541.74	1,270,033.61	97.62%	NA
Alaska plaice	Minor associated	65.20	213.88	125.73	136.41	93.04	126.85	0.01%	0.41%
Alaska skate	Minor associated	352.25	554.31	703.96	452.64	251.49	462.93	0.04%	1.50%
Aleutian skate	Minor associated	9.03	26.63	6.72	5.69	14.04	12.42	0.00%	0.04%
Arrowtooth flounder	Minor associated	421.96	695.11	413.29	279.50	252.34	412.44	0.03%	1.33%
Atka mackerel	Minor associated	367.21	569.12	544.97	201.50	40.24	344.61	0.03%	1.11%
Bairdi tanner crab*	PSC (ETP)	3,146.31	10,406.29	8,417.00	4,758.00	11,997.30	7,744.98	NA	NA
Benthic urochordata	Minor associated	2.11	1.92	1.32	1.55	1.20	1.62	0.00%	0.01%
Big skate	Minor associated	5.84	7.08	7.50	1.62	7.90	5.99	0.00%	0.02%
Bigmouth sculpin	Minor associated	8.29	31.18	0.00	0.00	0.00	7.90	0.00%	0.03%
Birds, unidentified*	Other bycatch	3.00	0.00	0.00	0.00	3.00	1.20	NA	NA
Blue king crab*	PSC (ETP)	99.32	1.00	0.44	59.00	0.00	31.95	NA	NA
Butter sole	Minor associated	6.44	22.03	31.01	11.34	23.56	18.88	0.00%	0.06%
Chinook salmon*	PSC (ETP)	25,038.00	32,298.46	13,852.00	6,415.00	11,874.00	17,895.49	NA	NA
Corals bryozoans, unidentified	Habitat	0.02	1.04	0.01	0.03	0.27	0.27	0.00%	0.00%
Dusky rockfish	Minor associated	25.54	32.91	12.75	6.30	7.27	16.95	0.00%	0.05%
Eelpouts	Minor associated	2.36	6.42	0.67	0.43	0.58	2.09	0.00%	0.01%
Flathead sole	Main associated	1,087.19	1,970.78	1,529.81	948.11	843.77	1,275.93	0.10%	4.12%
Giant grenadier	Minor associated	8.56	42.46	54.94	0.00	86.34	38.46	0.00%	0.12%
Golden king crab*	PSC (ETP)	445.00	521.81	115.00	165.00	132.00	275.76	NA	NA
Great sculpin	Minor associated	22.96	44.21	0.00	0.00	0.00	13.43	0.00%	0.04%
Halibut	PSC (ETP)	112.90	101.88	131.09	158.00	70.31	114.83	0.01%	0.37%

Herring	PSC (ETP)	1,101.62	3,861.12	1,708.27	1,708.00	3,087.08	2,293.22	0.18%	7.41%
Kamchatka flounder	Minor associated	55.46	181.80	49.38	158.44	35.33	96.08	0.01%	0.31%
Kittiwakes*	Other bycatch	13.00	3.00	7.01	0.00	3.00	5.20	NA	NA
Laysan albatross*	Other bycatch	0.00	8.00	0.00	0.00	0.00	1.60	NA	NA
Misc. fish	Minor associated	72.97	93.61	35.17	22.97	37.77	52.50	0.00%	0.17%
Murre*	Other bycatch	0.00	0.00	0.00	0.00	0.00	0.00	NA	NA
Non-Chinook salmon*	PSC (ETP)	348,631.00	320,477.51	546,472.00	242,375.00	112,512.42	314,093.58	NA	NA
Northern fulmar*	Other bycatch	105.32	96.14	103.15	128.00	56.00	97.72	NA	NA
Northern rockfish	Minor associated	114.36	157.90	83.82	46.44	40.76	88.66	0.01%	0.29%
Octopus	Minor associated	3.11	6.31	0.99	0.00	0.53	2.19	0.00%	0.01%
Opilio tanner crab*	PSC (ETP)	6,228.46	40,002.96	4,668.00	1,952.00	4,100.00	11,390.28	NA	NA
Other alcids*	Other bycatch	6.00	0.00	0.00	0.00	0.00	1.20	NA	NA
Pacific cod	Main associated	6,213.33	9,174.39	9,103.60	3,786.17	3,820.84	6,419.67	0.49%	20.74%
Pacific ocean perch	Main associated	8,014.02	6,047.70	2,468.19	1,467.95	1,345.46	3,868.66	0.30%	12.50%
Plain sculpin	Minor associated	4.61	6.63	0.00	0.62	0.00	2.37	0.00%	0.01%
Red king crab*	PSC (ETP)	453.30	432.17	52.00	311.00	54.45	260.58	NA	NA
Rex sole	Minor associated	265.75	499.75	189.79	104.55	203.61	252.69	0.02%	0.82%
Rock sole	Main associated	1,117.02	853.92	830.40	677.50	549.37	805.64	0.06%	2.60%
Rougheye rockfish	Minor associated	12.39	6.12	0.47	3.09	1.10	4.63	0.00%	0.01%
Sablefish	Main associated	1,236.72	3,457.07	1,106.06	352.76	490.15	1,328.55	0.10%	4.29%
Salmon shark	Minor associated	85.51	101.05	128.00	41.91	206.27	112.55	0.01%	0.36%
Sculpin	Minor associated	0.00	0.00	70.83	48.77	42.36	32.39	0.00%	0.10%
Sculpin, unidentified	Minor associated	15.20	34.21	0.00	0.00	0.00	9.88	0.00%	0.03%
Scypho jellies	Main associated	3,889.13	7,832.00	7,829.68	7,609.71	7,071.98	6,846.50	0.53%	22.12%
Sea anemone, unidentified	Minor associated	0.33	5.51	3.09	1.34	3.11	2.68	0.00%	0.01%
Sea pens, whips	Habitat	0.64	1.12	1.99	1.41	2.01	1.43	0.00%	0.00%
Sea star	Minor associated	50.77	61.36	19.99	184.56	27.90	68.92	0.01%	0.22%

Shearwaters*	Other bycatch	11.00	1.05	7.01	12.00	3.00	6.81	NA	NA
Shortraker rockfish	Minor associated	108.88	32.06	8.83	1.70	2.80	30.85	0.00%	0.10%
Skate, unidentified	Minor associated	140.35	235.15	190.46	100.20	123.01	157.83	0.01%	0.51%
Sleeper shark	Minor associated	14.61	29.34	40.92	13.63	62.73	32.25	0.00%	0.10%
Sponge, unidentified	Habitat	0.13	0.26	0.17	0.55	0.44	0.31	0.00%	0.00%
Squid	Main associated	5,756.54	6,178.72	3,821.91	3,704.60	3,942.05	4,680.76	0.36%	15.13%
Starry flounder	Minor associated	4.77	25.11	17.07	3.26	8.47	11.74	0.00%	0.04%
Thornyhead rockfish	Minor associated	30.92	11.16	2.07	3.11	4.07	10.27	0.00%	0.03%
Turbot	Minor associated	35.94	146.63	40.27	23.43	37.97	56.85	0.00%	0.18%
Urchins, dollars, cucumbers	Minor associated	1.86	20.62	0.12	0.16	0.15	4.58	0.00%	0.01%
White blotched skate	Minor associated	0.82	3.50	3.01	9.00	5.90	4.44	0.00%	0.01%
Yellow Irish lord	Minor associated	5.41	12.62	0.00	0.00	0.00	3.61	0.00%	0.01%
Yellowfin sole	Minor associated	443.83	1,205.46	753.98	887.22	749.87	808.07	0.06%	2.61%
Total**		1,397,447.85	1,365,873.63	1,370,264.79	1,085,176.51	1,286,137.18	1,300,980.00		

Notes:
Only species with percent of total average bycatch over 0.00% are shown in table.
* Number of individuals instead of metric tons
** Does not include species with individual numbers instead of weight

Table 9. Catch data of target, non-target, PSC/ETP, and habitat species for 2019-2023 by the GOA pollock fishery. Blue = target species, green = main associated species, orange = minor associated species, yellow = PSC/ETP species, purple = habitats. Source: observer data

Species	Target, Main Associated, Minor Associated, Other Bycatch, PSC/ETP, or Habitat	Catch (in metric tons)						Percent of Total Average	Percent of Total Average Bycatch
		2019	2020	2021	2022	2023	Five-Year Average		
Pollock	Target	114,676.98	103,632.95	96,725.00	127,866.84	132,687.32	115,117.82	93.50%	NA
Aleutian skate	Other bycatch	0.53	1.03	0.46	0.76	0.00	0.56	0.00%	0.01%
Arrowtooth flounder	Main associated	2,018.70	2,416.79	810.00	771.00	834.19	1,370.14	1.11%	17.13%
Atka mackerel	Minor associated	122.36	0.20	4.09	0.59	0.09	25.46	0.02%	0.32%

Bairdi tanner crab*	PSC (ETP)	41,889.09	19,003.39	1,791.00	746.00	1,256.28	12,937.15	NA	NA
Big skate	Minor associated	66.53	78.28	53.37	58.00	59.53	63.14	0.05%	0.79%
Bigmouth sculpin	Other bycatch	0.07	6.28	0.00	0.00	0.00	1.27	0.00%	0.02%
Butter sole	Other bycatch	31.70	23.79	1.92	3.36	0.63	12.28	0.01%	0.15%
Capelin	Minor associated	80.62	54.00	0.00	0.00	0.00	26.92	0.02%	0.34%
Chinook salmon*	PSC (ETP)	20,992.24	10,866.52	10,595.00	13,220.00	18,351.53	14,805.06	NA	NA
Corals bryozoans, unidentified	Habitat	0.00	0.00	0.00	0.03	0.00	0.01	0.00%	0.00%
Dover sole	Other bycatch	4.71	12.11	0.89	0.20	2.58	4.10	0.00%	0.05%
Dusky rockfish	Minor associated	16.44	24.55	37.00	47.37	46.58	34.39	0.03%	0.43%
English sole	Minor associated	14.89	58.53	14.00	2.56	37.24	25.44	0.02%	0.32%
Eulachon	Other bycatch	7.63	22.33	0.00	0.00	0.00	5.99	0.00%	0.07%
Flathead sole	Minor associated	197.14	227.06	109.00	70.22	133.50	147.38	0.12%	1.84%
Giant grenadier	Other bycatch	9.32	11.33	9.48	29.51	12.29	14.38	0.01%	0.18%
Golden king crab*	PSC (ETP)	0.05	2.01	0.15	0.12	0.12	0.49	NA	NA
Great sculpin	Other bycatch	5.33	8.53	0.00	0.00	0.00	2.78	0.00%	0.03%
Halibut	PSC (ETP)	187.20	94.96	81.00	59.88	44.05	93.42	0.08%	1.17%
Herring	PSC (ETP)	64.31	60.38	16.37	83.00	67.88	58.39	0.05%	0.73%
Kamchatka flounder	Other bycatch	2.67	0.00	0.00	0.00	0.00	0.54	0.00%	0.01%
Longnose skate	Other bycatch	20.65	22.39	14.94	17.48	20.21	19.13	0.02%	0.24%
Misc. fish	Minor associated	87.81	115.11	58.47	65.88	67.93	79.04	0.06%	0.99%
Non-Chinook salmon*	PSC (ETP)	5,063.02	2,161.54	1,160.00	1,033.00	2,167.00	2,316.91	NA	NA
Northern rockfish	Other bycatch	7.22	0.93	1.88	1.15	0.69	2.37	0.00%	0.03%
Octopus	Other bycatch	8.30	4.41	0.35	0.12	0.70	2.78	0.00%	0.03%
Opilio tanner crab*	PSC (ETP)	0.00	0.20	0.13	0.00	0.00	0.07	NA	NA
Other osmerids	Minor associated	46.98	6.62	88.75	1.27	11.45	31.02	0.03%	0.39%
Pacific cod	Main associated	811.25	1,011.31	2,917.09	3,479.04	3,975.07	2,438.75	1.98%	30.49%
Pacific ocean perch	Main associated	1,070.64	1,130.57	779.00	2,251.67	2,217.57	1,489.89	1.21%	18.63%

Rattail grenadier, unidentified	Minor associated	37.68	38.55	46.71	58.76	33.74	43.09	0.03%	0.54%
Red king crab*	PSC (ETP)	0.00	5.00	3.00	0.00	0.00	1.60	NA	NA
Redstripe rockfish	Other bycatch	2.41	0.00	0.00	0.00	0.00	0.48	0.00%	0.01%
Rex sole	Minor associated	89.68	100.42	51.00	16.00	66.36	64.69	0.05%	0.81%
Rock sole	Main associated	199.25	66.21	181.09	171.82	241.20	171.91	0.14%	2.15%
Rockfish, unidentified	Other bycatch	0.00	0.00	0.00	15.62	0.00	3.13	0.00%	0.04%
Rougheye rockfish	Minor associated	40.72	30.71	39.77	90.02	79.41	56.13	0.05%	0.70%
Sablefish	Main associated	409.24	794.66	58.00	85.88	96.81	288.92	0.23%	3.61%
Salmon shark	Minor associated	13.69	29.62	42.63	50.19	18.31	30.89	0.03%	0.39%
Sculpin	Other bycatch	0.33	0.27	9.34	16.11	0.00	5.21	0.00%	0.07%
Sculpin, unidentified	Other bycatch	0.07	13.16	0.00	0.00	0.00	2.65	0.00%	0.03%
Scypho jellies	Other bycatch	0.00	5.48	9.75	3.37	12.57	6.23	0.01%	0.08%
Sea star	Other bycatch	2.50	3.26	0.90	0.28	0.24	1.44	0.00%	0.02%
Shark	Other bycatch	0.77	0.35	1.63	1.83	1.07	1.13	0.00%	0.01%
Sharpchin rockfish	Other bycatch	0.00	0.00	0.00	2.35	0.00	0.47	0.00%	0.01%
Shortraker rockfish	Minor associated	6.32	22.85	28.02	115.47	140.23	62.58	0.05%	0.78%
Skate, unidentified	Other bycatch	2.86	2.90	2.84	3.08	3.87	3.11	0.00%	0.04%
Sleeper shark	Other bycatch	0.00	16.50	25.38	23.53	23.74	17.83	0.01%	0.22%
Smelt (Family Osmeridae)	Minor associated	0.00	0.00	240.51	93.21	51.96	77.13	0.06%	0.96%
Snails	Minor associated	0.46	0.00	0.02	0.00	22.84	4.66	0.00%	0.06%
Spiny dogfish	Minor associated	44.10	49.02	13.00	5.45	11.99	24.71	0.02%	0.31%
Sponge, unidentified	Habitat	0.00	0.00	0.00	0.01	0.00	0.00	0.00%	0.00%
Squid	Main associated	47.52	371.73	268.82	2,232.42	2,919.77	1,168.05	0.95%	14.60%
Starry flounder	Other bycatch	17.37	2.71	0.24	0.41	0.58	4.26	0.00%	0.05%
Thornyhead rockfish	Other bycatch	0.22	0.45	2.28	1.88	1.60	1.29	0.00%	0.02%
Turbot	Other bycatch	5.33	0.00	0.00	0.00	15.72	4.21	0.00%	0.05%
Yellow Irish lord	Other bycatch	4.35	16.62	0.00	0.00	0.00	4.20	0.00%	0.05%

Yelloweye rockfish	Other bycatch	2.15	0.00	0.37	0.12	0.02	0.53	0.00%	0.01%
Total**		120,486.98	110,589.92	102,745.39	137,797.74	143,961.57	123,116.32		

Notes:
Only species with percent of total average bycatch over 0.00% are shown in table.
* Number of individuals instead of metric tons
** Does not include species with individual numbers instead of weight

5.3.2 Habitats and ecosystem

There have been no changes in where the fishery operates, its relative footprint, or how the fishery impacts the habitat and ecosystem. See Fundamental Clause 6.1.4 for more details.

5.4 External factors (such as environmental issues) that may affect the fishery and its management

The effects of environmental variation on production of pollock in the BSAI and GOA have been studied extensively in terms of physical oceanography, ecosystem variability, and fish production. NMFS and the regional offices coordinate the production of a vast amount of new environmental and other information expected to improve groundfish fishery management in Alaska. Several ecosystem-wide oceanographic phenomena have been identified. The Pacific Decadal Oscillation, with decadal changes in 'warm' and 'cold' phases has been correlated with a number of factors, including sea level pressure, precipitation, and salmon landing in the Pacific Ocean (https://www.fisheries.noaa.gov/feature-story/understanding-ocean-changes-and-climate-just-got-harder).

Groundfish species show interannual variability in recruitment that may be related to El Niño Southern Oscillation driven climate variability. Years of strong onshore transport, typical of warm years in the BS, often corresponds with strong recruitment. The extent and timing of the presence of sea ice in the BS also determines the area where cold bottom water temperatures will persist throughout the following spring and summer. This EBS area of cold water, known as the cold pool, varies with the annual extent and duration of the ice pack and can influence fish distributions.

Past conditions have been an unusually warm phase. In 2014-2016, sea surface temperatures were as much as 3° C (about 5.4° F) higher than average, lasted for months, and appeared on large-scale temperature maps as a red-orange mass of warm water many hundreds of miles across (aka 'the blob'). This appeared to be different from normal patterns of ocean conditions such as the El Niño Southern Oscillation or Pacific Decadal Oscillation. Figure 2 show sea surface temperature changes in the Pacific Decadal Oscillation for 1950-2021.

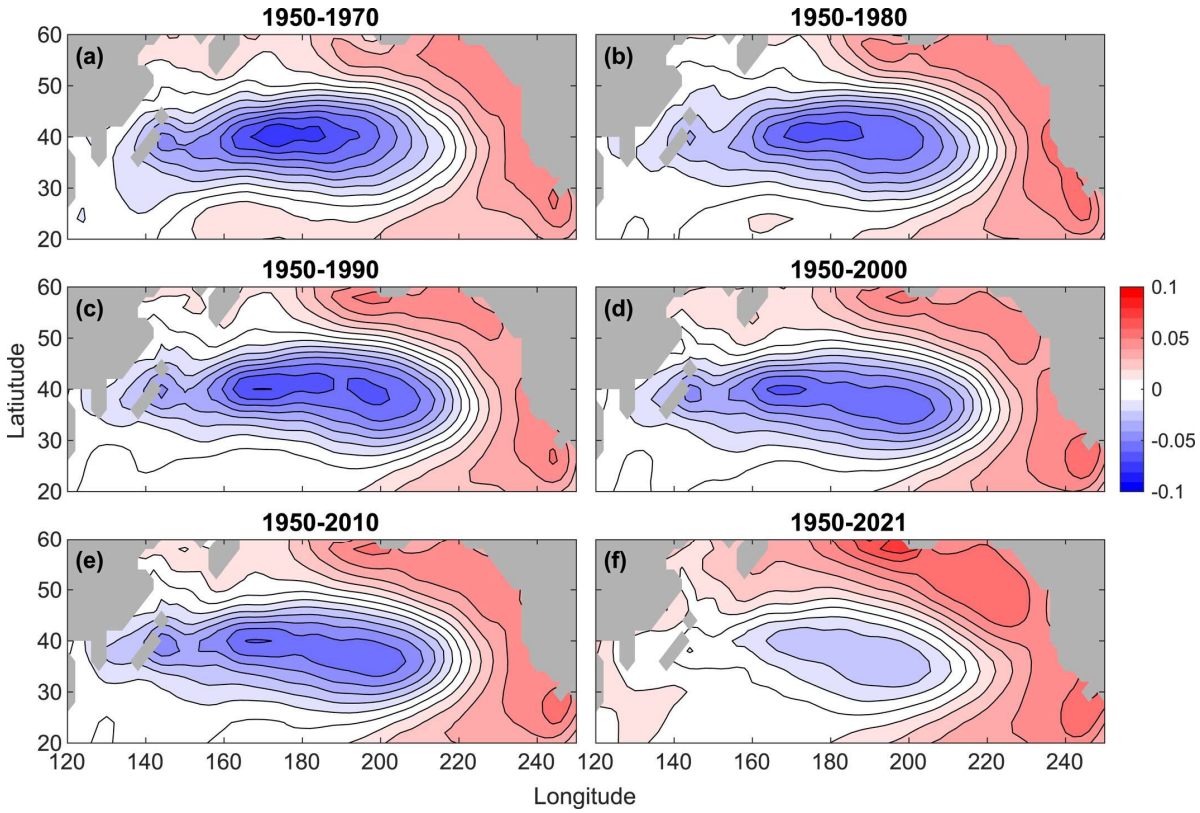

Figure 2. Sea surface temperature changes within the Pacific Decadal Oscillation for the period 1950-2021. Source: Werb and Rudnick 2023

6 ASSESSMENT OUTCOME SUMMARY / FUNDAMENTAL CLAUSES SUMMARIES

According to the RFM Standard Version 2.1, the following fisheries management issues would cause a fishery to fail assessment:

- Dynamiting, poisoning, and other comparable destructive fishing practices.
- Significant Illegal, unreported, and unregulated (IUU) fishing activities in the country jurisdiction.
- Shark finning (i.e., removal and retention of shark fins while the remainder of the shark is discarded in the ocean).
- Slavery and slave labor on board fishing vessels.
- Any significant lack of compliance with the requirements of an international fisheries agreement to which the United States 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 United States has been notified of that citation of non-compliance.

As was the case during the second reassessment, there is no evidence that the fishery has undertaken such practices or has been non-compliant. At the last recertification, Supporting Clause 3.1 achieved a score of 7, owing to the lack of long-term management objectives within Alaska state-managed groundfish fisheries. This resulted in a medium confidence rating and application of a minor non-conformity. Action has been undertaken, and evidence provided by the client enabled the audit team to conclude that the Supporting Clause can be rescored at 10 and the non-conformity closed. Table 10 shows the scores for each supporting clause at recertification and the scoring change. Additional information is provided in the sections below.

Table 10. Scoring table

Key Component	Fundamental Clause	Supporting Clause	Applicable?	Score	Confidence Rating	Conformance Level	NC Number
A – Fisheries Management System	1	1.1	Yes	10	High	Full	
		1.2	Yes	10	High	Full	
		1.2.1	Yes	10	High	Full	
		1.3	Yes	10	High	Full	
		1.3.1	Yes	10	High	Full	
		1.4	Yes	10	High	Full	
		1.4.1	Yes	10	High	Full	
		1.5	Yes	10	High	Full	
		1.6	Yes	10	High	Full	
		1.6.1	No	NA	NA	NA	
		1.7	Yes	10	High	Full	
		1.8	Yes	10	High	Full	
		1.9	No	NA	NA	NA	
	2	2.1	Yes	10	High	Full	
		2.1.1	Yes	10	High	Full	
		2.1.2	Yes	10	High	Full	
		2.2	Yes	10	High	Full	
		2.3	Yes	10	High	Full	
		2.4	Yes	10	High	Full	
		2.5	Yes	10	High	Full	
		2.6	Yes	10	High	Full	
		2.7	Yes	10	High	Full	
	3	3.1	Yes	~~7~~ 10	~~Medium~~ High	~~Minor NC~~ Full	1 – Closed
		3.1.1	Yes	10	High	Full	
		3.1.2	Yes	10	High	Full	
		3.1.3	Yes	10	High	Full	
		3.2	NA	NA	NA	NA	
		3.2.1	Yes	10	High	Full	
		3.2.2	Yes	10	High	Full	
		3.2.3	Yes	10	High	Full	

B – Science, Stock Assessment Activities, and the Precautionary Approach		3.2.4	Yes	10	High	Full	
	4	4.1	Yes	10	High	Full	
		4.1.1	Yes	10	High	Full	
		4.1.2	Yes	10	High	Full	
		4.2	Yes	10	High	Full	
		4.2.1	Yes	10	High	Full	
		4.3	Yes	10	High	Full	
		4.4	Yes	10	High	Full	
		4.5	Yes	10	High	Full	
		4.6	Yes	10	High	Full	
		4.7	Yes	10	High	Full	
		4.8	Yes	10	High	Full	
		4.9	No	NA	NA	NA	
		4.10	No	NA	NA	NA	
		4.11	No	NA	NA	NA	
	5	5.1	Yes	10	High	Full	
		5.1.1	Yes	10	High	Full	
		5.1.2	Yes	10	High	Full	
		5.2	Yes	10	High	Full	
		5.3	Yes	10	High	Full	
		5.4	Yes	10	High	Full	
		5.5	Yes	10	High	Full	
	6	6.1	Yes	10	High	Full	
		6.2	Yes	10	High	Full	
		6.3	Yes	10	High	Full	
		6.4	Yes	10	High	Full	
		6.5	Yes	10	High	Full	
	7	7.1	Yes	10	High	Full	
		7.1.1	Yes	10	High	Full	
		7.1.2	Yes	10	High	Full	
		7.2	No	NA	NA	NA	
C – Management Measures, Implementation, Monitoring, and Control	8	8.1	Yes	10	High	Full	
		8.1.1	Yes	10	High	Full	
		8.1.2	Yes	10	High	Full	
		8.2	Yes	10	High	Full	
		8.3	Yes	10	High	Full	
		8.4	Yes	10	High	Full	
		8.4.1	Yes	10	High	Full	
		8.5	Yes	10	High	Full	
		8.5.1	Yes	10	High	Full	
		8.6	Yes	10	High	Full	
		8.7	Yes	10	High	Full	
		8.8	Yes	10	High	Full	
		8.9	Yes	10	High	Full	
		8.10	No	NA	NA	NA	
		8.11	Yes	10	High	Full	
		8.12	Yes	10	High	Full	
		8.13	No	NA	NA	NA	
	9	9.1	Yes	10	High	Full	

		9.2	Yes	10	High	Full	
		9.3	Yes	10	High	Full	
	10	10.1	Yes	10	High	Full	
		10.2	Yes	10	High	Full	
		10.3	No	NA	NA	NA	
		10.3.1	No	NA	NA	NA	
		10.4	No	NA	NA	NA	
		10.4.1	No	NA	NA	NA	
	11	11.1	Yes	10	High	Full	
		11.2	Yes	10	High	Full	
		11.3	Yes	10	High	Full	
		11.4	No	NA	NA	NA	
D – Serious Impacts of the Fishery on the Ecosystem	12	12.1	Yes	10	High	Full	
		12.2	No	NA	NA	NA	
		12.2.1	Yes	10	High	Full	
		12.2.2	Yes	10	High	Full	
		12.2.3	Yes	10	High	Full	
		12.2.4	Yes	10	High	Full	
		12.2.5	Yes	10	High	Full	
		12.2.6	Yes	10	High	Full	
		12.2.7	Yes	10	High	Full	
		12.2.8	Yes	10	High	Full	
		12.2.9	Yes	10	High	Full	
		12.2.10	Yes	10	High	Full	
		12.2.11	Yes	10	High	Full	
		12.3	Yes	10	High	Full	
		12.4	Yes	10	High	Full	
		12.5	Yes	10	High	Full	
		12.6	Yes	10	High	Full	
		12.7	Yes	10	High	Full	
	13	13.1	No	NA	NA	NA	
		13.1.1	No	NA	NA	NA	
		13.2	No	NA	NA	NA	
		13.2.1	No	NA	NA	NA	
		13.3	No	NA	NA	NA	
		13.4	No	NA	NA	NA	
		13.5	No	NA	NA	NA	
		13.6	No	NA	NA	NA	
		13.7	No	NA	NA	NA	
		13.7.1	No	NA	NA	NA	
		13.7.2	No	NA	NA	NA	
		13.7.3	No	NA	NA	NA	
		13.8	No	NA	NA	NA	
		13.9	No	NA	NA	NA	
		13.10	No	NA	NA	NA	
		13.11	No	NA	NA	NA	
		13.12	No	NA	NA	NA	
		13.13	No	NA	NA	NA	

6.1 Update on consistency with Fundamental Clauses

6.1.1 Key Component A: The Fisheries Management System

Fundamental Clause 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.	
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. The management system and the fishery operate in compliance with the requirements of international, State, and local laws and regulations, including the requirements of any regional and/or international fisheries management agreement. 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. 1.2.1 Previously agreed management measures established and applied in the same region is region shall be taken into account by management. 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. 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. 1.4 A State's fishery management organization not member or participant of a sub-regional or regional fisheries management organization shall cooperate, in accordance with relevant international agreements and law, in the conservation and management of the relevant fisheries resources by giving effect to any relevant measures adopted by such organization or arrangement. 1.4.1 A fishery management organization seeking to take any action through a non-fishery organization which may affect the conservation and management measures taken by a competent sub-regional or regional fisheries management organization or arrangement shall consult with the latter, in advance to the extent practicable, and take its views into account. 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. 1.6 A fishery management organization and sub-regional or regional fisheries management organizations and arrangements, as appropriate, shall agree on the means by which the activities of such organizations and arrangements will be financed, bearing in mind, *inter alia*, the relative benefits derived from the fishery and the differing capacities of States to provide financial and other contributions. Where appropriate, and when possible, such organizations and arrangements shall aim to recover the costs of fisheries conservation, management, and research. 1.6.1 Without prejudice to relevant international agreements, States or fishery management organizations shall encourage banks and financial institutions not to require, as a condition of a loan or mortgage, fishing vessels or fishing support vessels to be flagged in a jurisdiction other than that of the State of beneficial ownership where such a requirement would have the effect of increasing the likelihood of non-compliance with international conservation and management measures. 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. 1.8 The management arrangements and decision-making processes for the fishery shall be organized in a transparent manner. 1.9 Management organizations not party to the Agreement to Promote Compliance with International Conservation and Management Measures by Vessels Fishing in the High Seas shall be encouraged to accept the Agreement and to adopt laws and regulations consistent with the provisions of the Agreement.	
Summary of relevant changes	**Clauses 1.2, 1.2.1, 1.4.1, 1.6, and 1.8** No relevant changes were reported. **Clauses 1.1, 1.3, 1.3.1, 1.4, and 1.7**

	When these clauses were reviewed at the last reassessment, two key international agreements: The U.S. and Russia bilateral Intergovernmental Consultative Committee (ICC) Fisheries Forum Agreement and The Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea ('The Donut Hole'), were cited as evidence of States and their management organizations: cooperating, gathering and sharing information and managing shared resources to ensure effective conservation and management of the stock(s). The client representative reported that the ICC Fisheries Forum Agreement has expired and, given the deterioration in international political relations due to the on-going Ukraine conflict, a new agreement could not be negotiated. Thus, at this moment in time there is no formal cooperation or sharing of information as regards the pollock stocks in the Bering Sea. The client representative opined that catches of EBS pollock in the WBS zone would be fully accounted for by annual summer pollock surveys in the EBS zone and considered in the scientific advice and management of the EBS stock. The most recent information on "the Donut Hole" convention indicates that annual meetings have occurred at least up to 2022 with a meeting scheduled in 2023. No information was available to indicate if Russia's participation as a Member State has been suspended. The Audit team have concluded that the changes in international cooperation provided by the ICC are clearly beyond the control of the client and/or the responsible fishery management organizations and are unlikely to compromise the sustainable management of the pollock resource owing to the way the existing scientific monitoring and management approach are implemented by the U.S. fishery management organizations (i.e., separate stock assessments and management units). **Clauses 1.61 and 1.9** Not applicable.
References	United States and Russia, Intergovernmental Consultative Committee (ICC) Fisheries Forum agreement 1988. The Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea – "The Donut Hole Agreement". https://www.state.gov/donut-hole-agreement Report of the 27th Annual conference of the parties to the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

Fundamental Clause 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.	
2.1 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. 2.1.1 States shall establish mechanisms for cooperation and coordination in planning, development, conservation, and management of coastal areas. 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. 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. 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. 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. The bases and purposes of such measures shall be explained to users of the resource in order to facilitate their application and thus gain increased support in the implementation of such measures. 2.5 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. 2.6 States shall cooperate to support and improve coastal area management, and in accordance with capacities, measures shall be taken to establish or promote (1) systems for research and monitoring of the coastal environment, and (2) multidisciplinary research of the coastal area using physical, chemical, biological, economic, social, legal, and institutional capabilities. 2.7 In the case of a States' activities that may have an adverse environmental effect on coastal areas of other States, States shall provide timely information and if possible, prior notification to potentially affected States, and consult with those States as early as possible.	
Summary of relevant changes	**Clauses 2.1, 2.2, and 2.3** The Council approved some updates to EFH information in four FMPs, including the BSAI and GOA groundfish FMPs. These changes included updating EFH description, fishing effects, non-fishing impacts to EFH, and updating EFH research objectives. More recently, the Council received a report (available here) outlining major EFH consultations conducted by the NMFS Alaska Region Habitat Division from April 2023-2024. **Clauses 2.4, 2.5, and 2.6** In June 2023, the Council initiated the development of a PEIS for all Council managed fisheries in the GOA and BSAI (NPFMC, June 2023, Newsletter). The intent of the proposed action is to develop new fisheries management policies, goals, and objectives for all federally managed fisheries in the North Pacific (i.e., those included in the FMPs for BSAI and GOA groundfish, BSAI crab, scallop, salmon, and the halibut fisheries). At the February 2024 Council meeting, the next steps for the programmatic process were reviewed. As part of the preparation of an EIS, NEPA requires that there is an early and open process for determining the scope of the issues to be addressed, this is commonly known as "NEPA scoping". In order to provide for meaningful public and Tribal engagement in this process, including the alternatives and scope of the action, the Council chose to extend the PEIS timeline. The Council will use the additional time to consider whether to alter the previously adopted alternatives, and what to include in the formal NEPA NOI to Prepare a PEIS,

	currently scheduled to be published in fall 2024. The Council must intend to complete a Final PEIS within two years of publishing the NOI. **Clause 2.7** No relevant changes were reported.
References	Appendix A to the Environmental Assessment for Amendment to the BSAI Groundfish FMP https://meetings.npfmc.org/CommentReview/DownloadFile?p=1c048be3-6015-48ec-8fee-c194b74eba32.pdf&fileName=C5%20Appendix%20A%20-%20BSAI%20Groundfish.pdf. Appendix B to the Environmental Assessment for Amendment to the BSAI Groundfish FMP. https://meetings.npfmc.org/CommentReview/DownloadFile?p=514568dd-2cc6-456a-bc87-5fa0479543ae.pdf&fileName=C5%20Appendix%20B%20-%20GOA%20Groundfish.pdf. NMFS Annual Essential Fish Habitat Report https://meetings.npfmc.org/CommentReview/DownloadFile?p=44a19181-535e-484a-97cd-fac77b04e7aa.pdf&fileName=B2%20NMFS%20EFH%20Report.pdf. NPFMC Newsletter, June 2023. https://www.npfmc.org/newsletters/. NPFMC Newsletter, February 2024. https://www.npfmc.org/newsletters/.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

Fundamental Clause 3. Management objectives shall be implemented through management rules and actions formulated in a plan or other framework.	
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. 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. 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. 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. 3.2 Management measures shall provide, *inter alia,* that: 3.2.1 Excess fishing capacity shall be avoided, and exploitation of the stocks shall remain economically viable. 3.2.2 The economic conditions under which fishing industries operate shall promote responsible fisheries. 3.2.3 The interests of fishers, including those engaged in subsistence, small-scale, and artisanal fisheries shall be taken into account. 3.2.4 Biodiversity of aquatic ecosystems shall be conserved and ETP species shall be protected. Where relevant, there shall be management objectives, and as necessary, management measures.	
Summary of relevant changes	**Clause 3.1** At the last reassessment of the fishery this clause achieved a score of 7, owing to the lack of long-term management objectives within Alaska state managed groundfish fisheries. This resulted in a medium confidence rating and application of a minor non-conformance. The same score, medium confidence rating, and minor non-conformance were applied to the Pacific cod fishery that was also reassessed in parallel with the pollock fishery. Working with the client for the Pacific cod fishery (the Alaska Fisheries Development Foundation (AFDF) a proposal (Proposal 161) was submitted to ADFG BOF during the Committee of the Whole at the October 2022 meeting to include objectives that would encompass all groundfish species managed at the state level. The proposal was intended to document the broad goals and objectives that the BOF uses to guide groundfish management. At the BOF Statewide Finfish and Supplemental Issues meeting in March 2023 the BOF approved proposal 161 (RC055) and Section 5 AAC 28.015 has been amended to include explicit and measurable short- and long-term objectives: As stated in 5 AAC 28.015. Guiding policy on groundfish fisheries resource management: The BOF and the department when taking actions regarding the management of groundfish fisheries should be based on the following principles and criteria: 1. Conservation of the groundfish resource to ensure sustained yield, which requires that the TAC in any fishery be based upon the biological abundance of the stock; 2. Minimization of bycatch of other associated fish and shellfish and prevention of the localized depletion of stocks; (3) protection of the habitat and other associated fish and shellfish species from non-sustainable fishing practices with consideration of ecosystem interactions; 3. Maintenance of slower harvest rates by methods and means and time and area restrictions to ensure adequate reporting and analysis necessary for management of the fishery and ensuring adherence to annual and seasonal TAC limits; 4. Extension of the length of fishing seasons by methods and means and time and area restrictions to provide for the maximum benefit to the state and to regions and local areas of the state; 5. Harvest of the resource in a manner that emphasizes the quality and value of the fishery product; 6. Provide opportunities for subsistence, sport, commercial and personal use fisheries; 7. Cooperation with federal agencies associated with groundfish fisheries; 8. Management of the groundfish fisheries are based on information that, in the commissioner's discretion, will tend to promote the purposes of Alaska statutes pertaining to fisheries management. This has resulted in this supporting clause being rescored at 10, and the minor non-conformance is closed. **Clauses 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.2, 3.2.3, and 3.2.4** No relevant changes were reported.

	Clause 3.2 Not applicable.
References	BOF Statewide Finfish and Supplemental Issues meeting in March 2023, https://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.meetinginfo&date=03-10-2023&meeting=anchorage. BOF approved proposal 161 (RC055) https://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2022-2023/state/rcs/RC055_Member_Jensen_Substitute_Language_Proposal_161.pdf. Alaska Admin code 5AAC 28.015. https://casetext.com/regulation/alaska-administrative-code/title-5-fish-and-game/part-1-commercial-and-subsistence-fishing-and-private-nonprofit-salmon-hatcheries/chapter-28-groundfish-fishery/article-2-general-specifications/section-5-aac-28015-guiding-policy-on-groundfish-fisheries-resource-management.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

6.1.2 Key Component B: Science and Stock Assessment Activities, and the Precautionary Approach

Fundamental Clause 4. There shall be effective fishery data (dependent and independent) collection and analysis systems for stock management purposes.	
4.1 All significant fishery removals and mortality of the target species (shall be considered by management. Specifically, reliable and accurate data required for assessing the status of fishery(ies) and ecosystems—including data on retained catch, bycatch, discards, and waste—shall be collected. Data can include relevant traditional, fisher, or community knowledge, provided their validity can be objectively verified. These data shall be collected, at an appropriate time and level of aggregation, by relevant management organizations connected with the fishery, and provided to relevant States regional, and international fisheries organizations. 4.1.1 Timely, complete, and reliable statistics shall be compiled on catch and fishing effort and maintained in accordance with applicable international standards and practices, and in sufficient detail to allow sound statistical analysis for stock assessment. Such data shall be updated regularly and verified through an appropriate system. The use of research results as a basis for setting management objectives, reference points, and performance criteria, as well as for ensuring adequate linkage between applied research and fisheries management (e.g., adoption of scientific advice) shall be promoted. Results of analysis shall be distributed accordingly as a contribution to fisheries conservation, management, and development. 4.1.2 In the absence of specific information on the *stock under consideration*, generic evidence based on similar stocks can be used. However, the greater the risk of overfishing, the more specific evidence is necessary to ascertain the sustainability of intensive fisheries. 4.2 An observer scheme designed to collect accurate data for research and support compliance with applicable fishery management measures shall be established. 4.2.1 Where necessary, fisheries management organizations and regional fisheries management organizations and other such arrangements should strive to achieve a level and scope of observer programs sufficient to provide quantitative estimates of total catch, discards, and incidental takes of living aquatic resources. 4.3 A fisheries management organization, regional fisheries management organizations or arrangements shall compile data and make them available, in a manner consistent with any applicable confidentiality requirements, in a timely manner and in an agreed format to all members of these organizations and other interested parties in accordance with agreed procedures. 4.4 States shall stimulate the research required to support policies related to fish as food. 4.5 There shall be sufficient knowledge of the economic, social, marketing, and institutional aspects of fisheries collected through data gathering, analysis, and research, as well as comparable data generated for ongoing monitoring, analysis, and policy formulation. 4.6 The fisheries management organization shall investigate and document traditional fisheries knowledge and technologies—in particular those applied to small-scale fisheries—in order to assess their application to sustainable fisheries conservation, management, and development. 4.7 If a fisheries management organization is conducting scientific research activities in waters of another State, it shall ensure that their vessels comply with the laws and regulations of that State and international law. 4.8 Adoption of uniform guidelines governing fisheries research conducted on the high seas shall be promoted and, where appropriate, support the establishment of policies that include, *inter alia*, facilitating research at the international and sharing the research results with affected States. 4.9 If appropriate, the fisheries management organization and relevant international organizations shall promote and enhance the research capacities of developing countries, *inter alia*, in the areas of data collection and analysis, information, science and technology, human resource development, and provision of research facilities, in order for them to participate effectively in the conservation, management, and sustainable use of living aquatic resources. 4.10 Competent national organizations shall, where appropriate, render technical and financial support to States upon request and when engaged in research investigations aimed at evaluating stocks which have been previously unfished or very lightly fished. 4.11 Relevant technical and financial international organizations shall, upon request, support States in their research efforts, devoting special attention to developing countries—in particular the least developed among them and small developing island countries.	
Summary of relevant changes	In the Alaska pollock fishery, no changes have been evidenced in the key aspects of fishery data (dependent and independent) collection and analysis systems for stock management purposes. This has been evidenced by the stakeholders during the site visit as well as by the SAFE reports – EBS (Ianelli et al., 2023a), AI (Barbeaux et al., 2023), and GOA (Monnahan et al., 2023).

	The Alaska pollock fishery is highly regulated, and data collection methods are typically standardized and closely monitored. For instance, the use of vessel monitoring systems (VMS) and observer programs ensures continuous data collection on catch sizes, locations, and bycatch rates. The Alaska pollock fishery continues to implement long-term monitoring programs to track stock health and assess the impact of fishing activities. These programs involve systematic surveys, such as acoustic surveys, which provide crucial data for stock assessments. The regulatory framework governing the Alaska pollock fishery, such as the Magnuson-Stevens Fisheries Conservation and Management Act, emphasizes the use of sound science in fisheries management. In this case, any changes in data collection or analysis methods would likely undergo rigorous review and scrutiny to ensure they maintain or improve the accuracy of stock assessments.
References	Barbeaux, S., Jim Ianelli, and Ned Laman, 2023. Chapter 1A: Harvest Projection for the walleye pollock stock in the Aleutian Islands. November 2023. Ianelli, J. et al. 2023. Assessment of the eastern Bering Sea walleye pollock. North Pacific Fishery Management Council, Anchorage, AK. Available https://www.npfmc.org/library/safe-reports/. Monnahan, C., Grant D. Adams, Bridget E. Ferriss, S. Kalei Shotwell, Denise R. McKelvey, and David W. McGowan 2023. Assessment of the Walleye Pollock Stock in the Gulf of Alaska. November 2023.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

Fundamental Clause 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.	
5.1 An appropriate institutional framework shall be established to determine the applied research required and its proper use (i.e., assess/evaluate stock assessment model/practices) for fishery management purposes. 5.1.1 Less elaborate stock assessment methods are frequently used for small-scale or low-value capture fisheries resulting in greater uncertainty about the status of the *stock under consideration.*., A more precautionary approach to managing fisheries on such resources shall be required, including, where appropriate, a lower level of resource utilization. A record of good management performance may be considered as supporting evidence of the adequacy of the management system. 5.1.2 The fisheries management organization shall ensure that appropriate research is conducted into all aspects of fisheries including biology, ecology, technology, environmental science, economics, and fishery enhancement. Analysis results shall be distributed in a timely and readily understandable fashion in order that the best scientific evidence available contributes to fisheries conservation, management, and development. The fisheries management organization shall also ensure the availability of research facilities and provide appropriate training, staffing, and institution building to conduct the research. 5.2 There shall be established research capacity necessary to assess and monitor (1) the effects of climate or other environmental change on stocks and aquatic ecosystems, (2) the status of the stock under State jurisdiction, and (3) the impacts of ecosystem changes resulting from fishing activity, pollution, or habitat alteration. 5.3 Management organizations shall cooperate with relevant international organizations to encourage research in order to ensure optimum utilization of fishery resources. 5.4 The fishery management organizations shall directly, or in conjunction with other States, develop collaborative technical and research programs to improve understanding of the biology, environment, and status of transboundary, shared, straddling, highly migratory and high seas stocks. 5.5 Data generated by research shall be analyzed and the results of such analyses published in a way that ensures confidentiality is respected, where appropriate.	
Summary of relevant changes	Information for assessing the status of Alaska pollock comes from the SAFE reports (https://www.fisheries.noaa.gov/tags/north-pacific-groundfish-stock-assessments) – EBS (Ianelli et al., 2023a), AI (Barbeaux et al., 2023), and GOA (Monnahan et al., 2023) – and is discussed in detail in Section 5.1. No changes have been evidenced in the Alaska pollock fishery considering the stock assessment activities. Stock assessment methods for the Alaska pollock fishery continue to be typically designed to account for the species' biology, behavior, and habitat preferences. These methods often include a combination of acoustic surveys, trawl surveys, and genetic analyses, tailored to the specific characteristics of the pollock population and its ecosystem. Stock assessments in the Alaska pollock fishery continue to be conducted in accordance with internationally recognized scientific standards, such as those outlined by NPFMC. These standards ensure that assessment methodologies are robust, transparent, and subject to peer review. Moreover, effective stock assessment in the Alaska pollock fishery considers not only the abundance and distribution of pollock but also the broader ecosystem dynamics. This may involve assessing interactions with other species, such as prey availability, predator-prey relationships, and environmental factors influencing pollock populations. If there have been no changes in the incorporation of ecosystem considerations into stock assessments, it suggests a holistic approach to fisheries management that aligns with the ecosystem-based management principles. Collaboration between industry stakeholders, scientists, and regulatory agencies continue to be robustly established and is crucial for ensuring the success of stock assessment activities.
References	Barbeaux, S., Jim Ianelli, and Ned Laman, 2023. Chapter 1A: Harvest Projection for the walleye pollock stock in the Aleutian Islands. November 2023. Ianelli, J. et al. 2023. Assessment of the eastern Bering Sea walleye pollock. North Pacific Fishery Management Council, Anchorage, AK. Available https://www.npfmc.org/library/safe-reports/. Monnahan, C., Grant D. Adams, Bridget E. Ferriss, S. Kalei Shotwell, Denise R. McKelvey, and David W. McGowan 2023. Assessment of the Walleye Pollock Stock in the Gulf of Alaska. November 2023.
Summary of consistency with	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

RFM Fisheries Standard	

Fundamental Clause 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.	
6.1 The fishery management organization shall establish safe target reference point(s) for management. Management targets are consistent with achieving maximum sustainable yield (MSY), a suitable proxy, or a lesser fishing mortality—if that is optimal in the circumstances of the fishery (e.g., multispecies fisheries) or is needed to avoid adverse impacts on dependent predators. 6.2 The fishery management organization shall establish appropriate limit reference point(s) for exploitation (i.e., consistent with avoiding recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible; RFM v2.1 Guidance Appendix 1, Part 1[3]). When a limit reference point is approached, measures shall be taken to ensure that it will not be exceeded. For instance, if fishing mortality (or its proxy) is above the associated limit reference point, actions should be taken to decrease the fishing mortality (or its proxy) below that limit reference point. 6.3 Data and assessment procedures that measure the position of the fishery in relation to the reference points shall be established. Accordingly, the *stock under consideration* shall not be overfished (i.e., above limit reference point or proxy) and the level of fishing permitted shall be commensurate with the current state of the fishery resources, maintaining its future availability, and taking into account that long-term changes in productivity can occur due to natural variability and/or impacts other than fishing (RFM v2.1 Guidance Appendix 1, Part 1[4]). 6.4 Accordingly, contingency plans shall be agreed in advance to allow an appropriate management response to serious threats to the resource as a result of overfishing, adverse environmental changes, or other phenomena that may have adverse impacts on the fishery resource (RFM v2.1 Guidance Appendix 1, Part 2[5]). Such measures may be temporary and shall be based on best scientific evidence available. 6.5 Measures shall be introduced to identify and protect depleted stocks and those stocks threatened with depletion, and to facilitate the sustained recovery/restoration of such stocks. Also, efforts shall be made to ensure that resources and habitats critical to the well-being of such stocks, which have received adverse impacts by fishing or other human activities, are restored.	
Summary of relevant changes	Information for assessing the status of Alaska pollock comes from the SAFE reports (https://www.fisheries.noaa.gov/tags/north-pacific-groundfish-stock-assessments) – EBS (Ianelli et al., 2023a), AI (Barbeaux et al., 2023), and GOA (Monnahan et al., 2023) – and is discussed in detail in Section 5.1. It is clear that the three stocks continue to be is safe status with biomass above reference levels and exploitation below fishing mortality at MSY.
References	Barbeaux, S., Jim Ianelli, and Ned Laman, 2023. Chapter 1A: Harvest Projection for the walleye pollock stock in the Aleutian Islands. November 2023. Ianelli, J. et al. 2023. Assessment of the eastern Bering Sea walleye pollock. North Pacific Fishery Management Council, Anchorage, AK. Available https://www.npfmc.org/library/safe-reports/. Monnahan, C., Grant D. Adams, Bridget E. Ferriss, S. Kalei Shotwell, Denise R. McKelvey, and David W. McGowan 2023. Assessment of the Walleye Pollock Stock in the Gulf of Alaska. November 2023.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

[3] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)
[4] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)
[5] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)

Fundamental Clause 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.	
7.1 The precautionary approach shall be applied widely to conservation, management, and exploitation of ecosystems to protect them and preserve the ecosystem. This should take due account of fishery enhancement procedures, where appropriate. Absence of scientific information shall not be used as a reason for postponing or failing to take conservation and management measures. Relevant uncertainties shall be taken into account through a suitable method of risk management, including those associated with the use of introduced or translocated species.[6] 7.1.1 In implementing the PA, the fishery management organization shall take into account, *inter alia*, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality, the impact of fishing activities (including discards) on non-target and associated or dependent predators, and environmental and socioeconomic conditions. 7.1.2 In the absence of adequate scientific information, appropriate research shall be initiated in a timely fashion. 7.2 In the case of new or exploratory fisheries, the fishery management organization shall adopt, as soon as possible, cautious conservation and management measures, including, *inter alia*, catch limits and effort limits. Such measures should remain in force until there are sufficient data to allow assessment of the impact of the fisheries on the long-term sustainability of the stocks, whereupon conservation and management measures based on that assessment should be implemented. Management measures should, if appropriate, allow for the gradual development of the fisheries.	
Summary of relevant changes	In the Alaska pollock fishery, no changes have been evidenced in the key aspects of management actions and measures for the conservation of stocks and the ecosystem. The measures continue to be based on the precautionary approach. This has been evidenced by the stakeholders during the site visit as well as by the SAFE reports (https://www.fisheries.noaa.gov/tags/north-pacific-groundfish-stock-assessments) – EBS (Ianelli et al., 2023a), AI (Barbeaux et al., 2023), and GOA (Monnahan et al., 2023). The precautionary approach continues to be a fundamental principle guiding fisheries management worldwide, including in the Alaska pollock fishery. It emphasizes proactive measures to prevent overfishing and minimizes impacts on the ecosystem, even in the presence of scientific uncertainty. The management measures in the Alaska pollock fishery, such as catch limits, gear regulations, and area closures, are typically designed to align with the precautionary approach. These measures aim to ensure sustainable harvest levels while accounting for uncertainty in stock assessments and ecosystem dynamics. In situations where information is deficient or uncertain, risk management strategies are often employed to inform management decisions. However, this condition has not been observed in the Alaska pollock fishery. Effective implementation of the precautionary approach and risk management strategies relies on collaboration with scientific experts and stakeholders. Regulatory agencies, such as the NPFMC and ADFG, continue to work closely with scientists to assess the status of pollock stocks, evaluate ecosystem impacts, and develop management recommendations.
References	Barbeaux, S., Jim Ianelli, and Ned Laman, 2023. Chapter 1A: Harvest Projection for the walleye pollock stock in the Aleutian Islands. November 2023. Ianelli, J. et al. 2023. Assessment of the eastern Bering Sea walleye pollock. North Pacific Fishery Management Council, Anchorage, AK. Available https://www.npfmc.org/library/safe-reports/. Monnahan, C., Grant D. Adams, Bridget E. Ferriss, S. Kalei Shotwell, Denise R. McKelvey, and David W. McGowan 2023. Assessment of the Walleye Pollock Stock in the Gulf of Alaska. November 2023.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

[6] FAO Technical Guidelines for Responsible Fisheries No. 2 – Precautionary approach to capture fisheries and species introductions. http://www.fao.org/docrep/003/w3592e/w3592e00.htm

6.1.3 Key Component C: Management Measures, Implementation, Monitoring, and Control

Fundamental Clause 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.

8.1 Conservation and management measures shall be designed to ensure the long-term sustainability of fishery resources at levels which promote optimum utilization and are based on verifiable and objective scientific and/or traditional, fisher, or community sources.

8.1.1 When evaluating alternative conservation and management measures, the fishery management organization shall consider their cost-effectiveness and social impact.

8.1.2 Responsible fisheries management organizations shall adopt and implement measures necessary to ensure the management of bycatch and reduction of discards as part of fisheries management (1) in accordance with the PA, as reflected in Article 6 of the UN Fish Stocks Agreement, and as set out in Article 6.5 and 7.5 of the Code; (2) in accordance with the responsible use of fish as set out in the Code; and (3) based on the best scientific evidence available, taking into account fishers' knowledge.

8.2 The fishery management organization shall prohibit dynamiting, poisoning, and other similar destructive fishing practices.

8.3 The fishery management organization shall seek to identify domestic parties having a legitimate interest in the use and management of the fishery. When deciding on use, conservation, and management of the resource, due recognition shall be given, where relevant, in accordance with national laws and regulations, to the traditional practices, needs, and interests of indigenous people and local fishing communities which are highly dependent on these resources for their livelihood. Arrangements shall be made to consult all the interested parties and gain their collaboration in achieving responsible fisheries.

8.4 Where excess capacity exists, mechanisms shall be established to reduce capacity to levels commensurate with sustainable use of the resource. Fleet capacity operating in the fishery shall be measured and monitored. The fishery management organization shall maintain, in accordance with recognized international standards and practices, statistical data, updated at regular intervals, on all fishing operations and a record of all authorizations to fish allowed by them.

8.4.1 Studies shall be promoted that provide an understanding of the costs, benefits, and effects of alternative management options designed to rationalize fishing, especially options relating to excess fishing capacity and excessive levels of fishing effort.

8.5 Technical measures regarding the *stock under consideration* shall be taken into account, where appropriate, in relation to fish size, mesh size, gear, closed seasons or areas, areas reserved for particular (e.g., artisanal fisheries), and protection of juveniles or spawners.

8.5.1 Appropriate measures shall be applied to minimize catch, waste, and discards of non-target species (both fish and non-fish species), and impacts on associated, dependent, or endangered species.

8.6 Gear marking requirements shall take into account uniform and internationally recognizable gear marking systems.

8.7 The fishery management organization and relevant groups from the fishing industry shall measure performance and encourage the development, implementation, and use of selective, environmentally safe, and cost-effective gear, technologies, and techniques that are sufficiently selective as to minimize catch, waste, discards of non-target species (both fish and non-fish species) and impacts on associated or dependent predators. The use of fishing gear and practices that lead to discarding the catch shall be discouraged, and the use of fishing gear and practices that increase survival rates of escaping fish shall be promoted. Inconsistent methods, practices, and gears shall be phased out accordingly.

8.8 Technologies, materials, and operational methods or measures—including, to the extent practicable, the development and use of selective, environmentally safe, and cost-effective fishing gear and techniques—shall be applied to minimize the loss of fishing gear, the ghost fishing effects of lost or abandoned fishing gear, pollution, and waste.

8.9 The intent of fishing selectivity and fishing impacts-related regulations shall not be circumvented by technical devices. Information on new developments and requirements shall be made available to all fishers.

8.10 Assessment and scientific evaluation shall be carried out on the impacts of habitat disturbance on the fisheries and ecosystems prior to the commercial-scale introduction of new fishing gear, methods, and operations. Accordingly, the impacts of such introductions shall be monitored.

8.11 International cooperation shall be encouraged for research programs involving fishing gear selectivity, fishing methods and strategies, dissemination of the results of such research programs, and the transfer of technology.

8.12 The fishery management organization and relevant institutions involved in the fishery shall collaborate in developing standard methodologies for research into fishing gear selectivity, fishing methods and strategies, and on the behavior of

	target and non-target species regarding such fishing gear—as an aid for management decisions and with a view to minimizing non-utilized catches. 8.13 Where appropriate, policies shall be developed for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. The fishery management organization shall ensure that, when selecting the materials to be used in the creation of artificial reefs, as well as when selecting the geographical location of such artificial reefs, the provisions of relevant international conventions concerning the environment and the safety of navigation are observed.
Summary of relevant changes	**Clauses 8.1, 8.1.1, 8.1.2, 8.5, and 8.7** Two FMP amendments pertinent to pollock fisheries: Amendment 126 (BSAI) and Amendment 114 (GOA) Trawl EM, are currently in the final rule making process. The Council's intent in recommending Amendments 126/114 is to improve salmon accounting, reduce monitoring costs, improve the quality of monitoring data, and modify current retention and/or discard requirements as necessary to achieve these objectives in association with CVs using trawl gear in the BS, AI, and GOA pollock fisheries along with associated tender vessels and processors. The Council is considering action to minimize chum bycatch in the BS pollock fishery. In April 2023, the Council adopted a purpose and need statement for the action as well as a set of preliminary alternatives to be analyzed for their relative feasibility. The set of preliminary alternatives were based on concepts for management measures put forward from the Council's Salmon Bycatch Committee composed of representatives of the pollock industry and Tribal and in-river salmon users. At its October 2023 meeting, after reviewing the Preliminary Review Analysis, the Council approved analyzing changes to chum salmon bycatch management measures. The next step will be an impact analysis of the potential environmental, social and cultural, and economic impacts of the proposed management measures relative to the status quo. The Council analysis will evaluate the following management measures to change the *status quo*: • Alternative 1: *Status quo*. All action alternatives apply to the entire Bering Sea pollock B season, the season in which chum salmon are taken as bycatch (PSC). • Alternative 2: A bycatch cap on the total number of chum salmon taken in the pollock fishery. The potential caps range from 200,000 to 550,000 total chum salmon, using annual run strength indicators from the Yukon River, Kuskokwim River, and Norton Sound region to trigger various bycatch cap levels. • Alternative 3: An annual cap on Western Alaska origin chum salmon bycatch ranging from 40,000 to 53,000 Western Alaska chum salmon. This Alternative would need to be implemented in conjunction with Alternative 2 because real-time, in-season genetic information is not available. • Alternative 4: Additional regulatory requirements and management measures for the pollock fleet to avoid chum salmon bycatch by closing areas in near real-time throughout the season in response to when chum are on the pollock fishing grounds. The first review of the impact analysis is scheduled to occur by mid-2024. There have been two primary and parallel issues regarding pelagic trawl gear. 1. The Council chose not to take any action to close the Red King Crab Savings Area (see Figure 1) due to concerns that fishing effort by pelagic trawl gear, pot, and longline could be having adverse effects on the recovery of the severely depleted Bristol Bay Red King Crab stock. However, the Council established an unobserved mortality working group for crab that has met and will be providing a report to Council at their June 2025 meeting. 2. A discussion paper was produced for the Council looking at the pelagic trawl gear definition to both align current regulations with objectives of the Council, which are to promote gear innovation and improvements as well as fixing more straightforward regulatory items (fix the codend not intended as part of the pelagic trawl/floats in salmon excluders, etc.). There is some interest in removing outdated regulations and improving the definition to meet the future needs of innovation and development particularly regarding benthic habitat impacts of pelagic trawl gear. **Clause 8.2** No relevant changes were reported. **Clause 8.3** In June 2023, the Council initiated the development of a PEIS for all Council managed fisheries in the GOA and BSAI. The intent of the proposed action is to develop new fisheries management policies, goals, and

	objectives for all federally managed fisheries in the North Pacific (i.e., those included in the FMPs for BSAI and GOA groundfish, BSAI crab, scallop, salmon, and the halibut fisheries). At the February 2024 Council meeting, the next steps for the programmatic process were reviewed. As part of the preparation of an EIS, NEPA requires that there is an early and open process for determining the scope of the issues to be addressed, this is commonly known as "NEPA scoping". In order to provide for meaningful public and Tribal engagement in this process, including the alternatives and scope of the action, the Council chose to extend the PEIS timeline. The Council will use the additional time to consider whether to alter the previously adopted alternatives, and what to include in the formal NEPA NOI to Prepare a PEIS, currently scheduled to be published in fall 2024. The Council must intend to complete a Final PEIS within two years of publishing the NOI. **Clauses 8.4, 8.4.1, 8.6,8.8, 8.9, 8.11, and 8.12** No relevant changes were reported. **Clauses 8.10 and 8.13** Not applicable.
References	Amendment 126 to the FMP for the Groundfish of the BSAI Management Area and Amendment 114 to the FMP for the Groundfish of the GOA Management Area: https://www.fisheries.noaa.gov/action/amendment-126-fmp-groundfish-bering-sea-and-aleutian-islands-management-area-and-amendment. Cunningham, S. and Olson, A. 2024. Groundfish Area Closures within the Bristol Bay Red King Crab Stock Assessment Area. Environmental assessment/regulatory impact review for proposed amendment to the fishery management plan for groundfish of the Bering Sea / Aleutian Islands Management Area. https://meetings.npfmc.org/CommentReview/DownloadFile?p=0cb90fa5-5e0e-40fc-9af1-00cf97ce18b6.pdf&fileName=C2%20BBRKC%20Analysis.pdf. NPFMC Newsletter, April 2023. https://www.npfmc.org/newsletters/. NPFMC Newsletter, June 2023. https://www.npfmc.org/newsletters/. NPFMC Newsletter, February 2024. https://www.npfmc.org/newsletters/.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

Fundamental Clause 9. Fishing operations shall be carried out by fishers with appropriate standards of competence in accordance with international standards, guidelines and regulations.	
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. 9.2 States, with the assistance of relevant international organizations, shall endeavor 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. 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.	
Summary of relevant changes	**Clauses 9.1, 9.2, and 9.3** No relevant changes were reported.
References	NA
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

Fundamental Clause 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.	
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. This could include relevant traditional, fisher, or community approaches, provided their performance could be objectively verified. 10.2 Fishing vessels shall not be allowed to operate on the stock under consideration in question without specific authorization. 10.3 States involved in the fishery shall, in accordance with international law, and within the framework of fisheries management organizations or arrangements, cooperate to establish systems for monitoring, control, surveillance, and enforcement of applicable measures with respect to fishing operations and related activities in waters outside the States jurisdiction. 10.3.1 Fishery management organizations which are members of or participants in fisheries management organizations or arrangements, shall implement internationally agreed measures adopted in the framework of such organizations or arrangements and consistent with international law to deter the activities of vessels flying the flag of non-members or non-participants engaging in activities that undermine the effectiveness of conservation and management measures established by such organizations or arrangements. In that respect, port States shall also proceed, as necessary, to assist other States in achieving the objectives of the FAO CCRF (1995) and should make known to other States details of regulations and measures they have established for this purpose without discrimination for any vessel of any other State. 10.4 jurisdiction of other States, unless such vessels have been issued with a Certificate of Registry and have been authorized to fish by the competent authorities. Such vessels shall carry on board the Certificate of Registry and their authorization to fish. 10.4.1 Fishing vessels authorized to fish on the high seas or in waters under the jurisdiction of a State other than the flag State shall be marked in accordance with uniform and internationally recognizable vessel marking systems such as the FAO Standard Specifications and Guidelines for Marking and Identification of Fishing Vessels.	
Summary of relevant changes	**Clause 10.1** Two FMP amendments pertinent to pollock fisheries: Amendment 126 (BSAI) and Amendment 114 (GOA) Trawl EM, are in the final rule making process. The Council intent in recommending Amendments 126/114 is to improve salmon accounting, reduce monitoring costs, improve the quality of monitoring data, and modify current retention and/or discard requirements as necessary to achieve these objectives in association with CVs using trawl gear in the BS, AI, and GOA pollock fisheries along with associated tender vessels and processors. In the latest enforcement report from the USCG (March 2024) Appendix B shows boarding and violation data. There were 6 enforcement action reports completed for pollock fishing (species code 270), four in the EBS and two in the GOA. The violations against fisheries regulations are listed below: • Misinterpretation of statistical area in logs • No endorsement for pollock trawl on fisheries federal permit • Violating terms of EM permit • Discarding must retain species The latest NMFS Office for Law Enforcement report (December 2023) highlights two Notices of Violation and Assessment in civil administrative cases pertinent to the pollock fishery. An appendix also summarizes general recent trends in violations reporting. The American Fisheries Act pollock statements and actions have decreased through the years, though the number of cases resulting in Summary Settlements is generally increasing. For Open Access pollock fisheries (GOA), the number of statements for the category and proportion that generated incidents is relatively stable. The most recent analysis of the observer program deployment from May 2023 highlights the 100% coverage in the BSAI pollock fisheries and a ~30% coverage rate in the GOA fisheries. An EFP was issued in January 2020 to evaluate the efficacy of EM systems and shoreside observers for pollock CVs using pelagic trawl gear in the BS and GOA. The goal for EM is compliance monitoring of maximized retention. Catch accounting for the vessel's catch and bycatch is done via eLandings reports and shoreside plant observers. There were 41 participating CVs in 2020, 71 vessels in 2021, and 80 vessels in 2022. The EFP includes CVs in the partial and full coverage categories. In January 2023, the EFP was extended through 2024, with expected regulatory implementation of the Trawl EM program by 2025.

	Clause 10.2 No relevant changes were reported. **Clauses 10.3, 10.3.1, 10.4, and 10.4.1** Not applicable.
References	Amendment 126 to the FMP for the Groundfish of the BSAI Management Area and Amendment 114 to the FMP for the Groundfish of the GOA Management Area: https://www.fisheries.noaa.gov/action/amendment-126-fmp-groundfish-bering-sea-and-aleutian-islands-management-area-and-amendment. 17th Coast Guard District Enforcement Report, March 2024. https://meetings.npfmc.org/CommentReview/DownloadFile?p=48bb7fd7-1c33-49e5-a03e-c98caaecd85c.pdf&fileName=B5%20USCG%20April%202024%20Report.pdf. Office of Law Enforcement, Alaska Enforcement Division, December Report to the NPFMC https://meetings.npfmc.org/CommentReview/DownloadFile?p=475936fa-58f5-4403-b98a-21a19244e4ef.pdf&fileName=B4%20OLE%20Report.pdf.
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

Fundamental Clause 11. There shall be a framework for sanctions for violations and illegal activities of adequate severity to support compliance and discourage violations.	
11.1 States laws of adequate severity shall be in place that provide for effective sanctions. 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 noncompliance with conservation and management measures. 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. This may include the adoption of a civil sanction regime based on an administrative penalty scheme. Fisheries management organizations shall ensure the consistent and transparent application of sanctions. 11.4 Flag States shall take enforcement measures towards fishing vessels entitled to fly their flag, which have been found by the State to have contravened applicable conservation and management measures. The State shall, where appropriate, make the contravention of such measures an offense under national legislation.	
Summary of relevant changes	**Clauses 11.1, 11.2, 11.3, and 11.4** No relevant changes were reported.
References	NA
Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

6.1.4 Key Component D: Serious Impacts of the Fishery on the Ecosystem

Fundamental Clause 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.

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.

12.2 The most probable adverse impacts from human activities, including fishery effects on the ecosystem/environment, shall be assessed and, where appropriate, addressed and or/corrected, taking into account available scientific information and local knowledge. This may take the form of an immediate management response or a further analysis of the identified risk. In this context, full consideration should be given to the special circumstances and requirements in developing fisheries, including financial and technical assistance, technology transfer, training, and scientific cooperation. In the absence of specific information on the ecosystem impacts of fishing on the unit of certification, generic evidence based on similar fishery situations can be used for fisheries with low risk of severe adverse impact. However, the greater the risk, the more specific evidence shall be necessary to ascertain the adequacy of mitigation measures.

12.2.1 The fishery management organization shall consider the most probable adverse impacts of the unit of certification on main associated species (RFM v2.1 Guidance Appendix 1, Parts 3 and 7[7]), by assessing and, where appropriate, addressing and or/correcting them, taking into account the best scientific evidence available and local knowledge. Accordingly, these catches (including discards) shall be monitored and shall not threaten these non-target species with serious risk of extinction, recruitment overfishing, or other impacts that are likely to be irreversible or very slowly reversible. If such impacts arise, effective remedial action shall be taken.

12.2.2 The fishery management organization shall consider the most probable adverse impacts of the unit of certification on minor associated species (RFM v2.1 Guidance Appendix 1, Parts 3 and 7[8]), by assessing and, where appropriate, addressing and or/correcting them, taking into account the best scientific evidence available and local knowledge. Accordingly, these catches (including discards) shall be monitored and shall not threaten these non-target species with serious risk of extinction, recruitment overfishing, or other impacts that are likely to be irreversible or very slowly reversible. If such impacts arise, effective remedial action shall be taken.

12.2.3 There shall be outcome indicator(s) consistent with achieving management objectives for non-target species (i.e., avoiding overfishing and other impacts that are likely to be irreversible or very slowly reversible).

12.2.4 The fishery management organization shall consider the most probable adverse impacts of the unit of certification on ETP species (RFM v2.1 Guidance Appendix 1, Parts 4 and 7[9]), by assessing and, where appropriate, addressing and or/correcting them, taking into account the best scientific evidence available and local knowledge.

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.

12.2.6 The fishery management organization shall consider the most probable adverse impacts of the unit of certification on habitats (RFM v2.1 Guidance Appendix 1, Parts 5 and 7[10]), by assessing and, where appropriate, addressing and or/correcting them, taking into account the best scientific evidence available and local knowledge.

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.

12.2.8 There shall be outcome indicator(s) consistent with achieving management objectives for avoiding, minimizing, or mitigating the impacts of the unit of certification on essential habitats for the *stock under consideration* and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification.

12.2.9 The fishery management organization shall consider the most probable adverse impacts of the fishery under assessment on the ecosystem (RFM v2.1 Guidance Appendix 1, Part 6[11]), by assessing and, where appropriate, addressing and or/correcting them, taking into account available scientific information and local knowledge.

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,

[7] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)
[8] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)
[9] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)
[10] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)
[11] Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1)

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.

12.2.11 The fishery management organization shall consider the most probable adverse human impacts on the stock/ecosystem under consideration, by assessing and, where appropriate, addressing and or/correcting them, taking into account available scientific information and local knowledge.

12.3 The role of the *stock under consideration* in the food web shall be considered, and if it is a key prey species[12] in the ecosystem, management objectives and measures shall be in place to avoid severe adverse impacts on dependent predators.

12.4 There shall be outcome indicator(s) consistent with achieving management objectives seeking to avoid severe adverse impacts on dependent predators resulting from the unit of certification fishing on a *stock under consideration* that is a key prey species.[13]

12.5 States shall introduce and enforce laws and regulations based on the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).

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

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.

Summary of relevant changes	**Clauses 12.1, 12.3, and 12.4** NOAA and NOAA Fisheries continues to have a series of programs monitoring and modelling oceanographic processes in Alaska and adjoining waters. The data, together with a range of other environmental monitoring information such as plankton, low trophic level fish species, fish populations, and population dynamics of higher predators are all assembled through NMFS. The relationship between environmental factors (biotic and abiotic) and BSAI and GOA pollock are evaluated annually in the SAFE process (Ianelli et al. 2023a, b; Barbeaux et al. 2023; Monnahan et al. 2023). All significant and commercial species are assessed individually according to the SAFE Tier system. Most of the species' SAFE reports contain details on ecosystem effects on the species (e.g., prey availability) and fishery effects on the ecosystem. The SAFE evaluations provide a process by which a wide range of relevant environmental information is assembled and evaluated in relation to its potential effects. Ecosystem Status Reports are done annually for EBS, AI, and GOA, updating the climate, biological, and fishing effects in each region (Siddon 2023, Ortiz and Zador 2023, Ferriss 2023). In addition, the relationship between different populations in the ecosystem is evaluated through ongoing ecosystem and multi-species modelling programs within NMFS. These information sources are presented and considered annually at Council meetings. TAC-setting within the Council demonstrably follows the precautionary principle. This is also informed by the range of ecosystem indicators reported to the plan teams as part of the SAFE process. These indicators include mammalian predators of groundfish (e.g., Northern fur seals, Seller sea lions), which are considered by the stock assessment plan teams, SSC, and the Council in setting TACs. For mammalian predators of groundfish (e.g., pollock), outcome indicators of direct mortality are required by the MMPA and ESA in terms of allowable mortalities. As noted in Section 5.4, recent conditions have been unusually warm with sea surface temperatures as much as 3° C (about 5.4° F) higher than average. Additionally, in recent years, the annual ice cover in the BS has decreased dramatically, which has likely affected several species' survivability and reproductive success. These changes have been and continue to be investigated. The Council's SSC and the Groundfish Plan Teams are considering these factors on an ongoing basis as they assess the groundfish stocks (e.g., Ianelli et al. 2023a, Monnahan et al. 2023). **Clauses 12.2, 12.2.1, 12.2.2, and 12.2.3** There is a comprehensive set of measures in place to minimize catch, waste, and discards of non-target species, as described above. Each of the BSAI and GOA pollock fisheries have limited non-target catches

[12] See Appendix 1 page 150 of the Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in North America (v2.1).

[13] See Appendix 1 page 150 of the Guidance to Performance Evaluation forthe Certification of Wild Capture and Enhanced Fisheries in North America (v2.1).

with pollock making up more than 93% in both regions. In the case of the Alaska pollock fishery, the target catch is above 300,000 tons so, as per the RFM requirements, the main associated species constitute 85% of the bycatch profile (Table 8 and Table 9).

BSAI pollock fishery

For the BSAI fishery, there are some main associated species with all making up less than 2% of the total average catch. The main associated species include:

- Flathead sole – RFM and MSC certified; not overfished
- Pacific cod – RFM and MSC certified; not overfished
- Pacific ocean perch – RFM and MSC certified; not overfished
- Rock sole –MSC certified; not overfished
- Sablefish – RFM and MSC certified; not overfished
- Scypho jellies – Grouping makes up 0.53% of total catch and 22.12% of total bycatch; however, this is a complex that is made up of several scypho jelly species so it is unlikely that the pollock fishery is negatively impacting the species.
- Squid – Grouping makes up 0.36% of total catch and 15.13% of total bycatch; however, this is a complex that is made up of several squid species so it is unlikely that the pollock fishery is negatively impacting the species.
- Yellowfin sole – RFM and MSC certified; not overfished

There are several minor associated species with all of them making up <0.04% of the total average catch. Given the large number of minor associated species but the low catch rate, the assessment team has determined that it is unnecessary to list each one of them here. Refer to Table 8 for more details. None of the minor associated species are overfished so none are likely to be negatively impacted by the pollock fishery.

Overall, these main and minor associated species and their catch amounts are similar to previous years. Therefore, the combined with operational measures employed by industry to meet the specific targets are effective at achieving the specified management objectives.

GOA pollock fishery

For the GOA fishery, there are some main associated species with all making up less than 2% of the total average catch. The main associated species include:

- Arrowtooth flounder – MSC certified; not overfished
- Pacific cod – RFM and MSC certified; not overfished
- Pacific ocean perch – RFM and MSC certified; not overfished
- Rock sole –MSC certified; not overfished
- Sablefish – RFM and MSC certified; not overfished
- Squid – Grouping makes up 0.95% of total catch and 14.6% of total bycatch; however, this is a complex that is made up of several squid species so it is unlikely that the pollock fishery is negatively impacting the species.

There are several minor associated species with all making up <0.15% of the total average catch. Given the large number of minor associated species but the low catch rate, the assessment team has determined that it is unnecessary to list each one of them here. Refer to Table 9 for more details. None of the minor associated species are overfished so none are likely to be negatively impacted by the pollock fishery.

Overall, these main and minor species and their catch amounts are similar to previous years. Therefore, the combined with operational measures employed by industry to meet the specific targets are effective at achieving the specified management objectives.

Clauses 12.2.4 and 12.2.5

There continues to be a process in place for the development of management objectives to ensure that endangered species are protected from adverse impacts from interactions with the unit of certification. The endangered species inhabiting the BSAI and GOA are primarily under the responsibility of the USFWS for seabird species and NOAA Fisheries for other protected species. For these fisheries, this is primarily marine mammals.

NMFS annually categorizes all U.S. commercial fisheries under the MMPA List of Fisheries according to the levels of marine mammal mortality and serious injury(https://www.fisheries.noaa.gov/national/marine-mammal-protection/list-fisheries-summary-tables). Category III fisheries interact with marine mammal stocks with annual mortality and serious injury <1% of the marine mammal's PBR level and total fishery-related mortality <10% of PBR. Any fishery in Category III is considered to have achieved the target level of mortality and serious injury. Category II fisheries have a level of mortality and serious injury that is >1% but is <50% of the stock's PBR level, if total fishery related mortality is >10% of the PBR. Category I fisheries have frequent mortality and serious injury of marine mammal resulting in annual mortality >50% of PRB. The BSAI pollock trawl fishery is a Category II (occasional interactions), and the GOA pollock trawl is Category III (remote likelihood or no known interaction). (As of 2021, the other gears were no longer classified due to the lack of any interactions in the last three year.) Observer program data continue to provide annual estimates of takes of endangered species – fish, seabirds, and marine mammals in the BSAI and GOA pollock fisheries.

BSAI pollock trawl fishery

The following species are listed on the List of Fisheries as relevant to this fishery:

- Bearded seal (Beringia)
- Harbor seal (Bristol Bay)
- Humpback whale (Hawai'i)
- Humpback whale (Mexico-North Pacific)
- Humpback whale (Western North Pacific)
- Pacific white-sided dolphin (North Pacific)
- Ribbon seal
- Ringed seal (Arctic)
- Steller sea lion (western US)

Marine mammals are rarely taken incidentally in the BSAI pollock trawl fishery. Of these species, five are also ESA-listed species: bearded seal, humpback whale (Mexico-North Pacific), and ringed seal are all threatened and humpback whale (Western North Pacific) and Steller sea lion are both endangered. The humpback whale is also listed in CITES Appendix I. According to available observer data for the most recent five-year period (2016-2020), the fishery has had 3 bearded seal, 1 fin whale, 2 humpback whale (Western North Pacific), 2 Pacific white-sided dolphin, 1 ribbon seal, 1 ringed seal, and 40 Steller sea lion mortalities (Freed et al. 2022). Overall, all of these catch numbers are significantly less than the species' PBRs (Young et al. 2023). Considering the cumulative impacts of all certified BSAI fisheries, the catch numbers are also below PBRs.

Regarding Steller sea lions, there has been a sustained increase in the population size in the BS with some decreasing in the AI. Work is ongoing to determine which life history traits (age-specific reproductive or survival rates) are implicated in the regional dynamics of Steller sea lions and to better understand the links between foraging behavior, diet, and population dynamics. Once completed these studies may provide new insight into the factors underlying recent population trends. Additionally, mitigation measures are in place to limit interactions (e.g., closed areas for Steller sea lion breeding; NOAA Fisheries 2022a, 2023b).

Seabird interactions with fishing gear are recorded through the NMFS Observer Program (summarized in Tide and Eich 2022), and population trends are monitored by the USFWS (summarized in Dragoo et al. 2020). The catch numbers of seabird species in this fishery are minimal, and data show no significant changes to the amount of bycatch. The only recent (2017-2021) seabird bycatch are northern fulmar, shearwaters, kittiwakes, murre, and Laysan albatross; none of these is an ESA-listed species. Short-tailed albatross remain the main endangered bird species of concern in the Alaska fisheries, and this fishery has not caught any in at least the last 10 years.

Three ESA-threatened salmon stocks that migrate to Alaskan waters include Lower Columbia River Chinook salmon, upper Willamette River Chinook salmon, and Lower Columbia River Chinook, spring. The bycatch of ESA-listed Chinook salmon by the BSAI pollock fishery increased in 2019 and 2020. However, the 2021-2023 catch decreased again, and all recent catch totals remain within the 45,000 PSC limit. Data continue to be collected, and the bycatch numbers are analyzed annually (NOAA Fisheries 2023a, 2024c). Cumulatively, the catch numbers are also below limits.

GOA pollock trawl fishery

	The following species are listed on the List of Fisheries as relevant to this fishery: • Steller sea lion (western US) Marine mammals are rarely taken incidentally in the GOA pollock trawl fishery. The Steller sea lion is the only List of Fisheries species caught by the fishery. According to available observer data for the most recent five-year period (2016-2020), the fishery has had 2 Steller sea lion mortalities (Freed et al. 2022). The Steller sea lion is not listed in CITES Appendix 1. These catch numbers are significantly less than the species' PBRs. Cumulatively, the catch numbers are also below the PBR. Recent surveys indicate that in the GOA pup and non-pup numbers have increased, showing positive population trends. According to observer data, this fishery catches no seabirds. Also, as with the BSAI pollock fishery, the GOA pollock fishery is not likely to jeopardize the continued existence of endangered Chinook stock. The bycatch of ESA-listed Chinook salmon by the GOA pollock fishery increased in 2023 but is still lower than the recent peak in 2019. Nevertheless, Chinook prohibited species limits have been imposed. The limits appear unlikely to be exceeded, but measures such as closed areas of high bycatch are in place to minimize this bycatch. Cumulatively, the catch numbers are also below limits. **Clauses 12.2.6, 12.2.7, 12.2.8, and 12.7** In April 2022, a new five-year review of EFH was announced. The review evaluated: 1) published scientific literature 2) unpublished scientific reports 3) information solicited from interested parties 4) previously unavailable or inaccessible data In 2023, the Council revised the EFH sections of its FMPs to address the results of the five-year review, and the results of the review led to improved species distribution mapping using a more uniform approach as well as an update to the fishing effects model to remove a coding error that omitted unobserved catch events (https://www.fisheries.noaa.gov/alaska/habitat-conservation/alaska-essential-fish-habitat-reviews). All groundfish species had EFH impacts that were determined to be minimal and temporary. There were two key issues regarding pelagic trawl gear: 1.) The Council chose not to take action to close the Red King Crab Savings Area due to concerns that fishing effort by pot, longline, and pelagic trawl gear could be having adverse effects on the recovery of the severely depleted Bristol Bay red king crab stock. However, the Council established an unobserved mortality working group for crab that has met and will provide a report to Council at their June 2025 meeting. 2.) A discussion paper was produced for the Council looking at the pelagic trawl gear definition to both align current regulations with objectives of the Council, which are to promote gear innovation and improvements as well as fixing more straightforward regulatory items (fix the codend not intended as part of the pelagic trawl/floats in salmon excluders, etc.). There is some interest in removing outdated regulations and improving the definition to meet the future needs of innovation and development particularly regarding benthic habitat impacts of pelagic trawl gear. **Clauses 12.2.9, 12.2.10, and 12.2.11** Management measures continue to be in place, based on a sound and fishery-related evidence platforms and extensive evaluations, designed to achieve the stated objectives for relevant ecosystem components. These specifically include marine mammals, seabirds, prohibited species, target and bycatch species, EFH, HAPCs, and food-web effects. Also, ongoing monitoring and ecosystem modelling are in place to meet the overarching objective of effective ecosystem-based management. **Clause 12.5** All fishing vessels operating in federal waters are required to comply with MARPOL Annex V, which specifically prohibits the at-sea disposal of all plastics. Vessels operating in the North Pacific therefore have three options: 1) non-plastics can be disposed of at sea within the legal restrictions, 2) they can incinerate wastes onboard the vessel, or 3) they can hold the wastes for shoreside disposal at port. Vessels are required to post oil pollution and garbage placards; have a written solid waste management plan that describes procedures for collecting, processing, storing, and discharging garbage; and have a designated person in charge of carrying out the plan. The BSAI and GOA pollock fishing vessels continue to be

	compliant with MARPOL Annex V as confirmed by regular vessel inspections and on-board observers (Austin Estabrooks, APA, pers. comm.). **Clause 12.6** The Council's overarching policy continues to include the objective of applying judicious and responsible fisheries management practices, based on sound scientific research and analysis. Also, all management measures are to be based on the best scientific information available. Key to delivering this scientific evidence base remains the work of the AFSC and their five-year strategic plan NOAA Fisheries 2022b). Research is often promoted and encouraged by academic institutions, furthering the aim of the Council. Research continues into community development associated with fisheries. Industry is also regularly involved in research.
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Summary of consistency with RFM Fisheries Standard	The fishery continues to meet the requirements of this Fundamental Clause of the RFM Fisheries Standard.

7 NON-CONFORMANCES

One minor NC was raised on supporting Clause 3.1 during the 4th surveillance of the previous certification cycle of the Alaska pollock fishery (Table 11). The corrective action plan from the client is provided in Table 12.

Table 11. Non-conformance 1

1	Non-conformance number
	1
2	Fundamental Clause
	Fundamental Clause 3, Supporting Clause 3.1
3	Score
	Minor non-conformance
4	Non-conformance
	By year 5 (2028), clear fishery specific objectives for the Alaska pollock fishery should be explicit at the state level of management for the Prince William Sound state waters fishery. The fishery specific 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. This will ensure legal responsibility and adherence to clear management measures that will protect the long-term sustainability and economic health of the fishery, among other things.
5	Milestone(s)
	The client should work with the BOF and ADFG to establish specific management objectives for Alaska pollock and translate those into a plan or other management document. By the first annual audit (2024), the fishery demonstrates that they have a plan to ensure short- and long-term objectives are in place for Alaska pollock in State of Alaska waters (specifically Prince William Sound). By the second annual audit (2025) the fishery will show that the plan is progressing according to schedule. By the third annual audit (2026) the fishery will show that the plan is progressing according to schedule. By the fourth annual audit (2027), the fishery will show that specific management objectives are in place for the Alaska pollock fishery in State waters, and those objectives are translated into an FMP or other management document in accordance with supporting clause 3.1.

6	Summary of action plan
	By the first annual audit (2024), the fishery will demonstrate a plan to ensure specific fishery objectives are in place for Alaska pollock in State of Alaska waters (specifically Prince William Sound). APA will work with stakeholders, including ADFG, to develop a plan which identifies possible entities to submit a proposal to the Board of Fisheries for inclusion of explicit fishery management objectives. APA will also provide an outline of the proposal (completed) and a timeline for submission to and potential approval by the Board of Fisheries. Until the condition is met, at the time of each annual audit, APA will submit to the Certification Body a progress report specifically describing progress toward satisfying this condition.
7	Progress against milestone(s)
	The same score, medium confidence rating, and minor conformity were applied to the Pacific cod fishery that was also reassessed in parallel with the pollock fishery. The pollock client, working with the client for the Pacific cod fishery (AFDF) submitted a proposal (Proposal 161) to ADFG BOF during the Committee of the Whole at the October 2022 meeting to include objectives that would encompass all groundfish species managed at the state level. The proposal was intended to document the broad goals and objectives that the BOF uses to guide groundfish management. At the BOF Statewide Finfish and Supplemental Issues meeting in March 2023 the BOF approved proposal 161 (RC055) and Section 5 AAC 28.015 has been amended to include explicit and measurable short- and long-term objectives: As stated in 5 AAC 28.015. Guiding policy on groundfish fisheries resource management: The BOF and the department when taking actions regarding the management of groundfish fisheries should be based on the following principles and criteria: 1. Conservation of the groundfish resource to ensure sustained yield, which requires that the TAC in any fishery be based upon the biological abundance of the stock; 2. Minimization of bycatch of other associated fish and shellfish and prevention of the localized depletion of stocks; 3. Protection of the habitat and other associated fish and shellfish species from non-sustainable fishing practices with consideration of ecosystem interactions; 4. Maintenance of slower harvest rates by methods and means and time and area restrictions to ensure adequate reporting and analysis necessary for management of the fishery and ensuring adherence to annual and seasonal TAC limits; 5. Extension of the length of fishing seasons by methods and means and time and area restrictions to provide for the maximum benefit to the state and to regions and local areas of the state; 6. Harvest of the resource in a manner that emphasizes the quality and value of the fishery product; 7. Provide opportunities for subsistence, sport, commercial and personal use fisheries; 8. Cooperation with federal agencies associated with groundfish fisheries; 9. Management of the groundfish fisheries are based on information that, in the commissioner's discretion, will tend to promote the purposes of Alaska statutes pertaining to fisheries management. **This has resulted in this supporting clause being rescored at 10, and the minor non-conformance is closed at this surveillance audit.**

Table 12. Corrective action plan 1

Milestone	Action	Roles & Responsibilities	Outputs

First Annual Audit (2024)	Fishery will demonstrate a plan to ensure specific fishery objectives are in place for Alaska pollock in State of Alaska waters (specifically Prince William Sound).	APA will coordinate with AFDF to work with the Board of Fisheries and ADFG to draft a proposal for submission to the BOF for inclusion of explicit fishery management objectives in an FMP or other management document.	An outline of the BOF proposal and a timeline for submission, with a progress report specifically describing tangible progress towards satisfying this condition.
Second Annual Audit (2025)	Fishery will demonstrate that the plan is progressing according to schedule.	BOF proposal will be submitted by APA and AFDF and stakeholders will be engaged to support approval of an FMP for the state waters groundfish fisheries.	A progress report specifically describing tangible progress towards satisfying this condition.
Third Annual Audit (2026)	Fishery will demonstrate that the plan is progressing according to schedule.	BOF proposal will be submitted and approved.	A progress report specifically describing tangible progress towards satisfying this condition.
Fourth Annual Audit (2027)	The fishery will show that specific management objectives are in place for the Alaska pollock fishery in State waters, and those objectives are translated into an FMP or other management document in accordance with supporting clause 3.1.	BOF proposal will be approved and implemented.	An approved and implemented FMP or other management document will be publicly available and presented to the Certification Body.

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9 APPENDICES

Appendix 1: Stakeholder submissions

No stakeholder comments were received during the announced consultation opportunities.

ABOUT DNV

DNV is a global independent certification, assurance and risk management provider, operating in more than 100 countries. Through its broad experience and deep expertise, DNV advances safety and sustainable performance, sets industry benchmarks, drives innovative solutions.

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DNV Business Assurance USA, Inc.
1400 Ravello Dr.
Katy, TX 77449
Phone 877-368-3530

www.dnvcert.com/ contactus@dnv.com