DNV·GL

SURVEILLANCE NO. 5

Report for the Gulf of Alaska Pollock, Bering Sea and Aleutian Islands Pollock Fisheries

Alaska Pollock Fishery Client Group

Authors: Andy Hough, Anna Kiseleva, Bill Brodie, Paul Knapman
Report No.: R2017-002, Rev. 0
Certificate No.: 210937-2016-AQ-NOR-ASI
Date: 16.06.2017

Surveillance audit No.:	Surveillance No. 5
Report title:	Report for the Alaska Pollock Fishery Client Group
Customer:	Alaska Pollock Fishery Client Group 4039 21st Ave. W, Suite 400 98199 Seattle, USA
Contact person:	Jim Gilmore
Date of issue:	16.06.2017
Project No.:	PRJC-550994-2016-MSC-NOR
Organisation unit:	ZNENO418
Report No.:	R2017-002, Rev. 0
Certificate No:	210937-2016-AQ-NOR-ASI

DNV GL - Business Assurance

DNV GL Business Assurance Norway AS
Veritasveien 1
1322 HØVIK, Norway
Tel: +47 67 57 99 00
http://www.dnvgl.com

Objective:
The objective of this report is the fifth surveillance audit of the Alaska Pollock fishery against the RFM standard.

Prepared by:
Anna Kiseleva
DNV GL Senior Assessor

Bill Brodie
Stock Assessment expert

Andy Hough
Ecosystem impacts expert

Paul Knapman
Management system expert

Keywords:
RFM, Alaska, pollock

Rev. No.	Date	Reason for Issue	Prepared by
0	16.06.2017	First Issue	Andy Hough, Anna Kiseleva, Bill Brodie, Paul Knapman

Table of contents

GLOSSARY

Abbreviations & acronyms

ABC	Allowable Biological Catch
ADFG	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
ASMI	Alaska Seafood Marketing Institute
BOF	Board of Fisheries
BSAI	Bering Sea and Aleutian Islands
CCRF	Code of Conduct for Responsible Fisheries
CDQ	Community Development Quota
CFEC	Commercial Fisheries Entry Commission
CPUE	Catch per Unit Effort
EIS	Environmental Impact Statement
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
ESA	Endangered Species Act
FAO	Food and Agriculture Organization of the United Nations
FMP	Fishery Management Plan
GOA	Gulf of Alaska
GHL	Guideline Harvest Level
IFQ	Individual Fishing Quota
IRFA	Initial Regulatory Flexibility Analysis
IRIU	Improved Retention/Improved Utilization
LLP	License Limitation Program
MSFCMA	Magnuson-Stevens Fisheries Management and Conservation 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
NPFMC	North Pacific Fishery Management Council
OFL	Overfishing Level
OLE	Office for Law Enforcement
OY	Optimum Yield
PSC	Prohibited Species Catch
RACE	Resource Assessment and Conservation Engineering
REFM	Resource Ecology and Fisheries Management
RFM	Responsible Fisheries Management
SAFE	Stock Assessment and Fishery Evaluation (Report)
SSC	Scientific and Statistical Committee
SSL	Steller Sea Lion
TAC	Total Allowable Catch
USCG	U.S. Coast Guard

1 SUMMARY AND RECOMMENDATION

1.1 Fundamental Clauses Summary

Fundamental Clause	Evidence adequacy rating:	Justification:
1: Structured and legally mandated management system	High	The Alaska pollock commercial fisheries are managed by the North Pacific Fishery Management Council (NPFMC) (hereafter referred to as "Council") and the NOAA's National Marine Fisheries Service (NMFS) in the federal waters (3-200 nm); and by the Alaska Department for Fish and Game (ADFG) and the Board of Fisheries (BOF) in the state waters (0-3 nm). In federal waters, Alaska pollock fisheries are managed under the Council's Gulf of Alaska (GOA) and Bering Sea and Aleutian Islands (BSAI) Groundfish Fishery Management Plans (FMPs) written and amended subject to the Magnuson Stevens Act (MSA). The state pollock fishery in Prince William Sound (PWS) is managed using a Guideline Harvest Level (GHL) set as a percentage of the GOA federal Allowable Biological Catch (ABC). The US Coast Guard (USCG), the NMFS Office of Law Enforcement (OLE) and the Alaska Wildlife Troopers (AWT) and/or deputized ADFG staff, enforce fisheries regulations in federal and state waters respectively.
2: Coastal area management frameworks	High	The NMFS and the Council participate in coastal area management-related institutional frameworks through the federal National Environmental Policy Act (NEPA) processes. These include decision-making processes and activities relevant to fishery resources and users in support of sustainable and integrated use of living marine resources and avoidance of conflict among users. The NEPA processes provide public information and opportunity for public involvement that are robust and inclusive at both the state and federal levels. With regards to conflict avoidance and resolution between different fisheries, the Council and the BOF tend to avoid conflict by actively involving stakeholders in the process leading up to decision making. Both entities provide a great deal of information on their websites, including agenda of meetings, discussion papers, and records of decisions. The Council and the BOF actively encourage stakeholder participation, and their deliberations are conducted in open, public sessions. Effectively, these meetings provide forums for avoidance of potential fisheries conflicts.
3: Management objectives and plan	High	The Magnuson Stevens Fishery Conservation and Management Act (MSA) is the primary domestic legislation governing the management of the nation's marine fisheries. Under the MSA, the council is authorized to prepare and submit to the Secretary of Commerce for approval, disapproval or partial approval, a Fishery Management Plan (FMP) and any necessary amendments, for each fishery under its authority that requires conservation and management. These include Groundfish FMPs for the Gulf of Alaska (GoA) and the Bering Sea & Aleutian Islands (BSAI) which incorporate the pollock fisheries in those regions. Both FMPs present long-term management objectives for the Alaska pollock fishery. These are reviewed annually by the Council. In state waters (0-3 nautical miles - nm), the PWS pollock fishery is managed by ADFG and the BOF using "5 AAC 28.263.

		Prince William Sound Pollock Pelagic Trawl Management Plan" which sets the regulations for the directed state pollock fishery.
4: Fishery data	High	The NMFS and the ADFG collect fishery data and conduct fishery independent surveys to assess the pollock fishery and ecosystems in GOA and BSAI areas. GOA and BSAI SAFE documents provide complete descriptions of data types and years collected. Records of catch and effort are firstly recorded through the e-anding (electronic fish tickets) catch recording system and secondly, collected by vessel captains in voluntary and required logbooks. Fishery independent data are collected in regular surveys of both the GOA and BSAI regions and additional fishery dependent data are collected by the observer program present in both regions. A summer acoustic trawl survey is carried out annually, alternating between the GOA and EBS areas. Bottom trawl surveys are carried out yearly in the EBS and biennially in the GOA and AI. Other sources of data (such as vessel-of-opportunity, crab, and international surveys) are also considered during the stock assessment process. The Prince William Sound pollock stock is estimated by ADFG bottom trawl surveys in summer and hydroacoustic surveys in winter (when possible).
5: Stock assessment	High	Guided by MSA standards, and other legal requirements, the NMFS has a well-established institutional framework for research developed within the AFSC. Scientists at the AFSC conduct research and stock assessments on pollock in Alaska each year, producing annual Stock Assessment and Fishery Evaluation (SAFE) reports for the federally managed EBS, GOA, Aleutian Islands and Bogoslof pollock stocks. ADFG also conducts scientific research and surveys on its state-managed Pollock fisheries. These SAFE reports summarize the best-available science, including the fishery dependent and independent data, document stock status, significant trends or changes in the resource, marine ecosystems, and fishery over time, assess the relative success of existing state and Federal fishery management programs, and produce recommendations for annual quotas and other fishery management measures. The annual stock assessments are peer reviewed by experts and recommendations are made annually to improve the assessments. An additional level of peer review by external experts is conducted periodically.
6: Biological reference points and harvest control rule	High	The ASFC SAFE reports consist of three volumes: a volume containing stock assessments, a volume containing economic analysis, and a volume describing ecosystem considerations. The stock assessment volume contains a chapter or sub-chapter for each stock or stock complex in the "target species" category, and a summary chapter prepared by the Groundfish Plan Team. Each chapter contains estimates of all annual harvest specifications except TAC, all reference points needed to compute such estimates, and all information needed to make annual status determinations with respect to "overfishing" and "overfished. The NPFMC harvest control system is a complex and multi- faceted suite of management measures to address issues related to sustainability, legislative mandates, and quality of information. The tier system specifies the maximum permissible Allowable Biological Catch (ABC) and of the

		Overfishing Level (OFL) for each stock in the complex (usually individual species but sometimes species groups). The EBS pollock stock in Alaska is categorized as tier 1a while the GOA pollock and AI stocks are categorized as tier 3. For Tier 1 stocks, reliable estimates are available of B and BMSY, and a reliable probability density function is available for FMSY. For Tier 3 stocks, the spawner-recruit relationship is uncertain, so that MSY cannot be estimated with confidence. Hence, a surrogate based on F40% is used, following findings in the scientific literature in the 1990s. For Tier 3 stocks, the MSY proxy level is defined as B35%. Stocks in tiers 1-3 are further categorized (a) (b) or (c) based on the relationship between B and BMSY (or proxy), with (a) indicating a stock where biomass is above BMSY (or proxy), (b) indicating a stock where biomass is below BMSY but above (0.05 x BMSY), and (c) indicating a stock where biomass is below (0.05 x BMSY). The category assigned to a stock determines the method used to calculate ABC and OFL.
7: Precautionary approach	High	There are three core components to the application of the precautionary approach in Alaskan groundfish fisheries. Firstly, the FMP for each management area sets out an Optimum Yield (OY) for the groundfish complex as a whole, which includes pollock along with the majority of targeted groundfish species. The second component is the tier system, which assigns each groundfish stock to a tier according to the level of scientific understanding, data available and uncertainty associated with the fishery. Each tier has an associated set of management guidelines, particularly in relation to calculating the level of catch permitted. The more data-deficient a stock, the higher the tier's number, and the more conservatively catch limits are set. At present the GOA and AI pollock fisheries are assigned to tier 3 and the EBS pollock fishery to tier 1. The third component is the Annual Catch Limit (ACL), Overfishing Limit (OFL), Acceptable Biological catch (ABC) and Total Allowable Catch (TAC) system. ACL is the level of annual catch of a stock or stock complex that serves as the basis for invoking accountability measures. OFL is the limit reference point of annual catch after which overfishing is determined to be occurring. For Alaska groundfish stocks, OFL is equal to the expected catch that would occur at the rate (or proxy thereof) which is estimated to provide the maximum sustainable yield (Fmsy). ABC is a recommended level of annual catch that accounts for the scientific uncertainty in the estimate of OFL and any other scientific uncertainty. TAC is the annual catch target for a stock or stock complex, derived from the ABC by considering social and economic factors and management uncertainty (i.e., uncertainty in the ability of managers to constrain catch so the ACL is not exceeded, and uncertainty in quantifying the true catch amount).
8: Management measures	High	The Magnuson Stevens Act is the federal legislation that defines how fisheries off the United States EEZ are to be managed. From this legislation and NPFMC objectives, the management system for the Alaska groundfish fisheries has developed into a complex suite of measures comprised of harvest controls—e.g., OY, TAC, ABC, OFL,

		ACL—effort controls (limited access, licenses, cooperatives), time and/or area closures (habitat protected areas, marine reserves), by-catch controls (PSC limits, Maximum Retainable Allowances (MRA), gear modifications, retention and utilization requirements), observers, monitoring and enforcement programs, social and economic protections, and rules responding to other constraints (e.g., regulations to protect Steller sea lions (SSL)). The NPFMC harvest control system is complex and multi-faceted in order to address issues related to sustainability, legislative mandates, and quality of information.
9: Management measures to produce maximum sustainable levels	High	The NPFMC harvest control system is complex and multi-faceted in order to address issues related to sustainability, legislative mandates, and quality of information. The rigorous process in place for over 30 years ensures that annual quotas are set at conservative, sustainable levels for all managed groundfish stocks. Model projections indicate that the pollock stocks in Alaska is neither overfished nor approaching an overfished condition. The Maximum Sustainable Yield (MSY), defined in the BSAI and GOA groundfish FMPs, is the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological and environmental conditions, fishery technological characteristics (e.g. gear selectivity), and distribution of catch among fleets. The MSY allows defining the reference points used to manage the groundfish fisheries such that TAC $\leqslant$ ABC <OFL.
10: Appropriate standards of fisher's competence	High	Alaska enhances through education and training programs the education and skills of fishers and, where appropriate, their professional qualifications. Records of fishers are maintained along with their qualifications.
11: Effective legal and administrative framework	High	The Alaska pollock fishery fleet uses enforcement measures including vessel monitoring systems (VMS) on board vessels, USCG boardings and inspection activities. The U.S. Coast Guard (USCG) and NMFS Office of Law Enforcement (OLE) enforce fisheries laws and regulations. OLE Special Agents and Enforcement Officers conduct complex criminal and civil investigations, board vessels fishing at sea, inspect fish processing plants, review sales of wildlife products on the internet and conduct patrols on land, in the air and at sea. NOAA Agents and Officers can assess civil penalties directly to the violator in the form of Summary Settlements (SS) or can refer the case to NOAA's Office of General Counsel for Enforcement and Litigation (GCEL). State regulations are enforced by the Alaska Wildlife Troopers (AWT).
12: Framework for sanctions	High	The Magnuson-Stevens Act (50CFR600.740 Enforcement policy) provides four basic enforcement remedies for violations: 1) Issuance of a citation (a type of warning), usually at the scene of the offense, 2) Assessment by the Administrator of a civil money penalty, 3) for certain violations, judicial forfeiture action against the vessel and its catch, 4) Criminal prosecution of the owner or operator for some offenses. In some cases, the Magnuson-Stevens Act requires permit sanctions following the assessment of a civil penalty or the imposition of a criminal fine. The 2011 Policy for the Assessment of Civil Administrative Penalties and Permit Sanctions issued by NOAA Office of the General Counsel – Enforcement and Litigation, provides guidance for the assessment of civil

		administrative penalties and permit sanctions under the statutes and regulations enforced by NOAA. The Alaska Wildlife troopers enforce state water regulations with a number of statutes that enable the government to fine, imprison, and confiscate equipment for violations and restrict an individual's right to fish if convicted of a violation.
13: Impacts of the fishery on the ecosystem	High	The NPFMC, NOAA (NMFS) and other relevant organisations continue to closely monitor the fisheries and their respective environmental effects. Appropriate significance appears to be allocated to issues of concern (including in response to stakeholder concerns – such as effects on salmon bycatch populations, endangered Stellar sea lions and effects on habitat). Fishery management plans, Environmental Impact Assessments and other assessments are kept under review. No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses. Full conformance continues against all supporting clauses.

1.2 Audit conclusion

Fishery	Status of certification	Comment
The Alaska pollock (Gadus chalcogrammus) commercial fisheries, under federal [National Marine Fisheries Service (NMFS)/North Pacific Fishery Management Council (NPFMC)] and state [Alaska Department of Fish and Game (ADFG) & Board of Fisheries (BOF)] management, fished by the directed fishery with pelagic trawl gear [and other gear types (jig, longline, pot, bottom trawl) that can legally land by-caught pollock] within Alaska's 200 nm EEZ.	**Certified**	Following the results of the 5th surveillance audit finalized in June 2017, the assessment team concludes that the RFM Certificate for this fishery shall remain active until the certificate expiry date of 5th December 2017. The fishery has entered the re-assessment process on the 16th May 2017 and it is expected that the fishery will be covered by the new certificate when the current certificate expires.

2 GENERAL INFORMATION

Table 1 General information

<table>
<tr><td>Fishery name</td><td colspan="3">Alaska Pollock Fishery</td></tr>
<tr><td>Unit(s) of Assessment (UoA)</td><td colspan="3">Applicant Group: Alaska Pollock Fishery Client Group
Product Common Name (Species): Alaska Pollock (Gadus chalcogrammus)
Geographic Location: Gulf of Alaska and Bering sea & Aleutian Islands within Alaska jurisdiction (200 nautical miles 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; North Pacific Fishery Management Council; Alaska Department of Fish and Game; Alaska Board of Fisheries</td></tr>
<tr><td>Date certified</td><td>6 December 2011</td><td>Date of certificate expiry</td><td>5 December 2017</td></tr>
<tr><td>Surveillance type</td><td colspan="3">Off-site surveillance/document review</td></tr>
<tr><td>Date of surveillance audit</td><td colspan="3">1-16 June 2017</td></tr>
<tr><td rowspan="5">Surveillance stage</td><td colspan="2">1st Surveillance</td><td></td></tr>
<tr><td colspan="2">2nd Surveillance</td><td></td></tr>
<tr><td colspan="2">3rd Surveillance</td><td></td></tr>
<tr><td colspan="2">4th Surveillance</td><td></td></tr>
<tr><td colspan="2">Other (expedited etc)</td><td>X: 5th surveillance</td></tr>
<tr><td>Surveillance team</td><td colspan="3">Lead assessor: Anna Kisseleva
Assessor(s): Andrew Hough, Bill Brodie, Paul Knapman</td></tr>
</table>

This report contains the findings of the fifth RFM Fisheries surveillance audit (expedited audit) conducted for the Alaska pollock fishery during 1-16 June 2017.

The Alaska Responsible Fishery Management programme is a voluntary program that has been developed by ASMI to provide an independent, third- party certification that can be used to verify that these fisheries are responsibly managed according to the Alaska RFM standard.

The Alaska RFM Certification programme uses the fundamental clauses of the Alaska RFM Conformance Criteria Version 1.3 and is in accordance with ISO 17065 accredited certification procedures. The assessment is based on the fundamental clauses specified in the Alaska RFM Conformance Criteria. It is based on six major components of responsible management derived from the FAO Code of Conduct for Responsible Fisheries (1995) and Guidelines for the Eco-labeling of products from marine capture fisheries (2009). The fundamental clauses are:

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

The purpose of this annual Surveillance Report is:

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

3 ASSESSMENT TEAM DETAILS

Anna Kiseleva
DNV GL Lead Assessor:

Anna is a senior assessor and a Global service responsible for MSC Fisheries and RFM certification schemes at DNV GL Business Assurance. She holds MSc degree in International fisheries management from the University of Tromsø and MSc degree in Business Management from Murmansk State Technical University. She has over 10 years of experience in the global seafood industry incl. assessment services, consultancy and project management. She is an experienced project management with proven ability to lead cross-disciplinary teams. She has been involved in the delivery of the Fisheries assessment services since 2008.

Andrew Hough
Main area of responsibility
Fundamental clause F (Serious Impacts of the Fishery on the Ecosystem):

Following three years PhD research on crustacean ecology, Andy has worked in the field of marine research and management for over twenty years, including marine conservation biology, fishery impacts on marine ecosystems, marine and coastal environmental impact assessment and policy development.
Andrew has been active in the development of Marine Stewardship Council certification since 1997, when involved in the pre-assessment of the Thames herring fishery. He was a founding Director of Moody Marine and led the establishment of Moody Marine fishery certification systems. He has also worked with MSC on several specific development projects, including those concerned with the certification of small scale/data deficient fisheries. He has been Lead Assessor on many fishery assessments to date. This has included Groundfish (e.g. cod, haddock, pollock, hoki, hake, flatfish), Pelagics (e.g. tuna species, herring, mackerel, sprat, krill, sardine) and shellfish (molluscs and crustacea); included evaluation of the environmental effects of all main gear types and considered many fishery administrations including the North Atlantic, South Atlantic, Pacific, Southern Ocean and in Europe, North America, Australia and New Zealand, Japan, China, Vietnam and Pacific Islands. He has recently acted solely as an expert team member of Principle 2 inputs of European inshore fisheries and Falkland Islands Toothfish. Andrew has also been involved in the development of certification schemes for individual vessels (Responsible Fishing Scheme) and evaluation of the Marine Aquarium Council standards for trade in ornamental aquarium marine species. Consultancy services have included policy advice to the Association of Sustainable Fisheries, particularly with regard to the implications of MSC standard development, and assistance to fisheries preparing for, or engaged in, MSC assessment.

William (Bill) Brodie
Main area of responsibility
Fundamental clause B (Science and Stock Assessment activities) and C (The precautionary approach) and D (Management measures):

Bill Brodie is an independent fisheries consultant with previously, a 36-year career with Science Branch of Fisheries and Oceans Canada (DFO, Newfoundland and Labrador Region). He has a BSc in Biology from Memorial University of Newfoundland and Labrador. For the last twelve years with DFO he

worked as Senior Science Coordinator/Advisor on Northwest Atlantic Fisheries Organization (NAFO) issues, serving as chair of the Scientific Council of NAFO and chairing 3 of its standing committees. As a stock assessment biologist, he led assessments and surveys for several flatfish species and stocks, including American plaice, Greenland halibut, yellowtail and witch flounders. These include the largest stocks of flatfish in the NW Atlantic. He also participated in assessments of flatfish, gadoid, and shrimp stocks in the NE Atlantic and North Sea. Bill has participated in over 30 scientific research vessel surveys on various Canadian and international ships, and he has over 200 publications in the scientific and technical literature, primarily on flatfish stock assessment. He has been involved with fishery managers and the fishing industry on a variety of issues, including identification of ecologically sensitive areas, and developing rebuilding plans for groundfish under a Precautionary Approach. Since retirement from DFO, Bill has been contracted to serve as an assessor on several FAO-based Responsible Fisheries Management certification assessment and surveillance audits for Alaskan stocks including Pacific cod, halibut, sablefish, pollock, and flatfish. He has also provided peer review for an MSC certification assessment for a redfish stock in the Grand Banks area.

Paul Knapman
Main area of responsibility
Fundamental clause A (The Fisheries Management System) and E (Implementation monitoring and control):

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 programme. He developed an extensive programme 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 organisation in England, with responsibility for managing an extensive area of inshore fisheries on the North Sea coast. The organisations 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 fisheries 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 IUU 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 has been involved as a lead assessor, team member and technical advisor/reviewer for more than 50 different fisheries. Paul returned to consultancy in 2015.

4 BACKGROUND TO THE FISHERY

4.1 Fishery description

No material changes occurred within this fishery since the last surveillance audit carried out in January 2016. All information on this fishery could be obtained from the original full-assessment report and subsequent surveillance reports available for the download at: http://www.alaskaseafood.org/rfm-certification/certified-fisheries/alaska-pollock/. Catches taken in this fishery are aligned with the numbers from the previous years (2015-2016).

4.2 Original Assessment and Previous surveillance audits

The Alaska Bering Sea/Aleutian Islands and Gulf of Alaska Pollock fisheries were first certified under the requirements of the Alaska Responsible Fisheries Management standard v1.2 on 6th of December 2011. The initial certification and four annual surveillance audits were carried out by the certification body Global Trust (GT).

18. November 2016, the certificate for this fishery was transferred from GT to the DNV GL and the validity of the Alaska Pollock certificate (Certificate No.:209971-2016-AQ-NOR-ASI) was extended from 6th December 2016 until 5th December 2017. This extension was done to allow the re-assessment to occur without the certificate expiring while the re-assessment process is on-going. In order to ensure that the client fishery stays in full compliance with the standard while the fishery is undergoing re-assessment, DNV GL carried out a remote desk-top review surveillance of the fishery. This review is considered as 5th annual surveillance audit. The certificate transfer and the fifth surveillance audit did not result in any changes in the compliance of the fishery with the RFM standard and the certificate remains valid until the extended expiry date of 5 December 2017. No non-conformities were raised as the result of the fifth surveillance audit and the fishery will proceed to the full re-assessment against the new version of the Alaska Responsible Fisheries Management standard v1.3.

5 THE ASSESSMENT PROCESS

5.1 Meetings attended

No on-site stakeholder consultancy was carried out during the fifth surveillance audit. DNV GL has carefully reviewed the full-assessment report and all subsequent surveillance reports and concluded that the low risk nature of the fishery, absence of conditions and history of excellent compliance with the rules and regulations in the client operations do allow for the remote surveillance audit with the desk-top review of new information only.

5.2 Stakeholder input

The annual surveillance audit for this fishery was publicly announced on 16th of May 2017. No stakeholder input was received by the assessment team.

6 ASSESSMENT OUTCOME SUMMARY/ FUNDAMENTAL CLAUSES SUMMARIES

6.1 The Fisheries Management System (A)

Fundamental Clause 1.

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

No. supporting clauses	17
Applicable supporting clauses	9
Non-applicable supporting clauses	8
Overall level of conformity	High
Non-conformance	0

Summary of Changes and Evidence of continuous compliance.

Supporting clause
1.1 There shall be an effective legal and administrative framework established at local and national level appropriate for fishery resource conservation and management.

Summarised evidence:
The principle legislative instrument for fisheries management in the U.S. is the MSA, as amended 2007. The MSA, sets ten National Standards (NS) for fishery conservation and management (16 U.S.C. § 1851), with which all FMPs must be consistent[1].

The NMFS implements the MSA and the National Standards. The procedures on how NMFS follows the NSs are published in the US Federal Register at 50 CFR Part 600 subpart D[2]. The NMFS is also charged with carrying out the federal mandates of the U.S. Department of Commerce with regard to commercial fisheries such as approving and implementing FMPs and FMP amendments.

The NPFMC[3] is one of eight regional councils established by the MSA to manage fisheries in the 200-mile Exclusive Economic Zone (EEZ). The NPFMC is authorized to prepare and submit to the Secretary of Commerce for approval, an FMP and any necessary amendments for each fishery under its authority that requires conservation and management actions. The NPFMC primarily manages groundfish in the GoA and BSAI, targeting cod, pollock, flatfish, mackerel, sablefish, and rockfish species. The NPFMC conducts public hearings so as to allow all interested persons an opportunity to be heard in the development of FMPs and amendments, and reviews and revises, as appropriate, the assessments and specifications with respect to the optimum yield from each fishery.

The NPFMC also works very closely with the ADFG[4] and the BOF[5] to coordinate management programs in federal and state waters (0-3 nm from shore). Many fishery resources are harvested in waters under both state and federal jurisdiction. As such, the NPFMC and state work together to address habitat concerns, catch limits, allocation issues, and other management issues through coordination meetings and delegation of management oversight to one agency or the other.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:

[1] http://www.nmfs.noaa.gov/sfa/laws_policies/msa/.
[2] https://www.law.cornell.edu/cfr/text/50/part-600/subpart-D
[3] https://www.npfmc.org
[4] http://www.adfg.alaska.gov
[5] http://www.adfg.alaska.gov/index.cfm?adfg=fisheriesboard.main

1.2 Management measures shall take into account the whole stock unit over its entire area of stock distribution.

1.2.1 The area through which the species migrates during its life cycle shall be considered by the management system.

1.2.2 The biological unity and other biological characteristics of the stock shall be considered within the management system

1.2.3 All fishery removals and mortality of the target stock(s) shall be considered by management.

1.2.4 Previously agreed management measures established and applied in the same region shall be taken into account by management.

Summarised evidence:
Pollock are broadly distributed in the North Pacific and are particularly prevalent in the Bering Sea[6]. NMFS, through the Alaska Fisheries Science Centre[7] (AFSC), in Seattle, and the Kodiak Fisheries Research Centre[8] (KFRC), generate the scientific information and analysis necessary for the conservation, management, and utilization of the region's groundfish resources. The biological unity and other biological characteristics of the stock are considered within the management system. In the US Bering Sea, three pollock stocks[9] have been identified and are managed within the framework of the NPFMCs BSAI Groundfish FMP[10].

In the Russian portion of the Bering Sea, two pollock stocks are identified, a western Bering Sea stock and a northern stock. There is some indication (based on NMFS surveys) that the fish in the northern region may be a mixture of western and eastern Bering Sea pollock with the latter

The US and Russia cooperate through a bilateral Intergovernmental Consultative Committee (ICC) fisheries forum[11], established following the signing of the US - Soviet Comprehensive Fisheries Agreement in 1988[12]. The objectives of the Agreement include maintaining a mutually beneficial and equitable fisheries relationship through cooperative scientific research and exchanges[13].

A separate pollock stock is identified in the GoA and is managed within the framework of the GOA Groundfish FMP[14]. The separation of pollock in Alaskan waters into eastern Bering Sea (EBS) and GoA stocks is supported by analysis of larval drift patterns from spawning locations, genetic studies of allozyme frequencies, mitochondrial DNA variability, and microsatellite allele variability.

Within US state waters, ADFG permit a 'parallel fishery'[15] (where the state allows fishing against the federal total allowable catch (TAC)) around Kodiak Island, the Chignik Area and the South Alaska Peninsula[16]. Also within PWS, the ADFG have a pollock management plan (5 ACC 28.263)[17] which is based on their surveys of the pollock in PWS and setting their own harvest strategy, accordingly.

Pollock are also found in international waters where no country has single jurisdiction. The Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea[18] ('The Donut Hole') is responsible for the conservation, management, and optimum utilisation of pollock resources in the high seas area of the Bering Sea. The pollock resource in the Convention Area declined to very low levels by the early 1990s. Member states (China, Japan, Korea, Poland, Russia, and the United States) have maintained a moratorium on commercial pollock fishing in the Convention Area since 1993 in an effort to allow the stock to rebuild. Despite the moratorium, pollock abundance in international areas remains at low levels.

6 http://www.fishwatch.gov/profiles/alaska-pollock
7 https://www.afsc.noaa.gov/default.htm
8 https://www.afsc.noaa.gov/kodiak/kodiakLab_HOME.php
9 https://www.afsc.noaa.gov/refm/stocks/assessments.htm
10 https://www.npfmc.org/wp-content/PDFdocuments/fmp/BSAI/BSAIfmp.pdf
11 https://www.state.gov/e/oes/ocns/fish/bilateral/
12 http://www.fisheries.noaa.gov/ia/agreements/bilateral_arrangements/russia/us_russia.pdf
13 http://www.nmfs.noaa.gov/ia/slider_stories/2013/04/us_russia.html
14 https://www.npfmc.org/wp-content/PDFdocuments/fmp/GOA/GOAfmp.pdf
15 http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyfisherygroundfish.main
16 http://www.adfg.alaska.gov/index.cfm?adfg=walleyepollock.management
17 http://www.touchngo.com/lglcntr/akstats/aac/title05/chapter028/section263.htm
18 https://www.afsc.noaa.gov/refm/cbs/convention_description.htm

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
1.3 Where trans-boundary, straddling or highly migratory fish stocks and high seas fish stocks are exploited by two or more States, the Applicant Management Organizations concerned shall cooperate and take part in formal fishery commission or arrangements that have been appointed to ensure effective conservation and management of the stock/s in question.

1.3.1 Conservation and management measures established for such stock within the jurisdiction of the relevant States for shared, straddling, high seas and highly migratory stocks, shall be compatible. Compatibility shall be achieved in a manner consistent with the rights, competences and interests of the States concerned.

Summarised evidence:
The US and Russia cooperate through the ICC as detailed in 1.2 above.

NOAA and the Federal Agency for Fisheries of the Russian Federation signed a Joint Statement on Enhanced Fisheries Cooperation (April 29, 2013)[19]. This document identifies three major areas of future cooperation: 1) combating global Illegal Unreported and Unregulated (IUU) fishing; 2) collaborating on science and management of Arctic Ocean living marine resources; and 3) advancing conservation efforts in the Ross Sea region of Antarctica.

The Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea ('The Donut Hole') is responsible for the conservation, management, and optimum utilisation of pollock resources in the high seas area of the Bering Sea, as detailed in 1.2 above.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
1.4 Organizations within the Management System cooperate with neighbouring coastal states with respect to common and shared fishery resources for their conservation and for the conservation of the environment.

1.4.1 A state member/participant of a sub-regional or regional fisheries management organization are/may be present in the area in question. These 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/arrangement.

1.4.2 States seeking to take 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

Summarised evidence:
The US and Russia cooperate through the ICC as detailed in 1.2 and 1.3 above.

In international waters, a cooperative agreement has been established between Russia, US, China, Japan, South Korea, and Poland, see 1.2 above.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
1.5 The fishery's management system shall actively foster cooperation between States with regard to:

[19] http://www.nmfs.noaa.gov/ia/slider_stories/2013/04/statement_signed.pdf

- **Information gathering and exchange**
- **Fisheries research**
- **Fisheries management**
- **Fisheries Development**

Summarised evidence:
The US and Russia have routinely allowed scientists from the other country onboard research vessels[20] and work through the ICC with respect to management and fisheries development.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
1.6 States 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 countries 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 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.

Summarised evidence:
Specific costs incurred during the management, research and enforcement of the groundfish stocks in the BSAI and GoA are reported in the BSAI and GoA Groundfish FMPs (see section 6.2.1 of the 2017 BSAI and GoA FMPs). Generally, funding is through Congressional appropriations.

The American Fisheries Act (AFA) 1998[21] [22], tightened the US ownership requirements of the BSAI pollock fleet. All AFA vessels must be US owned and licenced.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
1.7 Procedures shall be in place to keep the efficacy of current conservation and management measures and their possible interactions under continuous review to revise or abolish them in the light of new information.

- **Review procedures shall be established within the management system.**
- **A mechanism for revision of management measures shall exist.**

Summarised evidence:
The pollock fishery is managed under the NPFMC's BSAI and GoA Groundfish FMPs. The FMPs state that the Council will:

- Maintain a continuing review of the fisheries managed under this FMP, and all critical components of the FMP will be reviewed periodically;
- Annually review the objectives in the management policy statement;
- Conduct a complete review of EFH once every 5 years, and in between will solicit proposals on Habitat Areas of Particular Concern and/or conservation and enhancement measures to minimize potential adverse effects from fishing.

[20] https://data.noaa.gov/dataset/acoustic-trawl-survey-of-walleye-pollock-on-the-u-s-and-russian-bering-sea-shelf-dy1207-ek60

[21] https://www.marad.dot.gov/wp-content/uploads/pdf/American_Fisheries_Act.pdf

[22] https://alaskafisheries.noaa.gov/fisheries/AFA-pollock

The NPFMC have a "Call for Proposals"[23] process where stakeholders and the interested public can request review or revision of existing management measures. The BOF also provides opportunity for input through public notification and their website[24] of upcoming meetings and opportunities to input into the management process.

MSA is periodically revised and reauthorized (i.e. Sustainable Fisheries Act[25] added 3 standards to MSA).

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
1.8 The management arrangements and decision making processes for the fishery shall be organized in a transparent manner.

- **Management arrangements**
- **Decision-making**

Summarised evidence:

The NPFMC, NMFS[26] and ADFG websites provide considerable and, generally, easily accessible information, including meeting information, minutes, records of decisions.

The NPFMC and the BOF encourage stakeholder participation. The NPFMC meetings can take place in different venues in Alaska and the BOF meets in communities throughout coastal Alaska. Anyone may submit regulatory proposals, which are given due consideration by both the NPFMC and the BOF. Rules impose transparency so that all Board and Council members discussions are open to the public.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
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.

Summarised evidence:
The US has implemented[27] the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas[28] ("Compliance Agreement") within the US High Seas Fishing Compliance Act (16 USC 5501 *et Seq*)[29] and regulations promulgated by NOAA Fisheries.

High Sea fishing for Alaskan pollock may only occur in the Donut Hole but international agreement between member countries has banned fishing in this area of the Bering Sea.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally

[23] https://www.npfmc.org/?s=call+for+proposal
[24] http://www.adfg.alaska.gov/index.cfm?adfg=process.comments
[25] http://www.nmfs.noaa.gov/sfa/laws_policies/msa/sfa.html
[26] http://www.nmfs.noaa.gov
[27] http://www.nmfs.noaa.gov/ia/agreements/LMR%20report/agreement_to_promote_compliance_.pdf
[28] http://www.fao.org/docrep/MEETING/003/X3130m/X3130E00.HTM
[29] http://www.nmfs.noaa.gov/ia/permits/highseas.html

affect performance against the confidence ratings for any supporting clauses.
Conformance: Full conformance continues.

Fundamental Clause 2.

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

No. supporting clauses	16
Applicable supporting clauses	15
Non-applicable supporting clauses	1
Overall level of conformity	High
Non-conformance	0

Summary of Changes and Evidence of continuous compliance.

Supporting clause:

2.1 An appropriate policy, legal and institutional framework shall be adopted in order to achieve sustainable and integrated use of living marine resources, taking into account the fragility of coastal ecosystems, the finite nature of their natural resources and the needs of coastal communities.

2.1.1 States shall develop, as appropriate, institutional and legal frameworks in order to determine the possible uses of coastal resources and to govern access to them taking into account the rights of coastal fishing communities and their customary practices to the extent compatible with sustainable development.

2.1.2 In setting policies for the management of coastal areas, States shall take due account of the risks and uncertainties involved.

Summarised evidence:
In managing the Alaska pollock fishery, the NMFS, in connection with the NPFMC and ADFG, participate in coastal area management-related issues through processes established by the National Environmental Policy Act (NEPA)[30]. NEPA requires that all federal agencies' funding or permitting decisions be made with full consideration of the impact to the natural and human environment. An environmental review process is required that includes a risk evaluation and evaluation of alternatives including a, "no action" alternative. All of the NPFMC proposed regulations and the FMPs include NEPA considerations[31].

The management organizations within Alaska and their management processes take into account the rights of coastal fishing communities and their customary practices to the extent compatible with sustainable development[32] [33].

The NPFMC system was designed so that fisheries management decisions were made at the regional level to allow input from affected stakeholders. NPFMC meetings are open, and public testimony is taken on issues prior to deliberations and final decisions. Public comments are also taken at all Advisory Panel and Scientific and Statistical Committee meetings.

The BOF main role is to conserve and develop the fishery resources of the state. The BOF is charged

[30] https://www.epa.gov/nepa
[31] https://www.epa.gov/nepa/fishery-management-guidance-national-environmental-policy-act-reviews
[32] https://www.npfmc.org/summary-reports/
[33] https://www.npfmc.org/wp-content/PDFdocuments/resources/MSA40Booklet.pdf

with making allocative decisions, and ADFG is responsible for management based on those decisions. The BOF meets four to six times per year in communities around the state to consider proposed changes to state fisheries regulations. The board uses the biological and socio-economic information provided by ADFG and public comment, as well as guidance from the Alaska Department of Public Safety and Alaska Department of Law when creating regulations

The Community Development Quota (CDQ) Program[34] was created by the NPFMC in 1992 to provide western Alaska communities an opportunity to participate in the BSAI fisheries that had been foreclosed to them because of the high capital investment needed to enter the fishery. The purpose of the CDQ Program is (i) to provide eligible western Alaska villages with the opportunity to participate and invest in fisheries in the Bering Sea and Aleutian Islands Management Area; (ii) to support economic development in western Alaska; (iii) to alleviate poverty and provide economic and social benefits for residents of western Alaska; and (iv) to achieve sustainable and diversified local economies in western Alaska. The program involves eligible communities who have formed six regional organizations, referred to as CDQ groups. There are 65 communities within a fifty-mile radius of the Bering Sea coastline who participate in the program. The CDQ program allocates a percentage of the BSAI quotas to CDQ groups, including pollock, halibut, Pacific cod, crab and bycatch species. The program is reviewed every ten years[35].

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
2.2 Representatives of the fisheries sector and fishing communities shall be consulted in the decision-making processes involved in other activities related to coastal area management planning and development.

Summarised evidence:
As indicated in 2.1 above, all stakeholders are provided with the opportunity to input into the decision-making processes through the NPFMC and BOF processes.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
2.3 Fisheries practices that avoid conflict among fishers and other users of the coastal area shall be adopted.

2.3.1 Procedures and mechanisms shall be established at the appropriate administrative level to settle conflicts which arise within the fisheries sector and between fisheries resource users and other users of the coastal area.

Summarised evidence:
The pollock resource is allocated among user groups in accordance with the American Fisheries Act[36] (AFA). The AFA eliminated the race for pollock through the establishment of cooperatives[37] [38] with specific provisions for their allocations, structure, and participation by catcher vessels and processing plants, as well as annual reporting requirements and excessive share limits. In response to a directive in the AFA (section 211), the NPFMC added measures to protect other fisheries from adverse effects arising from the exclusive pollock allocation.
Action has been taken within the BASI and GoA pollock fisheries to minimize the bycatch of Chinook salmon[39] [40], which is a species of particular importance to subsistence and artisanal fishers. This has

[34] https://alaskafisheries.noaa.gov/fisheries/cdq
[35] https://alaskafisheries.noaa.gov/fisheries/cdq-review
[36] https://www.marad.dot.gov/ships-and-shipping/american-fisheries-act/
[37] https://www.npfmc.org/american-fisheries-act-afa-pollock-cooperatives/
[38] https://alaskafisheries.noaa.gov/fisheries/AFA-pollock
[39] https://alaskafisheries.noaa.gov/fisheries/chinook-salmon-bycatch-management
[40] https://www.npfmc.org/salmon-bycatch-overview/bering-sea-chinook-salmon-bycatch/

presented challenges to managers and industry alike and various mandatory and voluntary management approaches have been used, e.g. Prohibited Species Catch (PSC) limits, salmon excluder devices and "Rolling Hotspots", whereby, industry members provide each other real-time salmon bycatch information so that they can avoid areas of high risk of Chinook salmon bycatch. Most recently, in 2016, Amendment 110[41] of the BSAI FMP has been adopted and puts in place a salmon bycatch avoidance program which strengthens the approach that has been taken to date.

In order to avoid PSC limits hindering groundfish fisheries, Amendment 103[42] of the GoA FMP is going through the regulatory process, if adopted it will allow the reallocation of unused PSC Chinook salmon within and among specific trawl sectors in the Central and Western GoA, based on specific criteria and within specified limits.

The NEPA process is intended to resolve potential conflicts among users before project approvals are given. Conflict resolution mechanisms include both administrative (through governmental agencies) and legal (through courts of law) procedures. However, in most cases project approvals are withheld until substantive conflicts are resolved.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
2.4 States 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.

2.4.1 The public shall be kept aware on the need for the protection and management of coastal resources and the participation in the management process by those affected.

Summarised evidence:
The NPFMC and BOF provide a wealth of information on their websites, including regulations related to the fisheries. For more remote areas, radio updates are provided, e.g. notice of fishery closure. The agencies public meetings and process ensure awareness and input into the decisions for conservation and management measures and the outcomes.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:

2.5 The economic, social and cultural value of coastal resources shall be assessed in order to assist decision-making on their allocation and use.

Summarised evidence:
As indicated under 2.1.1 above the CDQ program provides an example of how the management system takes account of the allocation and use of coastal resources with respect to their economic, social and cultural value.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.
Supporting clause:
2.6 In accordance with capacities, measures shall be taken to establish or promote systems research and monitoring of the coastal environment as part of the coastal management process using physical, chemical, biological, economic, social, legal and

[41] https://www.federalregister.gov/documents/2016/06/10/2016-13697/fisheries-of-the-exclusive-economic-zone-off-alaska-bycatch-management-in-the-bering-sea-pollock
[42] https://www.regulations.gov/document?D=NOAA-NMFS-2016-0023-0012

institutional aspects.

2.6.1 States shall promote multi-disciplinary research in support and improvement of coastal area management, in particular on its environmental, biological, economic, social, legal and institutional aspects.

Summarised evidence:
A considerable amount of monitoring of the coastal environment in Alaska is performed by multiple federal and state agencies, e.g. NMFS, ADFG, US Forest Service[43], US. Fish and Wildlife Service (USFWS)[44], and the as well as many institutions of higher learning, e.g. the University of Alaska Institute of Marine Science[45].

Economic and social parameters are assessed by the staff of the NPFMC, NMFS and ADFG either during the NEPA review of plan amendments or during their on-going studies and evaluations.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
2.7 In the case of activities that may have an adverse transboundary environmental effect on coastal areas, States shall:

a) provide timely information and if possible, prior notification to potentially affected States.

b) consult with those States as early as possible.

Summarised evidence:
The risk of oil pollution[46] and polluted water from coastal mining tailings[47] [48] are examples of potential transboundary environmental effects on the coastal area. Coordination and development of memoranda of cooperation and a Pacific States / British Columbia Task Force to deal with oil and other pollution incidents are examples of facilitating pollution preparedness, prevention and response.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
2.8 States shall cooperate at the sub-regional and regional level in order to improve coastal area management.

Summarised evidence:
The pollock fishery in Alaska is managed by federal (NPFMC / NMFS) and state agencies (ADFG / BOF). There is regular and routine cooperation with respect to management and related research between the agencies.

A joint protocol[49] is in place between the NPFMC and ADFG which provides the intent to provide long term cooperative, compatible management systems that maintain the sustainability of the fisheries resources in federal and state waters.

Both agencies are also involved in the NEPA process as indicated in 2.1 above.
Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

[43] https://www.fs.fed.us
[44] https://www.fws.gov
[45] http://www.uaf.edu/cfos/research/institute-of-marine-scien/
[46] https://alaskafisheries.noaa.gov/sites/default/files/oilspillfactsheet1114.pdf
[47] http://www.fpir.noaa.gov/Library/HCD/EFH%20Non-fishing%20NW-SW%202003.pdf
[48] https://alaskafisheries.noaa.gov/sites/default/files/impactstoefh112011.pdf
[49] https://www.npfmc.org/wp-content/PDFdocuments/meetings/JointProtocol1209.pdf

Supporting clause:
2.9 States shall establish mechanisms for cooperation and coordination among national authorities involved in planning, development, conservation and management of coastal areas.

Summarised evidence:
Alaska has established mechanisms (e.g. NEPA process) for cooperation and coordination among national authorities involved in planning, development, conservation and management of coastal areas. See 2.1 above. Furthermore, The Alaska National Interest Lands Conservation Act[50] (ANILCA) directs federal agencies to consult and coordinate with the state of Alaska.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
2.10 States shall ensure that the authority or authorities representing the fisheries sector in the coastal management process have the appropriate technical capacities and financial resources.

Summarised evidence:
The technical capacities of the federal and state agencies involved in the management of Alaska pollock are significant, among others they can boast, internationally recognized scientists, seasoned fishery managers and policy makers and highly professional and trained enforcement officers.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
2.11 States and fisheries management organizations and arrangements shall regulate fishing in such a way as to avoid the risk of conflict among fishers using different vessels, gear and fishing methods.

The BSAI and GoA pollock fishery in federal and state waters is restricted to pelagic trawl gear only. No reports of gear conflict with other vessels or gear types targeting other species was provided for this audit.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

[50] http://dnr.alaska.gov/commis/opmp/anilca/

Fundamental Clause 3.

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

No. supporting clauses	6
Applicable supporting clauses	6
Non-applicable supporting clauses	0
Overall level of conformity	High
Non-conformance	0

Summary of Changes and Evidence of continuous compliance.

Supporting clause:

3.1 Long-term management objectives shall be translated into a plan or other management document and be subscribed to by all interested parties.

Summarised evidence
Under the MSA, the NPFMC is required to prepare and submit a FMP to the secretary of Commerce for approval for each fishery under its authority that is considered to require conservation and management. In so doing, the FMPs have to be consistent with ten national standards for fishery conservation and management (16 USC § 1851).

The NPFMC has in place groundfish FMPs in the BSAI and GoA that include the pollock fisheries. Within these FMPs there are nine management and policy objectives, that are reviewed annually.

In combination, the requirement for FMPs to be consistent with the national standards and the adoption of their management and policy objectives, the pollock fishery clearly has long-term management objectives.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:

3.2 Management measures shall provide inter alia that:

3.2.1 Excess fishing capacity shall be avoided and exploitation of the stocks remains 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 habitats and ecosystems shall be conserved and endangered species shall be protected.

3.2.5 Depleted stocks shall be allowed to recover or, where appropriate, shall be actively restored.

Summarised evidence

Managing fishing capacity
Excess fishing capacity is avoided by the AFA (1998). The Act limits participation and allocates percentages of the BSAI pollock fishery TAC among the fishery sectors (Section 206 of the Act). After deducting 10% of the TAC for the CDQ program and an incidental catch allowance, 50% of the remaining TAC is allocated to the inshore vessel sector; 40% to the catcher processor sector; and, 10%

to the mothership sector.

In 1995, the NPFMC adopted the and the Alaska Licence Limitation Program[51] (LLP). The intent of the program has been to use fishing track record to rationalise the Alaska groundfish and crab fleet by limiting the number, size and specific operation of vessels as well as eliminating latent licences.

Economic conditions
As a result, and in combination with good management practices and generally favorable environmental conditions, the Alaskan pollock fishery has largely remained economically stable since the 1990s[52] and fostered responsible fishing [53]. The longer term economic future of the fishery is also under consideration with respect to adaptation to climate change[54].

The interest of subsistence, small-scale and artisanal fisheries
The interest of subsistence, small-scale and artisanal fisheries are explicitly taken into account within the FMPs and, with respect to the BSAI and GoA pollock fisheries, action has been taken to minimise the bycatch of Chinook salmon, as a direct consequence of its importance for subsistence and artisanal fisheries (see section 2.3 above).

The ADFG management of subsistence fisheries includes coordination with the Federal Subsistence Board[55] and Office of Subsistence Management[56], which also manages subsistence uses by rural residents on federal lands and applicable waters under Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA).

Species protection
The Endangered Species Act[57] (ESA) provides for the conservation and protection of threatened and endangered species and their ecosystems. A species is considered endangered if it is in danger of extinction throughout all or a significant portion of its range. Two federal agencies, the NMFS and the USFWS, are responsible for maintaining lists of species that meet the definition of threatened or endangered under the ESA. NMFS is responsible for maintaining the endangered species list for marine species and managing those species once they are listed.

The ESA requires that management agencies identify and protect critical habitat for all endangered species (Section 7a.4 of the Act).

ADFG is responsible for determining and maintaining a list of endangered species in Alaska under AS 16.20.190[58]. Commissioners of ADFG and Natural Resources must take measures to preserve the natural habitat of fish and wildlife species that are recognized as threatened with extinction.

With respect to the pollock fishery in the BSAI and GoA, temporal and spatial restrictions on the fleets have been put in place through fishery exclusion zones around Steller sea lion rookeries or haulout sites and phased in reduction in the seasonal proportions of TAC that can be taken in critical habitat[59] [60].

Depleted stock recovery
Two status determinations are made annually for each stock or stock complex[61]: overfishing status, which describes whether catch is too high; and, overfished status, which describes whether biomass is too low.

An Over Fishing Limit (OFL) is set at the end of the preceding calendar year on the basis of the most recent stock assessment. For each stock, a determination of status with respect to overfishing is made in-season as the fisheries are monitored to prevent exceeding the TAC.

[51] https://alaskafisheries.noaa.gov/fisheries/llp
[52] http://ebooks.alaskaseafood.org/ASMI_Seafood_Impacts_Dec2015/pubData/source/ASMI%20Alaska%20Seafood%20Impacts%20Final%20Dec2015%20-%20low%20res.pdf
[53] https://www.afsc.noaa.gov/Education/factsheets/10_Wpoll_FS.pdf
[54] https://www.afsc.noaa.gov/quarterly/jas2012/divrptsREFM5.htm
[55] https://www.doi.gov/subsistence/board
[56] https://www.doi.gov/subsistence
[57] http://www.nmfs.noaa.gov/pr/laws/esa/
[58] http://www.touchngo.com/lglcntr/akstats/Statutes/Title16/Chapter20/Section190.htm
[59] https://alaskafisheries.noaa.gov/fisheries/sslpm
[60] https://www.npfmc.org/protected-species/steller-sea-lions/
[61] https://alaskafisheries.noaa.gov/sites/default/files/pseis0604-app_f1.pdf

In the event that overfishing is determined to have occurred, an in-season action, an FMP amendment, a regulatory amendment or a combination of these actions will be implemented to end such overfishing immediately.

A stock or stock complex is determined to be overfished if it falls below the minimum stock size threshold (MSST). According to the National Standard Guidelines definition, the MSST equals whichever of the following is greater: One-half the Maximum Sustainable Yield (MSY) stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years, if the stock or stock complex were exploited at the Maximum Fishing Mortality Threshold (MFMT) (also called the "OFL control rule"). This is the level of mortality that is considered to jeopardise the ability of the stock or stock complex to produce MSY on a continuing basis.

Within two years of such time as a stock or stock complex is determined to be overfished, an FMP amendment or regulations will be designed and implemented to rebuild the stock or stock complex to the MSY level within a time period specified at Section 304(e)(4) of the MSA. If a stock is determined to be in an overfished condition, a rebuilding plan would be developed and implemented for the stock, including the determination of an F_{OFL} and F_{MSY} that will rebuild the stock within an appropriate time frame.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

6.2 Science and Stock Assessment Activities (B)

Fundamental Clause 4.

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

No. Supporting clauses	**14**
Supporting clauses applicable	**9**
Supporting clauses not applicable	**5**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summary of Changes and Evidence of continuous compliance.

4.1 (Incl. 4.1.1, 4.1.2) Reliable and accurate data required for assessing the status of fisheries and ecosystems - including data on retained catch of fish, bycatch, discards and waste shall be collected.

The NMFS and the ADFG collect fishery data and conduct fishery independent surveys to assess the pollock fishery and ecosystems in GOA and BSAI areas. GOA and BSAI Stock Assessment and Fishery Evaluation (SAFE) documents provide complete descriptions of data types and time series of the data collected and used in the four annual age-based assessments, used to determine stock status and harvest recommendations for EBS, GOA, AI, and Bogoslof pollock.

Reporting of commercial catch from both state and federally managed fisheries is done through the Catch Accounting System (CAS), a multi-agency (NMFS, IPHC and ADFG) system that centrally collates landings data from shore based processing and landings operations as well as retained catch

observations from individual vessels. The CAS system also provides a centralized data platform for the collation of catch (landings and discards) data from the extensive observer program. Catch and effort are recorded through the e-landing (electronic fish tickets) system and also collected by vessel captains in logbooks. Landings are verified by shore-based observers, and estimates of discards in the pollock fisheries are compiled from fishing logbooks and at-sea observer data. Catch reports for pollock in the BSAI and GOA Regions for 2016 can be found on the NMFS Alaskan fisheries website.

Fishery independent data are collected in regular surveys of both the GOA and BSAI regions. The Resource Assessment and Conservation Division (RACE) of the AFSC is responsible for surveys in the federally managed fisheries (3-200 nm) while the ADFG undertake coastal surveys and collect data from state managed fisheries (0-3 nm). The various fishery independent surveys are used in the stock assessments and provide indices of abundance, including length and age composition data, as well as comprehensive biological information on pollock.

The Fisheries Monitoring and Analysis Division (FMA) of the NMFS monitor groundfish fishing activities in the US EEZ. FMA is responsible for the biological sampling of commercial fishery catches, estimation of catch and bycatch mortality, and analysis of fishery-dependent survey data. Data and analysis are provided to the Sustainable Fisheries Division of the Alaska Regional Office for the monitoring of quota uptake and for stock assessment, ecosystem investigations and research programs.

4.2 An observer scheme designed to collect accurate data for research and support compliance with applicable fishery management measures shall be established.

Beginning in 2013, Amendment 86 to the FMP of the BSAI and Amendment 76 to the FMP of the GOA established the new North Pacific Groundfish and Halibut Observer Program (NPGHOP). All vessels fishing for groundfish in federal waters are required to carry observers, at their own expense, for at least a portion of their fishing time. These changes were intended to increase the statistical reliability of data collected by the program, address cost inequality among fishery participants, and expand observer coverage to previously unobserved fisheries. Observer coverage in the EBS Pollock fishery has been at 100% (often with 2 observers per vessel) for the past several years, with lower coverage rates in GOA.

Data gathered in the NPGHOP cover all biological information from commercial fisheries, including catch weights (landings and discards), catch demographics (species composition, length, sex and age) and interactions with species such as sharks, rays, seabirds, marine mammals and other species with limited or no commercial value. Observers were also assigned to monitor deliveries of pollock to obtain a count of the number of salmon caught as bycatch and to obtain genetic samples from these fish. As well as providing data for stock assessment and other scientific purposes, the observer program is also used extensively in- and post-season management. Daily reports are electronically transmitted via the CAS system and can be used as the basis to trigger closures e.g. if maximum catch allocations of target or Prohibited Species are caught. Annual reports from the Observer Program contain detailed information on fees and budgets, deployment performance, enforcement, and outreach. NMFS envisions that future reporting will expand key performance metrics to improve understanding of the Observer Program performance. NMFS has already noted progress on incorporating variances associated with catch estimates, and will continue to report as work progresses.

NMFS and the NPFMC have developed an Electronic Monitoring (EM) Strategic Plan to integrate video monitoring into the Observer Program to improve data collection. The NMFS Policy on Electronic Monitoring Technologies and Fishery Dependent Data Collection provides guidance on the adoption of electronic technology solutions in fishery-dependent data collection programs. Electronic technologies include the use of vessel monitoring systems (VMS), electronic logbooks, video cameras for electronic monitoring (EM), and other technologies that provide EM and electronic reporting (ER). The policy also includes guidance on the funding for electronic technology use in fishery-dependent data collection programs. At-sea work has proceeded under this initiative in 2015 and 2016.

4.3 (Incl. 4.3.1) Sufficient knowledge of social, economic and institutional factors relevant to the fishery in question shall be developed through data gathering, analysis and research.

4.4 States shall stimulate the research required to support national policies related to fish as food.

4.5 States shall ensure that the economic, social, marketing and institutional aspects of fisheries are adequately researched and that comparable data are generated for ongoing monitoring, analysis and policy formulation.

Economic analyses are required to varying degrees under the Regulatory Flexibility Act (RFA), the MSA, the NEPA, the Endangered Species Act, and other applicable laws. AFSC's Economic and Social Sciences

Research Program produces an annual Economic Status Report of the Groundfish fisheries in Alaska. This comprehensive report provides estimates of total groundfish catch, groundfish discards and discard rates, prohibited species catch (PSC) and PSC rates, values of catch and resulting food products, the number and sizes of vessels that participated in the groundfish fisheries off Alaska, and employment on at-sea processors. The report contains a wide range of analyses and comments on the performance of a range of indices for different sectors of the North Pacific fisheries, including Alaskan pollock, and relates changes in value, price, and quantity, across species, product and gear types, to changes in the market.

4.6 States 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.

Various technologies are employed in the pollock fisheries to reduce by-catch and discards and to minimize bottom contact. Data from the smaller scale near-shore state-managed fisheries are included in the stock assessments. The NPFMC established a Rural Outreach Committee in 2009 to improve outreach and communications with rural communities and Alaska Native entities and develop a method for systematic documentation of Alaska Native and community participation in the development of fishery management actions . The Committee is to advise the Council on how to provide opportunities for better understanding and participation from Alaska Native and rural communities; to provide feedback on community impacts sections of specific analyses, if requested; and to provide recommendations regarding which proposed Council actions need a specific outreach plan and prioritize multiple actions when necessary. Priorities of the Committee included salmon PSC reduction in EBS and GOA.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

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.

No. Supporting clauses	**11**
Supporting clauses applicable	**11**
Supporting clauses not applicable	**0**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summary of Changes and Evidence of continuous compliance.

5.1 (Incl. 5.1.1) States shall ensure that appropriate research is conducted into all aspects of fisheries including biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science. The research shall be disseminated accordingly. States shall also ensure the availability of research facilities and provide appropriate training, staffing and institution building to conduct the research, taking into account the special needs of developing countries.

Guided by MSA standards, and other legal requirements, the NMFS has a well-established institutional framework for research developed within the Alaska Fisheries Science Center (AFSC), which operates several laboratories and Divisions. The Auke Bay Laboratories conducts scientific research on fish stocks, fish habitats, and the chemistry of marine environments.

The Fisheries Monitoring and Analysis Division (FMA) monitors groundfish fishing activities in the US

EEZ off Alaska and conducts research associated with sampling commercial fishery catches, estimation of catch and bycatch mortality, and analysis of fishery-dependent data. The Resource Assessment and Engineering Division (RACE) conducts fishery surveys to measure the distribution and abundance of approximately 40 commercially important fish and crab stocks. The Resource Ecology and Fisheries Management Division (REFM) collects data to support management of Northeast Pacific and eastern Bering Sea fish and crab resources, including Pollock. REFM also produces an annual Economic Status Report, referred to under clause 4.5 above.

The Pollock Conservation Cooperative Research Center at the School of Fisheries and Ocean Sciences in University of Alaska Fairbanks was established in 2000 to improve knowledge about the North Pacific Ocean and Bering Sea through research and education, focusing on the commercial fisheries of the Bering Sea and Aleutian Islands. The Center receives extensive funding from the pollock fishing industry in Alaska, and provides grants and other funding for research on pollock and other species, as well as funding for marine education, technical training, and research in the area of marine resource economics.

5.2 (Incl. 5.2.1) The state of the stocks under management jurisdiction, including the impacts of ecosystem changes resulting from fishing pressure, pollution or habitat alteration shall be monitored.

Peer reviewed stock assessments are done annually and used as the scientific basis to set catch quotas. Scientists also evaluate how fish stocks and user groups might be affected by fishery management actions. The assessments take into account uncertainty and evaluate stock status relative to reference points in a probabilistic way. The SAFE reports (see Section 4 above for details and references to the 2016 pollock SAFE documents) are compiled annually by the BSAI and GOA Groundfish Plan teams, which are appointed by the NPFMC. The annual SAFE reports also include a volume on Ecosystem Considerations. The SAFE report provides information on the historical catch trend, estimates of the maximum sustainable yield of the groundfish complex as well as its component species groups, assessments on the stock condition of individual species groups; assessments of the impacts on the ecosystem of harvesting the groundfish complex at the current levels given the assessed condition of stocks, including consideration of rebuilding depressed stocks; and alternative harvest strategies and related effects on the component species groups.

The AFSC periodically requests a more comprehensive review of groundfish stock assessments by the Center of Independent Experts (CIE). These reviews are intended to lay a broader groundwork for improving the stock assessments outside the annual assessment cycle. The EBS Pollock assessment was reviewed by three external reviewers from the CIE during May 16-19, 2016, and their reports are available on the NMFS website . Several recommendations from this review were incorporated into the 2016 EBS pollock assessment. Similarly, the GOA pollock assessment was reviewed by CIE in 2012, and subsequent assessments of the GOA sock have addressed many of the recommendations contained in that review. The next review of the GOA pollock assessment is scheduled for 2017.

In 2016, a three species stock assessment for pollock, Pacific cod and arrowtooth flounder, was presented for the EBS Region (Holsman et al. 2016). Results are presented from models estimated and projected with and without trophic interactions. Results were compared with those from the single species pollock assessment for EBS. Results from the multi-species model show that pollock biomass remains relatively high and similar to the past 3 years, and model predictions may indicate a slight decline in total and spawning biomass in 2016. Pacific cod total biomass remains relatively high, although may be slightly lower in 2016 than 2015. Female spawning biomass continues to increase steadily after a low in 2008. Arrowtooth biomass estimates suggest declines after a peak in 2008.

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 programmes to improve understanding of the biology, environment and status of trans-boundary aquatic stocks.

The United States and Russian Federation maintain the bilateral Intergovernmental Consultative Committee (ICC) fisheries forum pursuant to the U.S.-Soviet Comprehensive Fisheries Agreement, signed on May 31, 1988. These meetings have resulted in US vessels doing acoustical surveys with Russian Federation scientists in the Federation's zone of the Bering Sea (near Cape Navarin), where a small portion of U.S. pollock moves into .

5.5 (Incl. 5.5.1 and 5.5.2) Data generated by research shall be analysed and the results of such analyses published in a way that ensures confidentiality is respected, where

appropriate.

Data collected by scientists from the many surveys and pollock fisheries are analysed and presented in peer reviewed meetings and/or in primary literature, following rigorous scientific protocols. Results of these analyses are disseminated in a timely fashion through numerous methods, including scientific publications, and as information on NMFS, ADFG, and NPFMC websites, in order to contribute to fisheries conservation and management. Confidentiality of individuals or individual vessels (e.g. in the analysis of fishery CPUE data) is fully respected where necessary.

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

5.7 In the evaluation of alternative conservation and management measures, their cost-effectiveness and social impact shall be considered.

Since its introduction in 1998, the American Fisheries Act (AFA) has governed the operation of the Alaskan pollock fisheries. The AFA affected the pollock industry through capacity reduction, increased efficiency, regulatory bycatch reduction, a higher portion of utilized fish, and higher valued products. NMFS has numerous reports on the performance of the pollock vessels operating under AFA.

The Western Alaska Community Development Quota (CDQ) Program was created by the NPFMC in 1992 to provide western Alaska communities an opportunity to participate in the BSAI fisheries that had been foreclosed to them because of the high capital investment needed to enter the fishery. The CDQ Program allocates a percentage of all Bering Sea and Aleutian Islands quotas for groundfish, prohibited species, halibut, and crab to eligible communities and the current allocation is 10 % of the pollock TAC.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continue.

6.3 The Precautionary Approach (C)

Fundamental Clause 6.

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

No. Supporting clauses	**5**
Supporting clauses applicable	**5**
Supporting clauses not applicable	**0**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summary of Changes and Evidence of continuous compliance.

6.1 (Incl. 6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.1.5) States shall determine for the stock both safe targets for management (Target Reference Points) and limits for exploitation (Limit Reference Points), and, at the same time, the action to be taken if they are exceeded.

National Standard 1 of the MSA requires that conservation and fisheries management measures prevent overfishing while achieving optimal yield for each fishery on a continuing basis. The status of US fish stocks is determined by 2 metrics. The first is the relationship between the actual exploitation

level and the overfishing level (OFL). If the exploitation level (or fishing mortality) exceeds the FOFL, the stock is considered to be subject to overfishing. The second is the relationship between the stock size and the minimum stock size threshold (MSST). If the stock size is below the MSST it is considered to be overfished. The BSAI and GOA groundfish fishery management plans[62] have pre-defined harvest control rules that define a series of target and limit reference points for pollock and other groundfish covered by these plans. Each SAFE report describes the current fishing mortality rate, stock biomass relative to the target and limit reference points. Both management plans specify the Overfishing Limits (OFL) and the Fishing mortality rate (FOFL) used to set OFL, Acceptable Biological Catch (ABC) and the fishing mortality rate (F_{ABC}) used to set ABC, the determination of each being dependent on the knowledge base for each stock. The overall objectives of the management plans are to prevent overfishing and to optimize the yield form the fishery through the promotion of conservative harvest levels while considering differing levels of uncertainty. The management plan classifies each stock based on a tier system (Tiers 1-6) with Tier 1 having the greatest level of information on stock status and fishing mortality relative to MSY considerations.
Another limit reference point used in managing groundfish in the BSAI and GOA is the optimum yield (OY). The sum of the TACs of all groundfish species (except Pacific halibut) is required to fall within a given range. The range for BSAI is 1.4 to 2.0 million t; the range for GOA is 116 to 800 thousand t. In practice, only the upper OY limit in the BSAI Region has been a factor in altering harvests.

EBS Pollock is technically a tier 1 stock and therefore the reference points are based on MSY, although recommendations are also made based on tier 3 calculations. The following table is from the 2016 SAFE[63] for EBS pollock:

	As estimated or *specified last* year for:		As estimated or *recommended this* year for:	
Quantity	2016	2017	2017	2018
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)	11,300,000 t	11,000,000 t	13,000,000 t	12,100,000 t
Projected female spawning biomass (t)	**3,540,000 t**	**3,500,000 t**	**4,600,000 t**	**4,500,000 t**
B_0	5,676,000 t	5,676,000 t	5,700,000 t	5,700,000 t
B_{MSY}	1,984,000 t	1,984,000 t	2,165,000 t	2,165,000 t
F_{OFL}	0.514	0.514	0.465	0.465
$maxF_{ABC}$	0.401	0.401	0.398	0.398
F_{ABC}	0.27	0.26	0.36	0.37
OFL (t)	3,910,000 t	3,540,000 t	3,640,000 t	4,360,000 t
maxABC (t)	3,050,000 t	2,760,000 t	3,120,000 t	3,740,000 t
ABC (t)	2,090,000 t	2,019,000 t	2,800,000 t	2,979,000 t
Status	2014	2015	2015	2016
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 estimated catches assuming 1,350,000 t used in place of maximum permissible ABC for 2017 and 2018.

The stock's female spawning biomass in 2017 is estimated to be more than double the BMSY level, there is no overfishing occurring and the stock is not overfished. To add stability in catch rates and effort, an ABC for 2017 based on the Tier 3 values (2,800,000 t) was recommended by the SAFE authors, which is well below the maximum permissible (Tier 1a) value of 3,120,000 t. The Tier 1a overfishing level (OFL) is estimated to be 3,640,000 t. These values[64] were adopted by NPFMC in its Dec. 2016 meeting, and the TAC for 2017 was set at 1,345,000 t, a very slight increase from the 2016

62 N. Pac. Fish. Manage. Coun., Fisheries Management Plans http://www.npfmc.org/fishery-management-plans/

63 Ianelli et al. 2016a. http://www.afsc.noaa.gov/REFM/Docs/2016/EBSpollock.pdf

64 http://npfmc.legistar.com/gateway.aspx?M=F&ID=ce1faaba-10a1-4e74-b852-2e9bf21d07c8.pdf

TAC of 1,340,000 t.

For AI pollock, The 2016 SAFE document[65] estimates the stock size in 2017 to be slightly above the B35% ref. point. The stock was determined to have no overfishing occurring, and to not be overfished. Under tier 3b, the recommended ABC for 2017 was 43,650 t, the value adopted by NPFMC. The 2017 TAC was set unchanged at 19,000 t, which is well above the current catch level (~ 1500 t in 2016). For Bogoslof pollock, a tier 5 assessment[66] indicated an increase in estimated survey biomass in 2016. For the stock, there was no overfishing occurring, and the recommended 2017 ABC of 60,800 0 t was adopted by NPFMC. The 2017 TAC was set unchanged at 500 t, in line with recent catches in this stock.

For GOA pollock, the assessment indicated that the stock was well above the B40% ref point, placing the stock in tier 3a. The stock is not overfished, and overfishing is not occurring. The SAFE author's 2017 ABC recommendation for pollock in the Gulf of Alaska west of 140° W lon. (W/C/WYK regions) is 203,769 t, which is a decrease of 20% from the 2016 ABC (see table below, from 2016 SAFE[67]). The SAFE authors note large decreases in pollock biomass in the 2015 and 2016 ADFG surveys as contributing to this decline, and that further declines in ABC are expected in coming years if the low recruitment continues.

Status Summary for Gulf of Alaska Pollock in W/C/WYK Areas

	As estimated or specified *last* year for		As estimated or specified *this* year for	
Quantity/Status	2016	2017	2017	2018
M (natural mortality rate)	0.3	0.3	0.3	0.3
Tier	3a	3a	3a	3a
Projected total (age 3+) biomass (t)	1,937,900	1,543,100	1,391,290	991,030
Female spawning biomass (t)	321,626	357,193	363,800	348,330
$B_{100\%}$	750,000	750,000	667,000	667,000
$B_{40\%}$	300,000	300,000	267,000	267,000
$B_{35\%}$	262,000	262,000	234,000	234,000
F_{OFL}	0.29	0.29	0.30	0.30
$maxF_{ABC}$	0.25	0.25	0.25	0.25
F_{ABC}	0.23	0.25	0.25	0.25
OFL (t)	322,858	289,937	235,807	182,204
maxABC (t)	278,385	250,544	203,769	157,496
ABC (t)	254,310	250,544	203,769	157,496
	As determined *last* year for		As determined *this* year for	
Status	2014	2015	2015	2016
Overfishing	No	n/a	No	n/a
Overfished	n/a	No	n/a	No
Approaching overfished	n/a	No	n/a	No

For both stock components in the GOA, the NPFMC adopted the recommended ABCs[68]. The 2017 TAC for the W/C/WYK area was set at 203, 769 t, a reduction from 247,952 t in 2016. The SE Outside TAC was set unchanged at 9,920 t. No overfishing is occurring in this stock component.

Conformance: Full conformance continues.

Fundamental Clause 7.

Management actions and measures for the conservation of stock and the aquatic environment shall be based on the precautionary approach. Where information is deficient a suitable method using risk

[65] Barbeaux et al. 2016. http://www.afsc.noaa.gov/REFM/Docs/2016/AIpollock.pdfhttp://www.afsc.noaa.gov/REFM/Docs/2015/AIpollock.pdf

[66] Ianelli et al. 2016b. http://www.afsc.noaa.gov/REFM/Docs/2016/BOGpollock.pdfhttp://www.afsc.noaa.gov/REFM/Docs/2015/BOGpollock.pdf

[67] Dorn et al. 2016. http://www.afsc.noaa.gov/REFM/Docs/2016/GOApollock.pdf

[68] https://npfmc.legistar.com/View.ashx?M=F&ID=4878382&GUID=F0BF2084-5136-4CFD-BB57-970AA3195A75

assessment shall be adopted to take into account uncertainty.

No. Supporting clauses	**6**
Supporting clauses applicable	**6**
Supporting clauses not applicable	**0**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summary of Changes and Evidence of continuous compliance.

7.1 (Incl 7.1.1) The precautionary approach shall be applied widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment.
7.2 (Incl 7.2.1, 7.2.2, 7.2.3) For new and exploratory fisheries, procedures shall be in place for promptly applying precautionary management measures, including catch or effort limits.

The MSA, as amended, sets out ten national standards for fishery conservation and management, with national standard 1 of the MSA requiring that conservation and fisheries management measures prevent overfishing while achieving optimal yield for each fishery on a continuing basis. The BSAI and GOA Groundfish FMPs continue to be consistent with MSA requirements in applying the Precautionary Approach (PA) to fisheries. The FAO Guidelines for the PA advocate a comprehensive management process that includes data collection, monitoring, research, enforcement, and review, prior identification of desirable (target) and undesirable (limit) outcomes, and measures in place to avoid and correct undesirable outcomes, the action to be taken when specified deviations from operational targets are observed and an effective management plan. Lastly, the FAO guidelines advocate that the absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species as well as non-target species and their environment. The overall management system for pollock in Alaska is comprehensive, the available scientific data and analyses are substantial, and as detailed in the previous sections of this report, all the elements as specified above in the FAO guidelines for the PA are present.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

6.4 Management Measures (D)

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 be based upon verifiable evidence and advice from available scientific and objective, traditional sources.

No. Supporting clauses	**10**
Supporting clauses applicable	**10**
Supporting clauses not applicable	**0**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summary of Changes and Evidence of continuous compliance.

Management measures:

8.1. (Incl 8.1.1.) Conservation and management measures shall be designed to ensure the long-term sustainability of fishery resources at levels which promote the objective of optimum utilization, and be based on verifiable and objective scientific and/or traditional sources. In the evaluation of alternative conservation and management measures, their cost-effectiveness and social impact shall be considered.

National Standard 1 of the MSA requires that conservation and fisheries management measures prevent overfishing while achieving optimal yield on a continuing basis. As noted in previous sections, the NMFS and NPFMC follow a multi-faceted PA (OFL, ABC, TAC, OY) to manage the federal pollock fisheries, based on targets, limits, and pre-defined HCRs, as well as overall ecosystem considerations (e.g. the OY limits). The objectives are spelled out clearly in modern FMPs for BSAI and GOA Regions, and both FMPs contain long-term management objectives for the Alaska pollock fishery.

Management measures in the FMPs include (i) permit and participation, (ii) authorized gear, (iii) time and area, and catch restrictions, (iv) measures that allow flexible management authority, (v) designate monitoring and reporting requirements for the fisheries, and (vi) describe the schedule and procedures for review of the FMP or FMP component.There is a rigorous peer-reviewed scientific process, which accounts for uncertainty, upon which the annual management (ABC) advice and TAC is based. The state pollock fishery in Prince William Sound is managed by ADFG and BOF using a Guideline Harvest Level (GHL) set as a percentage of the GOA federal ABC, and regulations are spelled out in an FMP.

Based on the 2016 stock assessments, none of the pollock stocks in Alaskan federal or state waters are overfished, or are undergoing overfishing. There are regulations to protect Steller sea lions (SSL) and to avoid seabirds and corals, by-catches of all species are carefully managed and fisheries are closely monitored by extensive observer coverage, dockside checks, and Federal and State enforcement agencies. No destructive fishing practices are employed, and the only gear allowed to catch pollock in Alaskan waters (Federal and State) is the pelagic trawl, which has minimal impact on seabed habitats.

8.2. (Incl 8.2.1.) States shall seek to identify domestic parties having a legitimate interest in the use and management of the fishery.

Organisations and individuals involved in the fishery and management process have been identified. The Alaska pollock management process has many stakeholders, including Alaska pollock license holders, processors, fishermen's organizations, the states of Alaska, Washington, and Oregon, CDQ groups, and environmental groups. Roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction. The NPFMC process is the primary means for soliciting stakeholder information important to the Alaska pollock fisheries, and this is fully transparent and open to the public. Proposals for management measures may come from the public, state and federal agencies, advisory groups, or Council members. Fishing industry stakeholders work extensively with fishery scientists, managers, and other industry members on various initiatives to ensure sustainability of the Pollock fisheries. Cooperative fishing for pollock began under the AFA in 1999. The NPFMC's CDQ Program and Rural Outreach Committee also ensure community participation in fishery management actions.

8.3. (Incl 8.3.1.) Fleet capacity operating in the fishery shall be measured. States 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.

The BSAI and GOA FMPs define specific management measures to avoid excess fishing capacity and maintain stocks that are economically viable for the fishing communities and industry to harvest and process. As noted above in Section 4.5, AFSC's Economic and Social Sciences Research produces an annual Economic Status Report (Fissel et al. 2016)[69] of the Groundfish fisheries in Alaska, which includes estimates of catches, values of catch and resulting food products, and the number and sizes of vessels that participate in the groundfish fisheries off Alaska. There are substantial effort controls and records of all fishing operations in the Alaskan fisheries through mechanisms such as the NPFMC Licence Limitation Program, and the Restricted Access Management Program administered by NMFS Alaska Regional Office. The Alaska Commercial Fisheries Entry Commission (CFEC) issues state waters permits and vessel licenses to qualified individuals.

[69] Fissel, et. al., 2016. http://www.afsc.noaa.gov/refm/docs/2016/economic.pdf

Data on the number and location of Alaskan of fishers, permits issued, etc. can be found in Fissel et al. 2016. These authors note that information on Alaska sport fish and crew license holders, from 2000 – 2010 has been compiled through the Alaska Fisheries Information Network for Alaska Fisheries (AKFIN)[70] . Data on fishing in Alaskan state-managed fisheries can be found in the State of Alaska's CFEC website[71].

8.4. (Incl 8.4.1., 8.4.2.) States and relevant groups from the fishing industry shall encourage the development and implementation of technologies and operational methods that reduce waste and discards of the target species. These measures shall be applied appropriately.
There have been numerous regulations, as well as technological developments, aimed at reducing waste and discards in the pollock fisheries. These include various measures to address fish size, discards, and closed seasons and areas. Specific examples include the split of the BS Pollock TAC into A and B seasons to allow harvest of roe-bearing pollock at appropriate times and thereby reduce wastage, and the development of Chinook and chum salmon excluder devices for trawl gear to reduce these by-catches, and closures of large areas to protect numerous species. The doors used in the pelagic trawls used in the pollock fisheries in Alaska have negligible bottom contact, and although the net does contact the seabed, benthic or bottom species by-catch is generally quite low. Discard rates are also low in the pollock fisheries. Further information on by-catch is found in Section F below.

Information on bycatch and Prohibited Species Catch (PSC) in Alaskan fisheries can be found on the NMFS website. Amendment 91 is described there as "an innovative approach to managing Chinook salmon bycatch in the BSAI pollock fishery that combines a limit on the amount of Chinook salmon that may be caught incidentally with incentive plan agreements and performance standard. The program was designed to minimize bycatch to the extent practicable in all years, and prevent bycatch from reaching the limit in most years, while providing the pollock fleet with the flexibility to harvest the total allowable catch". NMFS implemented this program for the 2011 BSAI pollock fishery, and in 2015 NPFMC passed a number of salmon bycatch reduction measures for implementation in 2016-2017. This included incorporation of chum salmon avoidance into Amendment 91 Incentive Plan Agreements, requires salmon excluder devices, establishes penalties for vessels that consistently have high bycatch relative to the fleet, adjusts seasonal allocations, and lowers the hard cap and performance standard by 25% in years of low Chinook abundance. In the EBS, Chinook salmon bycatch in 2015 was 54% of the 2003-2015 mean value consistent with the magnitude of bycatch since the implementation of Amendment 91 in 2011. Ianelli and Stram (2014) provide estimates of the bycatch impact on Chinook salmon runs to the coastal west Alaska region and found that the peak bycatch levels exceeded 7% of the total run return. Since 2011, the impact has been estimated to be <2%.

Regarding the endangered Steller sea lions (SSL), the NPFMC has acted in a precautionary manner to place protections around rookeries and haulouts and close areas where fishing may impact SSL prey. Over 210,000 km2 (54%) of critical sea lion habitat is closed to the pollock fishery, with further restrictions on the proportion of annual pollock TAC which can be removed from the BSAI SSL Conservation Area.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

[70] http://www.akfin.org/home/

[71] https://www.cfec.state.ak.us/fishery_statistics/earnings.htm

Fundamental Clause 9.

There shall be defined management measures designed to maintain stocks at levels capable of producing maximum sustainable levels.

No. Supporting clauses	**11**
Supporting clauses applicable	**8**
Supporting clauses not applicable	**3**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summary of Changes and Evidence of continuous compliance.

9.1. Measures shall be introduced to identify and protect depleted resources and those resources threatened with depletion, and to facilitate the sustained recovery of such stocks. Also, efforts shall be made to ensure that resources and habitats critical to the well-being of such resources which have been adversely affected by fishing or other human activities are restored.

As noted in previous sections, the MSA requires that conservation and fisheries management measures prevent overfishing while achieving optimal yield on a continuing basis. NMFS and NPFMC follow a multi-faceted PA (OFL, ABC, TAC, OY) to manage the federal pollock fisheries, based on targets, limits, and pre-defined HCRs, as well as overall ecosystem considerations. Management measures are in place to ensure sustainability, and to allow rebuilding if stocks are overfished. None of the pollock stocks in Alaska are classified as overfished or undergoing overfishing, and are not in a depleted state. Only pelagic trawls are used in the fishery and no destructive fishing practices are allowed which would adversely impact habitat. The Environmental Impact Statement on Essential Fish Habitat (EFH) provided estimates of impact of the pelagic trawl gear used in the BSAI pollock fishery, which indicated that the fishery was highly unlikely to result in serious or irreversible harm to habitat structure. This was confirmed in the review of the EFH done in 2010.

With regard to other resources taken in the pollock fishery, considerable work has been done on studying the effects on Chinook salmon in the EBS, as there are concerns with the status of Chinook in many rivers. There have been several scientific sampling and genetic analyses of the Chinook salmon taken in the pollock fisheries in the GOA and EBS to determine their origins. Based on the analysis of 1,385 Chinook salmon bycatch samples collected throughout the 2014 BSAI pollock trawl fishery, Coastal Western Alaska stocks dominated the sample set (49%) with smaller contributions from North Alaska Peninsula (18%), British Columbia (14%), and West Coast U.S. (WA/OR/CA) (7%) stocks. Analysis of the pollock "A" and "B" seasons revealed changes in stock composition during the course of the year with lower contributions of Coastal Western Alaska, North Alaska Peninsula and Yukon stocks and higher contributions of West Coast U.S. (WA/OR/CA), British Columbia, NW Gulf of Alaska and Coastal Southeast Alaska stocks during the "B" season (Guthrie et al. 2016)[72]. For areas which comprised 84% of the GOA chinook bycatch in 2013, the proportions of reporting groups were determined to be as follows: British Columbia (43%), U.S. West Coast (42%), coastal Southeast Alaska (11%), Northwest GOA (3%), and others (< 1%) (Guyon et al. 2015)[73].

The analysis of 1,741 chum salmon collected throughout the 2014 BS trawl fishery, showed that the largest stock group in the catch was Northeast Asia (37%), followed by Eastern GOA/Pacific Northwest (PNW) (24%), Southeast Asia (19%), Western Alaska (18%), Upper/Middle Yukon (2%), and Southwest Alaska (< 1%) stocks (Kondzela et al. 2016)[74].

In 2011, the NMFS implemented a hard cap on Chinook salmon bycatch in the EBS pollock fishery, which was a significant step towards controlling and ultimately reducing bycatch. The NPFMC developed

[72] Guthrie et al. 2016. http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-310.pdf
[73] Guyon et al. 2015. https://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-291.pdf
[74] Kondzela et al. 2016. http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-314.pdf

incentive plan agreements to keep bycatch lower than the BSAI Chinook cap level, and these agreements include explicit incentives and penalties for the pollock fleet to avoid Chinook salmon in all conditions. In June 2016, the final rule for Amendment 110 to the FMP for groundfish of the BSAI management area was published[75]. The rule will improve the management of Chinook and chum salmon bycatch in the BSAI pollock fishery by creating a comprehensive salmon bycatch avoidance program.

Additional information on by-catch of various species in the pollock fishery is contained in Section F below.

9.2. 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.

Through extensive consultation processes and direct involvement in the management of the pollock stocks, interests of indigenous people and local fishing communities in Alaska are recognized. The Western Alaska Community Development Quota (CDQ) Program was created by NPFMC in 1992 to provide western Alaska communities an opportunity to participate in the BSAI fisheries that had been foreclosed to them because of the high capital investment needed to enter the fishery. Also, as noted in Section 4.6 above, NPFMC has established a Rural Outreach Committee to improve outreach and communications with rural communities and Alaska Native entities and develop a method for systematic documentation of Alaska Native and community participation in the development of fishery management actions. Management actions taken to reduce salmon by-catches also acknowledge the importance of the salmon resources to the individuals and communities reliant on them.

9.3. States and relevant groups from the fishing industry shall encourage the development and implementation of technologies and operational methods that reduce discards of the target and non-target species catch. The use of fishing gear and practices that lead to the discarding of catch shall be discouraged and the use of fishing gear and practices that increase survival rates of escaping fish shall be promoted.

The pelagic trawl fisheries for pollock account for very low bycatches of most species, including marine mammals (Muto et al. 2016)[76] and seabirds. As well, for the pollock fisheries, discarding is extremely low. From the observer report for the 2015 fishery[77], Table 4.3 shows that for the 1.18 million tons of pollock caught in the BSAI by catcher and catcher processor vessel in 2015, only 3,917 t of total discards was recorded, which is < 0.4%, and similar to the discard rate in the 2014 fishery recorded by observers.

The NPFMC measures for Chinook and chum salmon bycatch reduction passed in 2015 for implementation in 2016 require, among other actions, the use of salmon excluder devices. A number of studies, e.g. those conducted under the North Pacific Fisheries Research Foundation[78], have been carried out on trawl-mounted devices to exclude chum and chinook salmon in the pollock fisheries in GOA and BSAI.

9.4. Technologies, materials and operational methods shall be applied to minimize the loss of fishing gear and the ghost fishing effects of lost or abandoned fishing gear.

No fixed gears (e.g. gillnets) are permitted, by regulation, in the federal and state pollock fisheries in Alaska. Thus there is no ghost fishing from these forms of fishing gear in the pollock fisheries. As well, there is minimal gear loss in pelagic trawl fisheries, given that the lack of bottom contact from trawl doors greatly reduces snagging and subsequent loss of trawls on the seabed.

9.5. There shall be a requirement that fishing gear, methods and practices where practicable, are sufficiently selective as to minimize waste, discards, and catch of non-target species - both fish and non-fish species and impacts on associated or dependent species.

9.6 The intent of fishing selectivity and fishing impacts related regulations shall not be circumvented by

[75] https://www.federalregister.gov/articles/2016/06/10/2016-13697/fisheries-of-the-exclusive-economic-zone-off-alaska-bycatch-management-in-the-bering-sea-pollock

[76] Muto et al. 2016. http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-323.pdf

[77] AFSC. 2016. Observer Program Reports. Annual Deployment Plans and Reports. https://alaskafisheries.noaa.gov/fisheries/observer-program-reports

[78] North Pacific Fisheries Research Foundation – Salmon Excluder EFP 11-01 Final Report June 2013 http://www.npfrf.org/uploads/2/3/4/2/23426280/salmon_excluder_efp_11-01_final_report-1.pdf

technical devices and information on new developments and requirements shall be made available to all fishers.

9.7 International cooperation shall be encouraged with respect to research programs for fishing gear selectivity and fishing methods and strategies, dissemination of the results of such research programs and the transfer of technology.

9.8 States 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 behaviour of target and non-target species in relation to such fishing gear as an aid for management decisions and with a view to minimizing non utilized catches.

As noted earlier, there is minimal by-catch and discarding in the pollock fisheries. Use of salmon excluder devices is generally thought not to negatively impact the selectivity of the trawls toward pollock, and are designed not to impede escaping pollock or salmon. As reported by Gauvin, 2013[79], salmon excluder designs have evolved considerably since experimental trials in the Bering Sea pollock fishery started in the fall of 2003. Design changes have been influenced by a suite of exempted fishing permit (EFP) tests and by feedback from fishermen using the various designs over the years since the EFPs started. NPFMC has incorporated the use of excluder devices into their management measures. Developmental work is ongoing on these salmon excluder devices for both chum and chinook.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

Fundamental Clause 10.

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

No. Supporting clauses	**3**
Supporting clauses applicable	**3**
Supporting clauses not applicable	**0**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summary of Changes and Evidence of continuous compliance.

10.1./10.2./10.3. Education and training programmes.

The North Pacific Fishing Vessel Owners association (NPFVO) provides a large and diverse training program that many of the professional crew members must pass. Training ranges from firefighting on a vessel, damage control, man-overboard, MARPOL, etc., and the Sitka-based Alaska Marine Safety Education Association alone has trained more than 10,000 fishermen in marine safety and survival through a Coast Guard-required class on emergency drills. The State of Alaska, Department of Labor & Workforce Development (ADLWD) includes AVTEC (formerly called Alaska Vocational Training & Education Center, now called Alaska's Institute of Technology). One of AVTEC's main divisions is the Alaska Maritime Training Center , the goal of which is to promote safe marine operations by effectively preparing captains and crew members for employment in the Alaskan maritime industry.

Also, the University of Alaska Sea Grant Marine Advisory Program (MAP) provides education and

[79] Ibid.

training in several sectors, including fisheries management, in the forms of seminars and workshops. MAP also conducts sessions of their Alaska Young Fishermen's Summit. In addition to this, MAP provides training and technical assistance to fishermen and seafood processors in Western Alaska. A number of training courses and workshops were developed in cooperation with local communities and CDQ groups. Additional education is provided by the Fishery Industrial Technology Center, in Kodiak, Alaska.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

6.5 Implementation, Monitoring and Control (E)

Fundamental Clause 11.

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.

No. supporting clauses	3
Applicable supporting clauses	3
Non-applicable supporting clauses	0
Overall level of conformity	High
Non-conformance	0

Summary of Changes and Evidence of continuous compliance.

Supporting clause:

11.1 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.

Summarised evidence
The US Coast Guard (USCG)[80], NMFS Office of Law Enforcement (OLE)[81] and Alaska Wildlife Troopers (AWT)[82] (a Division of the Alaska Department of Public Safety) conduct at-sea and shore-based inspections.

At-sea, dockside monitoring, aerial surveillance and satellite vessel monitoring systems (VMS) are in operation[83] within the fisheries and developmental work is on-going with respect to additional electronic monitoring (EM) technologies[84].

The USCG serves as the primary agency for at-sea fisheries enforcement and coordinates their work with other federal and state agencies. The USCG presents their annual enforcement report at NPFMC meetings. No significant or systematic incidents with respect to the pollock fishery were highlighted in the 2016 report (17th Coast Guard District Enforcement Report – B4 USCG Report, October 2016).

[80] https://www.uscg.mil/d17/
[81] http://www.nmfs.noaa.gov/ole/
[82] http://dps.alaska.gov/AWT/
[83] https://www.npfmc.org/wp-content/PDFdocuments/membership/Enforcement/Enforcement_Precepts_1215.pdf
[84] https://www.npfmc.org/wp-content/PDFdocuments/conservation_issues/EM211.pdf

OLE enforcement officers conduct their own inspections of vessels, fish transport and processing facilities and work with the USCG and their state colleagues, through a Cooperative Enforcement Program (CEP)[85], that transfer funds to state and US territorial law enforcement agencies to support enforcement of federal laws and regulations. NOAA's Office of General Counsel for Enforcement and Litigation [86] is responsible for prosecuting offences.

The AWT are responsible for enforcing state fish and wildlife regulations. ADFG record landings, buying and production data on Departmental fish tickets or through a 'eLandings' system[87] (internet-based electronic filing). An individual, company, firm, or other organization that is a first purchaser, catcher-exporter, catcher-processor, or catcher-seller is required to be registered with the state and provide annual returns (Section 16.05.690[88] Record of Purchases) 5 AAC 39.130.[89]) is so doing, cross checks can be made against quota allocations.

Observers are used in the fisheries for scientific purposes[90] although in the North Pacific groundfish fisheries observers[91] are required to report violations of fisheries regulations that they witness[92]. All Alaska pollock vessels are required to carry observers as requested, and most carry two observers at all times to collect data on fishing effort, total catch by species, and biological data; characterize marine mammal and sea bird interactions. A 2015 analysis of the observer program deployment[93] shows 99% of total pollock deliveries in the Bering Sea were observed with all but one trip in the full coverage category (where vessels and processors obtain observers by contracting directly with observer providers) and 22% of total pollock deliveries in the GoA were observed with most trips falling under the partial coverage strategy (where NMFS has the flexibility to deploy observers when and where they are needed based on an annual deployment plan).

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
11.2 Fishing vessels shall not be allowed to operate on the resource in question without specific authorization.

Summarised evidence
Every fishing vessel targeting pollock in Alaska is required to have a federal[94] or state permit.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
11.3 States involved in the fishery shall, in accordance with international law, within the framework of sub-regional or regional 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 their national jurisdiction.

11.3.1 States which are members of or participants in sub-regional or regional 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

85 http://www.nmfs.noaa.gov/ole/docs/2015/ole_fy2015_annual_report.pdf
86 http://www.gc.noaa.gov/enforce-office.html
87 http://www.adfg.alaska.gov/index.cfm?adfg=fishlicense.elandings
88 http://touchngo.com/lglcntr/akstats/Statutes/Title16/Chapter05/Section690.htm
89 https://www.adfg.alaska.gov/static/license/fishing/pdfs/5aac39.pdf
90 https://www.afsc.noaa.gov/Quarterly/jas2010/jas10feature.pdf
91 https://www.afsc.noaa.gov/FMA/
92 http://www.alaskaseafood.org/wp-content/uploads/2016/03/FAO_Based-RFM-AK-Pollock-Assessment-and-Certification-Report-Public-Release_31st-Jan-2012.pdf
93 http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-322.pdf
94 https://alaskafisheries.noaa.gov/fisheries/AFA-pollock

non-participants which engage in activities which undermine the effectiveness of conservation and management measures established by such organizations or arrangements.

Summarised evidence
The "Donut Hole" agreement (see Section 1.2 for details) is the only area in the Central Bering Sea outside the Alaska EEZ where the pollock resource can be found (with exception of small quantities of pollock migrating in Cape Navarin. This area is subject to international agreement with other member countries.

The US and Russian Federation maintain the ICC fisheries forum (see section 1.2). The ICC is responsible for furthering the objectives of the Comprehensive Fisheries Agreement. The objectives of the Agreement include cooperation to address illegal fishing on the high seas of the North Pacific and the Bering Sea.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
11.4 Flag States shall ensure that no fishing vessels entitled to fly their flag fish on the high seas or in waters under the 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.

11.4.1 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.

Summarised evidence
The AFA ensures that vessel owners must demonstrate citizenship and relevant vessel registration documents.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

Fundamental Clause 12.

There shall be a framework for sanctions for violations and illegal activities of adequate severity to support compliance and discourage violations.

No. supporting clauses	4
Applicable supporting clauses	2
Non-applicable supporting clauses	2
Overall level of conformity	High
Non-conformance	0

Summary of Changes and Evidence of continuous compliance.

Supporting clause:
12.1 National laws of adequate severity shall be in place that provide for effective sanctions.

12.1.1 Sanctions shall be in force that affects authorization to fish and/or to serve as masters or officers of a fishing vessel, in the event of non-compliance with conservation and management measures.

Summarised evidence
The MSA provides four options for penalizing violations. In ascending order of severity:

1) Issuance of a citation (a type of warning), usually at the scene of the offence (see 15 CFR part 904, subpart E).
2) Assessment by the Administrator of a civil money penalty.
3) For certain violations, judicial forfeiture action against the vessel and its catch.
4) Criminal prosecution of the owner or operator for some offences. It shall be the policy of NMFS to enforce vigorously and equitably the provisions of the MSA by utilizing that form or combination of authorized remedies best suited in a particular case to this end.

OLE agents and officers can assess civil penalties directly to the violator in the form of a summary settlement or can refer the case to NOAA's Office of General Counsel for Enforcement and Litigation who can impose a sanction on the vessels permit or further refer the case to the U.S. Attorney's Office for criminal proceedings[95]. The low proportion of violations encountered during at-sea patrols of the Alaska fisheries demonstrates effective deterrence (Jun-Sep 2016: 403 boardings; 7 violations; 1.7% violation rate) (17th Coast Guard District Enforcement Report – B4 USCG Report, October 2016).

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Supporting clause:
12.2 Flag States shall take enforcement measures in respect of fishing vessels entitled to fly their flag which have been found by them to have contravened applicable conservation and management measures, including, where appropriate, making the contravention of such measures an offence under national legislation.

12.2.1 Sanctions applicable in respect of violations and illegal activities shall be adequate in severity to be effective in securing compliance and discouraging violations wherever they occur.

Summarised evidence
No foreign vessels fish with the US EEZ. USCG at-sea and aerial patrols monitor the situation.

Conclusion:
No evidence of significant change was reported or identified since the 4th surveillance assessment. A high level of conformity continues.

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

[95] https://fisheries.msc.org/en/fisheries/alaska-pollock-bering-sea-and-aleutian-islands/@@assessments

6.6 Serious Impacts of the Fishery on the Ecosystem (F)

Fundamental Clause 13.

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

No. Supporting clauses	13
Supporting clauses applicable	13
Supporting clauses not applicable	0
Overall level of conformity	HIGH
Non Conformances	0

Summary of Changes and Evidence of continuous compliance. Summary of Changes.

Gulf of Alaska (GoA)

The assessment of impacts on target stocks and dependent species continues at least at the level as when originally certified. The GoA groundfish Management Plan was most recently updated in November 2016 (https://www.npfmc.org/wp-content/PDFdocuments/fmp/GOA/GOAfmp.pdf). The Alaska Groundfish Programmatic Environmental Impact Assessment (as required under the National Environmental Protection Act) was reviewed in 2015 (https://alaskafisheries.noaa.gov/sites/default/files/sir-pseis1115.pdf). Conditions requiring a supplement to the 2004 PSEIS (if NMFS and the Council have made a substantial change in the proposed action (i.e., the management of the Federal groundfish fisheries) that is relevant to environmental concerns, or if there are significant new circumstances or information relevant to environmental concerns and bearing on the management of the groundfish fisheries or their impacts) were considered not to be required. The North Pacific Groundfish and Halibut Observer Program in 2015 had 100% observer coverage of catcher/processors fishing pollock and using pelagic trawls in the GOA. Catcher vessels using pelagic gear had 24.9% observer coverage and accounted for about 95% of the pollock catch in the GOA (NMFS 2016).

Potential impacts are identified and those with serious effects continue to be addressed. Bycatch of salmon is a potential issue of concern. In 2014 around 1400 non-Chinook salmon were taken, representing an increase relative to the average of 884 over the period 2010-2014. A sample of chum salmon from the GOA groundfish fisheries was subject to genetic analysis, which showed the highest proportion of the chum salmon sampled (mostly in the pollock fishery) were from Eastern GOA/PNW (92%) stocks (Kondzela et al. 2016). Chinook salmon bycatches in 2014 and 2015 were 10,877 and 13,448, respectively, well below the limit of 25,000 Chinook salmon set by Amendment 93 in 2012 (Balsiger 2016).

The process of identifying and addressing potential impacts on endangered species continues. For example, as well as chinook salmon, as described above, measures implemented in 2015 for the protection of Stellar sea lions continue in force. It is noted that in the southeast Alaska (eastern) population, pup counts have increased at a rate of 3.2% per year between 2000 and 2015 (Muto et al. 2016).

Research and management continues into habitat effects, concerned with both essential fish habitat (EFH https://alaskafisheries.noaa.gov/habitat/efh) and vulnerable coral and slope habitat, for which conservation areas are established (for example https://alaskafisheries.noaa.gov/sites/default/files/goashca.pdf). Four new research projects into fishery and other anthropogenic impacts on habitat were begun in 2015. Research continues into effects on biodiversity (as above); socioeconomic considerations are fundamental to the fishery management plan.

Bering Sea and Aleutian Islands (BSAI)

The latest update of the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands was produced in March 2017 (https://www.npfmc.org/wp-content/PDFdocuments/fmp/BSAI/BSAIfmp.pdf). The Alaska Groundfish Programmatic Environmental

Impact Assessment (as required under the National Environmental Protection Act) was reviewed in 2015 (https://alaskafisheries.noaa.gov/sites/default/files/sir-pseis1115.pdf). Conditions requiring a supplement to the 2004 PSEIS (if NMFS and the Council have made a substantial change in the proposed action (i.e., the management of the Federal groundfish fisheries) that is relevant to environmental concerns, or if there are significant new circumstances or information relevant to environmental concerns and bearing on the management of the groundfish fisheries or their impacts) were considered not to be required. As for the GoA, the assessment of impacts on target stocks and dependent species continues at least at the level as when originally certified. Information on the nature and amount of non-target species, endangered species (including marine mammals and seabirds) is collected by the North Pacific Groundfish and Halibut Observer Program operated by the NMFS, with 100% observer coverage.

Potential impacts are identified and those with serious effects continue to be addressed. Recent initiatives include, in 2016, 2016, a final rule to implement Amendment 111 to the BSAI FMP that reduced PSC limits for Pacific halibut in the BSAI groundfish fisheries by specific amounts in four groundfish sectors that results in an overall BSAI halibut PSC limit of 3,515 mt. This rule change is to minimise halibut bycatch in the BSAI groundfish fisheries to the extent practicable and to achieve, on a continuing basis, optimum yield from the BSAI groundfish fisheries (https://alaskafisheries.noaa.gov/sites/default/files/81fr24714.pdf).

Given the large catch volumes in the pollock fishery, bycatch of salmon is a potential issue of concern. A high number of non-Chinook salmon (nearly all made up of chum salmon) was observed in 2014 and 2015 (about 13% above the 2003-2013 average) (Ianelli et al. 2015). Chinook salmon bycatch in 2015 was 54% of the 2003-2015 mean value. Estimates of the bycatch impact on Chinook salmon runs to the coastal west Alaska region have been estimated to be below 2%The regional stock estimates for the 2014 chum salmon caught in the Bering Sea were similar to those in 2013, although there was a lower contribution from Upper/Middle Yukon stocks in 2014.

The process of identifying and addressing potential impacts on other endangered species also continues. In December 2014, NOAA implemented a 'final rule' for protection of Steller sea lions that primarily occur west of 144 degrees W longitude in Alaska (listed as endangered under the Endangered Species Act). For the primary prey species for Steller sea lions in the Aleutian Islands (Atka mackerel, Pacific cod and pollock) there are a combination of closed areas, harvest limits, and seasons. These are designed to disperse fishing efforts to maintain local population levels as a food source for the Steller sea lions while at the same time maintaining fishing opportunities and minimising economic impacts by removing some restrictions on fishing implemented in the 2010 Interim Final Rule and improving monitoring of vessels while maintaining such research as surveys of sea lions in the Aleutian Islands (https://alaskafisheries.noaa.gov/node/3203).

Research and management continues into habitat effects, both essential fish habitat (EFH) and vulnerable coral and slope habitat, for which conservation areas are established (for example Pribilof Islands, Aleutian Islands and Bering Sea habitat conservation areas and Aleutian Islands coral habitat and Alaska seamount habitat protection areas - https://www.npfmc.org/wp-content/PDFdocuments/fmp/BSAI/BSAIfmp.pdf). Seven new research projects into fishery and other anthropogenic impacts on habitat were begun in 2015, although many were related to other species or to the GoA. Relevant habitat research includes defining EFH for Alaska groundfish species, using species distribution modelling and bathymetry compilation for the Eastern Bering Sea slope.

Research continues into effects on biodiversity (as above) and community development, management limits pollock fishery access to named vessels and processors; included a buyout of 9 catcher/processor vessels. Among vessels, quotas are adjusted for community development quota allocation and incidental catch of pollock in other fisheries, and then apportioned among the pollock-directed vessels. The process and effects of such measures on communities is regularly reviewed (e.g. the October 2014 Five-year review of the effects of Amendment 80, prepared for the North Pacific Fishery Management Council).

Changes to Supporting-Clause Confidence Ratings.

No changes are apparent in the management of the GoA or BSAI fisheries that would detrimentally affect performance against the confidence ratings for any supporting clauses.

Conformance: Full conformance continues.

7 REFERENCES

A. Al-Humaidhi; D. Culpo, C. Donovan and R. Easton. 2014. Draft report Alaska Track 1: Review of the 2014 Spring Season. Pacific States Marine Fisheries Commission; 205 SE Spokane Street, Suite 100, Portland OR 97202.	http://www.npfmc.org/wp-content/PDFdocuments/conservation_issues/Observer/EM/PSMFC_EMProgra m.pdf
ADEC. 2014. Homepage. Department of Environmental Conservation, P.O. Box 111800, 410 Willoughby Ave., Ste. 303, Juneau, AK 99811-1800. Accessed Nov 2014.	http://dec.alaska.gov/
ADFG. 2014 Walleye Pollock (Theragra chalcogramma) Management webpage. Alaska Department of Fish and Game P.O. Box 115526; 1255 W. 8th Street Juneau, AK 99811-5526	http://www.adfg.alaska.gov/index.cfm?adfg=walleyepollock.management
ADFG. 2014. Commercial Fisheries Reporting Requirements. Alaska Department of Fish and Game P.O. Box 115526; 1255 W. 8th Street Juneau, AK 99811-5526	http://www.adfg.alaska.gov/static/license/fishing/pdfs/reporting_requiremen ts.pdf
ADFG. 2014. FISHERY UPDATE 2014 CENTRAL REGION GROUNDFISH FISHERIES OUTLOOK. Alaska Department of Fish and Game P.O. Box 115526; 1255 W. 8th Street Juneau, AK 99811-5526	http://www.adfg.alaska.gov/static/applications/dcfnewsrelease/378425150.pd f
AFSC. 2013. Observer Sampling Manual. Fisheries Monitoring and Analysis Division. North Pacific Groundfish Observer Program. Alaska Fisheries Science Center. 7600 Sand Point Wave. N.E. Seattle. Washington. 98115	http://www.afsc.noaa.gov/FMA/Manual_pages/MANUAL_pdfs/manual2013.p df
AFSC. 2014. Economic and Social Sciences Research Program Webpage. Alaska Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce; 7600 Sand Point Way. N.E. Seattle. Washington. 98115	http://www.afsc.noaa.gov/REFM/Socioeconomics/Projects/CPU.php
AFSC. 2014. Economic and Social Sciences Research Program Webpage. Alaska Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce; 7600 Sand Point Way. N.E. Seattle. Washington. 98115	http://www.afsc.noaa.gov/REFM/Socioeconomics/Projects/CPU.php
ALASKA JOURNAL OF COMMERCE. 2013. Spring test set for Gulf salmon excluders. Alaska Journal of Commerce 301 Arctic Slope Ave., Suite 350 Anchorage, AK 99518	http://www.alaskajournal.com/Alaska-Journal-of-Commerce/Contact-Us/
Alaska State Legislature. 2014. Alaska Statutes Title 16 (laws); Alaska Administrative Code Title 5 (regulations)	http://www.legis.state.ak.us/basis/aac.asp#TitleTable
AMSEA. 2014. ALASKA MARINE SAFETY EDUCATION ASSOCIATION HOMEPAGE. 2924 Halibut Point Road ~ Sitka, AK 99835	http://www.amsea.org/#!Happy-Holidays-from-AMSEA/ck6b/4B5EA797-

ASMI. 2012. Marine Protected Areas Brochure. Alaska Seafood Marketing Institute. Seattle WA, U.S.A.	http://ebooks.alaskaseafood.org/marine_protected_areas_brochure/
AVTEC. 2014. Alaska Maritime Training Center. AVTEC - Alaska's Institute of Technology; Department of Labor and Workforce Development Seward Campus: P.O. Box 889 ~ 809 2nd Avenue ~ Seward, Alaska 99664	http://www.avtec.edu/amtc-cost.aspx
AWT. 2014. Division of Alaska Wildlife Troopers Mission. 5700 E Tudor Road, Anchorage, AK 99507.	http://dps.alaska.gov/AWT/mission.aspx
AWT. 2014. Marine Enforcement Section webpage. 5700 E Tudor Road, Anchorage, AK 99507	http://dps.alaska.gov/awt/Marine.aspx
Balsiger, J. W. 2016. 2015 Annual report for the Alaska Groundfish Fisheries Chinook Salmon Incidental Catch and Endangered Species Consultation, NMFS 29 June, 2016.	
Barbeaux, S., J. Ianelli, W. Palsson. 2013. Aleutian Islands walleye pollock SAFE. In: Stock assessment and fishery evaluation report for the groundfish resources of the Bering Sea/Aleutian Islands regions. North Pac. Fish. Mgmt. Council, P.O. Box 103136, Anchorage, AK 99510., Section 1A	http://www.afsc.noaa.gov/REFM/Docs/2013/AIpollock.pdf
Barbeaux, S., J. Ianelli, W. Palsson. 2014. Aleutian Islands walleye pollock SAFE. In: Stock assessment and fishery evaluation report for the groundfish resources of the Bering Sea/Aleutian Islands regions. North Pac. Fish. Mgmt. Council, P.O. Box 103136, Anchorage, AK 99510., Section 1A	http://www.afsc.noaa.gov/REFM/Docs/2014/AIpollock.pdf
Barbeaux, S., J. Ianelli, and W. Palsson. 2016. Assessment of the pollock stock in the Aleutian Islands. In: Stock Assessment and Fishery Evaluation Report for the Groundfish Resources of the Bering Sea/Aleutian Islands Regions. North Pac. Fish. Mgmt. Council, P.O. Box 103136, Anchorage, AK 99510. pp 219-300.	http://www.afsc.noaa.gov/REFM/Docs/2016/BOGpollock.pdf
DNR. 2014. Flowchart Cook Inlet Offshore Oil & Gas Exploration Permit Application & Approval Process. Department of Natural Resources, 550 W. 7th Ave, Suite 1260, Anchorage, AK 99501-3557. Accessed Nov 2014.	http://dog.dnr.alaska.gov/Permitting/Documents/Arcadis/Arcadis_FlowchartCookInletOffshore_Draft.pdf
DNR. 2014. Homepage. Department of Natural Resources, 550 W. 7th Ave, Suite 1260, Anchorage, AK 99501-3557. Accessed Nov 2014.	http://dnr.alaska.gov/
Dorn M., Aydin K., Jones D., Palsson W. and Spalinger K. 2013. Assessment of the walleye pollock stock in the Gulf of Alaska. In Stock Assessment and Fishery Evaluation Report for Groundfish Resources of the Gulf of Alaska. North Pacific Fishery Management Council, P.O. Box 103136, Anchorage, AK 99510. North Pacific Fisheries Management Council, Anchorage, AK.	http://www.afsc.noaa.gov/REFM/Docs/2013/GOApollock.pdf
Dorn M., Aydin K., Jones D., Palsson W. and Spalinger K. 2014. Assessment of the walleye pollock stock in the Gulf of Alaska. In Stock Assessment and Fishery Evaluation Report for Groundfish Resources of the Gulf of Alaska. North Pacific Fishery Management Council, P.O. Box 103136, Anchorage, AK 99510. North Pacific Fisheries Management Council, Anchorage, AK.	http://www.afsc.noaa.gov/REFM/Docs/2014/GOApollock.pdf

Dorn, M., K. Aydin, B. Fissel, D. Jones, W. Palsson, K. Spalinger, and S. Stienessen. 2016. Assessment of the Walleye Pollock Stock in the Gulf of Alaska. Stock Assessment and Fishery Evaluation Reports for the Groundfish Resources of the Gulf of Alaska Regions. North Pac. Fish. Mgmt. Council, P.O. Box 103136, Anchorage, AK 99510. pp. 45-174.	http://www.afsc.noaa.gov/REFM/Docs/2016/GOApollock.pdf
Enforcement Programs and Operations. National Marine Fisheries Service, Alaska Region; National Oceanic and Atmospheric Administration.	http://www.nmfs.noaa.gov/sfa/reg_svcs/Councils/ccc_2011/Tab%20L%20-%20Enforcement%20Issues/Enforcement nt%20Issues.pdf
FATE. 2014. Alaska Marine Ecosystem Considerations Home.	http://access.afsc.noaa.gov/reem/ecoweb/
Fissel, B., M. Dalton, R. Felthoven, B. Garber-Yonts, A. Haynie, A. Himes-Cornell, S. Kasperski, J. Lee, D. Lew, A. Santos, C. Seung, K. Sparks. 2016. Stock Assessment and Fishery Evaluation Report for the Groundfish Fisheries of the Gulf of Alaska and Bering Sea/Aleutian Island Area: Economic Status of the Groundfish Fisheries off Alaska, 2015. NMFS, NOAA, 7600 Sand Point Way N.E. Seattle, Washington 98115-6349. xxiv + 464 p.	https://www.afsc.noaa.gov/refm/docs/2016/economic.pdf
Guthrie, C. M. III, HV. T. Nguyen, and J. R. Guyon. 2016. Genetic stock composition analysis of the Chinook salmon bycatch from the 2014 Bering Sea walleye pollock (*Gadus chalcogrammus*) trawl fishery, U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-310, 25 p.	http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-310.pdf
Himes-Cornell, A., C. Package, and A. Durland. 2011. Improving community profiles for the North Pacific fisheries. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-230, 85 p.	http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-230.pdf
Holsman, K.K., J. N. Ianelli, and K. Aydin. 2016. Multi-species Stock Assessment for walleye pollock, Pacific cod, and arrowtooth flounder in the Eastern Bering Sea. Stock Assessment and Fishery Evaluation Reports for the Groundfish Resources of the Gulf of Alaska Regions. North Pac. Fish. Mgmt. Council, P.O. Box 103136, Anchorage, AK 99510. pp. 181-218.	https://www.afsc.noaa.gov/REFM/Docs/2016/EBSmultispp.pdf
Honkalehto, T., P. H. Ressler, S. C. Stienessen, Z. Berkowitz, R. H.Towler, A. L. McCarthy, and R. R. Lauth. 2014. Acoustic Vessel-of- Opportunity (AVO) index for midwater Bering Sea walleye pollock, 2012-2013. AFSC Processed Rep. 2014-04, 19 p. Alaska Fish. Sci. Cent., NOAA, Natl. Mar. Fish. Serv., 7600 Sand Point Way NE, Seattle	http://www.afsc.noaa.gov/publications/procrpt/pr2014-04.pdf
Ianelli, J. N., Barbeaux S. J., McKelvey D. and Honkalehto T. 2013. 1.B. Assessment of walleye pollock in the Bogoslof Island Region. In: Stock assessment and fishery evaluation report for the groundfish resources of the Bering Sea/Aleutian Islands regions. North Pac. Fish. Mgmt. Council, Anchorage, AK	http://www.afsc.noaa.gov/REFM/Docs/2013/BOGpollock.pdf
Ianelli, J. N., Barbeaux S. J., McKelvey D. and Honkalehto T. 2014. 1.B. Assessment of walleye pollock in the Bogoslof Island Region. In: Stock assessment and fishery evaluation report for the groundfish resources of the Bering Sea/Aleutian Islands regions. North Pac.	http://www.afsc.noaa.gov/REFM/Docs/2014/BOGpollock.pdf

Ianelli, J.N., S. J. Barbeaux, and D. McKelvey. 2016b. Assessment of walleye pollock in the Bogoslof Island Region. Stock Assessment and Fishery Evaluation Report for the Groundfish Resources of the Bering Sea/Aleutian Islands Regions. North Pac. Fish. Mgmt. Council, P.O. Box 103136, Anchorage, AK 99510. pp. 301-310.	http://www.afsc.noaa.gov/REFM/Docs/2016/BOGpollock.pdf
Ianelli, J.N., T. Honkalehto, S. Barbeaux, S. Kotwicki, K. Aydin, and N. Williamson, 2013. Assessment of the walleye pollock stock in the Eastern Bering Sea. In Stock assessment and fishery evaluation report for the groundfish resources of the Bering Sea/Aleutian Islands regions for 2013. North Pac. Fish. Mgmt. Coun. Anchorage, AK.	http://www.afsc.noaa.gov/REFM/docs/2013/EBSpollock.pdf
Ianelli, J.N., T. Honkalehto, S. Barbeaux, S. Kotwicki, K. Aydin, and N. Williamson, 2014. Assessment of the walleye pollock stock in the Eastern Bering Sea. In Stock assessment and fishery evaluation report for the groundfish resources of the Bering Sea/Aleutian Islands regions for 2014. North Pac. Fish. Mgmt. Coun. Anchorage, AK.	http://www.afsc.noaa.gov/REFM/Docs/ 2014/EBSpollock.pdf
Ianelli, J.N., T. Honkalehto, S. Barbeaux, B. Fissel, and S. Kotwicki. 2016a. Assessment of the walleye pollock stock in the Eastern Bering Sea. Stock Assessment and Fishery Evaluation Report for the Groundfish Resources of the Bering Sea/Aleutian Islands Regions. North Pac. Fish. Mgmt. Council, P.O. Box 103136, Anchorage, AK 99510. pp. 55-180.	http://www.afsc.noaa.gov/REFM/Docs/2016/EBSpollock.pdf
Ianelli, J. N., T. Honkalehto, S. Barbeaux, and S. Kotwicki. 2015. Chapter 1. Assessment of the walleye pollock stock in the Eastern Bering Sea. 2015. North Pacific Bering Sea and Aleutian Islands Groundfish Stock Assessment and Fishery Evaluation Reports.	
Kondzela, C. M., J. A. Whittle, D. Yates, S. C. Vulstek, H. T. Nguyen, and J. R. Guyon. 2016. Genetic stock composition analysis of chum salmon from the prohibited species catch of the 2014 Bering Sea walleye pollock trawl fishery and Gulf of Alaska groundfish fisheries. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-AFSC-314, 49 p.	http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-314.pdf
Livingston P., Thompson G., Turnock J., Aydin K., Conners L., Spencer P., and Ormseth O. 2013. Designing and Implementing Annual Catch Limits for North Pacific Groundfish and Crab Stocks. Alaska Fisheries Science Center, National Marine Fisheries Service National Oceanic and Atmospheric Administration, Department of Commerce 7600 Sand Point Way N.E., Building 4 Seattle, Washington 98115	http://access.afsc.noaa.gov/pubs/posters/pdfs/pLivingston02_gf-crab-catch- limits.pdf
Loefflad, M. R., F. R. Wallace, J. Mondragon, J. Watson, and G. A. Harrington. 2014. Strategic plan for electronic monitoring and electronic reporting in the North Pacific. U.S. Dep. Commer., NOAA Mech. Memo. NMFS-AFSC-276, 52 p.	http://www.afsc.noaa.gov/Publications /AFSC-TM/NOAA-TM-AFSC-276.pdf
MAP. 2014. Marine Advisory Program, Fisheries. Alaska Sea Grant College Program, PO Box 755040, Fairbanks, Alaska, 99775-5040	http://seagrant.uaf.edu/map/fisheries/

M. M. Muto, M.M., V. T. Helker, R. P. Angliss, B. A. Allen, P. L. Boveng, J. M. Breiwick, M. F. Cameron, P. J. Clapham, S. P. Dahle, M. E. Dahlheim, B. S. Fadely, M. C. Ferguson, L. W. Fritz, R. C. Hobbs, Y. V. Ivashchenko, A. S. Kennedy, J. M. London, S. A. Mizroch, R. R. Ream, E. L. Richmond, K. E. W. Shelden, R. G. Towell, P. R. Wade, J. M. Waite, and A. R. Zerbini. 2016. Alaska marine mammal stock assessments, 2015. U.S. Dep. Commer., NOAA Tech. Memo. NMFS AFSC-323, 300 p.	http://www.afsc.noaa.gov/Publications/AFSC-TM/NOAA-TM-AFSC-323.pdf

NMFS (National Marine Fisheries Service). 2016. North Pacific Groundfish and Halibut Observer Program 2015 Annual Report. National Oceanic and Atmospheric Administration, 709 West 9th Street. Juneau, Alaska 99802.	https://alaskafisheries.noaa.gov/sites/default/files/2015observerprogramannualreport.pdf
NMFS. 1996. Magnuson-Stevens Fishery Conservation and Management Act. Public Law 94-265, As amended through October 11, 1996. NOAA's National Marine Fisheries Service; 1315 East-West Highway Silver Spring, MD 20910	http://www.nmfs.noaa.gov/sfa/magact/
NMFS. 2014. Bering Sea Aleutian Islands Catch Report (includes CDQ) Through: 27-DEC-2014, Alaska Region, Sustainable Fisheries Catch Accounting. NOAA's National Marine Fisheries Service , 709 West 9th Street. Juneau, Alaska 99802.	http://alaskafisheries.noaa.gov/2014/car110_bsai_with_cdq.pdf
NMFS. 2014. Chinook Salmon Bycatch Management. Alaska Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce; 7600 Sand Point Way. N.E. Seattle. Washington. 98115	http://alaskafisheries.noaa.gov/sustainablefisheries/bycatch/default.htm
NMFS. 2014. Fisheries Home; Law Enforcement. PO Box 21767 709 W. 9th Street, Room M09C Juneau, AK 99802-1767	http://www.nmfs.noaa.gov/ole/index.html
NMFS. 2014. Gulf of Alaska Catch Report Through: 27-DEC-2014, Alaska Region, Sustainable Fisheries Catch Accounting. National Marine Fisheries Service, 709 West 9th Street. Juneau, Alaska 99802.	http://alaskafisheries.noaa.gov/2014/car110_goa.pdf
NMFS. 2014. NOAA Fisheries Alaska Federal Fisheries Management - Sustainable Fisheries Division Homepage. National Marine Fisheries Service Alaska Regional Office PO Box 21668 Juneau, Alaska 99802-1668	http://alaskafisheries.noaa.gov/sustainablefisheries/default.htm
NMFS. 2014. Section 7 Consultation Biological Opinion – Authorization of Alaska groundfish fisheries under the Proposed Revised Steller Sea Lion Protection Measures, April 2014. National Marine Fisheries Service Alaska Regional Office PO Box 21668; Juneau, Alaska 99802-1668	http://alaskafisheries.noaa.gov/newsreleases/2014/ssl040214.htm
NOAA Fisheries. 2014. Enforcement Actions Weekly Highlights— November 22, 2014. National Marine Fisheries Service, Alaska Region; National Oceanic and Atmospheric Administration.	http://www.nmfs.noaa.gov/aboutus/contactus.html
NOAA Fisheries. 2014. NEWS RELEASE April 2, 2014. NOAA Fisheries concludes 'no jeopardy' to Steller sea lions from proposed fishery management changes in the Aleutian Islands. Alaska Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce; 7600 Sand Point Way. N.E. Seattle. Washington. 98115	http://alaskafisheries.noaa.gov/newsreleases/2014/ssl040214.htm
NOAA. 2011. Policy for the Assessment of Civil Administrative Penalties and Permit Sanctions; NOAA Office of the General Counsel – Enforcement Section. National Marine Fisheries Service, Alaska Region; National Oceanic and Atmospheric Administration. 7600 Sand Point Way. N.E. Seattle. Washington. 98115	http://www.gc.noaa.gov/documents/Penalty%20Policy_FINAL_07012014_combo.pdf

NOAA. 2013. Agreement Between the Government of the United States of America and the Government of the Union of Soviet Socialist Republics on Mutual Fisheries Relations. NOAA's National Marine Fisheries Service; 1315 East-West Highway Silver Spring, MD 20910	http://www.nmfs.noaa.gov/ia/slider_stories/2013/04/agreement.pdf
NOAA. 2013. Agreement Between the Government of the United States of America and the Government of the Union Of Soviet Socialist Republics on Mutual Fisheries Relations (Basic Instrument For The U.S.-Russia Intergovernmental Consultative Committee -- ICC). NOAA's National Marine Fisheries Service; 1315 East-West Highway Silver Spring, MD 20910	http://www.nmfs.noaa.gov/ia/bilateral/docs/US-Russia_ICC_IA_Book.pdf
NOAA. 2013. Fisheries Home, International Affairs, Strengthening U.S.-Russia Cooperation on Fisheries. NOAA's National Marine Fisheries Service; 1315 East-West Highway Silver Spring, MD 20910	http://www.nmfs.noaa.gov/ia/slider_stories/2013/04/us_russia.html
NOAA. 2013. NOAA's Office of Law Enforcement; Division Enforcement Priorities for 2013. National Marine Fisheries Service, Alaska Region; National Oceanic and Atmospheric Administration.	http://www.nmfs.noaa.gov/ole/docs/2013/ole-division-priorities-2013-final.pdf
NOAA. 2014. Federal Register. 50 CFR Part 679 Fisheries of the Exclusive Economic Zone Off Alaska; Gulf of Alaska; Final 2014 and 2015 Harvest Specifications for Groundfish; Final Rule. Department of Commerce. U.S.A.	http://alaskafisheries.noaa.gov/frules/79fr12890.pdf
NOAA. 2014. NOAA Office of the General Counsel, Enforcement Section Enforcement Actions July 1, 2013, through December 31, 2013. National Marine Fisheries Service, Alaska Region; National Oceanic and Atmospheric Administration.	http://www.gc.noaa.gov/documents/2013/enforce_Feb_020122014.pdf
NOAA. 2014. NOAA's Office of General Counsel; Penalty Policy and Schedules. Alaska Settlement Schedules. NOAA Office of General Counsel	http://www.gc.noaa.gov/enforce-office3.html
NOAA. 2014. Welcome to the Office of Science and Technology. National Marine Fisheries Service, Alaska Region; National Oceanic and Atmospheric Administration.	http://www.st.nmfs.noaa.gov/
NPFMC. 2014. Bering Sea Canyons. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/bering-sea-canyons/
NPFMC. 2014. Bering Sea Chinook Salmon Bycatch. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/salmon-bycatch-overview/bering-sea-chinook- salmon-bycatch/
NPFMC. 2014. Bering Sea Chum Salmon Bycatch. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/salmon-bycatch-overview/bering-sea-chum- salmon-bycatch/
NPFMC. 2014. C-5 Bering Sea Salmon Bycatch Council motion – June 7, 2014. North Pacific Fishery Management Council, P.O. Box 103136, Anchorage, AK 99510. North Pacific Fisheries Management Council, Anchorage, AK.	http://www.npfmc.org/salmon-bycatch-overview/bering-sea-chinook- salmon-bycatch/

NPFMC. 2014. C9 Bering Sea Canyons Motion – North Pacific Fishery Management Council April 13, 2014. North Pacific Fishery Management Council, P.O. Box 103136, Anchorage, AK 99510. North Pacific Fisheries Management Council, Anchorage, AK.	http://www.npfmc.org/bering-sea-canyons/
NPFMC. 2014. Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/wp-content/PDFdocuments/fmp/BSAI/BSAI fmp.pdf
NPFMC. 2014. Fishery Management Plan for Groundfish of the Gulf of Alaska Management Area. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/wp-content/PDFdocuments/fmp/GOA/GOAfmp.pdf
NPFMC. 2014. Gulf of Alaska Salmon Bycatch. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/salmon- bycatch-overview/gulf-of-alaska- salmon-bycatch/
NPFMC. 2014. Homepage. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/
NPFMC. 2014. Observer Program page. C1 Observer ADP Council Motion – FINAL 10/9/14. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.npfmc.org/observer-program/
NPFMC. 2014. STOCK ASSESSMENT AND FISHERY EVALUATION REPORT FOR THE GROUNDFISH RESOURCES OF THE BERING SEA/ALEUTIAN ISLANDS REGIONS BSAI INTRO December 2014. North Pacific Fishery Management Council. 605 West 4th, Suite 306, Anchorage, Alaska 99501-2252.	http://www.afsc.noaa.gov/REFM/Docs/2014/BSAIintro.pdf
NMFS. 2016. North Pacific Groundfish and Halibut Observer Program 2015 Annual Report, May 2016.	
NPFVOA. 2014. NPFVOA Vessel Safety Program. North Pacific Fishing Vessel Owners' Association 1900 West Emerson, Suite 101 Seattle, WA 98119	http://npfvoa.org/
NPRB. 2014. Bering Sea Project Findings. 1007 W 3rd Avenue, Suite 100 Anchorage, Alaska 99501	http://www.nprb.org/bering-sea-project/detailed-results-findings/
NPRB. 2014. Gulf of Alaska Project Findings. 1007 W 3rd Avenue, Suite 100 Anchorage, Alaska 99501	http://www.nprb.org/gulf-of-alaska-project/detailed-results-findings/
OPMP. 2014. Alaska National Interest Lands Conservation Act (ANILCA) Homepage. Office of Project Management and Permitting; 550 West 7th Avenue, Suite 1430; Anchorage, AK 99501-3579.	http://dnr.alaska.gov/commis/opmp/anilca/#
OPMP. 2014. Alaska National Interest Lands Conservation Act (ANILCA) Homepage. Office of Project Management and Permitting; 550 West 7th Avenue, Suite 1430; Anchorage, AK 99501-3579.	http://dnr.alaska.gov/commis/opmp/anilca/#
OPMP. 2014. OPMP Homepage. Office of Project Management and Permitting; 550 West 7th Avenue, Suite 1430; Anchorage, AK 99501-3579.	http://dnr.alaska.gov/commis/opmp/

S. Zador (Ed.).2014. Ecosystem Considerations for 2013. Appendix C of the BSAI/GOA Stock Assessment and Fishery Evaluation Report. Technical report, North Pacific Fishery Management Council, 605 W. 4th Ave., Suite 306, Anchorage, AK 99501.	http://www.afsc.noaa.gov/REFM/Docs/2013/ecosystem.pdf
SEAGRANT. 2014. Alaska Young Fishermen's Summit. Marine Advisory Program main office 1007 West 3rd Ave, Suite 100; Anchorage, AK 99501.	https://seagrant.uaf.edu/map/workshops/2013/ayfs/
State of Alaska. Title 5 . Fish and Game Chapter 28. Transportation, Possession and Release of Live Fish; Aquatic Farming Section 263. Prince William Sound Pollock Pelagic Trawl Management Plan. Made available by Touch N' Go Systems, Inc., and the Law Offices of James B. Gottstein	http://www.touchngo.com/lglcntr/akstats/aac/title05/chapter028/section263. htm
Title 5 . Fish and Game. Chapter 28 . Transportation, Possession and Release of Live Fish; Aquatic Farming; Section 89. 5 AAC 28.089. Guiding principles for groundfish fishery regulations	http://www.touchngo.com/lglcntr/akstats/aac/title05/chapter028/section089. htm
Undercurrentnews. 2014. American Seafoods agrees to $1.75m settlement in NOAA flow scale cases. Undercurrent News Limited, E1 Business Centre, Unit 204, 7 Whitechapel Road, London E1 1DU, UK	http://www.undercurrentnews.com/2014/10/14/american-seafoods-agrees-to-1-75m-settlement-in-noaa-flow- scale-cases/
USCG. 2013. 2013 End of Year report to the NPFMC. United States Coast Guard.	http://www.npfmc.org/summary-reports/
USCG. 2014. USCG District 17 Homepage. United States Coast Guard. US COAST GUARD 2703 MARTIN LUTHER KING JR AVE SE WASHINGTON DC 20593-7000.	http://www.uscg.mil/d17/
USFWS. 2014. Homepage. U.S. Fish and Wildlife Service. Accessed Nov 2014.	http://www.fws.gov/help/about_us.ht ml
Wessel, M., J. Rumble, K.J. Goldman, E.Russ, M.Byerly, and C. Russ. 2014. Prince William Sound Registration Area E groundfish fisheries management report, 2009-2013. Alaska Department of Fish and Game, Fishery Management Report No. 14-42, Anchorage.	http://www.adfg.alaska.gov/fedaidpdfs/FMR14-42.pdf
Woodby, D., D. Carlile, S. Siddeek, F. Funk, J. H. Clark, and L. Hulbert. 2005. Commercial Fisheries of Alaska. Alaska Department of Fish and Game, Special Publication No. 05-09, Anchorage.	http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf

APPENDICES

Appendix 1 Stakeholder submissions

No stakeholder comments were received during the annual surveillance activities.

ABOUT DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. We provide classification and technical assurance along with software and independent expert advisory services to the maritime, oil and gas, and energy industries. We also provide certification services to customers across a wide range of industries. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping our customers make the world safer, smarter and greener.