FAO-Based Responsible Fisheries Management Certification

Summary of the Certification of Alaska Pacific cod fisheries

Alaska Pacific cod commercial fisheries are awarded certification to the FAO-Based Responsible Fisheries Management Program.

Certification Determination

On the 17th April 2013 a positive Certification determination was awarded for the *fishery management of the U.S. Alaska Pacific cod commercial fisheries,* against the FAO-based Responsible Fisheries Management (RFM) Certification Program (Conformance Criteria version 1.2)[1]. The assessment was performed at the request of the Alaska Seafood Marketing Institute (ASMI). This document provides a concise summary of the assessment information and certification decision.

The Full Assessment and Certification Report will be made available for download on request at Global Trust and ASMI's websites after the 15th May 2013: www.GTCERT.com and http://sustainability.alaskaseafood.org

The Unit of Certification includes the Alaska Pacific cod (*Gadus macrocephalus*) federal and state commercial fisheries, fished with bottom trawl, longline, pot and jig gear, in the Bering Sea Aleutian Islands (BSAI) and Gulf of Alaska (GOA) management regions within Alaska's jurisdiction (200 nautical miles EEZ); and subjected to a 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 regime.

The resulting certification communication for the Alaska Pacific cod commercial fisheries is: ***'Certified Responsible Fisheries Management'*.**

Following a 12 month assessment process, a Global Trust Certification Committee, composed of fishery, certification and accreditation experts, unanimously agreed with the Assessment Team's findings that the applicant Alaska Pacific cod commercial fisheries are responsibly managed. The assessment and certification considered the effectiveness of management system and organizations, the robustness and effectiveness of fishery management plans, stock assessment activities, stock status and the application of precautionary harvest rates and management actions, monitoring and enforcement activities and the ecosystem effects of the fishery.

Background to the FAO Based Responsible Fisheries Management (RFM) Certification

This Certification delivers high confidence that reliable management systems are in place to properly assess and respond to any current and evolving issues and allow the fishery to continue on the path of responsible management. These management systems are certified as consistent with those

[1] Version 1.2 (Sept 2011), as derived by the United Nations Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries (1995), the FAO Guidelines for the Eco-Labeling of Fish and Fishery Products from Marine Capture Fisheries (2005) as amended/extended in 2009, and the FAO Fisheries Circular No. 917 by John. F. Caddy (1996).

recommended by the FAO Code of Conduct for Responsible Fisheries (1995) and FAO Guidelines for the Eco-Labeling of Fish and Fishery Products from Marine Capture Fisheries (2005) and amended/extended in 2009.

This Certification demonstrates responsible management for the sustainable use of the fisheries and is a realistic and tangible communication for this standard and process. The FAO-Based RFM Certificate lasts for five years and it involves annual surveillance assessments of the fishery. This Certification means that the Alaska Pacific cod commercial fisheries have met the criteria for certification of responsibly managed fisheries at the point in time of the assessment. Annual surveillance assessments and a full re-assessment every 5 years will be used to verify that fishery management continues to perform responsibly.

The Alaska Pacific cod commercial fisheries achieved high conformity against all but one of the clauses (6.1.3) of the FAO-Based RFM Conformance Criteria. The issue identified relates to Bering Sea/Aleutian Islands cod split, and has been addressed by a corrective action plan issued by the client providing recent information from the NPFMC supporting the current work in support of, and the upcoming closure of this issue (Dec. 2013). The assessment findings have been documented in a 250 page Full Assessment and Certification Report.

The assessment was conducted by Global Trust Certification according to the International Standards Organization (ISO) Guide 65:1996 procedures for FAO-based Responsible Fisheries Management Certification. ISO Guide 65 is the international general requirements for bodies operating product and process certification systems. The ISO Guide 65 assessment, certification and decision process is governed by the accreditation bodies of the International Accreditation Forum (IAF). Global Trust Certification is accredited by the Irish National Accreditation Board (INAB) who is a member of the IAF.

Details of the Assessment

ASMI, on behalf of Alaska Pacific cod commercial fisheries, submitted an application to Global Trust Certification for a formal assessment of these fisheries to the requirements of the FAO-Based Responsible Fisheries Management (RFM) Certification Program.

After the initial site visits and validation assessments an expert Assessment Team was formed to undertake the full assessment. The Assessment Team was composed of independent assessors (Table 1) with expert competency in fishery management and operation, stock assessment, and ecosystem effects of the fishery.

The Assessment Team's report was peer-reviewed by two additional independent experts (Table 2) before submission to a formal Global Trust Certification Committee (Table 3) for an independent certification decision.

The level of conformance of each fishery was scored against each clause of the FAO-Based Conformance Criteria (version 1.2). Conformance ratings were assigned through consensus scoring by the assessment team, based on objective evidence derived and measured from the fishery and verified through on site meetings and consultations.

A. The Fisheries Management System

Fundamental 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**
Supporting clauses applicable	**9**
Supporting clauses not applicable	**6**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summarized evidence:

The structure and function of the management system governing Pacific cod fisheries in Alaska:

The primary layer of governance for the Alaska Pacific cod fisheries is dictated by the Magnuson Stevens Act (MSA). The MSA, as amended last on January 12th 2007, sets out ten national standards for fishery conservation and management (16 U.S.C. § 1851), with which all Fishery Management Plans (FMP) must be consistent. Under the MSA, the NPFMC is authorized to prepare and submit to the Secretary of Commerce for approval, disapproval or partial approval, an FMP and any necessary amendments, for each fishery under its authority that requires conservation and management actions, i.e. the annual setting of OFL/ABC/TAC/ACL. While the State of Alaska mostly adopts complimentary regulations, even imposing an annual State Emergency Order that adopts federal Regulations in most management areas, state regulations are used to manage 0-3 nm & inside waters (areas not subject to MSA).

The federal Fishery Management Plans (FMPs), more specifically, 1) the GOA Groundfish FMP, and 2) the BSAI Groundfish FMP govern the management of the Pacific cod federal fisheries. In federal waters (3-200 nm), Alaska Pacific cod fisheries are managed by the NPFMC and the NMFS Alaska Region. The Council submits their recommendations/plans to the NMFS for review, approval, and implementation. The NMFS makes those recommendations available for public review and comment (partly by publication) before taking final action by issuing legally binding Federal regulations. In addition, NMFS Alaska Regional Office conducts biological studies, stock survey and stock assessment reports. The US Coast Guard (USCG) is responsible for enforcing these FMPs at sea, in conjunction with NMFS enforcement ashore. Also, the USCG enforce laws to protect marine mammals and endangered species, international fisheries agreements (i.e. UN High Seas Driftnet Moratorium in the North Pacific), and foreign encroachment.

In state waters (0-3 nm), Alaska Pacific cod fisheries are managed by the ADFG and the Alaska Board of Fisheries (BOF). There are seven state-managed Pacific cod regions: Kodiak, Chignik, South Alaska Peninsula, Aleutian Islands, Southeast Alaska, Prince William Sound, and Cook Inlet. Each area, apart from Southeast Alaska, supports two distinct Pacific cod fisheries. The first fishery is managed concurrent to the federal BSAI or GOA fishery, and is referred to as the parallel fishery. The parallel fishery is managed by the State adopting most of the NMFS rules and management actions (5 AAC 28.087), including seasons, and catch in this fishery is counted towards federal quotas. The second fishery in each area is referred to as the state-waters (or state-managed) fishery. The state-waters fishery is managed independently of the federal/parallel fishery by the ADFG under guidelines developed by the BOF (Guiding principles for groundfish fishery regulations 5 AAC 28.089 and BOF groundfish FMP 5 AAC 28.081). Six of the seven state-water fisheries are subject to an annual Guideline Harvest Level (GHL) calculated as a percentage of federal fishery quotas. The Alaska Wildlife Troopers enforce fishery state waters regulations from 0-3 nm. More than 90% of Alaska Pacific cod is harvested in the federal BSAI and GOA fisheries, and is therefore studied, managed, and enforced under the federal Groundfish FMPs.

Current management measures consider the whole stock biological unit (i.e. structure and composition contributing to its resilience over its entire area of distribution, the area through which the species migrates during its life cycle and other biological characteristics of the stock). Recent studies on genetic structure of P. Cod in the North Pacific Ocean demonstrate a clear isolation by distance (IBD) pattern, suggesting restricted gene flow, and thus a substantial amount of self-recruitment, among putative stock components at spatial scales relevant to current fisheries management and conservation practices (e.g. EBS, AI and GOA). Samples from the coast of Washington State and British Columbia were distinct from those in Alaska and, to a lesser degree to each other. Also, these samples were significantly different from those of China, Korea and Japan indicating a deep genetic subdivision between populations from Asia and North America. Moreover, the empirical evidence for discrete stocks of Pacific cod between the Russian and US EEZs (Eastern/Western Bering Sea) is also available.

A. The Fisheries Management System

Fundamental 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**
Supporting clauses applicable	**15**
Supporting clauses not applicable	**1**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summarized evidence

Participation in coastal zone institutional frameworks, decision making processes and activities:

The NMFS and the NPFMC participate in coastal area management-related institutional frameworks through the federal National Environmental Policy Act (NEPA) processes, a socio-economic and biological/environmental impact assessment of various proposed scenarios, before the path of action is decided. This occurs whenever resources under their management may be affected by other developments and each time they create, renew or amend regulations. The NEPA processes provide public information and opportunity for public involvement that are robust and inclusive at both the state and federal levels. Fisheries are relevant to the NEPA process in two ways. First, each significant NPFMC fisheries package must go through the NEPA review process. Second, any project that could impact fisheries (i.e., oil and gas, mining, coastal construction projects, etc.,) that is either on federal lands, in federal waters, receives federal funds or requires a federal permit, must go through the NEPA process. In this manner, both fisheries and non-fisheries projects that have a potential to impact fisheries have a built in process by which concerns of the NPFMC, NMFS, state agiencies, industry, other stakeholders or the public can be and are accounted for.

The state is a cooperating agency in the NEPA process for federal actions, so that gives the State of Alaska a seat at the table for federal actions. This includes decision-making processes and activities relevant to the fishery resource and its users in support of sustainable and integrated use of living marine resources and avoidance of conflict among users.

Overall, the NEPA process, existing agencies and processes (e.g. ADFG, the Alaska Department of Environmental Conservation, the Department of Natural Resources (DNR), US Fish and Wildlife Service, the Alaska National Interest Lands Conservation Act, the DNR's Office of Project Management and Permitting and Bureau of Ocean Energy Management), and the existing intimate and routine cooperation between federal and state agencies managing Alaska's coastal resources (living and non-living) is capable of planning and managing coastal developments in a transparent, organized and

sustainable way, that minimizes environmental issues while taking into account the socio-economic aspects, needs and interests of the various stakeholders of the coastal zone.

The Alaska Board of Fisheries (BOF) main role is to conserve and develop the fishery resources of the state. The board is charged 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 fisheries regulations around the state. Advisory committees are the local "grass roots" groups that meet to discuss fish and wildlife issues and to provide recommendations to the boards. There are 82 committees throughout the state each with expertise in a particular local area. This process ensures that the local communities' customary uses and practices are considered.

The NPFMC system was designed so that fisheries management decisions were made at the regional level to allow input from affected stakeholders which assures that the rights of coastal communities and their historic access to the fishery is included in the decision process. Council meetings are open, and public testimony - both written and oral - is taken on each and every issue prior to deliberations and final decisions. Public comments are also taken at all Advisory Panel and Scientific and Statistical Committee meetings. Each Council decision is made by recorded vote in public forum after public comment. Final decisions then go to NMFS for a second review, public comment, and final approval. Decisions must conform to the MSA, the NEPA, Endangered Species Act, Marine Mammal Protection Act, and other applicable law including several executive orders. The Council meets five times each year, usually in February, April, June, October and December, with three of the meetings held in Anchorage, one in a fishing community in Alaska and one either in Portland or Seattle. Most Council meetings take seven days, with the AP and SSC usually following the same agenda and meeting two days earlier

The Alaska BOF and the NPFMC have signed a joint protocol agreement to help coordinate compatible and sustainable management of fisheries within each organization's jurisdiction. A committee was formed, the Joint Protocol Committee, which includes three members from each group that meets at least once a year to identify and discuss issues of mutual interest. The entire board and council meet jointly once a year to consider proposals, committee recommendations, the analyses, and other topics of mutual concern. The joint meeting is typically held in Anchorage in February, depending upon council and board meeting schedules.

The Community Development Quota (CDQ) Program is a federal fisheries program that involves 65 communities within a fifty-mile radius of the Bering Sea coastline who participate in the BSAI crab and groundfish fisheries and are allocated 10% of the harvest privileges for the species, including Pacific cod.

A. The Fisheries Management System

Fundamental 3

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

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

Summarized evidence:

Fishery management plans and their objectives:

Under the MSA, the NPFMC 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. The GOA and BSAI Groundfish FMPs, under which Pacific cod in the federal waters of Alaska is managed, define nine management and policy objectives that are reviewed annually. These are 1) Prevent Overfishing, 2) Promote Sustainable Fisheries and Communities, 3) Preserve Food Webs, 4) Manage Incidental Catch and Reduce Bycatch and Waste, 5) Avoid Impacts to Seabirds and Marine Mammals, 6) Reduce and Avoid Impacts to Habitat, 7) Promote Equitable and Efficient Use of Fishery Resources, 8) Increase Alaska Native Consultation, 9) Improve Data Quality, Monitoring and Enforcement. The national standards and management objectives defined in GOA and BSAI FMPs provide adequate evidence to demonstrate the existence of long-term objectives clearly stated in management plans. Management measures detailed in the two Groundfish FMPs include quotas, allocated by region and by gear type; permit requirements, seasonal restrictions and closures, geographical restrictions and closed areas, gear restrictions, prohibited species requirements, retention and utilisation requirements, recordkeeping and reporting requirements, and observer requirements.

Each of the state-managed Pacific cod fisheries is subject to an annually-published FMP. These FMPs include details of Guideline Harvest Levels, gear restrictions, seasonal restrictions, vessel restrictions that limit and control access, buoy marking, pot storage and landing requirements, permissible bycatch proportions and reporting requirements. (5 AAC 28.081.) Gulf of Alaska Pacific Cod Management Plans sets the regulations for the directed state pacific cod fishery. This section applies to the management plans for Pacific cod as set out for the Prince William Sound Area (5 AAC 28.267), Cook Inlet Area (5 AAC 28.367) , Kodiak Area (5 AAC 28.467) , Chignik Area (5 AAC 28.537) , Aleutian Islands Area (5 AAC 28.647) and the South Alaska Peninsula Area (5 AAC 28.577).

B. Science and Stock Assessment Activities

Fundamental 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**

Summarized evidence:

Data collection, aggregation and use:

The annual age-based assessment used to determine stock status and harvest recommendations for BSAI and GOA Pacific cod uses data collected from commercial landings and transhipment reports, port and at-sea observer sex, length and age data from fishery independent surveys in the EBS, the AI and the GOA. The Resource Assessment and Conservation Division (RACE) of the Alaskan Fisheries Science Center (AFSC) are responsible for federally managed fisheries (3-200 nm) while the ADFG undertake coastal surveys and gather and collect data from state managed fisheries (0-3 nm). It is noted that the overall data collection program is probably one of the most extensive in the world. At-sea (processor and catcher-processor vessels) are legally required to report commercial and non-commercial catch data on a daily basis, while catch and auxiliary information from a very extensive observer program, in many cases covering 100% of the fleet activity (e.g. in the EBS) is also transmitted on a daily basis. Landings data from shore based processing facilities are also transmitted on a daily basis and the processing facilities subject to a high level of observer coverage, in many cases amounting to 100% coverage. For all operations under Federal jurisdiction, all US vessels catching Pacific cod within the US EEZ, land based and stationary floating processor and factory (motherships) receiving catches of Pacific Cod are legally obliged to maintain accurate records of all transactions. Landing data are routinely cross checked for overall accuracy, and verified during US Coast Guard and Alaska Wildlife Troopers boardings.

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. The Division is responsible for training and oversight of at-sea observers who collect catch data onboard fishing vessels and at onshore processing plants. 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.

To facilitate reporting of commercial catch from both state and federally managed fisheries, data

from a wide range of sources is gathered in 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.

Data gathered under the auspices of the North Pacific Groundfish Observer Programme (NPGOP) covers all biological information associated with commercial fisheries, including catch weights (landings and discards), catch demographics (species composition, length, sex and age) and interactions with sharks, rays, seabirds, marine mammals and other species with limited or no commercial value. As well as providing demographic data for scientific purposes, the observer programme is also used extensively in- and post-season management. Daily reports are electronically transmitted via the CAS system. This 'real-time' data is used as the basis to trigger area as well as fisheries closures e.g. if maximum catch allocations of target or Prohibited Species are caught. Financing of the NPGOP is based on a cost recovery formula where individual vessel operators must pay the daily observer costs as a condition of licence.

The level of coverage is variable between area, gear type and vessel length category. In general, coverage of catch and landings by vessels >125' is 100%, irrespective of gear category or area. Based on the annual observer data from 2004 to 2007, coverage is generally greater in the Aleutian Islands (95%) and the Bering Sea (86%), while coverage in the Central GOA (35%), Eastern GOA (47%) and Western GOA (31%) is lower. Although, by international standards this is a very high coverage rate. Starting January 1st 2013, the restructured observer program changed substantially to remedy the potential sources of bias, as identified in the "old" program. As well as increased observer coverage on all vessels >40' (vessels <40' are exempted for the first year) and the introduction of full coverage in fleets previously subject partial coverage criteria, vessels remaining within the partial coverage grouping are selected based on a random draw system with a mandatory obligation to carry an observer.

The NOAA biennial GOA groundfish survey data is used for the assessment for Pacific cod in the GOA. All three surveys (EBS, AI and GOA) collect demographic data (length and age) as well as stomach content data for potential use in multi-species assessment models. The annual EBS survey program follows systematic stratified design with two geographic strata: NW (arctic area) and SE (sub-arctic area) three depth strata (inner shelf < 50 m; mid-shelf between 50 and 200 m; and outer shelf > 200 m). On average 376 survey stations are completed annually in the EBS survey, with tow duration of 30 minutes at a speed of 3 knots. The nominal survey abundance index is standardized with the area swept. The GOA survey follows the same stratification as the EBS survey, a random stratified survey design. The survey is biennial, with the NOAA survey schedule alternating each year between the GOA and the AI survey area For each survey year, on average 825 stations surveyed by three boats in the GOA, and 420 stations surveyed by two boats in the AI.

In terms of socio-economic data collection, the Regulatory Flexibility Act (RFA) requires agencies (NPFMC, ADFG) to consider the impact of their rules (Fishery Management Plans, Fishing Regulations) on small entities (fishermen communities) and to evaluate alternatives that would accomplish the objectives of the rule without unduly burdening small entities when the rules impose a significant economic impact on a substantial number of small entities. Economic analyses are also required to

varying degrees under the MSA, the NEPA, the Endangered Species Act, and other applicable laws.

NOAA's Resource Ecology and Fisheries Management (REFM) Division produces an annual Economic Status Report of the Groundfish fisheries in Alaska The figures and tables in the report provide estimates of total groundfish catch, groundfish discards and discard rates, prohibited species catch (PSC) and PSC rates, the ex-vessel value of the groundfish catch, the ex-vessel value of the catch in other Alaska fisheries, the gross product value of the resulting groundfish seafood products, the number and sizes of vessels that participated in the groundfish fisheries off Alaska, vessel activity, and employment on at-sea processors. The report contains analysis and comment of the performance of a range of indices for different sectors of the North Pacific fisheries relate changes in value, price, and quantity, across species, product and gear types, to aggregate changes in the market. In addition, broader macro-economic external factors, such as exchange rates, consumer trends in seafood consumption, seafood imports, had impact on of pricing, volume, supply and demand.

B. Science and Stock Assessment Activities

Fundamental 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	**9**
Supporting clauses not applicable	**2**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summarized evidence:

Stock assessment activities:

The Resource Assessment and Conservation Engineering (RACE) Division comprises scientists from a wide range of disciplines whose function is to conduct quantitative fishery surveys and related ecological and oceanographic research to describe the distribution and abundance of commercially important fish and crab stocks in the region, and to investigate ways to reduce bycatch, bycatch mortality and the effects of fishing on habitat. Information derived from both regular surveys and associated research are analysed by AFSC stock assessment scientists and supplied to fishery management agencies and to the commercial fishing industry. The Resource Ecology and Fisheries Management (REFM) Division conducts research and data collection to support an ecosystem approach to management of fish and crab resources. More than twenty-five groundfish and crab stock assessments are developed annually and used to set catch quotas. In addition, economic and ecosystem assessments are provided to the Council on an annual basis. The Fisheries Monitoring and Analysis Division (FMA) monitors groundfish fishing activities and conducts research associated with sampling commercial fishery catches and estimation of catch and bycatch mortality, and analysis of fishery-dependent data.

The three surveys (EBS, AI and GOA) collect demographic data (length and age) as well as stomach content data for potential use in multi-species assessment models. The EBS survey is conducted annually, while the GOA and the AI surveys are conducted biannually, alternating with each other.

Stock Assessment and Fishery Evaluation (SAFE) Reports are produced annually for Pacific cod in the BSAI and GOA Regions. These reports contains all the details of the assessments including data collected and used, stock assessment models trialled,

Beginning with the 1994 GOA SAFE report a model using the Stock Synthesis 1 (SS1) assessment program and based largely on length-structured data formed the primary analytical tool used to assess the GOA Pacific cod stock. Similarly, SS1 was first applied to the EBS Pacific cod in the 1992 stock assessment. This first application used age-structured data and SS1 continued to be used, but based largely on length structured data since 2004. It should be emphasized that the model has

always been intended to assess only the EBS portion of the BSAI stock. Conversion of model estimates of EBS biomass and catch to BSAI equivalents has traditionally been accomplished by application of an expansion factor based on the relative survey biomasses between EBS and AI. The AI stock is quantified by inflating and extrapolating the results of the EBS assessment and the last available biomass ratios from each surveys used to scale up the assessment of the EBS stock to the BSAI area. Sub-samples of length and age taken from the survey are used for assessments. There is significant progress in the development of an age-disaggregated assessment for the Aleutian Islands Pacific cod, with independent adoption of OFL, ABC and TAC recommendations planned for the 2014 fishing season.

The adequacy and appropriateness of the stock assessments are ensured by extensive peer review. For BSAI and GOA groundfish assessments, the review process begins with an internal review of assessments by the AFSC. Following that review, assessments are reviewed annually by the groundfish plan teams who provide comments to the assessment authors on revisions to the assessment as well as to make recommendations to the SSC regarding OFL and ABC levels for each stock. The majority of the plan team members have expertise in stock assessment and fisheries biology with some additional members bringing in expertise in fishery management, in-season catch accounting, seabirds, marine mammals, and economics. The assessments as well as the plan team recommendations are then subsequently reviewed by the SSC who make the final OFL and ABC recommendations to the Council. The SSC may modify the recommendations from the Plan Team based upon additional considerations. The Council sets TAC at or below the ABC recommendations of the SSC.

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. Three external reviewers from the Center of Independent Experts (CIE) were contracted to review assessments of BSAI and GOA Pacific Cod in 2011. The terms of reference covered several aspects of the assessments including the use of fishery dependent and fishery independent data, gaps in modeling, accounting for assessment uncertainties, ageing issues, variation in survey trawl catchability. NMFS responded to the review and incorporated it into the 2012 assessment cycle.

C. The Precautionary Approach

Fundamental 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 target. 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	**1 Minor Non Conformance (clause 6.1.3)**
Item for surveillance	Adoption of Aleutian Islands Pacific cod independent OFL and ABC determinations at the December 2013 NPFMC meeting.

Summarized evidence:

Status determination criteria for Pacific cod stocks, reference points and relative biomass:

The BSAI and GOA groundfish fishery management plans management plans define a series of target and limit reference points for Pacific cod and other groundfish covered by these plans. Each SAFE report describes the current fishing mortality rate, stock biomass relative to target and limit reference points. Both management plans specify the Overfishing Limits (OFL) and the Fishing mortality rate (F_{OFL}) 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.

In general terms the harvest control rules become progressively precautionary with increasing tier classification and catch options are automatically adjusted depending on the status of stocks relative to Bmsy or the biomass $B_{X\%}$ corresponding to the percentage of the equilibrium spawning biomass that would be obtained in the absence of fishing (tier 1-2; 3). For Pacific cod, there are no reliable estimates of MSY, but reliable estimates of reference points relative to spawning per recruit are: B40% which equates to 40% of the equilibrium spawning biomass that would be obtained in the absence of fishing and $F_{35\%}/F_{40\%}$ - the fishing mortality rate that reduces the equilibrium level of spawning per recruit to 35%/40% of the level that would be obtained in the absence of any fishing.

This places both BSAI and GOA Pacific cod into Tier 3. Both stock are above their target reference point B40.

Stock	Target Reference Point (TRP)	Biomass at TRP	Biomass at present
BSAI	$B_{40\%}$	355.000 t	410.000 t
GOA	$B_{40\%}$	104.000 t	121.000 t

AI Pacific cod stock status. The combined BSAI Pacific cod unit has been extrapolated from the Pacific cod EBS model. In light of recent evidence that Pacific cod in the EBS and AI should be viewed as separate stocks, in 2010 the SSC requested that a separate assessment be prepared for Pacific cod in the AI. In response, the 2011 assessment contained an initial exploration of age-structure modeling for the AI Pacific cod. The initial exploration of age-structured modeling for Pacific cod in the AI indicates a sharp trend of decreasing of all the estimated amounts since the 1990's. Especially, the total (age 0+) biomass and the relative spawning biomass have the lowest values for the last two years. The relative spawning biomass could be approaching the limit reference point ($B_{17.5\%}$). Therefore the current approach of setting a single ABC for the entire BSAI area raises potentially serious conservation concerns for Pacific cod in the AI. This issue was identified as a non conformance against requirements 6.1.3 of the conformance criteria.

6.1.3 Data and assessment procedures shall be installed measuring the position of the fishery in relation to the reference points. Accordingly, the level of fishing permitted shall be commensurate with the current state of the fishery resources.

A corrective action plan was provided to the assessment team in April 2013, responding to the issued non conformance. This provided reference to a discussion paper available at the Council website (Apr 2013) relating to the EBS - AI Pacific cod split that provided substantiation to the corrective action plan provided. The evidence reported that 'given the heightened conservation concern, the SSC intends to set separate ABC/OFL for EBS Pacific cod and AI Pacific cod for the 2014 fishing season based on the best available information at that time, regardless of whether the age-structured model is adequate for stock status determinations. SSC recommendation advised the Council to initiate preparation of any background supporting documents such as a supplemental NEPA document that may be required for specification of separate ABCs/OFLs in 2014'. The assessment team will verify the adoption of separate OFL/ABC/TAC at the December 2013 Council meeting and re-evaluate this issue accordingly.

C. The Precautionary Approach

Fundamental 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 assessment shall be adopted to take into account uncertainty.

No. Supporting clauses	**6**
Supporting clauses applicable	**3**
Supporting clauses not applicable	**3**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summarized evidence:

The FAO Guidelines for the Precautionary Approach (PA) are satisfied:

The precautionary approach is applied widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. The MSA, as amended, sets out ten national standards for fishery conservation and management. The BSAI and GOA Groundfish FMP is consistent with MSA requirements in applying the Precautionary Approach to fisheries. The FAO Guidelines for the Precautionary Approach (PA) (FAO 1995) 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 for the Pacific cod in Alaska comprises all the elements as specified above in the FAO guidelines for the PA.

Absence of adequate scientific information is not used as a reason for postponing or failing to take conservation and management measures. The BSAI and GOA Pacific cod stocks are managed under a tier system rule based on stock knowledge. Status determination criteria for groundfish stocks are annually calculated using a six-tier system that accommodates varying levels of uncertainty of information. The six-tier system incorporates new scientific information and provides a mechanism to continually improve the status determination criteria as new information becomes available. The lower the tier, the less conservative the determination of OFL/ABC and ACL are. This is because more conservative determinations are at the higher tier levels (where less stock information is available). This system is intrinsically precautionary in nature and the results involve catches always lower than the overfishing level. Stock assessment results indicate that the BSAI and GOA Pacific

cod stock biomass is above B40 and that the stocks are neither overfished nor undergoing overfishing.

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 upper range for BSAI is 2.0 million Mt while for the GOA is 800 thousand Mt, acting as an ecosystem cap. In practice, only the upper OY limit in the BSAI has been a factor in altering and limiting harvests. In addition, for groundfish species identified as key prey of Steller sea lions (i.e., walleye pollock, Pacific cod, and Atka mackerel), directed fishing is prohibited in the event that the spawning biomass of such a species is projected in the stock assessment to fall below B20% in the coming year.

D. Management Measures

Fundamental 8

Management shall adopt and implement effective measures including; harvest control rules and technical measures applicable to sustainable utilization of the fishery and 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**

Summarized evidence:

Management measures:

The Alaska Pacific cod commercial fishery is managed according to a modern management plan that attempts to balance long-term sustainability of the resources with optimum utilization. Conservation and management measures are outlined in the BSAI and GOA FMPs for Groundfish. Along with yearly stock assessment surveys and reports (SAFEs), evaluation of the fisheries stock status, determination of OFL (consistent with MSY), ABC, ACL and TAC accounting for scientific uncertainty and ability and precision in catch control. Part of the assessment procedure is an extensive ecosystem assessment that shows development towards ecosystem-based management.

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.
For every change/amendment or new development affecting fisheries management and therefore modifying the FMPs, there is an evaluation of alternative conservation and management measures, including considerations of their cost effectiveness and social impact. The Regulatory Flexibility Act (RFA) requires agencies to consider the impact of their rules (Fishery Management Plans, Fishing Regulations) on small entities (fishermen communities) and to evaluate alternatives that would accomplish the objectives of the rule without unduly burdening small entities when the rules impose a significant economic impact on a substantial number of small entities.

In addition to the federal FMPs, regulations for the state-managed fisheries are set out in annual region-specific FMPs (regulations for parallel fisheries in state waters are generally identical to federal regulations). The board uses the biological and socio-economic information provided by ADFG, public comment received from inside and outside the state, as well as guidance from the Alaska Department of Public Safety and the Alaska Department of Law when creating regulations that are sound and enforceable. These exist for Kodiak, South Alaska Peninsula, Chignik, the

Aleutian Islands, Cook Inlet and Prince William Sound. The state fisheries are managed by allocation of a portion of the federal TAC to the state fishery (depending on biomass abundance in the various areas). Overall, state managed fisheries removals are eventually accounted for in the federal ACL requirements.

The BSAI cod fishery is a limited entry fishery (i.e. non AFA catcher trawlers, "amendment 80" trawl fleet, jiggers, CP and CV longliners, pot vessels). The GOA groundfish fisheries are among the few remaining limited access (not rationalized) fisheries in Alaska.
In the BSAI, after subtraction of the CDQ allowance for Western Alaska communities, the remaining TAC is allocated 1.4% for vessels using jig gear, 2.3% for catcher processors using trawl gear listed in Section 208(e)(1)-(20) of the AFA, 13.4% for catcher processors using trawl gear as defined in Section 219(a)(7) of the Consolidated Appropriations Act, 2005 (P.L. 108-447), 22.1% for catcher vessels using trawl gear, 48.7% for catcher processors using hook-and-line gear, 0.2% for catcher vessels ≥60' LOA using hook-and-line gear, 1.5% for catcher processors using pot gear, 8.4% for catcher vessels ≥60' LOA using pot gear, and 2.0% for catcher vessels <60' LOA that use either hook-and-line gear or pot gear. Allocations may be seasonally apportioned.
TACs in the GOA are apportioned by regulatory area, and by district for some stocks. Areas or districts may also be managed together. For the Central and Western areas Pacific cod TAC is allocated 90% to the inshore sector and 10% to the offshore sector only for the Gulf of Alaska. TAC is then allocated to the harvest sectors (catcher vessels and catcher processors using trawl, pot, hook-and-line, and jig gear). The Western and Central GOA harvest sector allocations superseded the inshore and offshore processing sector allocations. No trawling is allowed in the Eastern GOA, so harvest is restricted to fixed gear and jig.

The 50 C.F.R. § 679.27 Improved Retention/Improved Utilization Program program has been approved in 1997 requiring 100% retention of pollock and Pacific cod in all BSAI and GOA federal fisheries beginning on January 1, 1998. State regulations to extend these requirements to onshore processing plants have also been implemented. The regulation was modified in an amendment(s) published April 6, 2006, in 71 FR 17381; effective January 20, 2008. Also, in State waters, when a directed season is open for Pacific cod or pollock, regulations for improved retention and improved utilization (IR/IU) of groundfish (5 AAC 28.070 & 5 AAC 28.075) require that all captured Pacific cod or pollock be retained by the fisherman and accepted by a buyer. Similarly, all Pacific cod or pollock harvested must be retained up to the maximum retainable bycatch amounts when a bycatch season is open for these species.

Trawl sweeps modifications that 1) decrease significantly habitat interaction of trawl gear and 2) reduce the bycatch of crabs, and mortality rates of crabs that slip under the gear without being caught, have been implemented in the BSAI in 2011 and the Council has allowed in December 2012 for trials to be conducted in the GOA Region during 2013 and 2014. Longline gear is regulated as for seabird avoidance measures (e.g. use of streamer lines, sink baited hooks, circle hooks, line shooters, lining tubes, night settings etc.). False tunnel modifications for pot gear allow a higher catch of cod and a considerable decreased bycatch of tanner crab (otherwise the highest bycatch species in cod pots), and biodegradable escape mechanisms are required to minimize bycatch associated with so-called ghost fishing of lost gear. No fish size limits are implemented for Pacific cod because there is a depth separation between young and adult cod. Market forces assure that

fishermen target adult cod as it fetches a higher price per pound.

Regulations implementing the FMP include conservation measures that temporally and spatially limit fishing effort around areas important to marine mammals. NMFS uses Stellar sea lion protection measures (SSLPM) to ensure the groundfish fisheries off Alaska are not likely to jeopardize the continued existence of the western population of Steller sea lions or adversely modify their critical habitat. The management measures disperse fishing over time and area to protect against potential competition for important Steller sea lion prey species near rookeries and important haulouts.

D. Management Measures

Fundamental 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**

Summarized evidence:

Management measures to maintain the Pacific cod stocks at maximum sustainable levels:

The Pacific cod stocks in Alaska are not depleted or threatened with deletion. Presently and as projected for 2013 stock biomass levels are well above B35% in both management areas.

Council and BOF guidelines, state and federal regulations and MSA with its National Standards all define to management agencies what must be done if a stock becomes depressed. The US Congress established new statutory requirements under the MSA in 2006 to end and prevent overfishing by the use of annual catch limits (ACLs) and accountability measures. These new requirements were implemented in 2010 for all stocks subject to overfishing and in 2011 for all stocks not subject to overfishing. A new provision of the MSA requires that the respective scientific and statistical committees (SSC) of the eight fishery management councils determine scientific benchmarks, while the councils continue to recommend quotas subject to these scientific benchmarks. This separation of authorities represents a major step forward in trying to eliminate overfishing and to enhance recovery of overfished stocks nation-wide.

Assuming that catch is measured accurately, ACLs provide a transparent measure of the effectiveness of management practices to prevent overfishing. They cannot exceed the fishing level determined by the SSC, but catch thresholds can also be established that trigger accountability measures to prevent overfishing. Accountability measures might include: (1) seasonal, area, and gear allocations; (2) bycatch limits; (3) closed areas; (4) gear restrictions; (5) limited entry; (6) catch shares; (7) in-season fishery closures; and (8) observer and vessel monitoring requirements. Accountability measures allow close monitoring of overall catch levels, as well as seasonal and area apportionments. They might close designated areas, or fisheries, if bycatch limits for prohibited species are attained. They also allow monitoring of any endangered or threatened mammals or seabirds and provide a database for evaluating likely consequences of future management actions.

The Council has consistently adopted the annual OFL and acceptable biological catch (ABC)

recommendations from its SSC and set the total allowable catch (TAC) for each of its commercial groundfish stocks at or below the respective ABC. The NPFMC first defined OFL in 1991 as a catch limit that never should be exceeded. The NPFMC adopted more conservative definitions of OFL in 1996 and again in 1999, to comply with revised national guidelines. In 1999, the NPFMC prescribed that OFL should never exceed the amount that would be taken if the stock were fished at FMSY (or a proxy for FMSY), after Congress redefined the terms "overfishing" and "overfished" to mean a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce MSY on a continuing basis. The OFL could be set lower than catch at FMSY at the discretion of the SSC. OFL can be then virtually defined as an upper limit reference point.

In 1996, the NPFMC capped the rate of fishing mortality used to calculate ABC by the rate used to calculate OFL. These rates were prescribed through a set of six tiers defining more and more conservative catch levels as the tiers increased. Harvest rates used to establish ABCs were reduced at low stock size levels, thereby allowing rebuilding of depleted stocks. If the biomass of any stock falls below BMSY, or a proxy for BMSY, the fishing mortality is reduced relative to the stock status.

Both target and non-target species are regularly assessed and bycatch limits and PSC caps are in place to control impacts. Also, Essential Fish Habitat (EFH), as defined in MSA, are described and evaluated to assure that fishing impacts are not more than minimal or more than temporary. Some areas have been closed to protect dependent species, this includes SSL protection areas around rookeries and haulouts (10 & 20 nm closures).

During the last EFH review in 2010 it has been shown that fishing effects on the habitat of Pacific cod in the BSAI and GOA do not appear to have impaired either stocks' ability to sustain itself at or near the MSY level. When weighted by the proportions of habitat types used by Pacific cod, the long-term effect indices are low, particularly those of the habitat features most likely to be important to Pacific cod (infaunal and epifaunal prey). The fishery appears to have had minimal effects on the distribution of adult Pacific cod. Effects of fishing on weight at length, while statistically significant in some cases, are uniformly small and sometimes positive. While the fishery may impose some habitat-mediated effects on recruitment, these fall below the standard necessary to justify a rating of anything other than minimal or temporary.

D. Management Measures

Fundamental 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**

Summarized evidence:

Training opportunities and facilities. 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 the Alaska Maritime Training Center is to promote safe marine operations by effectively preparing captains and crew members for employment in the Alaskan maritime industry. The Alaska Maritime Training Center is a United States Coast Guard (USCG) approved training facility located in Seward, Alaska, and offers USCG/STCW-compliant maritime training (STCW is the international Standards of Training, Certification, & Watchkeeping). In addition to the standard courses offered, customized training is available to meet the specific needs of maritime companies. Also, the University of Alaska Sea Grant Marine Advisory Program (MAP) provides education and 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. Each Summit is an intense course in all aspects of Alaska fisheries, from fisheries management & regulation (e.g. MSA), to seafood marketing. The 2012 AYFS was held February 13th and 14th in Juneau, AK. The two-day conference aimed at providing crucial training and networking opportunities for fishermen entering the business or wishing to take a leadership role in their industry. The event took advantage of the Juneau location by introducing participants to the legislative process, and introducing the fish caucus of the legislature to the issues and concerns of Alaska's emerging fishermen. 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.

E. Implementation, Monitoring and Control

Fundamental 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	**6**
Supporting clauses applicable	**2**
Supporting clauses not applicable	**4**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summarized evidence:

Enforcement agencies and framework:

Effective mechanisms are established for fisheries monitoring, surveillance, control and enforcement measures including, an observer program (although it is designed for biological data collection rather than enforcement), inspection schemes such as US Coast Guard (USCG) boardings, dockside landing inspections and vessel monitoring systems, to ensure compliance with the conservation and management measures for the Pacific cod fishery.

The U.S. Coast Guard (USCG) and NMFS Office of Law Enforcement (OLE) enforce federal fisheries laws and regulations, especially 50CFR679. 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). GCEL can then assess a civil penalty in the form of a Notice of Permit Sanctions (NOPs) or Notice of Violation and Assessment (NOVAs), or they can refer the case to the U.S. Attorney's Office for criminal proceedings.

On January 8, 2002, an emergency interim rule (67 FR 956) was issued by NMFS to implement Steller sea lion protection measures. All vessels using pot, hook-and-line or trawl gear in the directed fisheries for pollock, Pacific cod or Atka mackerel are now required [Section 679.7(a)(18)] to have an operable vessel monitoring system (VMS) on board. This requirement is necessary to monitor fishing restrictions in Steller sea lion protection and forage areas. Also, when the vessels are fishing pacific cod in the state parallel fishery, they would use their VMS as directed by their federal fishing permit.

Boardings and Violations

Pacific cod in the Gulf of Alaska and Bering Sea Aleutian Islands is targeted by many different gear types including non-pelagic trawl, longline, pot, and jig gear. In the GOA the active size of these fleets is approximately 643 vessels, and the Coast Guard attempts to board approximately 52 vessels each year. From fiscal year 2008 through the end of fiscal year 2012, the Coast Guard conducted 291 boardings on Gulf of Alaska Pacific cod vessels, noting 25 violations on 19 vessels resulting in a detected violation rate for this fleet of 6.53%. Significant violations include failure to meet observer coverage rates as required, failure to use seabird avoidance gear, closed area incursions, illegal retention or unsafe release of bycatch species, and failure to use VMS as required.

In the BSAI, the active size of these fleets is approximately 263 vessels, and the Coast Guard attempts to board approximately 48 vessels each year. From fiscal year 2008 through the end of fiscal year 2012, the Coast Guard conducted 160 boardings on Bering Sea Pacific cod vessels, noting 31 violations on 25 vessels resulting in a detected violation rate for this fleet of 15.63%. Significant violations noted below include MRA bycatch overages, failure to meet observer coverage rates as required, IR/IU violations, and not using VMS.

The Alaska Wildlife Troopers enforce regulations for the state Pacific cod fisheries. Additionally, ADFG field staff is properly trained and deputized and can, if required, enforce regulations and make arrests.

Fishing permit requirements:

No foreign fleet is allowed to fish in the Alaska's EEZ. Every fishing vessel targeting pacific cod in Alaska is required to have a federal or state permit. The permit programs are managed by the Restricted Access Management (RAM) federal division and by the Commercial Fisheries Entry Commission for state waters.

E. Implementation, Monitoring and Control

Fundamental 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**
Supporting clauses applicable	**2**
Supporting clauses not applicable	**2**
Overall level of conformity	**HIGH**
Non Conformances	**0**

Summarized evidence:

Enforcement policies and regulations, state and federal:

In Alaska waters, enforcement policy section 50CFR600.740 states:

(a) The MSA provides four basic enforcement remedies for violations, in ascending order of severity, as follows: (1) Issuance of a citation (a type of warning), usually at the scene of the offense (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 offenses. 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.

(b) Processing a case under one remedial form usually means that other remedies are inappropriate in that case. However, further investigation or later review may indicate the case to be either more or less serious than initially considered, or may otherwise reveal that the penalty first pursued is inadequate to serve the purposes of the MSA. Under such circumstances, the Agency may pursue other remedies either in lieu of or in addition to the action originally taken. Forfeiture of the illegal catch does not fall within this general rule and is considered in most cases as only the initial step in remedying a violation by removing the ill-gotten gains of the offense.

(c) If a fishing vessel for which a permit has been issued under the MSA is used in the commission of an offense prohibited by section 307 of the MSA, NOAA may impose permit sanctions, whether or not civil or criminal action has been undertaken against the vessel or its owner or operator. In some cases, the MSA requires permit sanctions following the assessment of a civil penalty or the imposition of a criminal fine. In sum, the MSA treats sanctions against the fishing vessel permit to be the carrying out of a purpose separate from that accomplished by civil and criminal penalties against the vessel or its owner or operator.

The "Policy for the Assessment of Civil Administrative Penalties and Permit Sanctions" issued by NOAA Office of the General Counsel – Enforcement and Litigation on March 16, 2011, provides guidance for the assessment of civil administrative penalties and permit sanctions under the statutes and regulations enforced by NOAA. The purpose of this Policy is to ensure that: (1) civil administrative penalties and permit sanctions are assessed in accordance with the laws that NOAA enforces in a fair and consistent manner; (2) penalties and permit sanctions are appropriate for the gravity of the violation; (3) penalties and permit sanctions are sufficient to deter both individual violators and the regulated community as a whole from committing violations; (4) economic incentives for noncompliance are eliminated; and (5) compliance is expeditiously achieved and maintained to protect natural resources. Under this Policy, NOAA expects to improve consistency at a national level, provide greater predictability for the regulated community and the public, improve transparency in enforcement, and more effectively protect natural resources. For significant violations, the NOAA attorney may recommend charges under NOAA's civil administrative process (*see* 15 C.F.R. Part 904), through issuance of a Notice of Violation and Assessment of a penalty (NOVA), Notice of Permit Sanction (NOPS), Notice of Intent to Deny Permit (NIDP), or some combination thereof. Alternatively, the NOAA attorney may recommend that there is a violation of a criminal provision that is sufficiently significant to warrant referral to a U.S. Attorney's office for criminal prosecution.

The Marine Division of AWT and the State of Alaska Department of Law pursue a very aggressive enforcement policy. The Marine Division of AWT and the State of Alaska Department of Law pursue a very aggressive enforcement policy. They attend the BOF and are integral into the process for regulation formulation and legislation, analogous to the USCG attendance and input in the Council process. AWT has Statutory / Regulatory legislation pertaining to their authority enabling them to fine, imprison, and confiscate equipment for violations and restrict an individual's right to fish if convicted of a violation. These include AS 16 Fish & Game, 5AAC Fish & Game, 20 AAC Commercial Fishing, AS 11 Criminal, AS 46 Environment, AS 44 State Government, AS 02 Aeronautics, AS 18 Health & Safety. A State violation is a criminal violation (strict liability).

F. Serious Impacts of the Fishery on the Ecosystem

Fundamental 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 on 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**

Summarized evidence:

Ecosystem reports and studies:

The Final Programmatic Supplemental Environmental Impact Statement is an extensive review of the Alaska Groundfish Fisheries (PSEIS) (NMFS 2004). It provides information about effects of Alaska's groundfish fisheries on the ecosystem and effects of the ecosystem on the groundfish fisheries.

The North Pacific Research Board (NPRB) was created by Congress in 1997 to conduct research activities on or relating to the fisheries or marine ecosystems in the North Pacific Ocean, Bering Sea, and Arctic Ocean with a priority on cooperative research efforts designed to address pressing fishery management or marine ecosystem information needs. While the NPRB has invested millions of dollars on obtaining this objective, they have also developed two special projects that seek to understand the integrated ecosystems of the BSAI and GOA. For the Gulf of Alaska Integrated Ecosystem Research Program, more than 40 scientists from 11 institutions are taking part in the $17.6 million Gulf of Alaska ecosystem study that looks at the physical and biological mechanisms that determine the survival of juvenile groundfish in the eastern and western Gulf of Alaska. The study includes two field years (2011 and 2013) followed by one synthesis year.

For the Bering Sea, a large multiyear ecosystem project is moving towards completion. It consists of two large projects that will be integrated. One funded by the National Science Foundation (NSF's BEST program is the Bering Ecosystem Study, a multi-year study (2007-2010)). The other funded by NPRB (BSIERP, is the Bering Sea Integrated Ecosystem Research Program (2008-2012)). The overlapping goals of these projects led to a partnership that brings together some $52 million worth of ecosystem research over six years, including important contributions by NOAA and the US Fish & Wildlife Service. From 2007 to 2012, NPRB, NSF, and project partners are combining talented scientists and resources for three years of field research on the eastern Bering Sea Shelf, followed

by two more years for analysis and reporting.

The NMFS and the NPFMC, and other institutions interested in the North Pacific conduct assessments and research on environmental factors on cod and associated species and their habitats. Findings and conclusions are published in SAFE document, annual Ecosystem SAFE documents and other reports. SAFE documents for BSAI and GOA Pacific cod summarize ecosystem considerations for the stocks.

A primary ecosystem phenomenon affecting the pacific cod stock seems to be the occurrence of periodic "regime shifts" in which central tendencies of key variables in the physical environment change on a scale spanning several years to a few decades. One well documented example of such regime shift occurred in 1977, and shifts occurring in 1989 and 1999 have also been suggested. An attempt was made to estimate the change in median recruitment of BSAI and GOA Pacific cod associated with the 1977 regime shift.

The prey and predators of Pacific cod have been described and reviewed extensively The composition of Pacific cod prey varies to some extent by time and area. In terms of percent occurrence, some of the most important items in the diet of Pacific cod in the BSAI and GOA have been polychaetes, amphipods, and crangonid shrimp. In terms of numbers of individual organisms consumed, some of the most important dietary items have been euphausids, miscellaneous fishes, and amphipods. In terms of weight of organisms consumed, some of the most important dietary items have been walleye pollock, fishery offal, yellowfin sole, and crustaceans. Small Pacific cod feed mostly on invertebrates, while large Pacific cod are mainly piscivorous. Predators of Pacific cod include Pacific cod, halibut, salmon shark, northern fur seals, Steller sea lions, harbor porpoises, various whale species, and tufted puffin. Major trends in the most important prey or predator species could be expected to affect the dynamics of Pacific cod to some extent.

Bycatch and ETP species

Gear modifications have been implemented in the BSAI and are being tested in the GOA to lift the sweep off the seafloor and hence limit detrimental effects on the seafloor. Research has demonstrated that elevated sweeps can reduce unobserved mortality of crab from interacting with the trawl sweeps. Additionally there are several regulations in place towards seabird avoidance for vessels fishing with hook-and-line gear. Further gear-related measures include (i) biodegradable panels required for pot gear, to minimize bycatch associated with so-called ghost fishing of lost gear (5 AAC 39.145 *Escape Mechanism for Shellfish and Bottomfish Pots*) and (ii) tunnel openings for pot gear are limited in size (tunnel eye openings must be 36 inches in perimeter or less) to reduce incidental catch of halibut and crabs. Gillnets for groundfish have been prohibited to prevent ghost fishing and bycatch of non-target species. Detailed bycatch reduction programs are in place for species impacted by the fishery such as crab, halibut, seabirds, as well as measures to allow sufficient cod resources for Steller sea lions predation. Sea stars and giant grenadier made up the significant part of bycatch in the BSAI and the GOA in 2010. Also, with the development of the groundfish fisheries, regulations were implemented to limit bycatch of halibut, so as to minimize impacts on the domestic halibut fisheries. Interception of juvenile halibut (~30 cm and greater) often occurs in trawl fisheries targeting other groundfish species (such as rock sole, pollock, yellowfin sole, and Pacific cod). Incidental catch of halibut also occurs in groundfish hook and line and pot fisheries. Halibut is a PSC species which limits severely the Pacific cod fishery (i.e. when PSC cap is reached the fishery is closed). Regulations require that all halibut caught incidentally must be

discarded.

Seabirds

The Alaska Fisheries Science Center's Fishery Monitoring and Analysis Division supports the world's largest seabird bycatch monitoring effort through the North Pacific Groundfish Observer Program. Between 36,000 and 39,000 coverage days are completed each year in the Alaskan groundfish fisheries (longline, pot, pelagic trawl, and non-pelagic trawl), and data are provided for analysis of seabird bycatch. The AFSC has been producing estimates of seabird bycatch in Alaskan groundfish fisheries since the late 1990s. Estimates were produced covering the period 1993 to 2006 and are available in detail in the 2009 Ecosystem Chapter of the Stock Assessment and Fishery Evaluation Report. Updates can be found in the 2012 Ecosystem SAFE report. The AFSC has recently redesigned their approach to the production of annual estimates and are working on reports that will be available in the future that note seabird bycatch numbers, rates, fishing effort, species composition, and other important information.

In 2011, a groundfish fishery observer reported to their in-season advisor that they had recovered a short-tailed albatross (*Phoebastria albatrus*) (listed as endangered under the US Endangered Species Act in 2000) while monitoring gear retrieval on a Bering Sea freezer longline vessel fishing for Pacific cod. The AFSC immediately reported this take to the U.S. Fish and Wildlife Service and also informed interested parties in NOAA, the fishing industry, and environmental non-government organizations. The Short-tailed Albatross Biological Opinion for the longline fleet allows for 4 observed birds in a two-year period. This is based on observed birds, whether within or outside of the actual sample period, and is not based on the extrapolated numbers. A new 2-year period began on 16 September 2011, making this the first take in the current period. The vessel was using paired streamer lines and had not observed any short-tailed albatross in the area prior to the take event.

Sharks

The GOA Pacific cod fisheries caught 27% of the total (e.g. Alaska) incidental catch of the spiny dogfish and 37% of the total incidental catch of the Pacific sleeper shark. Spiny dogfish (*Squalus suckleyi*) is listed under the IUCN Red list as "Vulnerable". Fisheries and population trend data indicate that the southern part of the Northeast Pacific stock has also declined through overfishing, but stocks appear stable off Alaska. There are currently no directed commercial fisheries for shark species in federally or state managed waters of the BSAI and the GOA, and most incidental catch is not retained. Spiny dogfish are allowed as retained incidental catch in some state managed fisheries, and salmon sharks are targeted by some sport fishermen in Alaska state waters. There is no evidence to suggest that overfishing is occurring for any shark species in the BSAI and the GOA because the OFL has not been exceeded.

Stellar Sea Lions

Pacific cod is one of the four most important prey items of Steller sea lions. Furthermore, the size ranges of Pacific cod harvested by the fisheries and consumed by Steller sea lions overlap, and the fishery operates to some extent in the same geographic areas used by Steller sea lion as foraging grounds. The Fisheries Interaction Team of the Alaska Fisheries Science Center has been engaged in

research to determine the effectiveness of recent management measures designed to mitigate the impacts of the Pacific cod fisheries (among others) on Steller sea lions.

Fishing's effects on the habitat of Pacific cod in the BSAI and the GOA do not appear to have impaired either stock's ability to sustain itself at or near the MSY level. When weighted by the proportions of habitat types used by Pacific cod, the long-term effect indices are low, particularly those of the habitats features most likely to be important to Pacific cod (infaunal and epifaunal prey). The fishery appears to have minimal effects on the distribution of adult Pacific cod. Effects of fishing on weight at length, while statistically significant in some cases, are uniformly small and sometimes positive. While the fishery may impose some habitat-mediated effects on recruitment, these fall below the standard necessary to justify a rating of anything other than minimal or temporary.

Further Information

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Table 1: Global Trust Assessment Team Members

Name	Role	Name	Role
Dave Garforth, Global Trust Certification Ltd. Quayside Business Park Dundalk, Co. Louth Ireland	Lead Assessor	**Vito Ciccia Romito,** Global Trust Certification Ltd. Quayside Business Park Dundalk, Co. Louth Ireland	Assessor
Dr. Geraldine Criquet, Global Trust Certification Ltd. Quayside Business Park Dundalk, Co. Louth Ireland	Technical Support	**Dr. Norman Graham,** Galway, Ireland.	Assessor
Earl Krygier, Alaska, USA.	Assessor	**Dr. Christian Möllmann,** Hamburg, Germany.	Assessor

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Table 2: Peer Reviewers

Dr. Keith Criddle	Vladimir Laptikhovsky
Keith Criddle is the Ted Stevens Distinguished Professor of Marine Policy at the University of Alaska Fairbanks where he also serves as Director of the Fisheries Division. He received a PhD in agricultural economics from the University of California Davis in 1989. His research focuses on the intersection between the natural sciences, economics, and public policy and is driven by an interest in the sustainable management of marine resources with a particular emphasis on the commercial, sport, and subsistence fisheries of the North Pacific. In recent years, he and his students have explored topics ranging from the resilience and economic consequences of alternative management regimes for commercial, sport, and subsistence fisheries to the bio economic effects of climate change in North Pacific fisheries to the evolution of Chilean salmon aquaculture in response to requirements for traceability and assurance and implications	Upon graduating as M.Sc. in ichthyology and fish culture at the Kaliningrad State Technical University of Fishing Industry (Russia) in 1985, V. Laptikhovsky completed his Ph.D. in hydrobiology at the same university in 1995, and D.Sc. in hydrobiology at All-Russian Research Institute of Fisheries and Oceanography (Moscow) in 2006. In between 1995 and 1999 he has been working in Atlantic Research Institute of Fisheries of Oceanography (Kaliningrad, Russia) as a scientist dealing with stock assessment of squids and small pelagic fish, mostly off Northwest Africa. Since 1999 till now he is working in the Falkland Islands. Government Fisheries Department as the stock assessment scientist. His main duties include investigations of various aspects of population biology, fisheries, stock assessment, discard management, and licensing advice in respect to groundfish species of the Southwest Atlantic. His

for salmon production in Alaska. He has served a resident of the *Resource Modeling Association* and a member of the National Research Council's Ocean Studies Board.	research activities have been focused primarily on the Patagonian toothfish, red cod, Patagonian rock cod, blue whiting, different ray species (Rajidae), and octopods. V. Laptikhovsky authored more than 140 publications, mostly in peer-reviewed journals. In the year 2010 he was appointed as an Associate Editor of the Journal of Marine Biological Association of the U.K.

Table 3: Certification Committee Members

Bill Paterson, **Legal / Technical /Certification and Accreditation Expert** Global Trust Certification Ltd.	
Ciaran Kelly **Fishery Management Expert** Marine Institute. Ireland	**Deirdre Hoare** **Fishery Scientist** Independent. Ireland.
Also in Attendance	
Vito Ciccia Romito: Fishery Scientist Global Trust Certification Ltd. (Fishery Presentation to Certification Committee only)	
Dave Garforth: Fisheries and Certification Expert Global Trust Certification Ltd. (Fishery Presentation to Certification Committee only)	