US NORTH PACIFIC SABLEFISH

2013 MSC Second Surveillance Visit Report

Certificate Number: SCS-F-0019

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General Information

Table 1: General Information of the 1st Annual Surveillance Audit

Date of Issue	**September 10th 2013**	
Prepared by	SCS	**Tom Jagielo, MSc** **Sian Morgan, Ph.D.**
Re-Certification Date		**August 2011**
Certification Expiration Date		**August 2016**
Surveillance Team	SCS	**(Lead and Principle 2) Sian Morgan** **(Principle 1 and 3) Tom Jagielo**
Surveillance Stage	**2nd Annual Surveillance**	
Methodologies	**MSC Principle & Criteria for Sustainable Fishing, Version 1.1, May 2010** **MSC Certification Requirements Version 1.3, January 2013** **MSC Guidance to the MSC Certification Requirements Version 1.3, January 2013**	

Contents

Preface

All facts in this report relating to the compliance of the fishery were provided to SCS Global Services (SCS), the certifying body on record, by the Fishing Vessel Owner's Association (FVOA), the client; National Marine Fisheries Service, science and North Pacific Fisheries Management Council; management advice. However, the interpretation, opinions, and assertions made in this report on the continued compliance of the fishery with MSC requirements are the sole responsibility of SCS.

Acronyms

ABC	Allowable Biological Catch
ACL	Annual Catch Limit
ADFG	Alaska Department of Fish and Game
ADP	Annual Deployment Plan
AFSC	Alaska Fisheries Science Center
AI	Aleutian Islands
APA	Administrative Procedures Act
APR	Annual Performance Review
BSAI	Bering Sea and Aleutian Islands (Alaska, US)
CDQ	Community Development Quota
CEY	Constant Exploitation Yield
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CM	MSC Certification Methodology v1.2
DSR	Demersal Shelf Rockfish
EBS	Eastern Bering Sea
EM	Electronic Monitoring
ETP	Endangered, Threatened or Protected species
F_{ABC}	Harvest strategy that will reach the allowable biological catch
F_{OFL}	Harvest strategy that will reach an over-fishing level
FAO	Food and Agriculture Organization of the United Nations
FCM	Fisheries Certification Methodology
FVOA	Fishing Vessel Owner's Association
GOA	Gulf of Alaska
IFQ	Individual Fishing Quota
ITQ	Individual Transferable Quota
IPHC	International Pacific Halibut Commission
HAPC	Habitat Areas of Particular Concern
Kg	kilogram
Km	kilometre
Lb.	Pound, equivalent to roughly 2.2 kg
LOA	Length Over-All
M	Million (lbs.)
MSA	Magnuson-Stevens Act
MSC	Marine Stewardship Council
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
NPGOP	North Pacific Groundfish Observer Program
ODDS	Observer Declare and Deploy System
OFL	Over-Fishing Level
ROV	Remote-Operated Vehicle
SAFE	Stock Assessment and Fishery Evaluation
SCS	Scientific Certification Systems
SSB	Spawning Stock Biomass
t and mt	metric ton
TAC	Total Allowable Catch
US	United States
WDFW	Washington Department of Fish and Wildlife
WWF	World Wildlife Fund

Executive Summary

This report summarizes the findings from the second annual surveillance audit of the US north Pacific sablefish hook and line fishery after the recent MSC re-certification. The fishery was first certified in 2006 and re-certified as a source of sustainable seafood in 2011.

The 2013 second surveillance audit focused on any changes since the 2011 certification, and monitoring continued compliance with the MSC Principles and Criteria. There were no conditions carried over from the initial 2006 certification of the fishery. In 2013, the assessment team included new information in relevant sections of the report, focusing particularly on updating reference values relevant to retained and bycatch species, summarizing new habitat research relevant to the impacts of longline gear, outlining NMFS current research objectives for sablefish and synthesizing the current status of improvements to the AK Observer Program. Spot checks were conducted on performance indicators where new information was available and otherwise at random. The team re-scored performance indicators 1.2.3, 1.2.4, 2.4.2, 2.4.3, 3.2.3 and 3.2.4, with no changes in scores resulting.

Since the fishery is certified without conditions, it is only required to have onsite meetings every other year. Onsite meetings were required in 2013, and were held on July 9th 2013 in Seattle WA, USA. The assessment team held a face to face meeting with the client (Robert Alverson, FVOA) and teleconference with NMFS scientists (Chris Lunsford and Cara Rodgveller) responsible for field sampling and stock assessment. The team also met with Farron Wallace at the AK Science Center to obtain current information on the status of changes to the AK Observer Program and to understand both the strengths and weaknesses of the new program that have emerged during first implementation. At the time of the onsite visit, the interagency Observer Science Committee had produced a draft version of the Annual Performance Review of Observer Program, analyzing information from the first 16 weeks of 2013. This information was being incorporated into the revised 2014 Annual Deployment Plan, scheduled to be reviewed by NPFMC Advisory groups in Sept. 2013 and finalized by the Council in Oct. 2013.

Assessment Overview

1.1 General context

SCS conducted the initial MSC assessment of the US north Pacific sablefish hook-and-line fishery and found that the fishery was in compliance with the MSC Principles and Criteria as assessed against an assessment tree developed by the SCS assessment team. The assessment team consisted of four independent experts, which fulfilled the MSC scheme requirements from 2006 when the assessment started (FCMv5). The assessment team drafted an assessment tree based on the specific needs of the fishery and the fishery was assessed against that tree. The fishery was certified in April 2006 with two conditions in Principle 3. Both conditions were closed in the second surveillance audit of 2008.

The US North Pacific sablefish longline fishery in Alaska started the MSC re-assessment in May 2010 and was re-certified using the default assessment tree in August 2011. The original certificate was extended three months so that there was no lapse in certification. The same client group, Fishing Vessel Owner's Association in association with Eat on the Wild Side, supports the MSC certification of the related fishery; US Pacific halibut longline and the assessments were run in parallel. The assessment team met in person with the National Marine Fisheries Service and took the opportunity to interview scientists on both fisheries during the surveillance audit.

1.2 Methodology

The surveillance audit was carried out in accordance with the Marine Stewardship Council (MSC) Certification Methodology (CM v1.2).

The issues for the certifier, when there are no conditions to close out, is to determine whether a random check on the performance of the fishery verifies continued compliance with the MSC standards and to document the most recent research, landings and survey trends relating to the fishery.

The annual surveillance audit process is comprised of five general parts:

1. The certification body provides questions around areas of inquiry to determine if the fishery is maintaining the level of management observed during the original certification.

2. The certification body informs stakeholders that they have the opportunity to contribute to the surveillance audit by participating in a face-to-face interview process or by submitting comments in writing. The certification body must inform stakeholders of the opportunity to provide comment at least 30 days before the onsite meeting.

3. The surveillance assessment team meets with the fishery client in an opening meeting to allow the client to present the information gathered and to answer questions asked by the surveillance team. The surveillance team can then ask questions about the information provided to ensure full understanding of how well the fishery management system is functioning and if the fishery management system is continuing to meet the MSC standards. Additional interviews are conducted of fishery management and science personnel as well as stakeholders

4. The surveillance team determines if any PIs should be re-scored and presents its findings to the client fishery at the end of the site visit in a closing meeting. The results outline the assessment team's understanding of the information presented and its conclusion regarding the fishery management system's continued compliance with MSC standards.

5. The surveillance team submits a draft report to the fishery client and a subsequent final report to the MSC for posting on the MSC website. If there are continued compliance concerns, these are presented as non-conformances that require further action and audits as specified in the surveillance report.

1.3 Surveillance Team

Three assessment team members conducted the surveillance audit which fulfilled the requirements of the MSC CR. The original team members were not available to conduct the surveillance audit due to previous engagement or subsequent conflict of interest. The proposed team did not receive any stakeholder comments and collectively meet the same requirements of the CR for assessment team members.

Team Member (Principle 1/Principle 3):	Mr. Tom Jagielo (Tom Jagielo Consulting)
Team Leader (Principle 2):	Dr. Sian Morgan (SCS)

Mr. Tom Jagielo, Tom Jagielo Consulting (TJC), P1 & P3

Tom formed his own firm in 2008 to provide consulting services in quantitative fisheries science. Previously, he served for 24 years with the Washington Department of Fish and Wildlife (WDFW), and 6 years with the Fisheries Research Institute at the University of Washington in Seattle. At WDFW, Tom specialized in groundfish stock assessment and survey design, adapting state of the art tools and methods to assess marine fish populations for sustainable fisheries management. He has produced stock assessments used by the Pacific Fishery Management Council (PFMC), including analysis of lingcod and rockfish populations. Recent consulting projects have included the design and implementation of a novel coastwide aerial survey used for assessment and management of west coast Pacific sardine, and various investigations for the Virginia Institute of Marine Science, Environmental Defense Fund, the Alliance of Communities for Sustainable Fisheries, the At Sea Processors Association, and other clients. Tom has received appointments to the Scientific and Statistical Committee of the PFMC, the Technical Subcommittee of the US-Canada Groundfish Committee, the Pacific Coast Ocean Observation System, and various other workshop panels and review bodies. Tom has published in peer-reviewed journals and presented papers at national and international meetings. Tom received a B.S. degree in Biology from the Pennsylvania State University and a M.S. degree in Fisheries from the University of Washington, where he also conducted post M.S. graduate studies in fisheries population dynamics and parameter estimation.

Dr. Siân Morgan, Scientific Certification Systems, Team Leader and P2

Dr. Morgan has ten years of experience in the fields of marine ecology and fisheries science with particular expertise in markets-based fisheries reform, certification and quantitative methods for decision analysis. Dr. Morgan has worked in non-governmental, academic and consulting settings and brings to the team a strong background in multi-stakeholder consultation. Her doctoral research at the Fisheries Center, University of British Columbia/McGill examined the ecology, population dynamics and management of a small-scale, multi-species fishery in Asia. Sian participated in MSC's low trophic level workshops, which drafted the emerging standards for forage fisheries and has also drafted standards within the Aquaculture Dialogue process related to responsible sourcing of forage fisheries and ecological consideration associated with habitat disturbance. SCS client fisheries have included Louisiana Blue Crab, Gulf of California Mexico low trophic levels fisheries for sardine and thread herring and sardine as well as various international reform projects in data-deficient developing world fisheries. Past projects managed by Siân include developing SeaChoice, a national seafood program for Canada, conceiving pragmatic trade tools for CITES and researching species responses to area-based management for WWF. Sian is accredited to certify to the MSC standard, various ASC standards, MSC/ASC CoC, ISO 9001 and SA 8000.

1.4 Surveillance Meeting

The surveillance audit for 2013 comprised:

1. SCS determined the surveillance level of the audit cycle to be "reduced" but opportunistically interviewed staff in 2012 that were present for the related US Pacific halibut longline fishery surveillance audit. The 2013 surveillance audit required an onsite meeting. An announcement of the surveillance audit onsite meeting to take place in Seattle WA, USA was published to the MSC website June 12th 2013. Stakeholders were informed of the announcements through the MSC website and through direct mailings although no stakeholder comments were received. An audit plan was provided to the client, management, scientists and interested stakeholders by SCS before the meeting.

2. The assessment team was available to meet with stakeholders in Seattle WA, USA July 9th 2013. Stakeholders were also encouraged to provide comments in writing.

3. Meetings for the second annual surveillance audit took place on July 9th 2013 in Seattle Washington.

The opening meeting was conducted in person with Bob Alverson of the FVOA at the FVOA offices in Seattle, WA. The team leader confirmed the unit, the standard to be used reviewed requirements for use of the MSC eco-label. The audit team requested updates related to any changes in management, research and personnel since the certification as well as an updated vessel list. Included in the opening meeting and subsequent team questions via teleconference, were NMFS staff responsible for US Sablefish stock assessment and monitoring: Chris Lunsford and Cara Rodgveller (Juneau, AK).

The team also met with Farron Wallace at the Alaska Fishery Science Center (Seattle) on July 9th 2013 to understand implementation of the NMFS observer program which began in January of 2013.

The closing meeting covered both US Sablefish and US Halibut (both units have the FVOA as a Client) was held on the morning of July 11th with Bob Alverson.

Attendees associated with all meeting may be found in **Table 2** below.

3. SCS submitted a variance request to MSC to submit the report one month later than the normal surveillance report deadline due to staffing constraints.

4. A draft report was submitted September 4th 2013 to the client for review before publishing the second annual surveillance report to the MSC website.

Table 2. 2nd Annual Assessment Meeting Attendees and Organizations

2nd Annual Assessment Meeting Attendees	*Organization*	*Role*
Mr Tom Jagielo	TJC	Assessment Team
Dr Sian Morgan	SCS	Team Leader, Assessment Team
Mr Bob Alverson	FVOA	Client Representative
Mr Farron Wallace	NMFS/NOAA	Observer Program,
Mr Chris Lunsford	NMFS/NOAA	Stock Assessment/survey design
Ms Cara Rodgveller	NMFS/NOAA	Stock Assessment/survey design

Updated Information and Background of the Fishery

1.5 General discussion

This is the 2snd Annual Surveillance Report 2013 prepared by SCS to meet the requirements of the MSC for annual audits of certified fisheries.

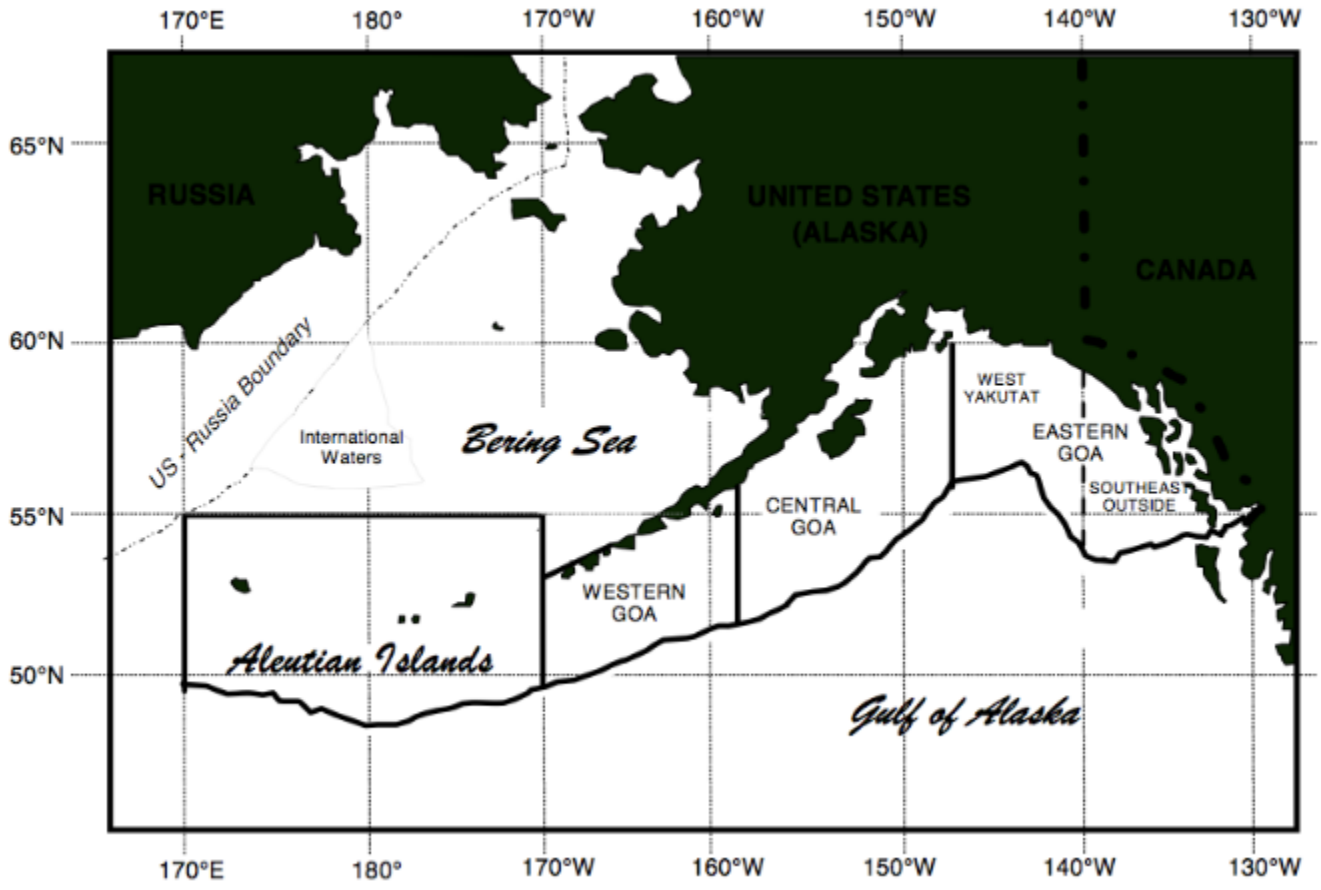
It is SCS's view that the north Pacific sablefish longline fishery continues to meet the standards of the MSC and complies with the 'Requirements for Continued Certification.' SCS recommends the continued use of the MSC certificate through to the 2014 audit cycle with no additional corrective action requests.

The sections below provide an update on the fishery since the re-certification in 2012 with a brief summary of the fishery for context.

1.6 Principle 1: Stock Status

Assessments for the US North Pacific sablefish fishery are conducted by NMFS via the Alaska Fisheries Science Center which models the entire federally managed Alaska sablefish fishery as one stock, integrating data from the Bering Sea, Aleutian Islands, and the Gulf of Alaska. The model incorporates data from a variety of sources such as the historical Japanese longline survey and fisheries, the annual domestic NMFS longline survey, the biennial NMFS bottom trawl survey in the Gulf of Alaska, and the domestic fixed and trawl gear fisheries. The data provided by these sources include catch, relative abundance, age and length compositions, size-at-age, and maturity-at-age (Hanselman et al. 2012a).

Figure 1. Sablefish Regulatory Areas and Districts (Source: http://www.alaskafisheries.noaa.gov/rr/figures/fig14.pdf)



The model configuration for the 2012 assessment was unchanged from the 2010 and 2011 assessments. New input data for the 2012 assessment included: 1) relative abundance and length data from the 2012 NMFS longline survey, 2) relative abundance and length data from the 2011 longline and trawl fisheries, 3) age data from the 2011 longline survey and 2011 fixed gear fishery, and 4) updated 2011 catch and projected 2012 catch (Hanselman et al. 2012a).

Sablefish are managed under Tier 3 of NPFMC harvest rules (Appendix II). Reference points are reported for the combined Eastern Bering Sea (EBS), Aleutian Islands (AI), and Gulf of Alaska (GOA) and are calculated using

recruitment events from 1979- 2011. The updated point estimates of B40%, F40%, and F35% for 2013, based on the 2012 assessment, are 106,506 mt, 0.095, and 0.113, respectively. Projected female spawning biomass (combined areas) for 2013 is 97,193 mt (91% of B40%), placing sablefish in sub-tier "b" of Tier 3. The maximum permissible value of F_{ABC} under Tier 3b is 0.086, which equates to a 2013 ABC (combined areas) of 16,230 mt. The OFL fishing mortality rate is 0.102 which results in a 2013 OFL (combined areas) of 19,180 mt. Model projections indicate that this stock is neither overfished nor approaching an overfished condition. Spawning biomass has increased from a low of 30% of unfished biomass in 2002 to 37% projected for 2013. Spawning biomass is projected to decline through 2017, and then is expected to increase, assuming average recruitment is achieved (Hanselman et al. 2012a).

The Audit Team held an informative teleconference on July 9th, 2013 with Chris Lunsford, and Cara Rodgveller of the NMFS Auke Bay Laboratories, Juneau, AK. It was noted that the 2000 year class is still the largest contributor to the sablefish population, comprising 20% of the spawning biomass in 2013. It appears that the 2008 year class is beginning to show signs of strength (comprises 5% of the spawning biomass in 2013) even though it is only 40% mature. A spawner-recruit relationship has not been developed for the sablefish stock. Sablefish recruitment is typically highly variable and researchers would ultimately like to incorporate environmental correlates into the stock assessment model. A basin-wide oceanographic project is currently underway that could eventually yield data useful for this purpose.

1.6.1 Target Species Catch Data

From 2011 to 2012 the TAC increased in the Gulf of Alaska (GOA) and the Aleutian Islands, and was reduced in the Bering Sea. Fishers remained under the recommended TAC in all areas in both years (see Table 3).

Underutilization of the TAC is thought to be more related to fishing effort rather than stock status.

Table 3. Catch allocations (TAC) for North Pacific sablefish for years 2011 and 2012. Net weight in metric tons. Source: Hanselman et al. 2012a

Alaska Areas	2011 TAC	2011 Catch	% of 2011 TAC caught	2012 TAC	2012 Catch*	% of 2012 TAC caught
Gulf of Alaska	**11,290**	**11,148**	**99%**	**12,960**	**10,434**	81%
Bering Sea	**2,850**	**695**	**24%**	**2,230**	**559**	25%
Aleutian Islands	**1,900**	**1,019**	**54%**	**2,050**	**884**	43%
TOTAL	16,040	12,862	80%	17,240	11,877	69%

*Through September 29, 2012. *Alaska Fisheries Information Network, (www.akfin.org).*

Using the blue eco-label for US North Pacific Sablefish

Although FVOA does not currently use the label themselves, products originating from the fishery are eligible to the carry the logo. All commercial sablefish permit holders are therefore eligible to sell their product as MSC certified and may carry the blue eco-label if the processor or fish buyer has a valid MSC chain-of-custody certificate from an accredited CAB such as SCS. Processors and fish buyers interested in using the MSC blue eco-label are encouraged to contact SCS to inquire on how to obtain MSC chain-of-custody certification at msc@scsglobalservices.com or the FVOA for certificate sharing arrangements.

1.7 Principle 2: Ecosystem Considerations

Stock assessments for species in the Bering Sea and Aleutian Islands (BSAI) and Gulf of Alaska (GOA) are conducted by the National Marine Fisheries Service scientists at the Alaska Fisheries Science Center in Seattle, WA and Juneau, AK. Assessments are published in annual Stock Assessment and Fishery Evaluation (SAFE) reports which are usually available in December: for this report, the most recent SAFE publication was December 2012. SAFE reports are reviewed by the Science and Statistical Committee (SSC) who make recommendations to the North Pacific Fisheries Management Council (NPFMC). The harvest strategy methodology uses a tiered system based on the amount of information available about the stock. Information comes from several trawl, longline, and acoustic surveys as well as observer data, life history parameters, historical commercial and recreational catch data and biological samples. Depending on the amount and type of information available, the stocks are referenced against the different tiered harvest control rule tables. The more information that is available about the stock, the less uncertainty there is in the assessment. For stocks with less information, a more conservative harvest rate is used. See Appendix II for a table of the tiered system of harvest control rules used the NPFMC (DiCosimo et al, 2010). US West Coast Groundfish fishing mortality is estimated in terms of ACL, ABC and OFL. In the 2012 West Coast Groundfish Discard and Catch Report (Bellman et al, 2012) it was reported that fishing mortality for all groundfish (all sectors) remained below the harvest reference points, though overall mortality was found to be greater in 2011 relative to 2010.

1.7.1 Retained Species

The major retained groundfish species in the US Sablefish fishery are Pacific halibut (largely captured as part of ITQ system by fishers holding both sablefish and halibut quota), Pacific cod and several species of rockfishes.

For Pacific halibut, biologically determined level for total removals from each regulatory area is calculated by applying a fixed harvest rate to the estimate of exploitable biomass in that area. This level is called the “constant exploitation yield” or CEY. IPHC estimates of coast wide CEY declined from 41.853 M lbs. in 2011 to 33.884 M Lbs. in 2012 (Hare 2012). IPHC estimated 2012 beginning of year SSB to be 42% of unfished biomass; down slightly from the 2011 beginning of year estimate 43% (Hare 2012).The action point for the stock status is 30% of unfished biomass (interview with IPHC). The stock remains above the action reference point.

The Gulf of Alaska (GOA) Pacific cod stock is assessed using tier 3a methodology and is not considered overfished and overfishing is not occurring (Thompson et al. 2009a; Thompson et al. 2011). Pacific cod in GOA are above the B_{40} reference point. In 2012, female spawning biomass was projected, based on the preferred model to be 111,000 t in 2013. B40 for the GOA cod is 97,200t in 2013 (A’mar et al, 2012). Pacific cod in the Bering Sea and Aleutian Islands (BSAI) were assessed using several models in 2012 (Thompson and Lauth, 2012) utilizing tier 3a methodology. Results from the preferred model indicate that Pacific cod stocks in the BSAI are increasing. Female spawning biomass is projected to increase from 410,000t in 2012 to 437,000t in 2013, which is well above the B_{40} of 374,000 for 2013 (Thompson and Lauth, 2012).

Total catch of rockfish and rockfish-like species in the hook and line Sablefish fishery in 2013 was 1142 t, with 728 t overall retained (Zador, 2012), and consists of 25 species. The dominant species caught and retained are (2013, t) (1) Thornyheads (292); (2) Shortraker rockfish (92); (3) “other” rockfish (77) (4) Pacific Ocean Perch (66); and (5) rougheye rockfish (57). These five groups of rockfish account for > 83% of all retained rockfish catch. Most of this is sold.

Thornyheads (*Sebastolobus* species) are assessed using tier 5 criteria (because of the absence of age information needed for age-structured assessment models (Lowe and Ianelli 2009). Three main species are in this genus (shortspine, longspine, and broadfin), but shortspine thornyheads dominate survey biomass and landings. For 2013, the total biomass for GOA thornyheads was estimated at 73,990 t a 17% increase in the observed biomass estimate of 2011 and a 6% decrease from the 2009 biomass estimate. The recommended overfishing limit for 2013 is 2,200 t. Landings rarely approach allowable biological catch status because thornyheads are not targeted and only incidentally captured by longline and trawl fisheries. For the most recent year of data available (2012), the ABC was 1,665 t and 683 t were taken (Shotwell & Ianelli, 2012).

Yelloweye rockfish are assessed as the dominant component of "demersal shelf rockfish", but only for the Southeast-Outside management region located in the SE Gulf of Alaska (Brylinsky et al. 2009), using a tier 4 assessment. This assemblage comprises yelloweye, quillback, copper, rosethorn, canary, China and tiger rockfish with only 2% of the DSR complex comprised of non-yelloweye species. The complex is assessed on a biennial cycle with full stock assessments conduced in odd calendar years: the last submersible survey was conducted in 2009. ROVs are being used in a pilot study in 2012 as an alternative to submersible surveys that are no longer possible. Allowable Biological Catch (ABC) for the DSR complex in the GOA in 2013 was 303 t with a further 7 t removed from the overall final TAC (296 t) for subsistence use (Green et al. 2012). In general, catches are dominated by incidental catches rather than directed fishing operations. Allowable biological catch is more conservative than would be recommended based on standard Tier 4 of NPFMC assessment tier criteria definitions, to account for the longevity and habitat-specific residency.

Yelloweye rockfish and other listed rockfish of concern could be of particular concern because of they have shown susceptibility to longline gear and because more southern populations have been overfished. Test fishing (not in AK) has shown that longline bycatch of yelloweye (and canary) rockfish is greater than the bycatch of these species caught in pots or trawls: this has been attributed to longline access to rocky areas inhabited by these species (Jenkins 2012). However, while yelloweye populations in WA, OR and CA are of concern, total take of DSR species (landed, discarded and overage from the halibut fishery) in the directed AK commercial fishery, the incidental commercial fishery and recreation fisheries for 2011 was 177 t. Because total catches are below both the 293 t DSR ABC and the 286 t yelloweye rockfish ABC limits, neither are subject to overfishing or approaching an overfished state.

Shortraker rockfish are assessed in a tier-5 assessment as the dominant component of the "other slope rockfish category" (Clausen 2009). In 2011, the Gulf of Alaska (GOA) stock was given their own chapter for the first time in the SAFE report published by the NPFMC (Clausen and Echave, 2011). The reference point for exploitation rate for GOA shortraker rockfish seeks to maintain F below 0.75 M; here M (natural mortality) is estimated to be 0.0225. For the 2013 fishery, the estimated exploitable biomass in the GOA is 48,048 t, yielding an overfishing limit of 1,441 t. Total Gulfwide catch for 2011 and 2012 were 916 t and 1081 t respectively, falling below the overfishing limit: in 2012 catch coincided with the shortraker max ABC of 1081 t (Echave et al. 2012). In the eastern Bering Sea / Aleutian Islands region (BSAI), total biomass was 17,452 t in 2012 and is estimated to be 16,447 in 2013. Total catch of 283 t for 2012 were well below the 524 t 2012 overfishing limit (Spencer and Rooper, 2012a).

Genetic analysis has revealed that “rougheye rockfish” landings of species labelled "rougheye rockfish" consist of two morphologically similar species; rougheye and blackspotted rockfish. Because they cannot be reliably identified in the field, data are collected in aggregate and labelled "rougheye rockfish" and are similarly assessed in aggregate. Stock assessments are conducted biennially in even years to correspond with the frequency of trawl surveys. Research priorities for rougheye rockfish are age validation studies and determining habitat

requirements at different life stages to aide in using ecosystem based approach to management. Relatively little is known about their life history, but they appear to be K-selected with late maturation, slow growth, extreme longevity and low natural mortality (Shotwell et al., 2012b). The current Tier 3a Gulf of Alaska assessment of this species estimates total female spawning biomass to be 12,610 t for 2013. Most recent catch data are from 2011 when 535 t were caught, not exceeding the 2011 OFL of 1,576 t (Shotwell et al. 2012b). The stock is not considered overfished nor is it approaching overfished. In the Eastern Bering Sea / Aleutian Islands, the overfishing limit is 691 t for 2013, and the 2012 catch of 185 t did not exceed the 2012 OFL of 576 t, therefore the stock is not considered overfished nor is it approaching overfished (Spencer and Rooper, 2012b).

Gulf of Alaska Pacific Ocean perch are a Tier 3a – assessed species, with assessments conducted on a biennial basis. In the GOA, the overfishing limit is 18,919 t for 2013, and the 2012 catch of 14,654 t did not exceed the 2012 OFL of 19,498 t (Hanselman et al. 2012b). In the Eastern Bering Sea / Aleutian Islands, the overfishing limit is 41,909 t for 2013, and the 2012 catch of 18,402 t did not exceed the 2012 OFL of 35,000 t. The stock is not considered overfished and is not approaching overfishing status (Spencer and Ianelli, 2012).

There is a strategy in place to manage the retained species which consists of (1) extensive catch accounting system (2) observer program to estimate discarded catch, (3) fishery independent surveys conducted by NOAA-Fisheries (4) statistical stock assessments for all the main retained species (5) a tiered system of assessments that provides for more precautionary annual catch limits when assessments use less precise methods. The tiered, precautionary procedure for setting annual catch limits provides a high likelihood that stocks will be maintained at levels above their reference points and clear procedures exist for restricting catch limits if stock rebuilding is necessary. The evidence for successful implementation of this management strategy is manifest by the healthy stock status for main retained species, the extensive catch accounting system to estimate total landings as well as annual stock assessment reports for these species.

This fishery has significant sources of fishery dependent and fishery independent data that permit stock assessments for retained species. Information used in managing this fishery comes from several sources detailed below. The information on retained species can be considered accurate and verifiable, and monitoring of species is sufficient to assess mortalities.

Information used to generate discard and catch estimates:

(1) Fishery independent surveys: NOAA- Fisheries conducts annual longline and trawl surveys in the Gulf of Alaska and in the Eastern Bering Sea / Aleutian Islands. This information is used directly in assessments.

(2) Catch accounting system: Participants in the sablefish quota fishery are required to use one of two electronic reporting systems. The first (IFQ and CDQ on-line catch reporting) documents only landings of ITQ- species (halibut / sablefish) as a way to track each participants' annual catch. The second, e-Landings is a more comprehensive system that inputs all catches, including self-reported discards as well as all retained and sold landings for all species. Catches can be submitted on-board the fishing vessel daily, so that the e-Landings system thereby provides real time catch accounting. Landing fish in the state of Alaska requires the use of fish tickets that describe the amount and composition of all fish sold. Thus, together the fish ticket and e-Landings system provide precise quantitative information on the amount of fish landed.

(3) Observers: Sablefish trips are randomly selected to take on federal observers. Notably, the industry has pursued changes in observer regulations to amend the observer coverage for the entire groundfish fishery in Alaska. That effort has culminated in an Initial Review Draft Environmental Assessment / Regulatory Impact

Review / Initial Regulatory flexibility analysis for proposed restructuring of observer program in the North Pacific (North Pacific Fishery Management Council 2010). Five alternative amendments were proposed and the revised program began in 2013.

1.7.2 Bycatch Species

The main bycatch species groups are giant grenadier, skates, sharks (spiny dogfish) and seabirds. The best available information on catch rates and stock status suggest that stocks are within biological limits.

The principle bycatch species are grenadiers (mainly giant grenadier, *Albatrossia pectoralis*) which are considered a "non-specified" species by the NPFMC and are not included in the AK Groundfish FMP process. The estimated catches annual catches of grenadiers in AK for the years 1997-2012 have ranged between ~11,000-21,000 mt, with an average for this period of ~16,000mt. The total annual sablefish catch in AK in the years 1996-2012 ranged from about 12,000 – 17,000 mt (Rodgveller et al. 2012). Thus the amount of grenadier caught in these years was similar to the amount of sablefish take.

In order to assess giant grenadier, a brief Tier 5 assessment is conducted (Clausen and Rodgveller 2009; Clausen and Rodgveller 2011) to determine an OFL and ABC. Findings are included as an appendix in the annual SAFE reports. Surveys that encounter giant grenadier are the NMFS longline survey in the Gulf of Alaska and Eastern Bering Sea and the Gulf of Alaska trawl survey; the 2012 SAFE report indicates that giant grenadier catches are generally decreasing (Zador, 2012). Biomass (2013) is estimated to be 597,884 t in the Gulf of Alaska (GOA). Overfishing is currently not occurring on giant grenadier stocks based on the Over Fishing Limit (OFL (2012/2013) = 46,635) and Allowable Biological Catch (ABC (2012/2013) = 34,976t) in GOA being much less than actual removals totalling 8,191 in 2011 (Clausen and Rodgveller, 2011). Bering Sea and Aleutian Islands (BSAI) grenadier biomass is was estimated to be 1,733,797 t in 2012 and is estimated to be 1,152,285 t in 2013. Overfishing is not occurring in the BSAI as OFL (2013) = 89,878 t and ABC (2013) = 67,409 t and are less than the total removals from BSAI of 6,360t.

The 2013 Giant grenadier report discusses that although present exploitation rates of giant grenadier are relatively low, the species have unique concerns that may put them at greater risk of overharvesting than other groundfish: a) nearly all grenadier caught are discarded and non-survive because the species cannot withstand the pressure change caused by retrieval to the surface; b) the depths fished for sablefish and Greenland turbot are responsible for most giant grenadier catch and at these depths females greatly outnumber males. Disproportionate removal of females by the fishery disproportionately reduces the spawning potential of the stocks; c) deep sea species such as grenadiers appear to be especially susceptible to overfishing due to traits such as long lifespan, slow growth, low fecundity, late maturation, low metabolic rates, and infrequent spawning (Rodgveller et al. 2012). In 2012 it was recommended at the NPFMC meeting that four options be produced for moving grenadiers into Fisheries Management Plans. Initial review of grenadier management is scheduled for 2013.

A diverse assemblage of skates are captured and discarded at sea. The 2012 SAFE report indicates bycatch averages from 2007-2011 in the sablefish fishery as 139 t / year (hook and line) for GAO "other skates", 122 t / year (hook and line) for GOA Longnose skates, and 18 t / year for BSAI "Skate".

In GOA stock assessments, Big skate and Longnose skate are treated separately from the other skates, which include about 15 species. In the GOA, all skate species are not being overfished, though insufficient information is available on the unfished biomass to determine whether they may be in an overfished state.

GOA skates are assessed on a biennial basis to coincide with survey data from the biennial trawl survey and a full assessment was presented in 2011 (Ormseth, 2012a). In 2011, the estimated overfishing level (OFL) in 2012/13 for big skate was 5,023t; 3,500 for longnose skate and 2,706 for all other skates combined. For each skate category, catches range from 1,998-2,536 t for big skate, 1020 -1,367 t for longnose skate and 1,206-1,489t for other species, between 2009-2011. Of these totals, it is estimated that the following were attributed to the sablefish fishery: big skate 2-11 t / year; longnose skate 67-98 t / year; 82 – 121 t / year. Catch both in the sablefish fishery, and overall, is under the estimated OFLs for skate species in the GOA (Ormseth, 2012a)

In the eastern Bering Sea / Aleutian Islands (BSAI), harvest recommendations for all skates are given in aggregate. The BSAI OFL based on data from the last 2011 survey, is 37,817 t / year and ABC is 31,523 t /year. Catches have ranged from 17,713 t / year – 20,198 t / year, between 2009-2011. It is estimated that the sablefish fishery was responsible for overall skate catches of 76-142 t / year from 2009 - 2011 in the BSAI. Catch both in the sablefish fishery, and overall, is under the estimated ABC and OFL indicating the skates in BSAI are within biologically based limits. Survey-based biomass limits show no discernible downward trend indicating overfishing (Ormseth, 2012b).

In 2010 it was recognized that skates may need extra protection of for their nursery areas; in the February 2012 NPFMC meeting, the Council chose to amend the groundfish, crab and scallop FMPs to identify six areas of skate egg concentrations as habitat areas of particular concern (HAPCs). These are sites of special importance within the essential fish habitat for formally managed species that may require additional protection from fishing activity or adverse fishing effects. At the same meeting, the Council requested that 1) NMFS monitor the HAPCs for changes in egg density or effects of fishing, 2) research and monitoring of skates be added to the research priority list and 3) federal descriptions of Bering Sea habitat conservation measures be standardized (NPFMC, 2010a).

Shark bycatch in the sablefish fishery is primarily comprised of spiny dogfish (*Squalus suckleyi*). Sharks are currently managed under the "other species" complex in the GOA and BSAI FMP (Pacific sleeper, salmon and other unidentified sharks) on a biennial basis: spiny dogfish is managed as a Tier 5 species while the overall "shark complex" is managed as Tier 6. Spiny dogfish is primarily captured in the flatfish trawl and cod longline fisheries (Tribuzio et al. 2012). Catch levels of "shark" in the sablefish fishery from 2007-2011 from all gear averaged 234 mt / year. The shark catch in the sablefish fishery does not exceed either the GOA shark complex OFL of 8,037 mt or the BSAI shark complex OFL (2011) of 1,360mt (Tribuzio et al. 2011a; Tribuzio et al. 2011b)

All longline vessels >55' are required to use seabird avoidance devices that have been demonstrated to markedly reduce seabird mortality (Melvin et al. 2001). The adoption of these measures has reduced seabird takes in other demersal longline fisheries by one-third (Fitzgerald et al. 2008), and albatross takes by 85% (Fitzgerald et al. 2008).

Demersal longline fisheries, on average, took 44-290 black-footed albatross per year, 2007 – 2011 (Fitzgerald et al. 2008), and 17-420 Laysan albatross per year (Fitzgerald et al. 2008). Other species commonly captured in demersal longlining include northern fulmar (2,357-7,921 per year, 2007-2011) gulls (1,141 – 2,208 per year, 2007-2011) and shearwaters (199-3,602 per year, 2007-2011 Recent changes in historical bycatch rates are notable for black-footed albatross where numbers increased recently from 44 in 2010 to 206 in 2011. This species in a Bird of Conservation Concern, listed the USFWS, indicating that without additional conservation actions, the species may become a candidate for listing under the Endangered Species Act (Zador 2012).

The management system consists of (1) surveys that are used to estimate stock status of non-target species and generate estimates of bycatch rates (2) setting of annual catch limits for the main bycatch species (3) mandatory use of seabird avoidance devices (tori lines) on all vessels larger than 55'. This system is expected to keep bycatch species at levels that are highly likely to be within biological limits.

1.7.3 Endangered, Threatened or Protected Species (ETP)

The only ETP species potentially adversely affected by the sablefish fishery is the short-tailed albatross (*Phoebastria albatrus*). The short-tailed albatross was listed as "endangered" in 2006 and thereby falls under protection of the U.S. Endangered Species Act. Before being subjected to intense hunting for feathers in the late 1800's / early 1900's, the short-tailed albatross was the most abundant albatross species in the North Pacific. Currently, roughly 2,400 short-tailed albatross are known to exist, and only 400 – 500 breeding pairs have been documented (USFWS, 2008). Their breeding range is now restricted to two islands (Torishima (Japan) and Minami-Kojima (contested between China and Japan)). The first of these supports roughly 80% of all breeding pairs, but because this island is an active volcano and the biggest colony is subject to mud slides, the population is at significant risk. The population on Torishima is growing at a rate of 6% per year (USFWS, 2008). Individual breeding pairs have recently been found on Kure Atoll and Midway Atoll, American wildlife refuges in the Hawaiian Islands.

Threats to the short-tailed albatross are principally the threat of stochastic events on Torishima Island, but also incidental catches in fisheries, ingestion of plastics, toxic contaminants, and depredation by non-native species. The current recovery plan concludes that these secondary threats do not pose a significant risk of depletion provided that populations continue to grow at current levels and that efforts to transplant chicks to islands that were part of their historical range are successful (USFWS, 2008).

The reported effectiveness of tori lines and the demonstrated reduction in all total albatross takes in Alaska longline fisheries since the adoption of seabird avoidance measures (Fitzgerald et al. 2008) implies that the sablefish fishery is unlikely to create unacceptable impacts to short-tailed albatross. The estimated population growth rate for short-tailed albatross is very high and near their maximum intrinsic rate of growth (USFWS 2008), which could not be possible if unacceptably high numbers of short-tailed albatrosses were taken in sablefish fisheries. These separate lines of evidence imply that it is highly unlikely that the effects of the fishery create unacceptable impacts to short-tailed albatross. Indeed, the recovery plan for short-tailed albatrosses (USFWS, 2008) concludes that: "short-tailed albatrosses are not declining due to seabird bycatch in commercial fisheries. Modelling indicates that 5-6% additional annual mortality would be needed before this species would begin to decline in numbers."

There is a strategy in place to manage the fishery's impact on short-tailed albatrosses. The management actions include the mandatory use of seabird avoidance measures that reduce albatross takes by more than 80%, and a bycatch limit that would close the entire sablefish fishery if more than 4 birds are killed in a two year period (http://alaskafisheries.noaa.gov/ram/ifq/rtf11.pdf). Population modelling suggests that levels of bycatch mortality would have to be nearly two orders of magnitude higher than the bycatch limit to cause population declines, thereby supporting a high confidence that this strategy will work. Best available information for the overall AK groundfish fishery shows that no Short-tailed Albatross were taken in 2007, 2008 or 2009. Fifteen birds were caught in 2010 and five in 2011 (across all fisheries) (Fitzgerald and Zador, 2012).

There have been no reported changes to management of ETP species and no indication that impacts to ETP species have changed in the sablefish longline fishery since the fishery was recertified in 2011.

1.7.4 Habitat

NOAA's overarching Habitat and Ecological Processes Research (HEPR) program is responsible for research to support habitat-based and ecosystem approaches to fisheries management. Projects focus on integrated studies that improve understanding of habitat and ecological processes. Key research areas include the loss of sea ice, essential fish habitat, ocean acidification and "The Bering Sea Project" (http://www.afsc.noaa.gov/HEPR/)

Sablefish longlining is generally thought to have minimal impacts relative to other types of gear, but can impact corals by entangling and dislodging them (as evidenced by coral bycatch, Livingston 2003). Areas of high coral density (coral gardens) have been identified, some in SE Alaska but most in the Aleutian Islands. All bottom – contact fishing in these areas is prohibited. Sixty-five different areas falling into one of six forms of protected waters in AK are described in an interactive map here: http://www.atsea.org/doc/NOAA-AlaskaMPAsMap8_09.pdf

The most important corals in Alaska waters are gorgonians, scleractinians and soft corals (*Gersemia* sp.). The distribution of corals have been assessed through NOAA trawl survey catch rates (Heifitze et al., 2002) and via smaller scale submersible surveys / observations (McConnaughey et al. 2009; Stone 2006). Identifying trends in these corals is difficult because they are encountered infrequently (Martin 2009), but nonetheless no discernible trend in gorgonians or scleractinians are apparent (Martin 2009).

Stone (2006) and Heifetz (2009) recently conducted submersible surveys of deep water corals and sponges in the Aleutian archipelago to describe depth distributions and also the incidence of visible damage or other footprints of fishing activities. They report substantial rates of coral damage, which is greatest in areas opened to trawling and least in regions infrequently trawled. Stone (2006) compares the depth distributions of corals to those of longlining and finds that in general, longlining sets are slightly shallower than the depths with peak coral densities, but there was substantial overlap between coral and longlining depth distributions. Of course, these data do not permit one to link damage to any particular gear, as longlining, trawling and fish/ crab pots were all used in these areas.

There is a strategy in place for managing the impact of the fishery on coral habitats which consists of (1) closing coral garden sites to all bottom-contact fishing in the Aleutian Islands and (2) closing coral garden sites in SE Alaska to bottom-contact fishing gears; (3) monitoring trends in relative abundance via the NOAA- Fisheries trawl surveys. There is a transparent criterion for identifying and classifying habitats as "Habitat Areas of Particular Concern" on the basis of rarity, ecological importance, sensitivity and level of disturbance (NPFMC 2010b). Coarse grain habitat mapping is already available and on-going efforts are seeking to provide finer grained, depth and habitat-specific information by sharing platforms with AFSC survey and NOAA vessels (AFSC, 2008). There is an effort to compile and organize habitat data, and summarized information is presented in McConnaughey et al. 2009; Martin (2009) describe trends in deep water corals and other biogenic habitat based on trawl survey bycatch and find little evidence for persistent trends in corals in the Bering Sea, Aleutian Islands or Gulf of Alaska.

In 2012 the NMFS Alaska Fisheries Science Center began an Alaska Coral and Sponge initiative. The work is sponsored by NOAA and consists of a three year field research program in the AK region for deep sea coral and

sponges, in order to better understand the location, distribution, ecosystem role and status of deep sea coral and sponge habitat. The overall initiative includes eleven projects: developing a coral habitat map for the GOA and AI, and a geologically interpreted substrate map for AK; investigations of *Prinmoa* corals in the GOA; estimation of the effects of commercial fixed gear fishing on coral and sponge using underwater camera; and measurements of oxygen and pH and increased collections of coral and sponge specimens from the summer bottom trawl surveys. The initiative is intended to result in management products that can be of utility to the NPFMC, for example in the annual Ecosystem Assessment, the AI Fishery Ecosystem Plan, or the 2015 5 year Essential Fish Habitat Review (AKSCI 2013a; AKSCI 2013b; Martin 2009, NMFS 2012).

Project 5 which examines the effect of fixed gears on benthic habitat will be of particular relevant to Sablefish management strategies and may lead to reformed use of gear design or set procedures. The pilot project to deploy a camera system on commercial longline and pot gear from 2012 will continue gear development. It is expected that another vessel of opportunity (either through AFSC research activities or collaboration with industry) will be available for field testing in 2013 (AKSCI 2013a).

Also in 2013, researchers at the University of Alaska Fairbanks and the Tombolo Institute will continue to collaborate with NOAA and USGS researchers to compile an interpreted (from geology) substrate and sediment map for Alaskan waters based on existing multibeam bathymetry, sediment data, and available seafloor imagery (AKSCI 2013a).

There were no reported changes to management of habitat and no indication that impacts to habitat have changed in the sablefish longline fishery since the fishery was recertified in 2011.

1.7.5 Ecosystem

Like most large marine ecosystems, resolving interaction strengths among food web constituents in Alaska is made difficult by limited data and confounding effects of environmental forcing (Essington 2009). Two primary concerns are germane to evaluating the effects of sablefish fishing on ecosystem functioning. The first is whether depletion of sablefish causes a release of top-down control on sablefish prey species, potentially leading to cascading effects on the food web. The second is that removal of sablefish reduces the productivity of any species that relies on sablefish for forage. Other indirect effects can arise if retained or bycatch species play key “top –down” or “bottom-up” roles in the ecosystem and thereby act to regulate food web structure.

Sablefish are mid- to upper trophic level opportunistic predators. Adults consume mostly benthic invertebrates and fishes (Yang and Nelson 2000, Yang et al. 2006). They do not constitute a dominant component of the feeding habits of any known predator; although feeding habits of large predators such as sperm whales are not well resolved (see Hanselman 2012a). However, the estimated natural mortality rate of sablefish and biomass of the population indicate relatively low levels of energy flow from sablefish to other predators.

There is some evidence that the fishery is highly unlikely to disrupt the key elements in the form of ecosystem models that have been developed for the Eastern Bering Sea, Aleutian Islands (Aydin et al. 2007) and the Gulf of Alaska (Gaichas and Francis 2008). None suggest an obvious critical or unique role of sablefish with respect to food web structure. Gaichas and Francis (2008) used network theory to identify potentially key species in the Gulf of Alaska food web on the basis of high connectivity and position as “hubs”. Four species were identified as (Pacific cod, Pacific halibut, walleye pollock and arrowtooth flounder) as highly connected species.

The North Pacific Fisheries Management Council includes a chapter on ecosystem considerations in the annual assessment of stocks. This report provides an extensive accounting of the dynamics of key biophysical drivers and indicators of ecosystem and community structure (Zador 2012). Apex predator biomass in the Eastern Bering Sea has been relatively stable over the past decade at a level roughly 35% less than the peak values witnessed in the late 1980s. Trends in biological trophic indicators for the Gulf of Alaska largely reflects the dynamics of arrowtooth flounder and walleye pollock. Diversity and species richness in the Gulf of Alaska show no trend, and apex predator biomass has been increasing (Zador 2012). Moreover, indicators of community structure in the Eastern Bering Sea (e.g. species richness, community size-spectra) do not suggest that groundfish fisheries are having significant adverse effects but instead are more responsive changes in spatial distribution of stocks and environmental conditions (Mueter and Lauth 2009; Boldt et al. 2008).

To date there has been no direct and explicit attempt to test the hypothesis of removals of sablefish have caused changes in ecosystem structure, either through effects on habitats, non-target species, or by reducing sablefish density and thereby diminishing their role in ecosystem structuring and functioning. Still, there has also been no evidence of widespread ecological change caused by fishing, as has been documented elsewhere (Casini et al. 2008). The fact that the sablefish population has not been depleted to very low levels implies that they are likely to maintain their ecological functioning.

Ecosystem context and management is overseen by the North Pacific Fisheries Management Council. The North Pacific Fisheries Management Council is one of the national leaders in implementing ecosystem-based management. The council's Fishery Management Plans specify a strategy to address, monitor and regulate ecosystem impacts of the fishery. Ecosystem-level constraints also factors into management decisions via a cap in total ecosystem removals for the Eastern Bering Sea and Gulf of Alaska based on considerations of the maximum surplus production of these ecosystems (Mueter 2009). The stated exosystem-based management goals of the NPFMC are:

1. Maintain biodiversity consistent with natural evolutionary and ecological processes, including dynamic change and variability
2. Maintain and restore habitats essential for fish and their prey
3. Maintain system sustainability and sustainable yields for human consumption and non-extractive uses
4. Maintain the concept that humans are components of the ecosystem. (Zador 2012)

The overall NPFMC Groundfish fisheries management plan also has specified ecosystem goals to: Develop indices of ecosystem health as targets for management; Improve the procedure to adjust acceptable biological catch levels as necessary to account for uncertainty and ecosystem factors; Continue to protect the integrity of the food web through limits on harvest of forage species.; Incorporate ecosystem-based considerations into fishery management decisions, as appropriate. Stock assessments include specific consideration of ecosystem impacts of each fishery, and the annual catch limits (total allowable catch) are based on scientific advice that first estimates total allowable biological catch based on single-species perspectives that are then modified downwards to account for ecosystem considerations.

Perhaps the most effective element that will act to prevent ecosystem impacts is a precautionary strategy to setting harvest levels: presently most stocks are well above their reference points, and only a small number of fisheries are part of overfishing rebuilding plan (e.g. king crab). Most groundfish are either near or well above biomass levels that would produce maximum sustainable yield (Worm et al. 2009). Across all groundfish stocks, exploitation rates are between 10 and 13 % (Mueter 2009), and that groundfish biomass is above the level that would produce total aggregate maximum sustainable yield (Mueter 2009).

Information on ecosystem structure and effects of sablefish fishing therein derives from data collected as part of Alaska Fisheries Science Center trawl and longline surveys, an extensive annual food habits collection program that dates to the 1980s, assessments for all main retained and discarded species, and monitoring of susceptible and vulnerable seabird populations. Moreover, ongoing research has been synthesizing this information via quantitative modeling (Aydin et al. 2007) and via comparative analyses (Gaichas et al. 2009, Link et al. 2009).

A central ecosystem tool relevant to wholistic groundfish management in AK is the "Ecosystem Considerations" Appendix that accompanies the annual compilation of stock assessment documents called the Stock Assessment and Fishery Evaluation (SAFE) reports (Boldt and Zador 2009; Zador 2012). Here, biophysical and ecological indicators relevant to ecosystem monitoring are tracked and reported annually. This Ecosystem Considerations Appendix is a significant compendium of information (230 pages in 2013) giving indicators and time-series that are relevant to groundfish management. In 2002, stock assessment scientist began using indicators from the appendix to systematically assess ecosystem factors such as climate, predators, prey and habitat that might affect particular stocks. Data contributors have also been asked to provide a rationale explaining the importance of indices they contribute, and explanation of impacts of any observed trends on the ecosystem or ecosystem components and how the information can be used to inform groundfish management decisions. Many of the time series are available on the web with author permission at: http://access.afsc.noaa.gov/reem/ecoweb/index.cfm.

No changes to ecosystem management or effects on the ecosystem from the sablefish longline fishery were detected since the fishery was recertified in 2011.

1.8 Principle 3: US North Pacific Sablefish Fishery Management

7.4.1 Overall management and fishing methods

Fisheries for sablefish in Alaska are both federally and state managed. The majority of sablefish fisheries in Alaska are limited entry and are managed through quota shares. Federal fisheries occur along the outer coast in the Gulf of Alaska, along the Aleutian Islands and in the Bering Sea with the majority of the harvest from the central Gulf and in Southeast. State managed fisheries for sablefish occur in Southeast Alaska, Prince William Sound, Cook Inlet, and in the Aleutian Islands (ADFG 2013).

Allocation of catch by gears

"Since 1992, approximately 90% of sablefish has been caught using longline gear with the remaining 10% divided between trawl and pots [neither pots nor trawl are part of the unit of certification, nor have these gear types been assessed under the MSC requirements]. Recently, pots have taken a larger portion of the remaining 10% than in previous years. The federally managed fishery in Alaska went to Individual Fishing Quota (IFQ) management in 1995. Quota shares were assigned initially to vessel owners or leaseholders who made at least one landing in the years 1988-1990. Each year, IFQs are assigned to individuals by multiplying the percentage of quota share they own by the annual harvest limit set for the sablefish fishery. Recent quotas have been near 20,000 tons. Pot fishing is banned in the GOA but is allowed in the Bering Sea and Aleutian Islands (BSAI) and accounts for nearly half of the IFQ catch in those areas" (AFSC, 2010).

Description of gear

Sablefish longline gear in Alaska is fished on-bottom. In the 1996 directed fishery for sablefish, average set length was 9km and average hook spacing was 1.2m. The gear is baited by hand or by machine, with smaller boats generally baiting by hand and larger boats generally baiting by machine. Circle hooks usually are used, except for modified J-hooks on some boats with machine baiters. Some vessels weight lines on rough or steep bottom to keep lines in place. Pots are longlined with approximately 40-135 pots per set.

1.8.2 Historical Governance

At the end of the 19th century and the first half of the 20th century, sablefish were utilized primarily by US and Canadian fishermen from California to Alaska. Catches were relatively small and averaged less than 2,000 t from 1930 to 1957. Thereafter, Japanese and Russian longliners began to fish the eastern Bering Sea and expanded the fishery. In 1962, catches peaked at 25,989 t. In the 1960s Japanese trawl fleets moved in and the longline fishery moved to the Aleutian Islands and Gulf of Alaska. In 1972 another peak was reached at 36,776 t. Populations declined and in the 1970s regulations were adopted in order and reduced the total catch. Relying on the Magnuson-Stevens Act, catches were restricted to about one fifth of the 1972 peak. The sablefish season was gradually reduced, so much so, that in some years the season was open only for a few days resulting in "derby" style fishing through the mid-1990s. Individual Fishery Quota (IFQ) was adopted in 1995 and the season length increased to 8 months/year. The fishery is now 8.5 months from March 1 to November 15 and corresponds with the timing of the Pacific halibut fishery.

1.8.3 The Current Fishery

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), in combination with other laws, currently form the legal framework governing management of the North Pacific sablefish fishery in the US. Sablefish are currently monitored by the National Marine Fisheries Service (NMFS), a branch of the National Oceanic Atmospheric Association (NOAA) which gives input to the North Pacific Fisheries Management Council (NPFMC) and Alaska Department of Fish and Game (ADFG). The fishery used to employ a gear based allocated quota system (50% of the Total Allowable Catch (TAC) to fixed gear (longlines) and 50% to trawl), but in 1995 the fishery moved to an IFQ system. As part of the amendment, 20% of the fixed gear allocation is set aside for a Community Development Quota (CDQ) reserve in the Bering Sea and Aleutian Islands. In 1997, maximum retainable allowances (0 to 7%) were set for sablefish as bycatch in other fisheries that vary by target species and location. Pots are banned for fishing sablefish in the Gulf of Alaska, but allowed in the Aleutian Islands (Hanselman et al, 2009).

Depredation by killer whales and sperm whales is common in the Alaska sablefish IFQ fishery (Hanselman et al, 2012a). Killer whale depredation commonly occurs in the Bering Sea, Aleutian Islands, and Western Gulf of Alaska. Sperm whale depredation is common in the Central and Eastern Gulf of Alaska. Pot fishing for sablefish has increased in the Bering Sea and Aleutian Islands as a response to depredation of longline catches by killer whales. Since 2004, pot gear has accounted for over half of Bering Sea fixed gear IFQ catch, and up to 34% of the catch in the Aleutian Islands (Hanselman et al, 2012). The NPFMC is presently considering a proposal to allow fishermen with commercial IFQs for both halibut and sablefish to retain halibut in IPHC Regulatory Area 4A that were caught in sablefish pots (NPFMC 2013). The Enforcement Committee of the NPFMC has noted that the intent of this proposal is not to permit increased directed fishing of halibut with pot gear, but rather better use of the halibut resource; Area 4A is subject to both halibut clearance requirements and a sablefish directed fishing requirement to operate VMS, so there are monitoring and enforcement tools already in use in the fishery (NPFMC 2013b, http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/halibut/4AhalibutPots_ExpanDP-413.pdf).

1.8.4 North Pacific Fishery Management Council (NPFMC)

Sablefish within the 200 mile limit and up to within 3 miles of shore are managed by the North Pacific Fishery Management Council in their Gulf of Alaska Groundfish Fishery Management Plan. The North Pacific Fishery Management Council (NPFMC) is one of eight regional councils established by the Magnuson Fishery Conservation and Management Act in 1976. The Council has primary responsibility for groundfish management in the Gulf of Alaska (GOA) and Bering Sea and Aleutian Islands (BSAI), including cod, pollock, flatfish, mackerel, sablefish, and rockfish species harvested mainly by trawlers, hook and line longliners and pot fishermen. The Council also makes allocation and limited entry decisions for halibut, though the U.S. - Canada International Pacific Halibut Commission (IPHC) which is responsible for conservation of halibut. Other large Alaska fisheries such as salmon, crab and herring are managed primarily by the State of Alaska.

1.8.5 Alaska Department of Fish and Game (ADF&G)

Sablefish within three miles of shore are managed by the Alaska Department of Fish and Game. Annual longline surveys are conducted in the Southern Southeast Inside (SSEI) subdistrict of the Eastern Gulf Alaska, by ADF&G, to assess sablefish stock status (Carroll and Stahl 2012).

1.8.6 Management System Dispute Resolution

The management system resolves most disputes within its highly participatory, open, and transparent structure and processes. Section 302 of the Magnuson-Stevens Act (MSA), and the Administrative Procedures Act (APA), mandate the Regional Fishery Management Councils follow specific procedures for discussing and resolving disputes on fisheries policy. Dissatisfied parties affected by Council and NMFS decisions can appeal the decision to the Appeals Office in the NMFS Alaska Regional Office, which adjudicates appeals of initial administrative determinations made under the authority of 50 C.F.R. Part 679 and Part 680. The jurisdiction of the Appeals Office's includes the Individual Fishing Quota (IFQ) Program for Pacific halibut and sablefish, the Western Alaska Community Development Program, and other management programs.

These dispute resolution mechanisms have proven to be effective at dealing with most issues, avoiding legal disputes, and are appropriate for the context of the sablefish fishery. In cases where the Council processes have not resolved disputes, the parties involved can and do, by law, resolve the disputes in the federal court system.

The fishery management system explicitly recognizes and accounts for the rights of people dependent on marine fishing in the form of the Western Alaska Community Development Quota Program and a subsistence sablefish fishery in waters in and off Alaska. As authorized and governed by the MSA as amended in 2006, the CDQ Program receives annual allocations of quota for groundfish, halibut, crab, and prohibited species in the Bering Sea and Aleutian Islands Management Area to allow these communities to ‘start and support regionally based, commercial seafood or other fisheries-related businesses’ (Section 305(i)(1) of the MSA).

In addition to its catch sharing plan and IFQ program for sablefish, the NPFMC has developed two management plans, the GOA and BSAI groundfish Fishery Management Plans that contain 46 short- and long-term objectives grouped into nine categories: (1) Prevent Overfishing; (2) Promote Sustainable Fisheries and Communities; (3) Preserve Food Web; (4) Manage Incidental Catch and Reduce By-Catch 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. These objectives are well-defined and measurable, consistent with achieving the outcomes expressed in MSC Principles 1 and 2, and are explicit within the fishery management system. The annual SAFE reports, and other assessments, provide measures of the extent to which the specific objectives are being achieved.

1.8.7 Enforcement

Enforcement authorities operate a comprehensive monitoring, control and surveillance (MCS) system in the sablefish fishery. The MSA charges two federal agencies with the authority to implement provisions of the Act: the National Marine Fisheries Service (NMFS) and the US Coast Guard. The Coast Guard enforces fisheries law and regulations at sea in conjunction with NOAA's Office of Law Enforcement and other federal, state, tribal, interstate and international organizations. The State of Alaska Department of Public Safety (Wildlife Troopers, Marine Enforcement Section) also enforces federal regulations under the Magnuson-Stevens Fishery Conservation and Management Act and other laws through a Joint Enforcement Agreement with NMFS (RAM 2009).

For violations that are significant, or for repeat violators, the agent refers the case to the NOAA General Counsel's Office for Enforcement and Litigation (GCEL) for further action. Penalty schedules, which specify the civil penalties for violations of federal fisheries regulations, have been developed for each region's fisheries. The penalty schedule Groundfish & Individual Fishing Quota Fisheries off The Coast of Alaska contains sanctions for various violations of sablefish IFQ regulations.

There have been no major changes to the way enforcement is carried out systematic non-compliance has not been an issue since the fishery was re-certified.

Table 4. At-sea IFQ fisheries violations, 2005–2011. Selected violations shown are those that have persisted in the fishery over time. (Source: http://alaskafisheries.noaa.gov/ram/ifq/rtf11.pdf, p. 52)

Violation Type	2011 Violations (23 on 13 vessels)	2010 Violations (21 on 17 vessels)	2009 Violations (10 on 10 vessels)	2008 Violations (5 on 5 vessels)	2007 Violations (20 on 19 vessels)	2006 Violations (20 on 19 vessels)	2005 Violations (10 on 8 vessels)
Fishing in Closed Area	1	1	2	0	0	0	0
FFP/IFQ Permit/Cardholder not onboard	7	1	1	0	2	4	5
Expired FFP	0	0	1	0	0	0	0
Boarding ladder	0	0	1	0	0	0	0
Insufficient Seabird Avoidance	0	0	0	0	2	7	3
Logbook Discrepancy	8	7	5	3	5	5	2

1.9 Fleet Composition

Regulations are often applied by sectors divided into categories based on vessel length over-all (LOA). Changes to the observer program will be applied to vessel size classes differently.

Table 5. Number of active Sablefish IFQ vessels by size class (Source: Vincent & Jagielo 2012)

Vessel Size Class (LOA)	Number of Active Vessels
<40 ft	16
40 to 59.9 ft	52
>50-59.9 ft	104
>60 ft	51

Table 6. Number of active vessels by management area and year. (Source: http://alaskafisheries.noaa.gov/ram/ifq/rtf11.pdf p. 69)

AK IFQ Sablefish	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average vessel number by area
AI (Aleutian Islands)	38	44	36	34	30	29	36	37	39	37	36
BS (Bering Sea)	48	45	38	45	40	37	38	43	42	49	42.5
CG (Central GOA)	209	204	192	192	189	188	176	178	174	174	187.6
SE (Southeast Outside)	262	2S0	252	234	227	221	21S	210	21S	205	230.1
WG (Western GOA)	74	75	73	76	75	73	64	64	65	66	70.5
WY (Western Yakutat)	145	136	136	131	128	129	117	116	117	114	126.9
Total licensed by year	776	504	727	712	689	677	431	648	437	645	624.6
Total participating vessels by year	416	409	396	378	372	373	359	362	368	362	379.5

1.9.1 Observer Program Changes

The NPFMC approved a re-structuring of the observer program in October, 2010 that makes important changes to how observers are deployed, how observer coverage is funded, and the vessels and processors that must have some or all of their operations observed. These changes will increase the statistical reliability of data collected by the program, address cost inequality among fishery participants, and expand observer coverage to previously unobserved fisheries.

Changes were adopted to increase randomization in the way that observers are deployed into fishing operations. Randomization will include timing, location, and magnitude of observer coverage with the goal of sampling vessel and trip types more uniformly through equal probability sampling (NMFS, 2012; NPFMC 2013b).

The North Pacific Groundfish Observer Program (NPGOP) employs a 5 tiered hierarchical sampling design where the lowest tier, tier 5, is biological sampling (length, sex, tissues, etc.) and the highest tier, tier 1, is the fishing

vessels and trips themselves (Cahalan et al, 2010). Under restructuring, changes have been made only to tier 1.

Prior to 2013, vessel operators chose which trips observers were deployed on. The resulting data were post-stratified to estimate the overall composition of catch from different trip types. Observed trips could be of any duration, location or target species (decided after the observer was deployed) except catcher-processors and mother ships, where 100% of trips are observed. In this scheme, fisheries were often disproportionally sampled, causing anomalous sampling events on these trips to be heavily weighted thereby potentially introducing bias into catch estimation.

Under the new equal probability sampling regime, tier 1 sampling is partitioned into two strata: (1) trip-selection stratum and (2) vessel-selection stratum. Some vessels and trip types still require full coverage, notably if processing at sea occurs.

For the trip-selection strata, vessels >57.5 ft. length over-all (LOA), and floating processing facilities will log in to an electronic database (Observer Declare and Deploy System, ODDS) to enter in anticipated trip dates and departure locations. From this information, observers will be randomly assigned to anticipated trips. If a trip that was scheduled to be observed is cancelled, the following trip by that vessel must be observed.

For vessel-selection strata, vessels between 40 and 57.5 ft. LOA will be entered into a lottery. If selected, a vessel must carry an observer for a two month period for every trip. This is intended to reduce the "observer effect" by increasing the duration of the time that an observer must be taken during the season instead of trip-by-trip where a fisher may choose to fish differently or not at all for that trip. Vessel owners are entered back into the lottery for the next quarter even if they had already been selected so that vessels have the same probability of being selected every quarter. Vessels <40' LOA will not have any human observer coverage in 2013. The strata based on vessel length are provisional for 2013 while the program is under evaluation, and are subject to changes in subsequent years to allow for flexibility and public input for implementation in 2014 onwards.

A pilot electronic monitoring (EM) program is being developed by the NMFS Observer Program at the Alaska Fisheries Science Centre in collaboration with Saltwater Inc., where video data from volunteer vessels will be compared with human observed trips to detect any changes or discrepancies in sampling associated with bycatch and discards. Field operations began April 1st 2013 and will continue through 2014, with success of the project contingent on voluntary vessel participation. The initial pilots will be undertaken on vessels < 60 ft in length, fishing with fixed gear and targeting Halibut or Sablefish IFQ, or groundfish, and develop performance standards for regulations related to installation, camera placement, equipment requirements and maintenance. The study also plans to examine total costs associated with the EM program. The NPMFC may also consider utilizing EM for vessels <40' LOA where it is difficult to accommodate a human observer (space limitations or safety concerns). At the June 2013 NPFMC meeting, the Council and Observer Advisory Council noted that the EM Strategic Plan would benefit from improving specificity related to implementation of EM systems and articulating a phase-in approach for EM in order to expedite overall implementation of EM for the small boat, fixed gear fleet. The Council approved development appointment of an EM Workgroup to meet for the first time in October or November of 2013 (NPFMC 2013b).

In order to learn more about recent changes in the observer program, the Audit Team conducted an in-person interview with Farron Wallace of the NMFS-AFSC in Seattle, WA on July 9th, 2013. Farron noted that the restructured observer program went into effect on January 1, 2013. Ongoing analysis and evaluation of

observer deployment and data collected in the program are now managed through an Annual Deployment Plan (ADP) and associated review process. An interagency working group, the Observer Science Committee (OSC) has been formed to make recommendations to NMFS and NPFMC on deployment methods. NMFS will routinely present an Annual Performance Review (APR) report to the NPFMC during its June meeting that provides an evaluation of the observer program, and proposed changes to the deployment plan for the following year. The APR report will detail how well various aspects of the program are working, and will lead to recommendations through the ADP. The first full annual review of the 2013 Observer Program will occur in June 2014. The draft final ADP was released September 1, 2013 (NMFS, 2013a). NMFS will consider recommendations made by the NPFMC during its October 2013 meeting to modify the draft ADP, which will be finalized in early December 2013.

The interim APR report was distributed in June, 2013 and covers progress on the first year of implementation, therefore covering only the first 16 weeks of 2013 (Faunce et al., 2003). Challenges have included: (1) difficulties in obtaining random samples due to conditional vessel releases from the program in the vessel selection stratum; (2) the lack of a definitive list of vessels in the vessel selection pool from which to make selections for observer coverage due to new entries into the fishery and non-participation of vessels previously that fished in the previous year. Other concerns have included; (3) inefficiencies due to sampling many small boats in the vessel selection category without knowing in advance if they will participate; (4) definition of a "trip" for sample selection, when tender deliveries occur (Robert Alverson FVOA, pers comm), where there is the need to identify both trips (leave port – return to port) and deliveries (offloads to tenders). The OAC recognizes that these concerns may require a regulatory amendment and/or may be addressed through the 2014 deployment plan. There may also (5) be the need to consider a *deminimus* catch release for very small "cleanup" trips, contingent on agreed use of EM: procedures for this do not currently exist. The OAC would also like (6) the Council to consider whether and how to base coverage on tonnage of catch or anticipated catch (Observer Advisory Committee doc).

More detailed recommendations associated with proposed observer program improvements can be found in Appendix IV.

Relevance of the changes in the observer program and EM pilots to the Sablefish longline fishery

As noted in the Strategic Plan document for EM in the North Pacific (NMFS, 2013b), observer coverage is 100% for the sablefish IFQ catcher-processor (CP) fleet, but not for the sablefish catcher vessel (CV) fleet. At present, VMS is used only in the Aleutian Islands IFQ fishery. Potential benefits to the sablefish fishery have been discussed that could come from the newly expanded observer program. For example, the collection of hook counts and spacing measurements of specific set segments is presently collected on observed trips, but is lacking for unobserved trips. Also, the NPFMC Groundfish Plan Team and SSC have noted that the expanded observer program could potentially help to resolve a catch accounting issue resulting from overlap between two datasets. The Halibut Fishery Incidental Catch Estimation (HFICE) is an estimate of the incidental catch of groundfish in the halibut IFQ fishery in Alaska, which is currently unobserved. Presently, the HFICE estimates cannot be added to the current Catch Accounting System (CAS) estimates of total catch because overlap occurs between the two datasets when sablefish are retained or discarded during an IFQ halibut trip (Hanselman et al 2012a).

A recent study has indicated that observer coverage and EM coverage exhibited statistically unbiased and acceptable comparability related to identification and numbers for almost all species, with the exception of those that could not be identified beyond the species grouping levels used in management (Cahalan et al.

2010). EM does not however, have the same capacity as human observers to collect certain biological specimens (e.g. otoliths, scales).

At present there is recognition by the NPFMC and the OSC of the disconnect between the intent to generate a better understanding of catch and discards via implementation of the overall observer program, and the reality of "releasing" small boats from coverage, while still facing obstacles to EM system implementation. These specific concerns are outlined in Appendix IV in relation to the EM strategic plan and the EM Workgroup.

1.9.2 Research Updates

The 2012 SAFE Report identifies areas for priority research stating that "a better understanding of juvenile distributions, habitat utilization, and species interactions would improve understanding of the processes that determine the productivity of the stock. Better estimation of recruitment and year class strength would improve assessment and management of the sablefish population". In the initial scoring of the fishery, performance indicator 1.1.2 (Reference Points) received a passing score of 80, but the assessment team noted the absence of a stock-recruitment relationship for US Sablefish (which is available for Sablefish in Canadian waters).

Priority research objectives for Sablefish include:

1) Refining the survey abundance index model and accounting for whale depredation, and potentially including gully abundance data as well as other covariates
2) Refining the fishery abundance index to utilize a core fleet and identifying covariates that affect catch rates
3) Improving knowledge of sperm and killer whale depredation and quantifying depredation effects on the fishery's catch rates
4) Continuing to explore the use of environmental data to aid in determining recruitment
5) Working closely with an integrated GOA Ecosystem project funded by the NPRB that is aiming to look at recruitment processes of major groundfish including sablefish.
6) Developing a spatially explicit research assessment model that includes movement which will help to examine smaller-scale population dynamics while retaining a single stock hypothesis in the AK-wide sablefish model.
7) Improving knowledge of maturity and fecundity

Research and Background Documents Provided to the Assessment Team

According to the terms of the Action Plan, the client has provided the following information on the work undertaken since the initial certification in 2011:

1.10 2011 & 2012 Report of Assessment and Research Activities:

- Bellman MA, Al-Humaidhi A, Jannot J, Majewski J. 2012. Estimated Discard and Catch of Groundfish Species in the 2011 US West Coast Fisheries. West Coast Groundfish Observer Program. National Marine Fisheries Service, NWFSC, 2725 Montlake Blvd. E., Seattle, WA 98112.

- Clausen DM and Rodgveller CJ. 2011. Appendix 1: Gulf of Alaska and Bering Sea/Aleutian Islands SAFE Reports. Assessment of the Grenadier Stock Complex in the Gulf of Alaska, Eastern Bering Sea and the Aleutian Islands. December 2011. Stock Assessment and Fishery Evaluation Report (SAFE). North Pacific Fishery Management Council, Anchorage AK.

- Gilroy, H.L. and S.R. Hare. 2011. Wastage of halibut in the commercial halibut fishery. IPHC Report of Assessment and Research Activities 2011:53-61 Available at: http://www.iphc.washington.edu/publications/rara/2011/2011.53.Wastageofhalibutinthecommercialhalibutfishery.pdf

- Green K, Carlile D, Jaenicke, and Meyer S. 2011. Assessment of the demersal shelf rockfish stock complex in the southeast outside district of the Gulf of Alaska. Alaska Department of Fish and Game. GOA Demersal Shelf Rockfish. December 2011 NPFMC Gulf of Alaska SAFE. p1193-1198.

- Hare, S.R. 2011. Assessment of the Pacific halibut stock at the end of 2010. IPHC Report of Assessment and Research Activities 2010: 85-175 Available at: http://www.iphc.washington.edu/library/raras/149-rara-2010.html

- Hare, S.R. 2011a. Potential modifications to the IPHC harvest policy. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2010: 177-199.

- Hare, S.R. 2012. Assessment of the Pacific halibut stock at the end of 2011. Int. Pac. Halibut Comm. Report of Assessment and Research Activities 2011: 101-201.

- Murphy J. and Ianelli J. 2011. 2011 Assessment of the Thornyhead stock in the Gulf of Alaska. NMFS Alaska Fisheries Science Center. SAFE report. December 2011. p1199-1238.

- NMFS. 2012. 2013 Observer Program NMFS Annual Deployment Plan. October 2012. Fishery Monitoring and Analysis Division, Alaska Fisheries Science Center. Seattle WA. pp 49. Available at: http://www.fakr.noaa.gov/npfmc/PDFdocuments/conservation_issues/Observer/2013DeploymentPlanFiinal.pdf

- NPFMC. 2012. Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area. North Pacific Management Council. Anchorage AK, pp 162. Available at: http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/BSAI/BSAI.pdf

- NPFMC. 2012. Fishery Management Plan for Groundfish of the Gulf of Alaska. North Pacific Management Council. Anchorage AK, pp 146. Available at: http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/GOA/GOA.pdf

- Ormseth O. 2011. Chapter 18: Gulf of Alaska skates. North Pacific Marine Fisheries Commission Stock Assessment Fishery Evaluation (SAFE) report. NMFS Alaska Fisheries Science Center, Seattle WA. pp 1315-1376.

- Ormseth O and Matta B. 2011. Chapter 18: Bering Sea and Aleutian Islands skates. North Pacific Marine Fisheries Commission Stock Assessment Fishery Evaluation (SAFE) report. NMFS Alaska Fisheries Science Center, Seattle WA. Pp 1157-1242.

- Spencer PD and Ianelli JN.2011. Chapter 15: Assessment of the Shortraker Rockfish in the Bering Sea and Aleutian Islands. Stock Assessment and Fishery Evaluation (SAFE) Report. North Pacific Fishery Management Council, Anchorage AK, pp 1073-1074. Available at: http://www.afsc.noaa.gov/refm/docs/2011/BSAIshortraker.pdf

- Spencer P.D. and Rooper C.N.2011 Chapter 14: Assessment of Blackspotted and Rougheye Rockfish Stock Complex in the Bering Sea/Aleutian Islands. Stock Assessment and Fishery Evaluation (SAFE)

Report. North Pacific Fishery Management Council, Anchorage AK, pp1067-1072. Available at: http://www.afsc.noaa.gov/REFM/docs/2011/BSAIrougheye.pdf

- Thompson GG, A'mar T, Palsson WA. 2011a. Chapter 2: Assessment of the Pacific Cod Stock in the Gulf of Alaska. Stock Assessment and Fishery Evaluation (SAFE) Report. North Pacific Fishery Management Council, Anchorage AK, pp. 161-306. Available at: http://www.afsc.noaa.gov/REFM/docs/2011/GOApcod.pdf

- Thompson GG and Lauth R. 2011b. Chapter 2: Assessment of the Stock in the Bering Sea and Aleutian Islands Area. Stock Assessment and Fishery Evaluation (SAFE) Report. North Pacific Fishery Management Council, Anchorage AK, pp269-476. Available at: http://www.afsc.noaa.gov/REFM/docs/2011/BSAIpcod.pdf

- Tribuzio CA, Echave K, Rodgveller C, Hulson P, Goldman K. 2011. Chapter 20: Assessment of the Shark stock complex in the Bering Sea and Aleutian Islands. Stock Assessment and Fishery Evaluation (SAFE) report. North Pacific Fishery Management Council. pp1247-1252.

- Zador S and Gaichas S. 2011. Appendix C: Ecosystem Considerations for 2011. The Plans Team for the Groundfish Fisheries of the Bering Sea, Aleutian Islands and Gulf of Alaska. North Pacific Fishery Management Council. 243pp.

1.11 2013 Report of Assessment and Research Activities (received from client):

- Council Final Motion on Observer Restructuring. FSAI Amendment 86/GOA Amendment 76. October 8 2010.

- Faunce, C.H., Gasper, J., Wallace, F., Cahalan, J., Mondragon, J., Amar, T. Lowe, S. and Webster, R. 2013. Annual Performance Review: North Pacific Groundfish and Halibut Observer Program. First and Preliminary 2013 Version. June 2013. Available at: http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/conservation_issues/Observer/ObserverAnnualReview613.pdf

- Individual Fish Quote (IFQ) Allocations and Landings (For Fishing Year 2013). Prepared July 9 2013. NOAA Fisheries Service, Juneau AK - giving current estimate of Sablefish catch to date, remaining pounds and recent of TAC landed

- Letter from NMFS to Chairman Olson of the North Pacific Fisheries Management Council addressing the council's recommendations and requests in development of the 2014 draft Annual Deployment Plan for the AK Observer Program. Pp. 13

- Minutes from the June 7, 2013 Observer Program Council Motion. Council Motion on Observer Issues, C-3. June 2013. Pp.2

- NMFS. 2013. Observer Program NMFS Annual Deployment Plan. October 2012. Fishery Monitoring and Analysis Division, Alaska Fisheries Science Center. Seattle WA. Pp. 49. Available at: http://www.fakr.noaa.gov/npfmc/PDFdocuments/conservation_issues/Observer/2013DeploymentPlanFiinal.pdf

- NMFS. 2013. Annual Performance Review. North Pacific Groundfish and Halibut Observer Program. First and Preliminary 2013 Version. Prepared by the Observer Science Committee. June, 2013. Pp. 20 Available

at: http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/conservation_issues/Observer/ObserverAnnualReview613.pdf

- NMFS 2013. Semi-Annual Report to North Pacific Fishery Management Council. FY 2013 First and Second Quarters. (Oct 1 2012-March 31 2013).

- NMFS. 2013. Draft 2014 Annual Deployment Plan for Observers in the Groundfish and Halibut Fisheries off Alaska. 31 pages plus appendices. NOAA. Juneau, AK

- North Pacific Groundfish and Halibut Observer Program. First and Preliminary 2013 Version. Prepared by the Observer Science Committee. June, 2013. Pp. 20

- Observer Advisory Committee Report, June 2013. Observer Advisory Committee meeting minutes. June 3-4 2013, Juneau, AK

Conclusions and Recommendations

It is SCS's view that the US North Pacific sablefish longline fishery continues to meet the standards of the MSC and complies with the 'Requirements for Continued Certification.'

There were no conditions to the certification of this fishery. Performance indicators 1.2.3, 1.2.4, 2.4.3, 3.2.3 and 3.2.4 were selected to review as a 'spot check.' No changes to the scores from the initial certification were made.

1.2.3		
Relevant information is collected to support the harvest strategy.		
SG 60	**SG 80**	**SG 100**
Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy. Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy. Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule. There is good information on all other fishery removals from the stock.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available. All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.

Conclusion after 2nd annual surveillance audit: Score not changed: 90
In general, information for the assessment of sablefish is relatively data rich in comparison to other stock assessments. A better understanding of the recruitment dynamics (i.e., a stock recruitment relationship), would allow the stock to move to a Tier 2 status within the NPFMC system. Ongoing investigations are being conducted to evaluate environmental correlates that could potentially be used to improve estimates of recruitment.

1.2.4		
There is an adequate assessment of the stock status.		
SG 60	**SG 80**	**SG 100**

The assessment estimates stock status relative to reference points. The major sources of uncertainty are identified.	The assessment is appropriate for the stock and for the harvest control rule, and is evaluating stock status relative to reference points. The assessment takes uncertainty into account. The stock assessment is subject to peer review.	The assessment is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery. The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way. The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored. The assessment has been internally and externally peer reviewed.

Conclusion after 2nd annual surveillance audit: Score not changed: 95
The stock assessment model used for this stock has not been changed substantively since certification in 2011. The annual stock assessment is appropriate for the Tier 3 harvest control rules that are used by the NPFMC and provides estimates of current biomass and evaluates stock status relative to reference points. The model takes a degree of uncertainty into account, but has not been tested to examine robustness to uncertainty. The assessment is reviewed internally and externally by the Gulf of Alaska and Bering Sea Plan Teams, North Pacific Fisheries Management Council and the Scientific and Statistical Committee on an annual basis. Also, reviews by the Center for Independent Experts (CIE) are conducted periodically.

2.4.2

There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types.

SG 60	SG 80	SG 100
There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance. The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above. There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or habitats involved. There is some evidence that the partial strategy is being implemented successfully.	There is a strategy in place for managing the impact of the fishery on habitat types. The strategy is mainly based on information directly about the fishery and/or habitats involved, and testing supports high confidence that the strategy will work. There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is

similar fisheries/habitats).		some evidence that the strategy is achieving its objective.

Conclusion after 2nd annual surveillance audit: Score not changed: 90

Sablefish longline fishery is not expected to have significant impacts on habitat. However, it has been noted that bottom contact gear such as longlines, may interact with biogenic habitat, including habitat-forming coral species. It has been seen that in red tree coral thickets in the eastern Gulf of Alaska 17% and 20% of the "standing stock' of corals and sponges respectively have been damaged to some degree by longlines (AKCSI 2013) and corals and sponges are bycatch seen in both commercial fisheries and stock assessment surveys using longlines, indicating interactions between gear and benthic habitat.

In the 2011 assessment, 4 main strategies were cited as means of managing the impact of the fishery on benthic habitat: 1) closing coral garden sites to all bottom-contact fishing in the AIs, 2) closing coral garden sites in SE AK to bottom-contact fishing gears, 3) monitoring trends in relative abundance via the NOAA-Fisheries trawl surveys and 4) use of onboard observers to document incidence of coral bycatch. There is also a transparent set of criteria for identifying and classifying habitats as "Habitat Areas of Particular Concern".

Since 2011, two new sources of information to modify fishing strategies have become available: further information through changes to the structure of the observer program and Project 5 of the NOAA research initiative described in 2.4.3, documenting the effects of fixed gear on benthic habitat. Neither has currently resulted in any modifications to the strategies used to mitigate impacts, but there is an explicit objective in the NOAA research to obtain information to "provide insights regarding possible gear modification to minimize interaction". The score for this PI remains 90 but could increase if new information results in strategic improvements that diminish interactions.

2.4.3		
Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.		
SG 60	**SG 80**	**SG 100**
There is a basic understanding of the types and distribution of main habitats in the area of the fishery. Information is adequate to broadly understand the main impacts of gear use on the main habitats, including spatial extent of interaction.	The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery. Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent, timing and location of use of the fishing gear. Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types. Changes in habitat distributions over time are measured. The physical impacts of the gear on the habitat types have been quantified fully.

Conclusion after 2nd annual surveillance audit: Score not changed: 80

When the fishery was originally assessed in 2011, the spatial distribution of fishing effort for the AK Sablefish fishery was documented via log books and observers, and these data had been used to map and weight the potential impacts of sablefish longlining on vulnerable habitats. The AK Fishery Science Centre and the North Pacific Fishery Management Council had developed criteria for identifying and classifying specific habitats as "habitat areas of particular concern" (HAPCs) on the basis of rarity, ecological importance, sensitivity and level of disturbance (NPFMC 2010b). Coarse grain habitat mapping was available at the time of assessment and ongoing efforts were attempting to provide finer grained, depth and habitat-specific information by sharing information with AFSC survey and NOAA vessels (AFSC, 2008). There had been an effort to compile and organize habitat data, with summarized information presented in McConnaughey et al. 2009. Martin (2009) described trends in deep water corals and other biogenic habitat based on trawl survey bycatch and found little evidence for persistent trends in corals in the Bering Sea, Aleutian Island or Gulf of Alaska.

Previous work extrapolated from studies done in other areas indicates that when impacts on physical structure, seafloor organisms, shellfish and crabs, finfish, sharks, marine mammals as well as seabirds and turtles was considered, bottom longline impacts score 30 on a 100 point scale, relative to pots (38) and trawls (91) (Morgan & Chuenpagdee 2003). This work (which aggregates single set pots and trotlined pots) may also have underestimated the true damage of pots used for Sablefish, which exclusively use trotlines (Jenkins et al. 2012). Nonetheless, it is known that when longlines are hauled, they may cause hooks to snag, abrading rocks, corals and sponges, should these be present. Damage is magnified if the gear is hauled mechanically. Observations in red tree coral thickets in the eastern Gulf of Alaska indicate that 17% and 20% of the "standing stock' of corals and sponges respectively have been damaged by longlines (Stone et al. in preparation (Jenkins et al. 2008)

Corals and sponges are common bycatch in both commercial fisheries and stock assessment surveys using longlines, indicating interactions between gear and benthic habitat

There is evidence that information is being gathered to improve the knowledge of commercial fixed gear on habitat. In 2012, NOAA sponsored a 3 year field research program in AK for deep sea corals and sponges, in order to better understand the location, distribution, ecosystem role and status of deep sea coral and sponge habitats. The initiative includes 11 projects, where Project 5 aims to estimate of the effects of commercial fixed gear fishing on coral and sponge *in situ*, using underwater cameras. In 2012 a prototype camera system was constructed and deployed, which indicated the need to redesign the system: this testing is expected to continue through 2013. It is also expected that the revised observer program should provide increased information on bycatch, giving an indirect measure of habitat impacts from longlines. This new information may allow the fishery to improve its score in the future: at present the score remains 80.

3.2.3		
Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.		
SG 60	**SG 80**	**SG 100**
Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective. Sanctions to deal with non-compliance exist and there is some evidence that they are applied. Fishers are generally thought to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules. Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence. Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery. There is no evidence of systematic non- compliance.	A comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence. There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery. There is no evidence of systematic non- compliance.

Conclusion after 2nd annual surveillance audit: Score not changed: 85

The enforcement system has not been changed substantively since original certification in 2011. The enforcement authorities operate a comprehensive monitoring, control and surveillance (MCS) system in the sablefish and other Alaska fisheries. The enforcement program for the Alaska fishery has demonstrated the ability to enforce the fishery's management regulations. Observers of the fishery generally believe that the sanctions provide effective deterrence. There are no serious concerns of widespread or systematic non-compliance in the Alaska sablefish fishery. Regulations for the IFQ sablefish fishery require that fishers maintain logbooks and regularly report their catches, landings, and other measures of fishing activity to NMFS. There is generally widespread compliance with the logbook requirement.

3.2.4		
The fishery has a research plan that addresses the information needs of management.		
SG 60	**SG 80**	**SG 100**
Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2. Research results are available to interested parties.	A research plan provides the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2. Research results are disseminated to all interested parties in a timely fashion.	A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2. Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.

Conclusion after 2nd annual surveillance audit: Score not changed: 90

Research programs have not changed substantively since original certification in 2011. The Alaska Fisheries Science Center of NMFS operates an active research program on sablefish and related issues, such as seabirds bycatch by longline fishing vessels. Much of this research is reported in annual SAFE documents used by NPFMC for management. Research priorities for management are identified and are routinely updated by the NPFMC in a Research and Data Needs document, required by the MCA. An additional research program is operated by the North Pacific Research Board (NPRB). The NPRB organizes and funds research to improve the understanding of the North Pacific, Bering Sea, and Arctic Ocean ecosystems. This research supports effective management and sustainable use of marine resources in the region, and management decision-making by the NPFMC and NMFS.

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Appendix I: Supporting Letter from the North Pacific Fishery Management Council

North Pacific Fishery Management Council

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October 3, 2012

Ms. Adrienne Vincent
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Dear Ms. Vincent:

I am writing at the request of Mr. Robert Alverson from the Fishing Vessel Owners Association, to apprise you of the progress, and pending implementation, of our restructured North Pacific Observer Program. Previous certifications of the halibut fisheries off Alaska have noted the lack of observer coverage in these fisheries. I am pleased to be able to inform you that the fee-based program developed by the Council in 2010 is now nearing its implementation phase, and beginning in January of 2013 observer coverage requirements will be extended to fisheries heretofore lacking observer coverage, including a portion of the halibut fleet.

Under the restructured program, observer coverage will be deployed in the groundfish and halibut fisheries on all vessels equal to or greater than 40 ft. in length. In order to ensure that a representative sample of fishing events is obtained, observers will be deployed onto vessels or fishing trips through stratified random selection, where every sample unit (vessel or trip) has an equal probability of being selected. As a result, the proportion of the fisheries observed should, on average, be proportional to the areas and fisheries in which fishers participate. Vessels between 40 ft. and 57.5 ft. length will be randomly selected by calendar quarter, and if selected must carry an observer for all trips during that quarter. Vessels over 57.5 ft. must register each fishing trip, and each fishing trip will have an equal probability of being selected for observer coverage. We are also developing electronic monitoring applications (such as video cameras or other devices) which can be used in addition to, or in lieu of, observers on smaller vessels, which have difficulty physically accommodating an observer.

I hope this information is useful in your upcoming certification review. Please do not hesitate to contact me if you need any additional detail on these pending changes in observer requirements for these fisheries.

Sincerely,

Chris Oliver
Executive Director

CC: Mr. Robert Alverson, FVOA

Appendix II: North Pacific Fishery Management Council Groundfish tier system to estimate reference points

From DiCosimo et al, 2010

Description of the groundfish tier system used by NPFMC since 1999 for defining fishing–mortality rate related to overfishing level (F_{OFL}) and to acceptable biological catch (F_{ABC}) based on the type of information available (Info).

Tier 1	Info: reliable point estimates of B and B_{MSY} and reliable pdf of F_{MSY}	
	(1a)	Stock status: $B/B_{MSY} > 1$ $F_{OFL} = m_A$; $F_{ABC} \times m_H$
	(1b)	Stock status: $a < B/B_{MSY} \leq 1$ $F_{OFL} = m_A \times (B/B_{MSY} - a)/(1 - a)$; $F_{ABC} \leq m_H \leq (B/B_{MSY} - a)/(1 - a)$
	(1c)	Stock status: $B/B_{MSY} \times a$ $F_{OFL} = F_{ABC} = 0$
Tier 2	Info: reliable point estimates of B, B_{MSY}, F_{MSY}, $F_{35\%}$, and $F_{40\%}$	
	(2a)	Stock status: $B/B_{MSY} > 1$ $F_{OFL} = F_{MSY}$; $F_{ABC} \leq F_{MSY} \times (F_{40\%}/F_{35\%})$
	(2b)	Stock status: $a < B/B_{MSY} \times 1$ $F_{OFL} = F_{MSY} \times (B/B_{MSY} - a)/(1 - a)$; $F_{ABC} \leq F_{MSY} \times (F_{40\%}/F_{35\%}) \times (B/B_{MSY} - a)/(1 - a)$
	(2c)	Stock status: $B/B_{MSY} \leq a$ $F_{OFL} = F_{ABC} = 0$
Tier 3	Info: reliable point estimates of B, $B_{40\%}$, $F_{35\%}$, and $F_{40\%}$	
	(3a)	Stock status: $B/B_{40\%} > 1$ $F_{OFL} = F_{35\%}$; $F_{ABC} \leq F_{40\%}$
	(3b)	Stock status: $a < B/B_{40\%} \leq 1$ $F_{OFL} = F_{35\%} \times (B/B_{40\%} - a)/(1 - a)$; $F_{ABC} \leq F_{40\%} \times (B/B_{40\%} - a)/(1 - a)$
	(3c)	Stock status: $B/B_{40\%} \leq a$ $F_{OFL} = F_{ABC} = 0$
Tier 4	Info: reliable point estimates of B, $F_{35\%}$, and $F_{40\%}$	
		$F_{OFL} = F_{35\%}$; $F_{ABC} \leq F_{40\%}$
Tier 5	Info: reliable point estimates of B and natural mortality rate M	
		$F_{OFL} = M$; $F_{ABC} \leq 0.75 \times M$
Tier 6	Info: reliable catch history from 1978 to 1995	
		OFL = average catch (1978–1995), unless otherwise established by SSC; ABC $\leq 0.75 \times$ OFL

a, 0.05 for Tiers 1–3, by applying the 10% rule (Rosenberg *et al.*, 1994) to half of the B_{MSY} reference point; B, current biomass; subscripts MSY, 35%, and 40%, biomass related to the maximum sustainable yield, or to 35% or 40% of the unexploited biomass (or to the F related to those); pdf, probability density function; m_A and m_H, arithmetic and harmonic mean of the pdf.

Appendix III: North Pacific Fishery Management Council Groundfish tier system to estimate reference points

Company	Contact	Phone/FAX	Address	Email 3/20/13
Alaska Glacier Seafood Co.	Kristie Erickson P. O. Box 34363 Juneau, AK 99803	Phone (907) 790-3590; Fax (907) 790-4286	P. O. Box 34363 Juneau, AK99803	
Alaskan Leader Seafoods	Steve Alger	(206) 965-1881	4215 – 21st Ave. West, Suite 200 Seattle, WA 98199	Steve@alaskanleader.com
APICDA Joint Venture Bering Pacific Seafoods	Ken Smith Bering Pacific SFds P. O. Box 87 False Pass, AK 99583	907.548-2350 (False Pass) Ken's cell: 907.301-8348 Fax: 907.548-2352	Bering Pacific Seafood P.O. Box 87 False Pass, AK 99583	ksmith@apicda.com
APICDA Joint Ventures Atka Pride Seafoods	Joe Kyle 234 Gold Street Juneau, AK 99801	(907)586-0161 Fax: (907) 586-0165	Atka Pride Seafoods 234 Gold Street Juneau, AK 99801	jkyle@apicda.com
Arrowac Fisheries, Inc.	Frank Mercker	B'HM(360) 676-1606/phone (360) 671-7855/fax Seattle (206) 282-5655	Fishermen's Commerce Bldg., 4039 – 21st Ave. West, Suite 200 Seattle, WA 98199	tony@arrowac-merco.com
Auction Block Company, The	Heather Brinster	(907) 235-7267 p (907) 235-4833 f	4501 Ice Dock Road Homer, AK 99603	jessica.auctionblock@gmail.com
Bornstein Seafoods, Inc.	Christa Svensson P. O. Box 58 Astoria, OR 97103	(503) 325-6164 Fax: (503) 325-0403	P. O. Box 58 Astoria, OR 97103	
Cannon Fish Company	5512 17 th Ave NW Seattle, WA. 98107 Ph. 206-281-9322 FAX. 206-281-1644	Matthew Aliberti		matthewa@cannonfish.com
Central Bering Sea Fishermen's Association	Jonathan Thorpe, CFO	Phone:(907) 262-0800; Fax: (907) 262-0817; cell (907) 252-4485	44539 Sterling Highway, Suite 205C Soldotna, AK 99669	jthorpe@cbsfa.com
Clipper Seafoods	Paul Gilliland Gerry Thygesen	(206) 284-3474 (206) 838-1144	641 W. Ewing Seattle, WA 98119	pgilliland@beringselect.com
Coastal Villages Seafoods	711 H. Street, Ste 200 Anchorage, AK 99501 Ph. (907) 278-5151 Fax (907) 278-5150	Danielle Zeedar Purchasing Coordinator		Danielle_z@coastalvillages.org
Copper River Seafoods	Chris LaCroix	Phone: (907) 522-7806 (888) 622-1197 Fax: (907) 222-0348	Copper River Seafoods 1400 East 1st Ave. Anchorage, AK 99502	clacroix@copperriverseafood.com
Dana F. Besecker Company, Inc.	Tyler Besecker Vice President 7525 S.E. 24th Street, Ste. 665 Mercer Island, WA 98040	Phone: (206) 232-5040; Fax: (206) 232-4413	7525 S.E. 24th Street, Ste. 665 Mercer Island, WA 98040	tyler@dfbcompany.com
Fish Factory, The	Mike McCune	Phone: (907) 235-1300 Fax: (907) 235-1350	800 Fish Dock Road Homer, AK 99603	
Glacier Fish Company LLC	Merle Knapp or Lisa Butzner	(206) 298-1200 Phone (206) 298-4750 fax	1200 Westlake Ave. N., AGC Bldg., Ste900 Seattle, Wa 98109	LisaB@glacierfish.com
Hoonah Cold Storage/Northern Products Corp.	William Dignon	(206) 448-6677 (206) 448-9664 Fax	705 Terminal Sales Bldg. 1932 - 1st Ave. Seattle, WA 98101	
Icicle Seafoods Inc.	Mark Callahan	(206) 281-5367	4019 – 21st Ave. West Seattle, WA 98199	markc@icicleseafoods.com
International Seafoods of Alaska, Inc.	Ted Kishimoto	Phone: (907) 486-4768 Cell: (907) 539-2095 Fax: (907) 486-4885	P. O. Box 2997 Kodiak, AK 99615	ted@isa-ak.com
Kachemak Bay Seafoods	William Sullivan		P. O. Box 4004 Homer, AK 99603	bill.sullivan@alaska.net
Kenia River Seafoods, Inc.	Sean Crosby (sales, Plant operations) Karin Holbrook (Office Manager)	(877) 434-7449 No fax yet	P. O. Box 29 Kenai, AK 99611	sean.karin@alaska.net

North Pacific Seafoods, Inc.	Jeff Backlund	(206) 726-9900	4 Nickerson St. Suite 400 Seattle, WA 98109	bobn@npsfds.com
Northport Fisheries	Keith Goodnight	(425) 743-0200 Cell (425) 335-3393	6105 – 61st Ave. S.E. Snohomish, WA 98290	
Ocean Beauty Seafoods	Ron Christianson (Sales) Mark Palmer, Pres.	(206) 284-6700 Fax: (206) 281-5897	P. O. Box 70739 Seattle, WA 98107	mark.palmer@oceanbeauty.com
Pacific Seafood Group	John Lin (QC General Manager	(503) 905-4500	Invoices to: Don Scott, Controller Pacific Seafood Group 16797 S.E. 130th Ave. Clackamas, OR 97015	
Pacific Star Seafoods	David Brindle (Sales) (Home Office) E & E Foods 3625 – 1st Ave. S. Seattle, WA 98134	(907) 283-7787 Cell: (206) 245-6043 EE#(206) 768-8979	Pacific Star Seafood 520 Bridge Access Rd. Kenai, AK 99611	randy@eefoods.com
Pacific Storm Seafoods	Geoff Hewitt Hartley (604) 786-6745	Office #: (604) 552-5599; Geoff cell: (604) 786-6745; Doug cell: (788) 822-6347; Fax: (604) 552-5581	31745 Marshall Road Abbotsford, BC V2T5Z8	geoff@pacificstorm.ca
Peter Pan Seafoods, Inc.	Hart Schwarzenbach Director of Quality Assurance	(206) 728-6000 Phone; (206) 727-7280 Direct Line; Fax (206) 441-9090	2200 Sixth Ave. Seattle, WA 98121-1820	harts@ppsf.com
Plitt Company, The	Timothy M. Lathrop	Phone: (773) 276-2200; Fax (773)276-3350 (312) 953-6593 mobile	1455 West Willow St Chicago, IL 70722.	Tim@plittfish.com
S.M. Products (BC) Ltd.	Robert Kaczynski	(604) 946-7665	Suite 827, River Road West Delta, BC V4K3N2	rob@halibut.ca
Seafood Producers Cooperative	Tom McLaughlin	(360) 733-0120	2875 Roeder Ave.	tmclaughlin@spcsales.com

Appendix VI: North Pacific Fisheries Management Council Observer Program Council Motion

The Council makes the following recommendations and requests in development of the 2014 Annual Deployment Plan:

1. The 2014 ADP should continue to reflect a priority for monitoring vessels managed under PSC limits in the trip selection pool. The Council recognizes that this necessarily modifies an equal probability sampling design such that higher observer coverage rates are provided in the trip selection pool, and lower rates in the vessel selection pool, consistent with the 2013 ADP.
2. Maintain the policy that observers should not displace crew members or IFQ holders, nor should vessel modifications be required to accommodate an observer.
3. Request NMFS provide information that would help inform a decision as to whether to create a new criterion for receiving a conditional release from observer coverage in 2014 based on a de minimus amount of halibut or sablefish IFQ in an IFQ holder's account.
4. Request NMFS assess whether the 2014 ADP can address the observer effect associated with tender deliveries (disproportionately high numbers of deliveries to tenders when vessels unobserved, or longer trips when unobserved and delivering to tenders), or whether a regulatory change is necessary.
5. Include available information that shows, within the vessel selection pool in 2013: 1) the average number of trips taken within each 2 month deployment period; and 2) the average length of trips within the 2 month period.
6. Include information as to the tradeoffs and considerations that should be taken into account in evaluating whether the 2 month deployment period for those in the vessel selection pool should remain, or be reduced (e.g., one month). Include consideration of a provision that if a vessel is selected for a coverage period and chooses not to fish during that period, the vessel is automatically selected for the next coverage period

The Council also requests NMFS provide additional information for review in October, separate from the ADP:

1. Provide more detailed information on program costs, recommendations for ways to modify deployment to achieve cost savings, and fishery data resulting from the 2013 deployment.
2. Revisions to the heat maps and other descriptive or graphical approaches that provide the ability for the Council and public to better understand coverage changes by fisheries from 2012 to 2013 with the most recent information available to NMFS. One example: include a comparison (in the partial coverage category) of trawl coverage in 2012 vs. 2013 and fixed gear coverage in 2012 vs. 2013.
3. Assess current observer coverage to provide an evaluation of the reliability of indices of Chinook salmon genetic stock identification information for GOA pollock trawl and rockfish trawl fisheries.

The Council makes the following recommendations for the annual performance review (June 2014):

1. Include information on the volume of catch observed in both vessel and trip selection pools.
2. Include information on achieved coverage rates by gear type. (trawl vs. fixed gear)
3. Include information on trip length by observed and unobserved vessels in both the trip and vessel selection pools. Within the vessel selection pool, break out the IFQ fleet.
4. A review of the trip selected and vessel selected pools in consideration of whether vessels should have an option to choose either one, or whether the deployment plan should place every vessel in the partial coverage category in the trip selection pool. (Dec. 2012 request)

5. An evaluation of the difference between observer coverage in the vessel and trip selection pools (a review of the sampling method). (Dec. 2012 request).
6. An evaluation of ways to insert cost effective measures into the deployment plan. (Dec. 2012 request).
7. An evaluation of detailed programmatic costs. (Dec. 2012 request).

The Council makes the following recommendations on the EM strategic plan:
1. The Council adopts the EM strategic plan as a guidance document for incorporating EM into the Observer Program.
2. The Council recommends use of a catch estimation approach to develop EM for the halibut and sablefish fisheries.

The Council adds the following tasks to the EM Workgroup:
1. The Workgroup should identify performance standards, operational procedures, and sampling and deployment plans appropriate for IFQ vessels and also look at implementation vehicles and potential phase-in approaches.
2. The Workgroup should use the following sections of the strategic plan to focus its efforts: page 14 (Goal II, Objective 1, Strategy C) and page 16 (Goal III, Objective 1, Strategy A).
3. The Workgroup should focus on developing a catch estimation based program for the IFQ fisheries rather than a logbook audit approach.
4. The Workgroup should consider additional strategies other than release from observer coverage requirements to increase industry participation in pilot projects for 2014.

Regulatory Amendments

The Council tasks staff to develop a single discussion paper that identifies the main issues associated with the three proposed regulatory amendments forwarded by the OAC, in order for the Council to consider initiating an amendment package or packages for revisions to the Observer Program at a future date.

The three proposals are described briefly as follows:
• Evaluate moving the BSAI pacific cod trawl CV fleet into the full coverage category for the purpose of cooperative management or crediting the fleet for the cost of observer coverage that would be provided through trip selection process.
• For vessels that previously operated as CVs and CPs within a year, consider options to allow an annual election; revisions to the control date for making the election; and production tonnage **criteria.**
• Change the method of observer fee collection for the IFQ fleet to use standardized current year exvessel prices.
Council Motion on Observer Issues, C-3 June 2013

—End Report—