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Gulf of Alaska Cod Fishery

4th Surveillance Report

Prepared for
Alaska Fisheries Development Foundation (AFDF)

Certificate No: MRAG-F-0071 (MSC-F-31192)

MRAG Americas, Inc.
August 30, 2019

Conformity Assessment Body (CAB)	MRAG Americas, Inc.
Assessment team	Erin Wilson (team leader), Don Bowen, Jake Rice and Paul Knapman
Fishery client	AFDF
Assessment Type	4th Surveillance Audit

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1 Executive summary

This report contains the findings of the fourth surveillance cycle in relation to the Gulf of Alaska (GOA) cod (*Gadus macrocephalus*) fishery. A surveillance audit was carried out on June 17-19th, 2019, in conjunction with the surveillance and reassessment activities for Bering Sea and Aleutian Islands (BSAI) and GOA pollock, cod and flatfish, and with the initial assessment of BSAI Atka mackerel, Pacific Ocean perch and Northern Rockfish and GOA Pacific Ocean perch, Northern rockfish and Dusky rockfish, and was attended by participants detailed below. The BSAI Alaska pollock fishery are currently certified under the Marine Stewardship Council (MSC) and Responsible Fisheries Management (RFM) Standards. This is their second reassessment against the MSC standard; they have been certified since 2010. There 4 Pacific cod total Units of Assessment (UoAs) in the GOA, with gear types pot, jig, demersal longline and demersal trawl.

No issues were identified, and no changes in the fishery occurred that would result in a change in certification from the last surveillance. The fisheries had no conditions or recommendations. No performance indicators were rescored.

MRAG Americas confirms that this fishery continues to meet the MSC Fisheries Standard and shall remain certified.

2 Report details

2.1 Surveillance information

Table 1. Surveillance information

1	Fishery name	
	Gulf of Alaska Pacific Cod Fishery	
2	Surveillance level and type	
	Level 1, onsite surveillance audit	
3	Surveillance number	
	1st Surveillance	
	2nd Surveillance	
	3rd Surveillance	
	4th Surveillance	X
	Other (expedited etc.)	
4	Team leader	
	Ms. Erin Wilson (team leader). Erin Wilson joined MRAG Americas Inc. in 2015, where she currently works as a Senior Fisheries Consultant. She has served as a team member for several MSC assessments and conducts routine audits for the International Seafood Sustainability Foundation (ISSF). Prior to joining MRAG Americas, she spent 2 years working at the Oregon Department of Fish and Wildlife (ODFW) as a Natural Resource Specialist and Biological Technician for the Oregon Marine Reserves. She has collaborated on a multitude of projects that focus on marine science and conservation in both a biological and social science aspect. She received a M.Sc. in Marine Resource Management from Oregon State University and a B.S. in Zoology (with a marine emphasis) and a Spanish minor from Colorado State University. In addition, Erin has passed MSC v1.3, v2.0, v2.1 and ISO 19011 training.	

	MRAG Americas confirms that Ms. Wilson meets the competency criteria in Annex PC for team leader as follows: • She has passed the MSC team leader training; • She has the required competencies described in Table PC1, section 2; • She has passed the MSC Traceability training module; • She meets ISO 19011 training requirements; • She has undertaken two fishery assessments as a team member in the last five years, and • She has experience in applying different types of interviewing and facilitation techniques and is able to effectively communicate with clients and other stakeholders. MRAG Americas confirms that Ms. Wilson has no conflicts of interest in relation to the fishery under assessment.
5	Team member
	Dr. Don Bowen. William Don Bowen is a Ph.D. graduate of the University of British Columbia, Vancouver, B.C. He has been a research scientist at the Bedford Institute of Oceanography, Dartmouth and an Adjunct Professor of Biology at Dalhousie University, Halifax, Nova Scotia for more than 25 years. He is best known for his research on the ecology, energetics and population dynamics of North Atlantic phocid seals, based largely on his collaborative studies at Sable Island. His interests also include mammalian life histories, population assessment, ecological interactions with fisheries, conservation and ecosystem change. Has published over 200 scientific papers, including 155 journal articles and book chapters and two books. He has served on the USA recovery team of the Hawaiian monk seal, and as chair of the UK Special Committee on Seals. He has broad national (Natural Science and Engineering Research Council, DFO) and international (National Academy, NSF, NRC, NMFS, NERC, NRPB) experience as a science advisor and served as member of the Board and Editor of Marine Mammal Science for five years. He has considerable experience as an MSC assessor having been involved with a number of groundfish fisheries certifications (e.g., pollock, Pacific cod) in the Bering Sea and Gulf of Alaska. MRAG Americas confirms that Dr. Bowen meets the competency criteria in Annex PC for team members as follows: • He has an appropriate university degree and more than five years' experience in management and research in fisheries; • He has undertaken at least two MSC fishery assessments or surveillance site visits in the last five years; • He is able to score a fishery using the default assessment tree and describe how conditions are set and monitored. In addition, he has the appropriate skills and experience required to serve as a Principle 2 assessor as described in FCP Annex PC table PC3, and MRAG Americas confirms he has no conflicts of interest in relation to the fishery under assessment. **Dr. Jake Rice.** Dr. Jake Rice is Chief Scientist for the Department of Fisheries and Oceans, Canada. He previously served as Director of Peer Review and Science Advice and held senior DFO Science positions in Pacific and Newfoundland Regions. He received BSc. from Cornell (1970 Conservation) and Ph. D. from University of Toronto (1974 - Ornithology). He has more than 270 publications in the scientific and technical literature, primarily on the ecosystem approach to integrated management. He is a member of the Group of Experts for the UN Regular Process for Global Marine Assessments, and a Lead Authors for the chapter on Drivers, Trends and Mitigation, for the next IPCC Assessment Report. He has been active as an expert or delegate to many UN meetings and agencies (FAO, CBD, GEF, UNEP, UNESCO-IOC, ICP, BBNJ etc.).

	MRAG Americas confirms that Dr. Rice meets the competency criteria in Annex PC for team members as follows: • He has an appropriate university degree and more than five years' experience in management and research in fisheries; • He has undertaken at least two MSC fishery assessments or surveillance site visits in the last five years; • He is able to score a fishery using the default assessment tree and describe how conditions are set and monitored. In addition, he has the appropriate skills and experience required to serve as a Principle 1 assessor as described in FCP Annex PC table PC3, and MRAG Americas confirms he has no conflicts of interest in relation to the fishery under assessment. **Paul Knapman** is an independent consultant based in Halifax, Nova Scotia, Canada. Paul began his career in fisheries nearly 30 years ago as a fisheries officer in the UK, responsible for the enforcement of UK and EU fisheries regulations. He then worked with the UK government's nature conservation advisors (1993-2001), as their Fisheries Programme Manager, responsible for establishing and developing an extensive programme of work with fisheries managers, scientists, the fishing industry and ENGOs, researching the effects of fishing and integrating nature conservation requirements into national and European fisheries policy and legislation. Between 2001-2004 he was Head of the largest inshore fisheries management organisation in England, with responsibility for managing an extensive area of inshore fisheries on the North Sea coast. The organisations responsibilities and roles included: stock assessments; setting and ensuring compliance with allowable catches; developing and applying regional fisheries regulations; the development and implementation of fisheries management plans; acting as the lead authority for the largest marine protected area in England. In 2004, Paul moved to Canada and established his own consultancy providing analysis, advisory and developmental work on fisheries management policy in Canada and Europe. He helped draft the management plan for one of Canada's first marine protected areas, undertook an extensive review on IUU fishing in the Baltic Sea and was appointed as rapporteur to the European Commission's Baltic Sea Regional Advisory Council. In 2008, Paul joined Moody Marine as their Americas Regional Manager, with responsibility for managing and developing their regional MSC business. He became General Manager of the business in 2012. Paul has been involved as a lead assessor, team member and technical advisor/reviewer for more than 50 different fisheries in the MSC programme. He returned to fisheries consultancy in 2015. MRAG Americas confirms that Mr. Knapman meets the competency criteria in Annex PC for team members as follows: • He has an appropriate university degree and more than five years' experience in management and research in fisheries; • He has undertaken at least two MSC fishery assessments or surveillance site visits in the last five years; • He is able to score a fishery using the default assessment tree and describe how conditions are set and monitored. In addition, he has the appropriate skills and experience required to serve as a Principle 3 assessor as described in FCP Annex PC table PC3, and MRAG Americas confirms he has no conflicts of interest in relation to the fishery under assessment. The whole assessment team collectively meets the requirements as described in FCP Annex PC table PC3.
6	Audit/review time and location
	June 17-19, 2019 in Seattle, WA. This site visit was held in conjunction with the reassessment of the BSAI and GOA pollock, cod and flatfish fisheries and the initial assessment of the BSAI Atka mackerel, Pacific Ocean perch and Northern Rockfish and GOA Pacific Ocean perch, Northern rockfish and Dusky rockfish.

7	Assessment and review activities
	The surveillance reviewed changes in science and management.

2.2 Background

Update on the fishery since the 3rd surveillance audit

Target stocks update

The general framework used by National Marine Fisheries Service (NMFS) and the North Pacific Fisheries Management Council (NPFMC) is to set Overfishing levels (OFL) and an Allowable Biological Catch (ABC) less than OFL (to take account of uncertainties and introduce greater precaution in decision-making). This framework is considered to control harvests effectively. This is codified in Amendment 56 to the BSAI and GOA Groundfish Fishery Management Plans (FMP) which defines the OFL, the fishing mortality rate used to set OFL (FOFL), the maximum permissible ABC, and the fishing mortality rate used to set the maximum permissible ABC. The fishing mortality rate used to set ABC (FABC) may be less than this maximum permissible level, but not greater. Reliable estimates of reference points related to spawning per recruit are available, so Pacific cod in the GOA have generally been managed under Tier 3 of Amendment 56. Tier 3 uses the following reference points: B40%, equal to 40% of the equilibrium spawning biomass that would be obtained in the absence of fishing; F35%, equal to the fishing mortality rate that reduces the equilibrium level of spawning per recruit to 35% of the level that would be obtained in the absence of fishing; and F40%, equal to the fishing mortality rate that reduces the equilibrium level of spawning per recruit to 40% of the level that would be obtained in the absence of fishing.

The GOA Pacific Cod stock assessments use Stock Synthesis-based models. The results from the 2018 stock assessment (Barbeaux et. al 2018) are given in the table below. According to this assessment, overfishing is not occurring, though stock status is below B35% primarily due to adverse environmental conditions of warm water. Harvest has been reduced commensurately with the harvest control rule to ensure that ABCatches have been reduced to ensure the stock can rebuild to target levels. This could potentially affect Principle 1 scores and will be addressed further in the reassessment repot. A Kobe plot showing stock status and fishing mortality relative to reference points used for the harvest control rule from 1977 to 2020 is given in the figure following the table. Both are excerpted from Barbeaux et al 2018.

The estimate of the 2019 Spawning Stock Biomass (SSB) is 34,701 t, whereas the B40%, which is a surrogate for Bmsy, is 68,896. Moreover the 2018 assessment projection of the 2019 SSB is 34,424, confirming that there is little evidence of any retrospective bias in the assessment. With the SBB estimate at only 50% of the Bmsy surrogate the stock is highly likely to be below the long-term average Point of Recruitment Impairment (PRI) for the stock. However, there is evidence in several surveys that there are strong year classes of pre-recruits and that the highly anomalous very warm water temperatures in this area have begun to return to more typical temperatures. Both of these lines of evidence suggest that the SSB that was appropriate as the PRI for the stock might have been much lower than the long term value of 68,896 during the recent period, and the stock was able to produce typical numbers of pre-recruits during the most recent period, but they suffered very high natural mortality prior to recruitment to the SSB or fishery, with water temperature as the likely causal factor for the elevated natural mortality rate. Under these highly anomalous conditions it seems likely from the available evidence that the stock productivity has not been impaired by the relatively low SSB. Moreover, in the two previous periods of anomalously warm temperatures in the GOA, the Pacific cod underwent similar rapid declines in recruitment with SSB following the recruitment down. However, in both cases when the two or three warm years passed, recruitment increased very rapidly and SSB began to grow as soon as the year-classes began to recruit. The most recent warm event was longer and warmer than any on record, so stock trajectory in the near future is highly uncertain. However, estimates of 0+ group numbers and juveniles were both increasing in 2018 and recruitment does not appear to be impaired. As outlined in the existing harvest control rule, it is warranted that recruitment is to be monitored with particular care and fishing mortality kept low until the juveniles actually start to appear in the SSB.

There is evidence for the GOA stock that numbers of pre-recruits in the stock range are higher than during the years of the warm pool, From the most recent assessment, the total stock biomass (0+) increased by 16% from 2017 to 2018, by another 35% from 2018 to 2019, and is projected to increase by another 24% from 2019 to 2020. In addition, the most recent estimate of natural mortality suggests a decline as well, however the age disaggregation of natural mortality is too uncertain to conclude with any confidence how it will be expressed in

stock biomass increase. In addition, in both previous instances when anomalously warm water conditions were recorded in association with this stock, recovery of stock biomass commenced immediately after the anomalous conditions ameliorated. Together these constitute strong evidence that stock rebuilding is underway already and if environmental conditions remain in states more characteristic of the GOA for the next few years, rebuilding to the neighbourhood of B40% should be completed by the early 2020s. If natural mortality rates remain elevated in the longer term, then reconsideration of productivity-based reference points for the stock, including Bmsy and its surrogates, will be necessary.

Although current SSB is below the BMSY level and approaching B20% (Blim), since this is the 4th surveillance report, the assessment team determined that rather than rescoring PI 1.1.1 at this time, this PI will be rescored with the rebuilding PI triggered, in the reassessment report for which the ACDR is already published.

Quantity	As estimated or *specified last* year for: 2018	2019	As estimated or *specified this* year for: 2019	2020
M (natural mortality rate)	0.49	0.49	0.50	0.50
Tier	3b	3b	3b	3b
Projected total (age 0+) biomass (t)	170,565	198,942	266,066	329,133
Female spawning biomass (t)				
Projected	36,209	34,424	34,701	34,774
$B_{100\%}$	168,583	168,583	172,240	172,240
$B_{40\%}$	67,433	67,433	68,896	68,896
$B_{35\%}$	59,004	59,004	60,284	60,284
F_{OFL}	0.42	0.40	0.36	0.36
$maxF_{ABC}$	0.34	0.32	0.29	0.29
F_{ABC}	0.31	0.31	0.25	0.29
OFL (t)	23,565	21,412	23,669	26,078
maxABC (t)	19,401	17,634	19,665	21,592
ABC (t)	18,000	17,000	*17,000	21,592
Status	As determined *this* year for: 2016	2017	2017	2018
Overfishing	No	n/a	No	n/a
Overfished	n/a	no	n/a	No
Approaching overfished	n/a	no	n/a	No

*Reduction from max to 17,000t to maintain stock above $B_{20\%}$ in 2020 based on estimated end of year catch in 2018 of 13,096 t.

Figure 1 Figure 1 Summary of Projections for the GOA Pacific Cod Stock

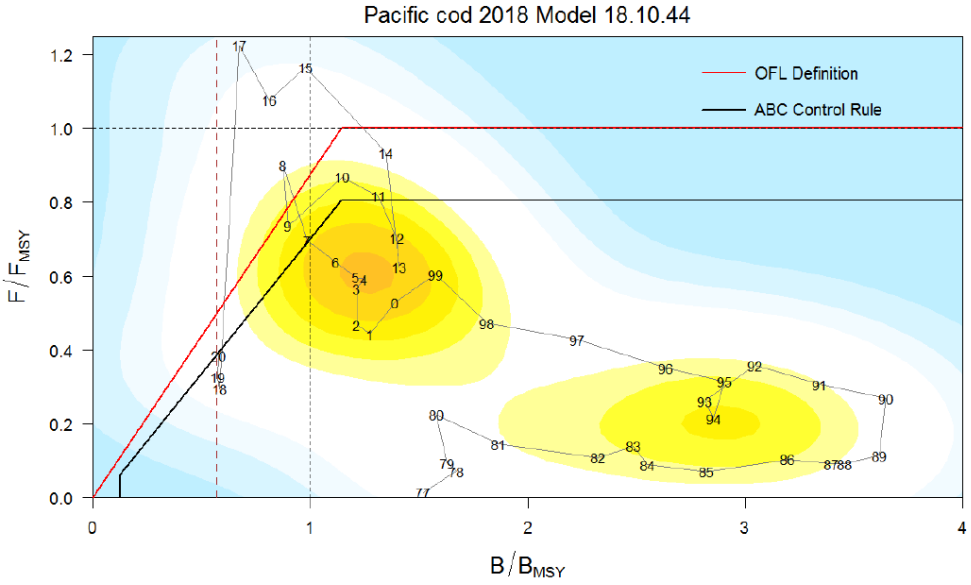

Figure 2.99 For Model 18.10.44 ratio of historical F/*Fmsy* versus female spawning biomass relative to *Bmsy* for GOA pacific cod, 1977-2020. Note that the proxies for *Fmsy* and *Bmsy* are *F35%* and *B35%*, respectively. The Fs presented are the sum of the full Fs across fleets. Dashed line is at $B_{20\%}$, Steller sea lion closure rule for GOA Pacific cod.

Figure 2 F/Fmsy versus female spawning biomass relative to Bmsy for GOA Pacific cod, 1977-2020.

Ecosystem update

There was no information that led to concerns with compliance of Principle 2 requirements based on the review of new information.

Retained species and bycatch

The composition and amount of retained species and bycatch, including marine mammals and seabirds, in GOA fisheries are collected by The North Pacific Groundfish and Halibut Observer Program operated by the NMFS. In 2018, 100% of the catcher/processor vessel catch in the trawl fishery and 93% in the hook and line fishery was observed in MSC-certified Pacific cod fisheries. Catcher vessels were observed at a level of 15%, 14% and 12% for hook and line, trawl, and pot gears, respectively. About 23% of catch was taken by pots in 2018 with the remainder split about equally between the trawl and hook and line fisheries (Alaska Fisheries Science Center and Alaska Regional Office 2019).

In 2018, there was a large decrease in the catches of retained species covered in the GOA Groundfish Fishery Mangement Plan (FMP),1,120 t compared the average over the period 2011 to 2017 of 7,235 t (Mary Furuness, NMFS Alaska Regional Office, Catch Accounting System, 2019). This decrease was driven largely by a reduction in the catches of arrowtooth flounder, pollock, rock sole, skates, and Atka mackerel. Among prohibited species, the bycatch of halibut declined again in 2018. By contrast, the bycatch of tanner crabs increased, but was still far below the long-term average catch. Only 401 and 5 Chinook salmon and non-Chinook salmon, respectively, were taken as bycatch in 2018.

The level of bycatch of non-target species declined again in 2018 to 491 t, continuing a longer-term trend (Mary Furuness, NMFS Alaska Regional Office, Catch Accounting System, 2019). This decline was driven by a reduction in the catches of sea stars, miscellaneous fishes, and state-managed rockfish.

Bait is used in several of the Pacific Cod fisheries. However, as the total harvest of Pacific cod has decreased in the past several years, the amount of bait used has also declined (Chad See Executive Director, Freezer Longline Coalition, personal communication 2019). Illex spp. (Argentine shortfin squid *Illex argentinus* and Northern shortfin squid *Illex illecebrosus*) are still the preferred bait in the demersal longline fishery, but some fishers are testing the use of Pacific saury or Atlantic-sourced mackerel pike, primarily in the B season when the seas are calmer (Chad See, Executive Director, Freezer Longline Coalition, personal communication 2019).

Seabirds

The most recent US Fish and Wildlife surveys (Dragoo et al. 2017) on seabird population trends in Alaska Maritime National Wildlife Refuge monitored sites indicated that state-wide, 13% of species showed increasing population trends, 56% were stable and 31% declined between 2007 and 2016 (compared to just 13% of species exhibiting declining trends between 2006 and 2015). Recent declining population trends likely are a consequence of poor localized food conditions, which also may have contributed to the large seabird die off during the winter of 2015-2016 (Dragoo et al. 2017).

From 2007 through 2017, only 16 % of the demersal longline gear estimated seabird bycatch occurred in the GOA with the remainder in the eastern Bering Sea (80 %) and Aleutian Islands (4 %) (Eich et al. 2018). In 2017, the seabird bycatch in the Pacific cod demersal longline fishery increased to 232 birds; a slight increase over the average bycatch of 209 birds during the period 2007-2017 (Eich et al. 2018). This increase was driven mainly by Northern fulmar, but there was also an increase in the bycatch of Black-footed albatross and gulls. Nevertheless, few seabirds were taken by this gear. No seabirds were reported in the Pacific cod trawl and pot fisheries in 2017.

Marine mammals

Marine mammals are rarely taken incidentally in the GOA Pacific cod fishery. Data for the period 2012 – 2016, indicate that only three Steller sea lions were taken (1 in longline and 2 in trawl gear) in the Pacific cod fisheries (Muto et al. 2018). The flatfish fishery in the GOA continues to be listed as Category III (remote likelihood or no known interaction with marine mammals) fishery (https://www.fisheries.noaa.gov/national/marine-mammal-protection/list-fisheries-summary-tables#table-1-category-ii).

Steller sea lions
NOAA conducted surveys to count Steller sea lion pups and non-pups (adults and juveniles ≥ 1 year old) on terrestrial rookeries and haulout sites in Alaska in June-July 2018

(https://www.fisheries.noaa.gov/resource/data/2018-results-steller-sea-lion-surveys-alaska). Overall counts of Steller sea lions in the western Distinct Population Segment (DPS) in Alaska increased between 2002 and 2018. The latest survey data confirm that regional trends, for both pups and non-pups, are comparable to those described in previous years' assessments: generally decreasing counts west of Samalga Pass and increasing counts to the east. In 2018, virtually none of the eastern and central GULF was surveyed. Data collected during the 2019 survey, which will be focused in the GOA, should yield more precise and accurate estimates of counts and trends for this area (https://www.fisheries.noaa.gov/resource/data/2018-results-steller-sea-lion-surveys-alaska).

Habitat

As previously reported, the most recent 5-year review of Essential Fish Habitat (EFH) in 2016 estimated that only 1.8% of Pacific cod EFH in the GOA is impacted by Pacific cod fisheries (http://www.npfmc.org/wp-content/PDFdocuments/conservation_issues/EFH/EFH_FE_output_GOA_locked.xlsx). This minimal level of disturbance is not regarded as a serious threat to EFH.

Ecosystem

The NPFMC along with 10 federal agencies and 4 state agencies have created the Alaska Marine Ecosystem Forum to promote coordination between the agencies on issues of shared responsibilities related to the marine ecosystems off Alaska's coast. In June 2018, the Council convened a one-day Ecosystem Research Workshop to discuss the integration of ecosystem knowledge into the Council process.
Zador and Yasumiishi (2018) report on the state of the GOA ecosystem. In 2018, the GOA remained warm, but has moderated since the extreme heatwave of 2014–2016. Mesozooplankton biomass has remained greater than average. There were more large species of copepods available suggesting an improvement in foraging conditions for planktivorous predators. Capelin declined during the warm years of 2015–2016 and continued to be minimal in seabird chick diets. Apex fish predator biomass during 2017 was at its lowest level in the 30-year time series, and the recent 5-year mean is below the long-term average. The trend is driven primarily by Pacific cod and Arrowtooth flounder which were both at the lowest abundance in the survey time series. Pacific cod has continued to decline from a peak survey biomass in 2009. Although there were substantial ecosystem changes, none of the observed changes would affect the Principle 2 performance indicators of the GOA Pacific cod fisheries.

Potential or actual changes to the management system

In February 2019, the Council conducted its annual review of the Programmatic Groundfish Management Policy, as required under the GOA and BSAI Groundfish FMPs. The management policy was added to the FMPs through the 2004 Programmatic SEIS and reflects the Council's vision for management of these fisheries from an ecosystem-based management perspective. The Council's anticipation that management of the groundfish fisheries will always be a dynamic process was built into the management policy and so annual review was identified as a necessary tool to ensure that management continues to be adaptive to changes in the fisheries and ecosystem. More specifically, annual review allows the Council to evaluate the adequacy of the Policy relative to current issues and concerns such that revisions, if necessary, can be identified. It also allows the Council to review its numerous actions and statements and whether those are fulfilling the Policy. Finally, it provides a framework for revision to the Council's workplan for the coming year.

This year's review highlighted Council activities in 2017 that were relevant to the Groundfish Management Policy. The Council recognized the ecosystem-based management response to the change in GOA Pacific cod stock conditions, the re-categorization of squid to the ecosystem component category, ongoing projects under the observer program, halibut abundance-based management, progress in conservation of northern fur seals, ongoing sector reports, and outreach to the community on St Paul Island, among many other issues to be consistent with priorities and objectives in the Policy. Additionally, it was pointed out that each Council agenda includes many non-action items that parallel or directly fulfil the Policy. As with previous review in April 2017, the Council determined that the Programatic Supplemental Environmental Impact Statement (PSEIS) continues to be appropriate as a guiding document and chose not to initiate any amendments to the Policy. Furthermore, the Council found that its actions over the past year and pending actions for the current year continue to fulfil the Policy and did not feel that new Council actions needed to be initiated.

Changes or additions/deletions to regulations.
In April 2019, the GOA Groundfish FMP Amendment Summaries became available. These summaries have been compiled into a comprehensive reference document that illustrates the evolution of the GOA Groundfish FMP. This is a companion volume to the amendment of summaries prepared for the BSAI Groundfish FMP in May 2016.

At the June 2019 meeting, the Council took final action to recommend adjusting GOA pollock and Pacific cod seasonal allocations. The purpose of this action is to reduce management inefficiencies in the Western and Central GOA trawl catcher vessel (CVV) pollock and Pacific cod fisheries. The Council intends to promote opportunities to harvest the resource when it is most valuable and accessible and to avoid redistribution of fishing opportunities between harvest sectors or management areas (e.g. non-trawl sectors). The Council also wants to offer flexibility to the fleet to manage and avoid prohibited species catch. Finally, the Council's preferred alternative is intended to be in accordance with measures that mitigate impacts on ESA-listed Steller sea lions (NPFMC 2019). For Pacific cod, the Council aims to reduce the underharvest of B season TAC in the trawl CV sector by moving some of the seasonally allocated TAC to the A season. The Council re-specified the options for the amount of the seasonal reallocation, to clarify that sectors other than the trawl CVs would not be impacted. The preliminary preferred alternative would result in an A/B seasonal TAC ratio – across all sectors – of 64%:36%, compared to the status quo of 60%:40% (NPFMC 2019).

Annually, the Council develops harvest specifications based on information from the Groundfish Plan Teams, Scientific and Statistical Committee, Advisory Panel, the public, and any other relevant information (NPFMC 2018a). Final harvest specifications are implemented by mid-February each year and based on new information contained in the latest groundfish Stock Assessment and Fishery Evaluation (SAFE) reports. The most recent Council approved harvest specifications for the 2018-2019 can be found at GOA Groundfish Specifications for 2019-2020.

State Waters

At the Board of Fisheries (BOF) 18-19 October 2018 meeting in Anchorage, the Board discussed proposals for the following ADFG GOA Pacific cod management plans fisheries:

- Chignik Area Pacific cod Management Plans
- South Alaska Peninsula Area Pacific Cod Management Plan

The summary outcome for each management plan follows:

Chignik Area Pacific cod Management Plans

It was agreed to coordinate season opening dates between Chignik Area state-waters and parallel Pacific cod fisheries.

South Alaska Peninsula Area Pacific Cod Management Plan

It was agreed to repeal the regulation that delays opening of the South Alaska Peninsula state-waters Pacific cod jig gear fishery based on National Weather Service marine forecast.

When the weather delay provision was adopted in 2007, it was primarily directed at the pot gear fishery given that fishery is highly competitive with seasons typically lasting less than 21 days. The jig gear fishery is comparatively slow-paced, and the weather delay provision does not significantly reduce competition or improve access for participants. From 2007 through 2018, the average jig gear season length was 158 days and less than 3% of all landings occurred during the first week of the fishery (BOF 2018).

There have been no changes in the regulations affecting the fishery since the previous surveillance audit.

Personnel changes in science, management or industry to evaluate impact on the management of the fishery.

In 2018, the Council appointed Dr. Peter Hulson to serve on the NPFMC Gulf of Alaska Groundfish Plan Team. Also, in 2018, the Council appointed Ms. Lisa Hillier (Washington Department of Fish and Wildlife - WDFW) to serve on both the BSAI and GOA Groundfish Plan Teams (NPFMC 2018c). These changes in personnel are not expected to have a major impact on the fishery.

Potential changes to the scientific base of information, including stock assessments.

The science, information, and management of the fishery took place following the normal procedures of the past several years. Fishery dependent and independent data collection, stock assessment, monitoring and evaluation of ecosystem impacts continued at a high level. The Council set yearly harvest specifications for Pacific cod and other fisheries and can be found at the following link: GOA Groundfish Specifications for 2019-2020. The assessment team received no information that identified an issue requiring further investigation that could lead to rescoring of any performance indicators.

Monitoring, Control and Surveillance Update

Observer program: The North Pacific Observer Program is a comprehensive, industry-funded monitoring and data collection program that uses onboard observers and electronic monitoring (EM). On August 8, 2017 NMFS published a final rule to integrate EM into the North Pacific Observer Program (Ganz et al. 2018).

All vessels that participate in federally managed groundfish fisheries off Alaska are assigned to one of two categories: 1) full observer coverage, or, 2) partial observer coverage. Vessels and processors in the full coverage category have at least one observer present during all fishing or processing activity. Vessels and processors in the partial coverage category are assigned observer or EM based on the sampling plan described in the Annual Deployment Plan (ADP) (NPFMC 2019b). The selection rates as described in the 2018 ADP and programmed into the Observer Declare and Deploy System (ODDS) were as follows:

- No selection (zero coverage) – 0%;
- Electronic Monitoring (EM) – 30%;
- Trawl (TRW – No Tender) – 20%;
- Hook-and-line (HAL) – 17%;
- Pot (POT – No Tender) – 16%;
- Tender trawl (TRW - Tender) – 17%; and
- Tender pot (POT - Tender) – 17%.

Notable changes since the 2018 ADP include observer deployment on vessels in the partial coverage category for 2019 and the expansion of the EM selection pool. NMFS adopted the following stratification scheme with sample sizes allocated according to the 15 % plus optimization based on discarded groundfish, Pacific halibut and Chinook salmon for the 2019 ADP:

- No selection – 0%;
- EM – 30%;
- Trawl – 24%;
- Hook-and-line – 18%,
- Pot – 15%;
- Tender trawl – 27%; and
- Tender pot – 16% (AFSC 2019).

EM deployment in 2019 continues to be funded through a combination of federal funding and other sources such as from the National Fish and wildlife Foundation. NMFS placed 168 vessels in the EM selection pool (AFSC 2019).

No other substantial changes in the North Pacific Groundfish Observer Program occurred during 2018 and 2019 that would affect the MSC certification.

Enforcement Activity
No compliance issues were reported or brought to the attention of the audit team.

Traceability Update
No changes to traceability were reported that would affect the MSC certification.

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P2 REFERENCES:

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2.3 Version details

Table 2. – Fisheries program documents versions

Document	Version number
MSC Fisheries Certification Process	**Version 2.1**
MSC Fisheries Standard	**Version 1.3**
MSC General Certification Requirements	**Version 2.3**
MSC Surveillance Reporting Template	**Version 2.01**

3 Results

3.1 Surveillance results overview

3.1.1 Summary of conditions

Not applicable; there are no conditions for this fishery.

3.1.2 Total Allowable Catch (TAC) and catch data

Table 3 Total Allowable Catch (TAC) and catch data for GOA

TRAWL				
TAC	Year	**2018**	Amount	**13,096 t**[2]
UoA share of TAC	Year	**2018**	Amount	**2882 t**[1]
UoA share of total TAC	Year	**2018**	Amount	**2882 t**[5]
Total green weight catch by UoC	Year (most recent)	**2018**	Amount	**2882 t**[5]
Total green weight catch by UoC	Year (second most recent)	**2017**	Amount	**13,041 t**
LONGLINE				
TAC	Year	**2018**	Amount	**13,096 t**[2]
UoA share of TAC	Year	**2018**	Amount	**2537 t**[5]
UoA share of total TAC	Year	**2018**	Amount	**2537 t**[5]
Total green weight catch by UoC	Year (most recent)	**2018**	Amount	**2537 t**[5]
Total green weight catch by UoC	Year (second most recent)	**2017**	Amount	**8978 t**
POT				
TAC	Year	**2018**	Amount	**13,096 t**[2]
UoA share of TAC	Year	**2018**	Amount	**2393 t**[5]
UoA share of total TAC	Year	**2018**	Amount	**2393 t**[5]
Total green weight catch by UoC	Year (most recent)	**2018**	Amount	**2393 t**[5]
Total green weight catch by UoC	Year (second most recent)	**2017**	Amount	**13,426 t**
JIG[2]				
TAC	Year		Amount	
UoA share of TAC	Year		Amount	

[1] Total as of 10/9/2018.
[2] "There is a small jig fishery for Pacific cod in the GOA, this is a primarily state managed fishery and there is no observer data documenting distribution. This fishery has taken on average 2,400 t per year. In 2017 and 2018 the jig fishery was nearly non-existent with catch at less than 290 t. Catch in both the Central and Western GOA was exceptionally low as were catch rates." https://www.afsc.noaa.gov/REFM/Docs/2018/GOA/GOApcod.pdf

UoA share of total TAC	Year		Amount	
Total green weight catch by UoC	Year (most recent)		Amount	
Total green weight catch by UoC	Year (second most recent)		Amount	

3.1.3 Recommendations

Not applicable.

3.2 Conditions

Not applicable. There are no conditions for this fishery.

3.3 Client Action Plan

Not applicable. There are no conditions for this fishery.

3.4 Re-scoring Performance Indicators

Not applicable. No Performance Indicators were re-scored.

4 Appendices

4.1 Evaluation processes and techniques

4.1.1 Site visits

The surveillance audit process as defined in the MSC Fishery Certification Process version 2.1 was followed in this audit.

Information supplied by the clients and management agencies was reviewed by the assessment team ahead of the onsite meeting, and discussions with the clients and management agencies centred on the content within the provided documentation. In cases where relevant documentation was not provided in advance of the meeting, it was requested by the assessment team and subsequently supplied during, or shortly after the meeting.

Thirty days prior to the audit site visit, all stakeholders from the full assessment were informed of the visit and the opportunity to provide information to the auditors in advance of, or during, the site visit. The site visit was held partly at the offices of At-Sea Processors and at Alaska Fisheries Science Center (AFSC) in Seattle, WA, June 17th – June 19th. Stakeholders attended either in person or via teleconference.

The following participants were in attendance:

Name	Affiliation
Erin Wilson	MRAG Americas
Paul Knapman	MRAG Americas and DNV assessment team member
Don Bowen	MRAG Americas assessment team member
Jake Rice	DFO Emeritus, MRAG Americas assessment team member
Jodi Bostrom	MRAG Americas assessment team member
Amanda Stern-Pirlot	MRAG Americas
Michealene Corlett	MRAG Americas
Giuseppe Scarcella	MRAG Americas and DNV assessment team member
Anna Kiselva	DNV GI
Miki Takada	Marine Stewardship Council (MSC)
Gonzalo Banda	MSC
Eileen Ekstrom	ANSI Technical Assessors
Austin Estabrooks	At-Sea Processors Association
Mark Fina	Alaska Seafood Cooperative
Christopher Oliver	Alaska Seafood Cooperative
Dave Gaudet	Alaska Fisheries Development Foundation (AFDF)
Riley Smith	AFDF
Matt Tinning	At Sea Processors Association
Julie Decker	AFDF (teleconference)
Susan Robinson	Ocean Peace Inc.
Nicole Kimball	Pacific Seafood Processors Association (teleconference)
Mark Stichert	Groundfish/Shellfish Fisheries Management Coordinator, Alaska Department of Fish and Game (ADFG), (teleconference)
Forrest Bowers	ADFG (teleconference)
Miranda Westphal	ADFG (teleconference)
Asia Beder	ADFG (teleconference)
Jim Ianelli	Alaska Fisheries Science Center (AFSC)
Steve Barbeaux	AFSC
Martin Dorn	AFSC
Meaghan Bryan	AFSC
Thomas Wilderbuer	AFSC
Sandra Lowe	AFSC
Chris Wilson	AFSC
Martin Dorn	AFSC
Grant Thompson	AFSC (teleconference)
Pete Hulson	AFSC (teleconference)
Jeremy Sterling	AFSC
Brian Fadely	AFSC
Shannon Fitzgerald	NMFS/AFSC
Kerim Aydin	AFSC
Ed Melvin	AFSC

Kirsten Holsman	AFSC
Elizabeth Siddon	AFSC
Jennifer Ferdinand	AFSC
Lieutenant Jonathan Streifel	Alaska Wildlife Troopers (AWT)
Julie Bonney	Alaska Fisheries Databank (teleconference)

The following is a summary of the agenda for the site visit:

Alaska Responsible Fisheries Management & Marine Stewardship Council
Site Visit Agenda/audit plan June 17 – 19th
Monday, June 17th, 2019
Location:
At-Sea Processors Association
4039 21st Ave West Suite 400
Seattle, WA 98199

Time	Topic	MSC Team members	RFM Team members	Interviewees
8:30-9:00	General opening meeting with all clients and both programs to go over the agenda and logistics for the visit. MSC Agenda Items: • Objectives/Introductions • Overview of the assessment process, changes with the FCP RFM assessment team and their opening meeting	EW, GS, JB, PK (JR, WDB, ASP, MC)	AK, GS, JB, PK	Chris Oliver, Austin Estabrooks, Mark Fina, Dave Gaudet, Julie Decker, Riley Smith
9:00-10:30	Flatfish, rockfish, Atka mackerel client meeting: • Review of general info about the client group • Review of fishing operations: • Review of impacts on the ecosystem	EW, GS, JB, PK (JR, WDB, ASP, MC)	AK, GS, JB, PK	Chris Oliver, Mark Fina
10:30–10:45	Break			
10:45-12pm	Flatfish/Mackerel, POP and Rockfish Continued • Review of management practices			
12-1pm	Lunch	All	All	Austin, Chris, Mark, Dave
1-2pm	Pollock opening meeting • Review agenda and ensure content for P1, P2 and P3 has been gathered, meetings arranged, etc. • Confirm traceability for fisheries • Review current certificates • Review any changes, new developments	EW, JR, WDB, PK (ASP, GS, JB, MC)	N/A	Austin Estabrooks, Ruth Christiansen, Nicole Kimball
2:00	Meeting with cod complainant	EW, JR, WDB, PK (ASP, GS, JB, MC)	N/A	Complainant and only the MSC assessment team
3:00 - 4:00	Cod opening meeting • Review agenda and ensure content for P1, P2 and P3 has been gathered, meetings arranged, etc. • Confirm traceability for fisheries • Review current certificates • Review any changes, new developments	EW, JR, WDB, PK (ASP, GS, JB, MC)	N/A	Dave Gaudet, Julie Decker, Chad See, Nicole Kimball
4:00-5:00	• Management Review, changes in regulations, management plan, enforcement, monitoring, etc.	EW, PK		ADF&G: Forrest Bowers
	End Day 1			

Tuesday, June 18th, 2019

Location:
Alaska Fishery Science Center
7600 Sand Point Way N.E., Building 4
Seattle, WA 98115
Traynor Room 2079

Time	Topic	MSC Team members	RFM Team members	Interviewees
9:00 am	Introductions, review agenda			
9:10-10:15	2018 Stock assessments overview of BSAI and GOA pollock	JR, WDB, PK, EW (GS)	N/A	Pollock assessments EBS pollock – Jim Ianelli AI Pollock - Steve Barbeaux GOA Pollock – Martin Dorn
10:15-11:15	EBS, AI, and GOA Pacific cod (same as above)	JR, WDB, PK, EW (GS)	N/A	Pacific cod assessments EBS and AI Pacific cod - Grant Thompson *teleconference* GOA Pacific cod- Steve Barbeaux
11:15-12	BSAI Atka mackerel (same as above)	JR, WDB, PK, EW (GS)	AK, GS, JB, PK	BSAI Atka mackerel – Sandra Lowe
1:30-2:30	2018 Stock assessments overview of BSAI and GOA flatfish stocks (same as above)	GS, JB, PK, EW	GS, JB, PK, AK	BSAI Kamchatka flounder, Greenland turbot –Meaghan Bryan GOA N & S rock sole – Meaghan Bryan BSAI northern rock sole – Tom Wilderbuer Yellowfin sole – Tom Wilderbuer BSAI Alaska plaice – Tom Wilderbuer
3:00	BREAK			
3:15	2018 Stock assessments overview of BSAI and GOA flatfish stocks continued...			BSAI and GOA arrowtooth flounder assessments – Tom Wilderbuer
4:00	2018 Stock assessments overview of BSAI and GOA rockfish stocks (same as above)	JR, WDB, PK, EW (GS)	AK, GS, JB, PK	BSAI northern rockfish – Paul Spencer GOA northern rockfish – Pete Hulson *teleconference* BSAI POP – Paul Spencer GOA POP – Pete Hulson GOA Dusky rockfish – Pete Hulson for Kari Fenske
	End Day 2			

Wednesday, June 19th, 2019
Morning sessions were held at:

Alaska Fishery Science Center
7600 Sand Point Way N.E., Building 4
Seattle, WA 98115
Traynor Room 2079

Afternoon sessions were held at:
At-Sea Processors Association
4039 21st Ave West Suite 400
Seattle, WA 98199

Time	Topic	MSC Team members	RFM Team members	Interviewees
9-10	Marine Mammal Lab/Seabirds	All	All	Marine Mammals – Brian Fadely and Jeremy Sterling Seabirds – Shannon Fitzgerald and Ed Melvin *teleconference*
10-11am	Ecosystems	All	All	Ecosystem status and trend updates – Ebett Siddon Ecosystem and multispecies modeling – Kirstin Holsman, Kerim Aydin
11-11:15	BREAK			
11:15-12	Fisheries Monitoring and Analysis- Observer program	All	All	Jennifer Ferdinand
12-1:45	Lunch and travel to APA office			
1:45-2:00	Bycatch engineering/reduction including Salmon avoidance	All	All	Austin Estabrooks presenting Noelle Yochum's slides (NMFS Conservation Engineering)
2pm	Habitats/EFH	All	All	John Olson-NMFS habitat division *teleconference*
TBD	Enforcement			AWT/TBD
3.00-3:30	Pollock closing meeting	EW, JR, WDB, PK (ASP, GS, JB, MC)	N/A	Austin Estabrooks, Ruth Christiansen, Julie Bonney, (Nicole Kimball)
3:30-4:00	Cod closing meeting	EW, JR, WDB, PK (ASP, GS, JB, MC)	N/A	Dave Gaudet, Julie Decker, Chad See
4.00-4:30	Team debrief and planning meeting	All		
	End Day 3			

4.1.2 Stakeholder participation

Thirty days prior to the audit site visit, all stakeholders from the full assessment were informed of the visit and the opportunity to provide information to the auditors in advance of, or during, the site visit. We received no requests from

outside stakeholders to take part in meetings, nor did we receive any written submissions regarding the GOA cod fishery.

4.2 Stakeholder input

No Stakeholder input was received for the GOA cod fishery.

4.3 Harmonised fishery assessments

Table 4 Overlapping fisheries

Fishery name	Certification status and date	Performance Indicators to harmonise
GOA Pollock	Certified, January 12, 2016	PIs 2.1.x, 2.2.x, 2.3.x, 2.4.x, 2.5.x, 3.1.x, 3.2.x (for GOA cod UoAs)
GOA Flatfish	Certified, October 29, 2015	PIs 2.1.x, 2.2.x, 2.3.x, 2.4.x, 2.5.x, 3.1.x, 3.2.x (for GOA cod UoAs)
BSAI and GOA Atka Mackerel, Pacific Ocean perch, northern rockfish, and dusky rockfish	In assessment	PIs 2.1.x, 2.2.x, 2.3.x, 2.4.x, 2.5.x, 3.1.x, 3.2.x (for GOA cod UoAs)

Table 5 Overlapping fisheries

Supporting information	
- Describe any background or supporting information relevant to the harmonisation activities, processes and outcomes.	
There is a Memorandum of Agreement between the clients for all of the Alaska groundfish fisheries, allowing certified species under each certificate to be landed and sold as certified by the other clients. Principle 3 management is very similar for all NPFMC-managed groundfish fisheries in the GOA and scores are consequently aligned. All clients participate in joint assessment and audit visits and have more or less the same assessment teams. There is no need for any more formal harmonization process as a result.	
Was either FCP v2.1 Annex PB1.3.3.4 or PB1.3.4.5 applied when harmonising?	**No**
Date of harmonisation meeting	**Not required; see above**
If applicable, describe the meeting outcome	
- e.g. Agreement found among teams or lowest score adopted.	