



Client Report for Second Annual Surveillance Audit

for

***Marine Stewardship Council Certification of Sustainability for Pacific cod
in the BSAI and GoA management areas in Alaska***

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Table of Contents

Introduction.....	6
Results.....	7
Management Guidance Metrics for the BSAI	7
Management Guidance Metrics for the GOA.....	7
Stock Status for the BSAI.....	7
Stock Status for the GOA	8
Summary of Pacific Cod Catches in the BSAI.....	9
Summary of Pacific Cod Catches in the GOA.....	10
Conditions.....	13
GoA/BSAI Condition 1 – Stock Structure.....	13
GoA/BSAI Condition 2 (longline) and 3 (trawl) – Protected, Endangered and Threatened Species	17
Preliminary Seabird bycatch Estimates for Alaskan Groundfish Fisheries, 2007-2010.....	17
GoA/BSAI Condition 3 (longline) and 2 (pot)	28
Status of bait stocks used in the Alaska Pacific Cod fisheries.....	28
GoA/BSAI Condition 2 (trawl), 4 (longline) and 3 (pot) – Lost Gear	32
GoA Condition 5: Skate Bycatch (Longline).....	34
GoA Skate Fishery (state-waters) 2009-2010.....	34
Complaints against the certified operation; recorded, reviewed, or actioned.....	39
Bering Sea skate egg concentration areas	39
GOA salmon bycatch in non--pollock fisheries.....	39
Bering Sea canyons.....	39
Literature Cited	40

List of Tables

Table 1. Final 2011 Overfishing Level (OFL), Acceptable Biological Catch (ABC), Total Allowable Catch (TAC), Initial TAC (ITAC), Guideline Harvest Level (GHL) and Community Development Quota (CDQ) Reserve Allocation for Pacific Cod in the BSAI (in metric tons).	7
Table 2. Final 2011 ABCs, TACs, and OFLs of Pacific Cod for the Western/Central/West Yakutat (W/C/WYK), Western (W), Central ©, Eastern (E), Regulatory Areas, and in the West Yakutat (WYK), Southeast Outside (SEO), and Gulfwide (GW) districts of the Gulf of Alaska..	7
Table 3. Stock Status Parameters for Pacific Cod in the BSAI.....	8
Table 4. Stock Status Parameters for Pacific cod in the GoA.....	8
Table 5. Summary of the Pacific cod catches in the Eastern Bering Sea by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 3	9
Table 6. Summary of the Pacific cod catches in the Aleutian Islands by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 3	9
Table 7. Summary of the Pacific cod catches in the Eastern Bering Sea and Aleutian Islands by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 3	9
Table 8. Summary of the Pacific cod catches in the Gulf of Alaska by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 22	10
Table 9. Summary of the Pacific cod catches in both the Federal and State waters of the Gulf of Alaska. All catches include discards. Catches for 2011 are through October 22	10
Table 10. 2011 Pacific Cod Harvests in the State Waters Fisheries for Western Gulf and Alaska Peninsula.....	11
Table 11. State-Managed, State-Waters Pacific Cod Harvest & Effort by Gear Type	12
Table 12. Fecundity data from Appendix 1.B of Ormseth, O. A. (2007), "Reproductive potential of Pacific cod (<i>Gadus macrocephalus</i>) in Alaska" Ph.D. dissertation, University of Alaska Fairbanks. Weight data are from 2010 SAFE reports.....	14
Table 13. Fecundity at Age	16
Table 14. Species and Species Group Categories Used in this Report ¹ and the Individual Species Included in the Grouping	19
Table 15. Total Estimated Seabird Bycatch in Alaskan Federal Groundfish Fisheries, All Gear Types and Fishery Management Plan Areas Combined, 2007 through 2010.....	20
Table 16. Summary of Estimated Seabird Bycatch in the Alaskan Demersal Longline Groundfish Fishery, all Fishery Management Plan Areas Combined	21
Table 17. Estimated Seabird Bycatch in the Aleutian Islands Area Demersal Longline Groundfish Fishery	21
Table 18. Estimated Seabird Bycatch in the Bering Sea Islands Area Demersal Longline Groundfish Fishery	22
Table 19. Estimated Seabird Bycatch in the Gulf of Alaska Area Demersal Longline Groundfish Fishery.....	23
Table 20. Estimated Seabird Bycatch for Alaskan Groundfish Trawl Fisheries, Pelagic and Non-Pelagic Gear Combined, all Fishery Management Plan Areas Combined	23
Table 21. Estimated Seabird Bycatch for the Alaskan Groundfish Bering Sea and Aleutian Islands Fisheries Management Plan Area, Pelagic and Non-Pelagic Trawl Gear Combined	24
Table 22. Estimated Seabird Bycatch for the Alaskan Groundfish Gulf of Alaska Fisheries Management Plan area, Pelagic and Non-Pelagic Trawl Gear Combined	25

Table 23. Estimated Seabird Bycatch for the Alaskan Groundfish Pelagic (P) and Non-Pelagic (N) Trawl Gear Types across all Fisheries Management Areas	26
Table 24. Estimated Seabird Bycatch for Pot Vessels Fishing Groundfish in Alaskan Federal Waters, all Fishery Management Plan Areas Combined	27
Table 25. Bait Species, Quantity, Fishery Source and Status for the Pacific Cod Longline, Pot And Jig Fisheries.....	29
Table 26. The GHGs and harvests for 2009 and 2010 were as follows (harvests exceeding the GHG are indicated in bold)	34
Table 27. Stock Status Parameters for Skates	36
Table 28. Historical Skate Harvest for GoA (1990 – 2007).....	38

List of Figures

Figure 1. Fecundity at Age for Pacific cod	14
Figure 2. Weight at Age for Pacific cod	15
Figure 3. Fecundity at Age for Pacific cod	15
Figure 4. Total estimated seabird bycatch by year in the Alaskan demersal longline fishery derived by employing three methods: the Fish and Wildlife Service (Stehn et. al 2001), the National Marine Mammal Laboratory (Fitzgerald et. al 2008), and this preliminary	27
Figure 5. Pacific Sardine Harvest Status.....	29
Figure 6. GoA Federal Waters (NEEDS NEW TITLE?).....	35
Figure 7. NMFS GOA bottom trawl survey biomass trends for big and longnose skates, 1984-2011.....	37

Introduction

On January 25, 2010, the Marine Stewardship Council (MSC) certified the pot, jig, trawl and longline fisheries for Pacific Cod (*Gadus macrocephalus*) in the Bering Sea and Aleutian Islands (BSAI) and the Gulf of Alaska (GOA) as sustainable under MSC standards. As part of the ongoing MSC certification, each fishery and gear types is required to undergo an annual surveillance audit. This report provides the following information relative to the four gear types used to harvest Pacific Cod in the BSAI and GOA:

1. Management guidance metrics for 2011 for the BSAI and GOA from the National Marine Fisheries Service (NMFS) and Alaska Department of Fish and Game (ADF&G)
 - a. Overfishing Level (OFL);
 - b. Acceptable Biological Catch (ABC);
 - c. Total Allowable Catch (TAC);
 - d. Initial TAC (ITAC);
 - e. Guideline Harvest Levels (GHL); and
 - f. Community Development Quota (CDQ) Reserve Allocation.
2. Data on stock structure in the trawl, longline and pot fisheries in the BSAI and GOA;
3. Incidental take of seabirds in the trawl and longline fisheries in the BSAI and GOA;
4. Status of bait species stocks in the longline and pot fisheries in the BSAI and GOA;
5. Information regarding lost gear in the trawl, longline and pot fisheries in the BSAI and GOA;
6. Information on Skate Bycatch in GoA trawl and longline fisheries.

Results

Management Guidance Metrics for the BSAI

The final 2011 NMFS management guidance metrics for Pacific cod in the BSAI are shown in Table 1.

Table 1. Final 2011 Overfishing Level (OFL), Acceptable Biological Catch (ABC), Total Allowable Catch (TAC), Initial TAC (ITAC), Guideline Harvest Level (GHL) and Community Development Quota (CDQ) Reserve Allocation for Pacific Cod in the BSAI (in metric tons).

	OFL	ABC	TAC	ITAC	GHL	CDQ
Amount	272,000	235,000	227,950	203,559		24,391

Management Guidance Metrics for the GOA

The final NMFS management guideline metrics for Pacific Cod in the GOA are shown in Table 2.

Table 2. Final 2011 ABCs, TACs, and OFLs of Pacific Cod for the Western/Central/West Yakutat (W/C/WYK), Western (W), Central ©, Eastern (E), Regulatory Areas, and in the West Yakutat (WYK), Southeast Outside (SEO), and Gulfwide (GW) districts of the Gulf of Alaska

District	OFL	ABC	TAC
W		30,380	22,785
C		53,816	40,362
E		2,604	1,953
Total	102,600	86,800	65,100

Stock Status for the BSAI

The BSAI stock was assess as “not overfished” nor approaching “overfished” (Table 3).

Table 3. Stock Status Parameters for Pacific Cod in the BSAI

Quantity/Status	Last Year		This Year	
	2011	2012	2012	2013
<i>M</i> (Natural Mortality)	0.34	0.34	0.34	0.34
Specified /Recommended Tier	3b	3b	3b	3b
Projected biomass (ages 0 +)	1,560,000	1,750,000	1,690,000	1,720,000
Female Spawning biomass (t)				
Projected	358,000	389,000	410,000	437,000
<i>B</i> _{100%}	961,000	961,000	889,000	889,000
<i>B</i> _{40%}	384,000	384,000	355,000	355,000
<i>B</i> _{35%}	336,000	336,000	311,000	311,000
<i>F</i> _{OFL}	0.29	0.31	0.36	0.36
<i>maxF</i> _{ABC}	0.25	0.26	0.30	0.30
Specified/Recommended OFL(t)	272,000	329,000	369,000	374,000
Specified/Recommended ABC (t)	235,000	281,000	314,000	319,000
Is the stock being subjected to overfishing?	No	n/a	No	n/a
Is the stock currently overfished?	n/a	No	n/a	No
Is the stock approaching a condition of being overfished?	n/a	No	n/a	No

Stock Status for the GOA

The GOA stock was assessed as “not overfished” nor approaching “overfished” (Table 4).

Table 4. Stock Status Parameters for Pacific cod in the GoA

Quantity/Status	Last Year		This Year	
	2011	2012	2012	2013
<i>M</i> (Natural Mortality)	0.38	0.38	0.38	0.38
Specified /Recommended Tier	3a	3a	3a	3a
Projected biomass (ages 0 +)	428,000	401,300	521,000	530,000
Female Spawning biomass (t)				
Projected	124,100	111,900	121,000	127,000
<i>B</i> _{100%}	256,300	256,300	261,000	261,000
<i>B</i> _{40%}	102,500	102,500	104,000	104,000
<i>B</i> _{35%}	89,700	89,700	91,400	91,400
<i>F</i> _{OFL}	0.51	0.51	0.53	0.53
<i>maxF</i> _{ABC}	0.42	0.42	0.44	0.44
Specified/Recommended OFL(t)	102,600	92,300	104,000	108,000
Specified/Recommended ABC (t)	86,800	78,200	87,600	91,000
Is the stock being subjected to overfishing?	No	n/a	No	n/a
Is the stock currently overfished?	n/a	No	n/a	No
Is the stock approaching a condition of being overfished?	n/a	No	n/a	No

Summary of Pacific Cod Catches in the BSAI

Catches are reported separately for the BSAI, GOA and State of Alaska waters. Catches are also reported by gear type for each area (NMFS 2011, ADF&G 2012).

Catches in the BSAI were greater in 2011 than 2010 in all sectors (Table 5, 6 and 7).

Table 5. Summary of the Pacific cod catches in the Eastern Bering Sea by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 3

Year	Trawl	Longline	Pot	Other	Total
2010	41,152	81,663	19,655	388	142,858
2011	56,900	87,918	25,376	505	170,700

Table 6. Summary of the Pacific cod catches in the Aleutian Islands by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 3

Federal					
Year	Trawl	Longline	Pot	Other	Total
2010	16,757	7,638	777	0	25,122
2011	9,250	1,194	1	0	10,444
State					
2010	2,113	77	1,688	0	3,878
2011	4	14	30	0	48

Table 7. Summary of the Pacific cod catches in the Eastern Bering Sea and Aleutian Islands by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 3

Federal					
Year	Trawl	Longline	Pot	Other	Total
2010	57,909	89,301	20,381	388	167,979
2011	66,150	89,112	25,377	505	181,144
State					
2010	2,113	77	1,688	0	3,878
2011	4	14	30	0	48

Summary of Pacific Cod Catches in the GOA

As for the BSAI catches, the 2011 GoA catches were greater than in 2010.

Table 8. Summary of the Pacific cod catches in the Gulf of Alaska by fleet sector and gear type. All catches include discards. Catches for 2011 are through October 22

Federal					
Year	Trawl	Longline	Pot	Other	Total
2010	21,791	16,673	20,114	426	59,004
2011	16,007	14,436	28,067	703	59,212
State					
2010	373	14,604	4,090	19,067	38,134
2011	720	16,146	4,613	21,480	42,959

Table 9. Summary of the Pacific cod catches in both the Federal and State waters of the Gulf of Alaska. All catches include discards. Catches for 2011 are through October 22

Year	Trawl	Longline	Pot	Other	Total
2010	22,164	31,277	24,204	19,493	97,138
2011	16,727	30,582	32,680	22,183	102,171

Table 10. 2011 Pacific Cod Harvests in the State Waters Fisheries for Western Gulf and Alaska Peninsula



2011 STATE MANAGED GROUND FISH
PRELIMINARY PACIFIC COD HARVEST BY FISHERY WEEK

UPDATED : 07/05/11



Vessels	KODIAK			CHIGNIK			SOUTH ALASKA PENINSULA					
	Total	Pot	Jig	Total	Pot	Jig	Total	Pot	Jig			
Registered	0	0	0	13	0	13	0	0	0			
2011 GHJL	14.83 Million Pounds			10.38 Million Pounds			16.74 Million Pounds					
ALLOCATIONS:	50% Pot, 50% Jig Pot Vessels >58' restricted to 25% of total GHJL before Sept. 1. Pot = 7.41 million Jig = 7.41 million			90% Pot, 10% Jig Pot = 9.34 million Jig = 1.04 million			85% Pot, 15% Jig Pot = 14.23 million Jig = 2.51 million					
2011 DATES:	Pot		Jig		Pot		Jig		Jig			
	Landings	Catch	Landings	Catch	Landings	Catch	Landings	Catch	Landings	Catch		
	Fishery Opened 2/05/11				Fishery Opened 3/1/11				Fishery Opened 2/25/11			
Feb 6 - 12	87	3,860,704	35	205,009	-	-	-	-	-	-		
Feb 13 - 19	99	4,120,350	31	187,189	-	-	-	-	-	-		
Feb 20 - 26	3	151,588	64	472,352	-	-	-	-	12	392,557		
Feb 27 - Mar 5	Closed 2/18/11		50	211,496	33	1,603,696	-	-	126	6,483,857		
Mar 6 - 12	-	-	60	398,242	72	4,172,736	-	-	140	7,415,035		
Mar 13 - 19	-	-	120	814,211	74	3,594,439	-	-	3	71,819		
Mar 20 - 26	-	-	137	1,280,174	Closed 3/17/11		-	-	Closed 3/11/11			
Mar 27 - Apr 2	-	-	162	1,414,489	-	-	-	-	36	302,918		
Apr 3 - 9	-	-	102	473,921	-	-	-	-	Confidential			
Apr 10 - 16	-	-	220	1,678,455	-	-	-	-	32	234,247		
Apr 17 - 23	-	-	Closed 4/14/11		-	-	Confidential		82	797,653		
Apr 24 - 30	-	-	-	-	-	-	Confidential		46	374,441		
May 1 - 7	-	-	-	-	-	-	Confidential		Closed 4/26/11			
May 8 - 14	-	-	-	-	-	-	Confidential		-	-		
May 15 - 21	-	-	-	-	-	-	5	39,199	-	-		
May 22 - 28	-	-	-	-	-	-	4	17,734	-	-		
May 29 - Jun 4	-	-	-	-	-	-	Confidential		-	-		
Jun 5 - 11	-	-	-	-	-	-	4	20,552	-	-		
Jun 12 - 18	-	-	-	-	-	-	4	25,779	-	-		
Jun 19 - 25	-	-	-	-	-	-	5	24,571	-	-		
Jun 26 - Jul 2	-	-	-	-	-	-	Confidential		-	-		
ACCUMULATIVE	189	8,132,642	981	7,135,538	179	9,370,871	22	186,401	281	14,363,268		
CATCH	(Total combined)		15,268,180		(Total combined)		9,557,272		(Total combined)			
									16,795,852			

Table 11. State-Managed, State-Waters Pacific Cod Harvest & Effort by Gear Type

Harvest in round weight					
Cook Inlet Area Pacific Cod					
State-Waters Season Dates					
Pot Gear: noon Jan. 30 - noon March 19 AND noon Oct. 9 - noon Dec. 27					
Jig Gear: noon Jan. 30 - noon Sept. 1 AND noon Oct. 9 - noon Dec. 27					
Year	Area	Gear	Unique Vessels	# Landings	Harvest (lb)
2011	Cook Inlet	Pot	11	156	3,902,154
		Jig	31	203	498,185
		Total	40	359	4,400,339
	<i>Cook Inlet</i>	<i>GHL</i>			<i>4,449,911</i>
Prince William Sound (PWS) Area Pacific Cod					
State-Waters Season Dates					
All gear types: noon Feb. 5 - noon Feb. 23					
Year	Area	Gear	Unique Vessels	# Landings	Harvest (lb)
2011	PWS	Longline	25	63	1,594,590
	<i>PWS</i>	<i>GHL</i>			<i>1,435,195</i>
	<i>(No harvest by pot or jig gear in 2011)</i>				
<i>Note: GHL = Guideline Harvest Level</i>					

Conditions

GoA/BSAI Condition 1 – Stock Structure

Performance Indicator 1.3.1.2 (trawl, longline, and pot fisheries)

Does information indicate any changes in structure that would alter reproductive capacity?

Scoring Guidepost 80

Evidence exists that the fishery has not caused changes in stock structure that would affect recruitment. Or potentially adverse changes in structure are clearly identified and effective remedial measures are in place.

Score

75

Conclusion: The material presented to the surveillance and audit team goes a long way towards meeting this Condition. The changes in numbers at age are consistent with the expected effects of a sustainable fishery. Total mortality does increase such that numbers at age of older age groups decline in abundance over time. However, the spawning biomass is comprised of a number of age classes, and the greatest declines are in the oldest ages, which have always comprised only a minority of the reproductive individuals in this stock. The types of modelling provided by Drs. Thompson and A'mar support the conclusion that there are certainly sufficient numbers of spawners to maintain the reproductive potential of GOA Pacific cod.

However, this work should be augmented by at least some opportunistic gonadal sampling and histological analysis of spawning Pacific cod of various ages, to document that fecundity per unit of spawning biomass is high enough in the younger mature ages to ensure spawning potential is being maintained. With that additional information this Condition could be considered to be fully met. The Condition is considered to be on target for completion within the two year timeline.

Subsequent to the 1st ASA site visit, further communication with Dr. Grant Thompson about additional available information on stock structure took place. Dr. Thompson provided a table and graphs from a doctoral dissertation by Dr. Olav Ormseth with Pacific cod fecundity per kilogram data from 2007 for both BSAI and GoA. See Table 12 below:

Table 12. Fecundity data from Appendix 1.B of Ormseth, O. A. (2007), "Reproductive potential of Pacific cod (*Gadus macrocephalus*) in Alaska" Ph.D. dissertation, University of Alaska Fairbanks. Weight data are from 2010 SAFE reports

Age	Fecundity		Weight		Fecundity/kg	
	BSAI	GOA	BSAI	GOA	BSAI	GOA
6	1.6	1.1	4.03	3.42	0.40	0.32
7	2.4	1.7	5.04	4.40	0.48	0.39
8	3.2	2.4	5.97	5.35	0.54	0.45
9	4.1	3.1	6.79	6.26	0.60	0.50
10	5.0	3.9	7.49	7.10	0.67	0.55
11	5.9	4.6	8.09	7.86	0.73	0.59
12	6.7	5.3	8.59	8.54	0.78	0.62
13	7.4	6.0	9.00	9.15	0.82	0.66
14	8.1	6.7	9.34	9.68	0.87	0.69
15	8.7	7.3	9.61	10.14	0.91	0.72
16	9.2	7.9	9.83	10.54	0.94	0.75
17	9.7	8.4	10.02	10.88	0.97	0.77

Figure 1. Fecundity at Age for Pacific cod

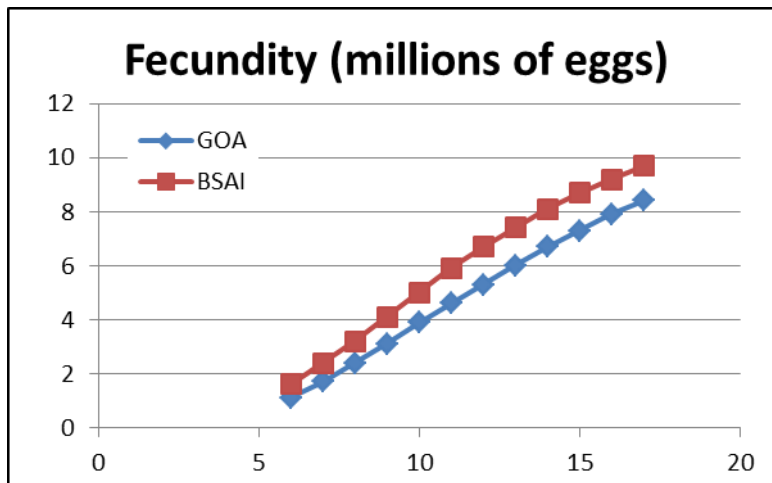


Figure 2. Weight at Age for Pacific cod

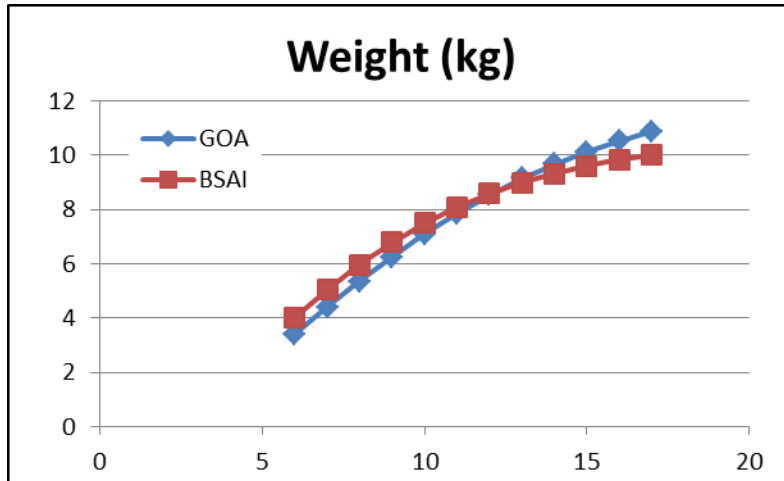
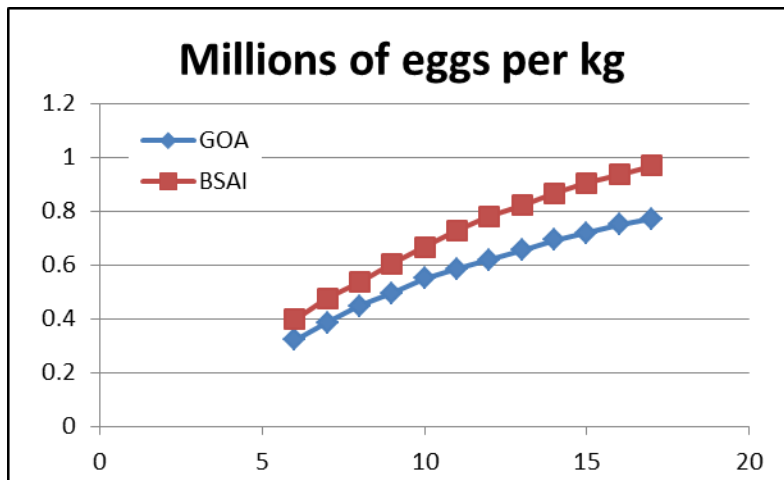


Figure 3. Fecundity at Age for Pacific cod



Fecundity data used in the graphs is from Ormseth (2007) while the weight data is from the SAFE report (AFSC, 2010). The fecundity data used in the graphs was from a review of the literature. New fecundity data is provided by Ormseth (personal communication, Table 13). The data is from samples collected during his dissertation research.

Table 13. Fecundity at Age

Age	Fecundity			Relative Fecundity (eggs/g)	
	Mean	N	Se	Mean	N
3	2.E+06	1	NA	710.7	1
4	1.E+06	1	NA	782.1	1
5	2.E+06	6	229,320	726.0	6
6	3.E+06	13	283,621	794.6	13
7	4.E+06	10	322,996	774.8	10
8	6.E+06	11	243,754	905.2	11
9	6.E+06	8	796,753	934.6	8
10	5.E+06	4	494,880	825.1	4

Neidetcher (personal communication, 2011) examined samples collected by the Fisheries Interaction Team since 2002. Over 40,000 gross ovarian scans were used to identify spatial and temporal patterns in spawning of Pacific cod. The data identified the outer Bering Sea shelf and specific areas along the Aleutian Islands as spawning locations. Peak spawning was determined to occur in mid-March though the timing and duration is variable.

GoA/BSAI Condition 2 (longline) and 3 (trawl) – Protected, Endangered and Threatened Species

Indicator 2.1.2.1-- Is information available on the nature and extent of the by-catch (capture of nontarget species)?

Scoring Guidepost 80

Information is available on non-target species directly affected by the fishery including their distribution and/or ecology. Quantitative information is available on significant by-catch. If obtained by sampling, this is considered sufficient to provide adequate information.

Score

75

Conclusion: The team considers that progress in obtaining current estimates of seabird bycatch is satisfactory and, given that more recent data than 2006 will shortly be available, were content to keep this Condition open until they received these new data and the client's analysis of these data with respect to their estimated impact on the bycatch species.

Preliminary Seabird bycatch Estimates for Alaskan Groundfish Fisheries, 2007-2010

This preliminary report provides estimates of seabirds caught as bycatch in commercial groundfish fisheries operating in federal waters of the Alaska U.S. Exclusive Economic Zone for the years 2007 through 2010. Bycatch estimates for 1993 through 2006 have been previously reported in the Ecosystem Chapter of the annual Stock Assessment and Fishery Assessment reports (Fitzgerald et. al, 2008). The groundfish fishery includes the gear types demersal longline, pot, pelagic trawl, and non-pelagic trawl. The estimates provided here do not apply to gillnet, seine, troll, jig, or halibut longline fisheries.

Estimates are based on two sources of information. The first is data provided by NMFS-certified Fishery Observers deployed to vessels and floating or shoreside processing plants. Observers provide a suite of information on many parameters of the catch (Alaska Fisheries Science Center (AFSC) 2010). These data are expanded from the sample up to the fleet using weekly processing reports of total landings. The numbers provided here are produced from the NMFS Alaska Regional Office Catch Accounting System (Cahalan et. al 2010). This is the third approach since 1993 used to generate estimates of seabird bycatch in these fisheries (Figure 4). The first approach was carried out by the USFWS and covered the years 1993 through 1997 (Stehn et. al 2001). The second analytical approach was completed within the AFSC, in the National Marine Mammal Laboratory and covered the years 1993 through 2006 (Fitzgerald et. al, 2008). These estimates were provided annually beginning in 1998. Given staffing and database changes that occurred in 2007 and 2008, the AFSC has been revising the approach to developing these annual

estimates. While all three approaches used the same two primary data sources, each approach is slightly different and produces slightly different results, although the results shown in years of overlap for the demersal longline fleet (Figure 4) show good agreement. The current analytical method being employed (Catch Accounting System) results in estimates that are about 8% higher in the demersal longline fleet than the previous method used. This is due to an improved ability to extrapolate to portions of the fishery that are not directly observed.

While numbers here are summarized into broad species groups in some cases, observers identify each bird from their sample to the most accurate species or species group that they can. For the analysis and reporting of bycatch, many of these are consolidated to a larger grouping (Table 14). For example, the species group “Gull” includes all Laridae except Kittiwakes. Most gulls that are identified to species within this group are Glaucus, Glaucus-winged, Herring, and unidentified (typically juvenile) or hybrid gulls.

Estimated bycatch for the years 2007 through 2010 (Tables 15 through 24) are based on observer sample data. Biases do exist, however, with sampling on commercial fishing vessels. On demersal longline vessels, seabirds may drop off the hook while the gear is fishing or being retrieved. Drop-offs that occur alongside the vessel are seen by observers and included in their sample data. Only those seabirds that drop off underwater and out of sight are not recorded. On trawl vessels, seabird mortality can occur due to interactions with gear such as net-monitoring equipment (paravanes or third wires) or be caught in the net wings and not be landed with the fish catch. These mortalities would not be included in the estimates reported below. The AFSC is working on an evaluation of these additional sources of mortality on trawl vessels and how best to monitor and include them in annual estimates (Fitzgerald et. al, in prep).

This preliminary report addresses only the point-count estimates for seabird mortality associated with groundfish. Estimates are provided for all gear types (pot, longline and trawl) across all Fishery Management Plan Areas (Bering Sea and Aleutian Islands, Gulf of Alaska) for each year (Table 14). Estimates for demersal longline across all Alaskan waters (Table 15) is provided followed by demersal longline bycatch by major fishery management plan area (Tables 17 through 19). The combined trawl fleet bycatch (Table 20) and trawl bycatch by fishery management area (Bering Sea and Aleutian Islands or Gulf of Alaska) or by gear type (pelagic and non-pelagic) are then shown (Tables 21 through 23). Finally, the pot fishery bycatch is noted in Table 24. A comprehensive report is being prepared that will also provide information on the actual number of birds observed, measure of units of effort for each fishery, bycatch rates, and other features.

Of special note is the incidental takes of two Short-tailed albatross (*Phoebastria albatrus*) observed in August and September of 2010 which leads to an estimated take of 15 birds (Tables 15, 16, and 18). These 2 individual birds were taken in the demersal longline cod fishery in the Bering Sea. The Biological Opinion for the Short-tailed albatross (USFWS 2003) allows for an expected incidental take of 4 birds in each two-year period for the demersal longline fishery. Note that this take is based on numbers of birds observed rather than the estimate of total take derived from the observed take. The takes recorded in 2010 were the first ones observed since 1998.

Table 14. Species and Species Group Categories Used in this Report¹ and the Individual Species Included in the Grouping

Species/species Group	Includes	Scientific Name
Short-tailed Albatross	n/a	<i>Phoebastria albatrus</i>
Laysan Albatross	n/a	<i>Phoebastria immutabilis</i>
Black-footed Albatross	n/a	<i>Phoebastria nigripes</i>
Unidentified Albatross	Short-tailed, Laysan, or black-footed.	n/a
Northern Fulmar	n/a	<i>Fulmarus glacialis</i>
Shearwaters	Unidentified Shearwater	<i>Puffinus</i> spp
	Sooty Shearwater	<i>Puffinus griseus</i>
	Short-tailed shearwater	<i>Puffinus tenuirostris</i>
	Unidentified dark Shearwater	<i>P. griseus</i> or <i>tenuirostris</i>
	Unidentified procellarid	Procellariiformes
Storm Petrel	Unidentified Storm Petrel	<i>Oceanodroma</i> spp.
	Fork-tailed Storm Petrel	<i>O. furcata</i>
	Leach's Storm Petrel	<i>O. leucorhoa</i>
Gull	Unidentified gull	<i>Laridae</i>
	Herring gull	<i>Larus argentatus</i>
	Glaucous gull	<i>Larus hyperboreus</i>
	Glaucous-winged gull	<i>Larus glaucescens</i>
	Slaty-backed Gull	<i>Larus schisti</i>
	Gull hybrids	<i>Laridae</i>
Kittiwake	Black-footed Kittiwake	<i>Rissa tridactyla</i> ,
	Red-legged Kittiwake	<i>Rissa brevirostris</i>
Murre	Unidentified Murre	<i>Uria</i> spp.
	Thick-billed Murre	<i>Uria lomvia</i>
	Common Murre	<i>Uria aalge</i>
Puffin	Unidentified Puffin	<i>Fratrurcula</i> spp.
	Horned Puffin	<i>F. corniculata</i>
	Tufted Puffin	<i>F. cirrhata</i>
	Rhinoceros Auklet	<i>Cerorhinca moncerata</i>
Auklet	Unidentified Murrelet or auklet	Several genera
	Murrelets	<i>Brachyramphus</i> spp and others
Other Alcid	Auklets	<i>Aethia</i> spp and others
	Unidentified alcid,	<i>Alcidae</i>
	Guillemot, unidentified	<i>Cepphus</i> spp.
Other Bird	Miscellaneous birds – could include:	
	Loons	<i>Gaviidae</i>
	Grebe	<i>Podicipedidae</i>
	Cormorant	<i>Phalacrocoracidae</i>
	Seaduck	<i>Anatidae</i>
	Jaeger/skua	<i>Stercorariidae</i>
	Terns	<i>Sternidae</i>
Unidentified Seabird	All of the above	

¹ A complete list of the species and species group categories used by North Pacific Groundfish Observers is available in the Groundfish Observer Manual (AFSC 2010).

Table 15. Total Estimated Seabird Bycatch in Alaskan Federal Groundfish Fisheries, All Gear Types and Fishery Management Plan Areas Combined, 2007 through 2010

Species/ Species Group	Year			
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Unidentified Albatross	16	0	0	0
Short-tailed Albatross	0	0	0	15
Laysan Albatross	17	420	114	267
Black-footed Albatross	176	290	52	44
Northern Fulmar	4,581	3,426	7,921	2,357
Shearwater	3,602	1,214	622	647
Storm Petrel	1	44	0	0
Gull	1,309	1,472	1,296	1,141
Kittiwake	10	0	16	0
Murre	7	5	13	102
Puffin	0	0	0	5
Auklet	0	3	0	0
Other Alcid	0	0	105	0
Other Bird	0	0	136	0
Unidentified	509	40	166	18
Total	10,228	6,914	10,441	4,596

Table 16. Summary of Estimated Seabird Bycatch in the Alaskan Demersal Longline Groundfish Fishery, all Fishery Management Plan Areas Combined

Species/ Species Group	Year			
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Unidentified Albatross	16	0	0	0
Short-tailed Albatross	0	0	0	15
Laysan Albatross	17	420	105	267
Black-footed Albatross	176	290	52	44
Northern Fulmar	3,556	2,860	7,161	1,782
Shearwater	2,876	1,201	576	492
Storm Petrel	0	0	0	0
Gull	1,006	1,403	1,214	1,084
Kittiwake	10	0	10	0
Murre	5	5	13	0
Puffin	0	0	0	5
Auklet	0	0	0	0
Other Alcid	0	0	0	0
Other Bird	0	0	0	0
Unidentified	493	40	122	15
Total	8,155	6,219	9,253	3,704

Table 17. Estimated Seabird Bycatch in the Aleutian Islands Area Demersal Longline Groundfish Fishery

Species/ Species Group	Year			
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Unidentified Albatross	0	0	0	0
Short-tailed Albatross	0	0	0	0
Laysan Albatross	13	127	25	147
Black-footed Albatross	0	0	0	0
Northern Fulmar	62	97	117	101
Shearwater	53	39	10	12
Storm Petrel	0	0	0	0
Gull	31	19	41	183
Kittiwake	0	0	0	0
Murre	0	0	0	0
Puffin	0	0	0	0
Auklet	0	0	0	0
Other Alcid	0	0	0	0
Other Bird	0	0	0	0
Unidentified	5	0	0	0
Total	164	282	193	443

Table 18. Estimated Seabird Bycatch in the Bering Sea Islands Area Demersal Longline Groundfish Fishery

Species/ Species Group	Year			
	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Unidentified Albatross	0	0	0	0
Short-tailed Albatross	0	0	0	15
Laysan Albatross	4	130	13	40
Black-footed Albatross	18	7	5	9
Northern Fulmar	2,526	1,791	6,582	1,647
Shearwater	2,795	1,162	566	480
Storm Petrel	0	0	0	0
Gull	421	1,279	808	640
Kittiwake	10	0	10	0
Murre	5	5	13	0
Puffin	0	0	0	5
Auklet	0	0	0	0
Other Alcid	0	0	0	0
Other Bird	0	0	0	0
Unidentified	445	31	122	15
Total	6,224	4,405	8,119	2,851

Table 19. Estimated Seabird Bycatch in the Gulf of Alaska Area Demersal Longline Groundfish Fishery

Species/ Species Group	Year			
	2007	2008	2009	2010
Unidentified Albatross	16	0	0	0
Short-tailed Albatross	0	0	0	0
Laysan Albatross	0	163	67	80
Black-footed Albatross	158	283	47	35
Northern Fulmar	968	972	462	34
Shearwater	27	0	0	0
Storm Petrel	0	0	0	0
Gull	554	105	365	261
Kittiwake	0	0	0	0
Murre	0	0	0	0
Puffin	0	0	0	0
Auklet	0	0	0	0
Other Alcid	0	0	0	0
Other Bird	0	0	0	0
Unidentified	44	9	0	0
Total	1,767	1,532	941	410

Table 20. Estimated Seabird Bycatch for Alaskan Groundfish Trawl Fisheries, Pelagic and Non- Pelagic Gear Combined, all Fishery Management Plan Areas Combined

Species/ Species Group	Year			
	2007	2008	2009	2010
Unidentified Albatross	0	0	0	0
Short-tailed Albatross	0	0	0	0
Laysan Albatross	0	0	9	0
Black-footed Albatross	0	0	0	0
Northern Fulmar	653	537	635	506
Shearwater	726	13	41	155
Storm Petrel	1	44	0	0
Gull	303	9	82	57
Kittiwake	0	0	6	0
Murre	2	0	0	102
Puffin	0	0	0	0
Auklet	0	3	0	0
Other Alcid	0	0	105	0
Other Bird	0	0	136	0
Unidentified	16	0	44	3
Total	1,701	606	1,058	823

Table 21. Estimated Seabird Bycatch for the Alaskan Groundfish Bering Sea and Aleutian Islands Fisheries Management Plan Area, Pelagic and Non-Pelagic Trawl Gear Combined

Species/ Species Group	Year			
	2007	2008	2009	2010
Unidentified Albatross	0	0	0	0
Short-tailed Albatross	0	0	0	0
Laysan Albatross	0	0	9	0
Black-footed Albatross	0	0	0	0
Northern Fulmar	562	498	635	384
Shearwater	726	13	41	155
Storm Petrel	1	44	0	0
Gull	303	9	82	57
Kittiwake	0	0	6	0
Murre	2	0	0	102
Puffin	0	0	0	0
Auklet	0	3	0	0
Other Alcid	0	0	105	0
Other Bird	0	0	136	0
Unidentified	16	0	44	3
Total	1,610	567	1,058	701

Table 22. Estimated Seabird Bycatch for the Alaskan Groundfish Gulf of Alaska Fisheries Management Plan area, Pelagic and Non-Pelagic Trawl Gear Combined

Species/ Species Group	Year			
	2007	2008	2009	2010
Unidentified Albatross	0	0	0	0
Short-tailed Albatross	0	0	0	0
Laysan Albatross	0	0	0	0
Black-footed Albatross	0	0	0	0
Northern Fulmar	91	39	0	122
Shearwater	0	0	0	0
Storm Petrel	0	0	0	0
Gull	0	0	0	0
Kittiwake	0	0	0	0
Murre	0	0	0	0
Puffin	0	0	0	0
Auklet	0	0	0	0
Other Alcid	0	0	0	0
Other Bird	0	0	0	0
Unidentified	0	0	0	0
Total	91	39	0	122

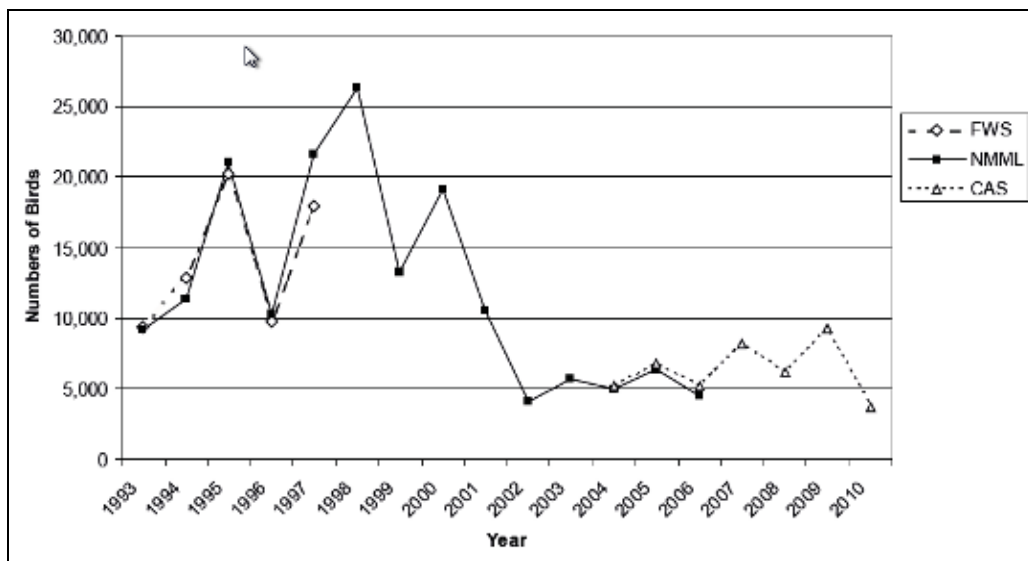
Table 23. Estimated Seabird Bycatch for the Alaskan Groundfish Pelagic (P) and Non-Pelagic (N) Trawl Gear Types across all Fisheries Management Areas

Species/ Species Group	Trawl	Year			
		2007	2008	2009	2010
Unidentified Albatross	P	0	0	0	0
	N	0	0	0	0
Short-tailed Albatross	P	0	0	0	0
	N	0	0	0	0
Laysan Albatross	P	0	0	0	0
	N	0	0	9	0
Black-footed Albatross	P	0	0	0	0
	N	0	0	0	0
Northern Fulmar	P	552	290	302	69
	N	101	248	333	436
Shearwater	P	21	13	3	22
	N	705	0	38	133
Storm Petrel	P	1	0	0	0
	N	0	44	0	0
Gull	P	9	9	3	0
	N	294	0	79	57
Kittiwake	P	0	0	6	0
	N	0	0	0	0
Murre	P	2	0	0	0
	N	0	0	0	102
Puffin	P	0	0	0	0
	N	0	0	0	0
Auklet	P	0	3	0	0
	N	0	0	0	0
Other Alcid	P	0	0	0	0
	N	0	0	105	0
Other Bird	P	0	0	3	0
	N	0	0	133	0
Unidentified	P	16	0	37	3
	N	0	0	7	0
Total	P	601	315	354	94
	N	1,100	292	704	728

Table 24. Estimated Seabird Bycatch for Pot Vessels Fishing Groundfish in Alaskan Federal Waters, all Fishery Management Plan Areas Combined

Species/ Species Group	Year			
	2007	2008	2009	2010
Unidentified Albatross	0	0	0	0
Short-tailed Albatross	0	0	0	0
Laysan Albatross	0	0	0	0
Black-footed Albatross	0	0	0	0
Northern Fulmar	372	29	125	69
Shearwater	0	0	5	0
Storm Petrel	0	0	0	0
Gull	0	60	0	0
Kittiwake	0	0	0	0
Murre	0	0	0	0
Puffin	0	0	0	0
Auklet	0	0	0	0
Other Alcid	0	0	0	0
Other Bird	0	0	0	0
Unidentified	0	0	0	0
Total	372	89	130	69

Figure 4. Total estimated seabird bycatch by year in the Alaskan demersal longline fishery derived by employing three methods: the Fish and Wildlife Service (Stehn et. al 2001), the National Marine Mammal Laboratory (Fitzgerald et. al 2008), and this preliminary



GoA/BSAI Condition 3 (longline) and 2 (pot)

Performance Indicator 2.1.2.4 (GoA/BSAI longline and pot fisheries)

Are the effects of supply and use of bait known?

Scoring Guidepost 80

There is adequate knowledge of the use of bait including sources and amounts and there is sufficient information to indicate that collection of bait does not cause significant conservation problems.

Score

75

Conclusion: The summary report did not consider the stock status of the bait species used in the longline and pot fisheries and so the team were not able to conclude whether the quantities used in the fisheries compromised their conservation status. In accordance with the Condition, it is anticipated that the client will provide the audit team with a complete report by the second audit.

Status of bait stocks used in the Alaska Pacific Cod fisheries

Three of the four Pacific Cod fisheries use bait to attract fish (longline, pot and jig). Some baits are used in several fisheries, however, most use a single type bait (Table 3). Many bait stocks lack rigorous stock assessment programs whether they are from the United States or outside. This makes it difficult to determine the effect of the Pacific cod fishery on the bait stock. It is also difficult to determine an accurate estimate of the amount of a type and source of bait. There is no chain of custody for a bait dealer transactions.

Table 25. Bait Species, Quantity, Fishery Source and Status for the Pacific Cod Longline, Pot And Jig Fisheries

Fishery	Bait	Quantity	Fishery Source	Status
Longline	Pacific Squid (Humbolt) <i>Dosidicus gigas</i>	Minimal	US West Coast	Undeterminable
	East Coast Squid <i>Illex illecebrosus</i>	80,000 lbs.	US East Coast	Undeterminable
	Argentine Squid <i>Illex argentines</i>	770,000 lbs.	South Atlantic	Undeterminable
	Pacific Saury <i>Cololabris saira</i>	None reported for 2011	China	Unknown
	Pacific Herring <i>Clupea harengus</i>	*Herring are used as bait in crab fisheries, but not preferred in the P cod fishery.	US West Coast	Stable
Pot	Pollock <i>Theragra chalcogramma</i>	Minimal usage of pollock pieces.	Alaska	Stable
	Pacific Sardine <i>Sardinops sagax</i>	1.5 million lbs.	Canada West Coast	Stable
Jig	East Coast Squid <i>Illex illecebrosus</i>	Usage level in this fishery is a portion of the amount reported above.	US East Coast	Undeterminable
	Argentine Squid <i>Illex argentines</i>	Usage level in this fishery is a portion of the amount reported above.	South Atlantic	Undeterminable

Pacific Sardine

Pacific Sardines used as bait in the pot sector of the Alaska Pacific Cod fishery are reported to be from the Pacific Northwest and British Columbia. After a collapse in the mid 20th century, Pacific sardine stocks all along the west coast of North America have rebounded. The Pacific Fishery Management Council and the Department of Fisheries and Oceans Canada have both established conservative harvest regimes (F₁₅ Rule). 2010 harvest for CA, OR and WA was 66,900 mt. See <http://swr.nmfs.noaa.gov/fmd/cps/pacsar.htm>.

Below are directed harvest allocations for 2012 in the same fishery. The 1.5 million lbs. reportedly used in the P cod fishery in Alaska would equate to less than 1% of the harvest from the Pacific Northwest fishery alone.

Figure 5. Pacific Sardine Harvest Status



The Pacific sardine resource off California, Oregon, and Washington is managed under the authority of the Coastal Pelagic Species (CPS) Fishery Management Plan (FMP) on a January through December fishing season. The total harvest guideline (HG) for January 1, 2012, through December 31, 2012, is 97,409 metric tons (mt), with a directed harvest fishery allocation of 94,409 mt. The 2012 HG is apportioned the following way: January 1-June 30, 33,093 mt for directed harvest with an incidental set-aside of 1,000 mt; July 1-September 14, 38,964 mt for directed harvest with an incidental set-aside of 1,000 mt; September 15-December 31, 24,352 mt for directed harvest with an incidental set-aside of 1,000 mt. 2011 Pacific Sardine Harvest in Metric Tons.

2012 Pacific Sardine Harvest in Metric Tons

Estimated Landings			
Directed Harvest Allocation January 1- June 30 = 33,093			
	California	Oregon	Washington
1 st Period Totals	11,300	0	0
Directed Harvest Allocation July 1- September 14 = 38,694			
	California	Oregon	Washington
2 nd Period Totals	0	0	0
Initial Directed Harvest Allocation September 15 – Dec. 31 = 24,352			
	California	Oregon	Washington
3 rd Period Totals	0	0	0
Year Totals	11,300	0	0

*Preliminary data acquired from CDFG, ODFW, and WDFW

The above landings are figures as of **May 11, 2012**.

Pacific Herring

Pacific herring are harvested throughout Alaska primarily in bait and sac roe fisheries. Harvests are guided by a 20% rule (no more than 20% of the biomass may be harvested). Since 2000, harvests have been between 60 and 120 million lbs with the bait harvest averaging less than approximately 5 million lbs (ADF&G). The small amount of Pacific herring used as bait are used in the crab fishery and are NOT preferred for the Pacific cod fishery. It is used infrequently as bait for Pacific cod.

Pacific Saury

Historically, Japan was the reportedly the primary supplier of Pacific saury, however, the

tsunami destroyed a large amount of fish in the cold storages as well as 43 of the 60 saury fishing vessels. Japan is obtaining saury from China and the bait for the Pacific cod fisheries is also reportedly from China.

Pacific saury catches fluctuate widely by year, depending on the weather and other factors. In fiscal 2009, catches were abundant, reaching some 300,000 metric tons, with imports at just 80 metric tons. In fiscal 2010, only about 200,000 metric tons were caught, as unseasonably warm ocean waters kept the fish well offshore in deep water, and to the north of Hokkaido. Prices for saury were high.

Pollock

Pollock is a relatively new bait for the Pacific Cod fishery. The bait is reportedly remainders of the Pollock after processing. The Alaska Fishery Science Center recently estimated the 2012 abundance to be 11% greater than the 2011 estimate. The 2012 recommendation for the ABC is 22% greater than the 2011 ABC west of 140 ° W lon (Alaska Fisheries Science Center 2011).

Squid

Squid are highly sensitive to changes in oceanographic conditions, such as sea temperature; recruitment and reproduction can fluctuate dramatically on a seasonal or annual basis. Such variability makes it difficult to assess the abundance of squid; the status of many populations is unknown. Squid live fast and die young; most species complete their entire life cycle within one year. This, along with the fact that most squid spawn year-round, makes these species inherently resilient to fishing pressure (WWF)

Pacific Squid

Fins of the Pacific squid (Humboldt) are reportedly used as bait. As with all squid, little is known of their stock status. They were reported as exceptionally abundant in a Scientific American article in 2010 while the Pacific Fishery Management Council reported that they were exceptionally abundant in 2009 and rare in 2010 (Scientific American).

Argentine Squid

Argentine squid current stocks are said to be fully-exploited. It cannot be assessed as to whether the current fishing levels are keeping the populations at safe levels because of a lack of management for this species. Squid are not particularly vulnerable to fishing pressure as they are a short-lived species with a life span of 1 year but they spawn in aggregations and migrate to spawning areas, resulting in an increase in vulnerability to fishing pressure during the spawning season. Squid are semelparous, which means they only spawn once before they die so this also adds to their vulnerability to fishing pressure. They are caught using a method called squid-jigging which has very little to no negative impact on the environment and landed catches consist of very little bycatch (Seafood Choice). The harvest of *Illex argentines* reported for 2011 was 76,760 tonnes. The usage level for the P cod fishery in Alaska would be less than ½ of 1% of that reported harvest.
http://www.minagri.gob.ar/site/pesca/pesca_maritima/02-desembarques/index.php

GoA/BSAI Condition 2 (trawl), 4 (longline) and 3 (pot) – Lost Gear

Indicator 2.1.3.2. (GoA/BSAI longline, trawl and pot fisheries) There is knowledge of the type, quantity and location of gear lost during fishing operations. Estimates can be made on the extent of adverse effects, including ‘ghost fishing’.

Condition: To ensure that, as a minimum, the performance indicator achieves the 80 scoring guidepost it is required that:

By the second year of the Certification GoA Trawl, Longline and Pot vessels are required to record the amount of gear lost.

By the third year of certification a study should be undertaken to assess the extent to which lost pots may impact the benthos, particularly in hard bottom habitats.

If the results of these studies determine that significant and unacceptable impacts occur on sensitive benthos, identify ways of reducing gear loss and implement a program to monitor improving performance.

Score

75

Conclusion: While progress has been made on this Condition the client will have to make rapid progress in distributing the lost gear forms and encouraging their completion in order to meet the requirements of this Condition.

AFDF produced Lost Gear Reporting Forms as referenced in the 1st ASA Client Report and distributed those forms to fleet managers, representatives of fishing groups and processors for the respective gear groups during the 2011 season.

The return, collection and compilation of the Lost Gear forms for the 3 gear types has not progressed according to our work plan. There is a strong reluctance on the vessel skipper’s part to transfer set or tow location information from the vessel log and pass that sensitive information along to anybody, even with the guarantee of confidentiality. So the number of returned Lost Gear forms is minimal to date, and an insufficient sample size from which to draw any valid conclusions.

There is regulatory change pending involving the observer program from the NPFMC. The change would add observer coverage to vessels under 60’ OAL and require onboard observers to record lost gear. In October 2010, the Council approved a motion to restructure the observer

program for vessels and processors that are determined to need less than 100% observer coverage in the Federal fisheries (Alternative 3), including previously uncovered sectors such as the commercial halibut sector and <60' groundfish sector, under authority of Section 313 in the USA. The Council recommended restructuring the program such that NMFS would contract directly with observer companies to deploy observers according to a scientifically valid sampling and deployment plan, and industry would pay a fee equal to 1.25% of the ex-vessel value of the landings included under the program. (The Magnuson Stevens Act authorizes collection of an ex-vessel fee of up to 2%.) As all sectors benefit from the resulting data, the Council chose to apply the same fee percentage to all restructured sectors, in order to develop a fee program that is fair and equitable across all sectors in the restructured program.

The restructured program is intended to provide NMFS with the flexibility to deploy observers in response to fishery management needs and to reduce the bias inherent in the existing program, to the benefit of the resulting data. NMFS is currently developing the proposed rule to implement the Council's recommendations. Progress on the restructured observer program including lost gear information was reported in April, 2012 in Anchorage, and implementation will likely occur in 2013.

This regulatory change indicates that the management structure is responding to an acknowledged issue and has taken action to fill the perceived data gap; the same gap which was recognized by the assessment team and resulted in this condition. Lost gear information from the restructured observer program would likely be available in 2014. The client would like to amend the work plan originally submitted, based on the difficulty encountered in trying to get set and tow location information given to a third party, and allow the impending observer program regulatory change to provide more accurate and more rigorously collected lost gear information to the assessment team in a timely manner.

GoA Condition 5: Skate Bycatch (Longline)

Performance Indicator 2.1.5.2 and 2.3.1.3

2.1.5.2 - Does the removal of non-target stocks have unacceptable impacts on ecosystem structure and function?

Score

75

2.3.1.3

Do management measures allow for recovery of affected populations?

Score

75

Conclusion: The client has stated that this information will be presented for evaluation at the second annual audit. The team looks forward to seeing both a time series of recent skate by-catches, broken down by species and gear type, and an assessment of the extent to which levels of bycatch pose unacceptable risks to those species.

GoA Skate Fishery (state-waters) 2009-2010

Prior to 2006, directed fishing for skates in state waters was allowed by Commissioner’s Permit; in 2006 skates were placed on bycatch status only. In 2008, the Alaska state legislature appropriated funds for developing the data collection necessary to open a state-waters directed fishery. In 2009 and 2010, the state conducted a limited skate fishery in the eastern portions of the Prince William Sound (PWS) Inside and Outside Districts (Table 28, Charlie Trowbridge, personal communication). In 2009, the guideline harvest level (GHL) was based on skate exploitation rates in federal groundfish fisheries and NMFS survey estimates of skate biomass (Table 27, Figure 7). This was changed for 2010, when GHLs were based on ADF&G trawl survey results.

Table 26. The GHLs and harvests for 2009 and 2010 were as follows (harvests exceeding the GHL are indicated in bold)

Year	2009		2010	
	Big	longnose	big	Longnose
Inside District GHL (lbs)	20,000	100,000	20,000	110,000
Inside District Harvest (lbs)	47,220	68,828	20,382	68,681
Outside District GHL (lbs)	30,000	150,000	30,000	155,000
Outside District Harvest (lbs)	82,793	59,538	6,190	9,257

The big skate GHL was exceeded by a substantial amount in 2009. In 2010, trip limits for big skate were imposed to reduce the potential for exceeding the GHL. The improved management resulted in a much smaller overage in the Inside District and no overage in the Outside District. The state-waters skate fishery was discontinued in 2011.

Figure 6. Harvest Recommendations for GoA Federal Waters

Harvest recommendations for GOA skates in 2012-2013				
Skate Species		Big	Longnose	Other
M		0.1	0.1	0.1
Average biomass	W	6,258	928	
	C	23,900	25,059	
	E	20,071	9,008	
	Gulfwide	50,229	34,995	27,061
ABC	W	469	70	
	C	1,793	1,879	
	E	1,505	676	
	gulfwide	3,767	2,625	2,030
OFL	Gulfwide	5,023	3,500	2,706

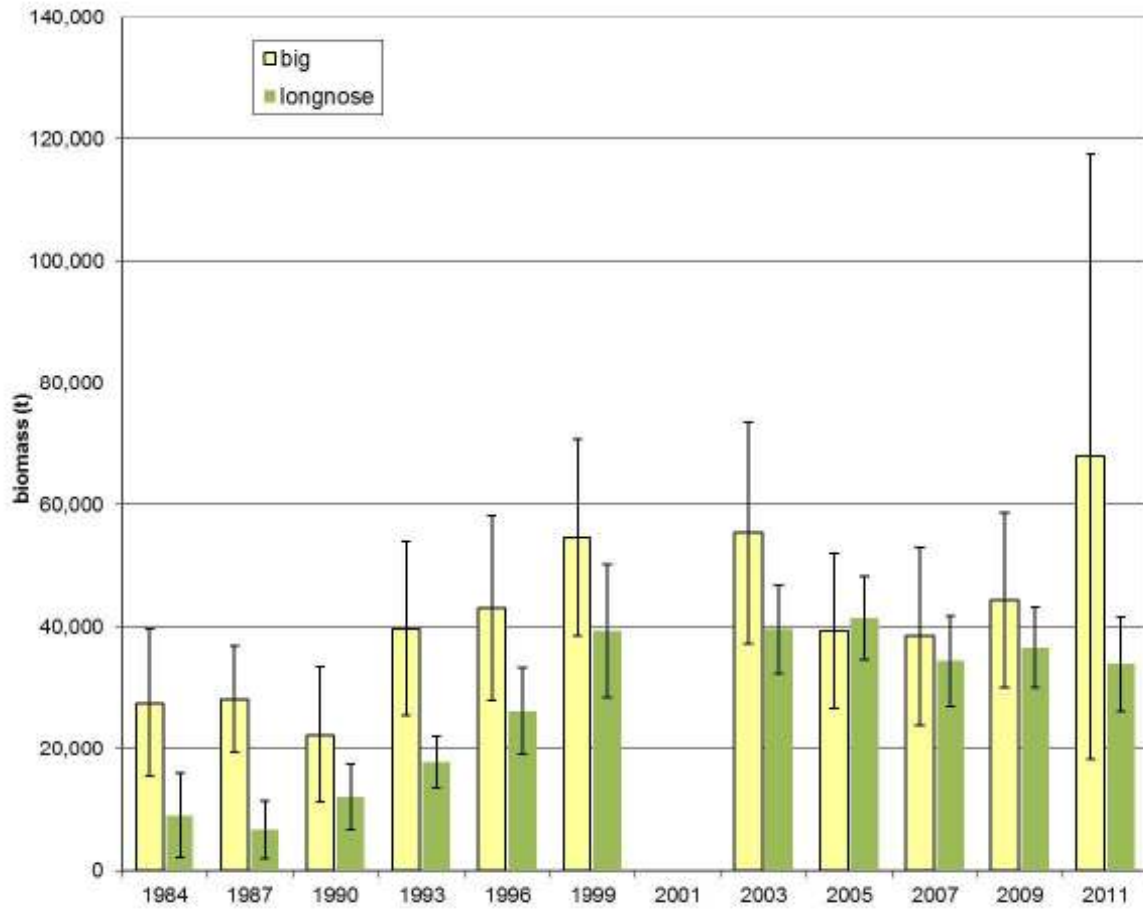
Given the continued uncertainty regarding the bycatch of skates in Pacific halibut fisheries, we recommend that direct observation of these fisheries be initiated to monitor this substantial bycatch. In addition, because of the existing high levels of incidental catches, **NMFS is not recommending any directed fishing for GOA skates.** Information on the *Bathyraja* species should be closely monitored to ensure that target fisheries do not expand to these poorly understood species before basic life history information can be collected to ensure effective management.

Table 27. Stock Status Parameters for Skates

Quantity/Status		last year		this year	
		2011	2012	2012	2013
<i>M</i> (natural mortality) - all GOA skates		0.1	0.1	0.1	0.1
Specified/recommended Tier - all GOA skates		5	5	5	5
big skate (<i>Raja binoculata</i>)					
Biomass (3-survey average)	W	7,979	7,979	6,258	6,258
	C	27,325	27,325	23,900	23,900
	E	9,077	9,077	20,071	20,071
	GOA-wide	44,381	44,381	50,229	50,229
<i>F</i> _{OFL} (<i>F</i> = <i>M</i>)		0.1	0.1	0.1	0.1
<i>maxF</i> _{ABC} (maximum allowable = 0.75 x <i>F</i> _{OFL})		0.075	0.075	0.075	0.075
Specified/recommended <i>F</i> _{ABC}		0.075	0.075	0.075	0.075
Specified/recommended OFL (t)		4,438	4,438	5,023	5,023
Specified/recommended ABC (t)	W	598	598	469	469
	C	2,049	2,049	1,793	1,793
	E	681	681	1,505	1,505
	GOA-wide	3,329	3,329	3,767	3,767
Is the stock being subjected to overfishing?		no	no	no	no
longnose skate (<i>Raja rhina</i>)					
Biomass (3-survey average)	W	1,086	1,086	928	928
	C	26,790	26,790	25,059	25,059
	E	10,155	10,155	9,008	9,008
	GOA-wide	38,031	38,031	34,995	34,995
<i>F</i> _{OFL} (<i>F</i> = <i>M</i>)		0.1	0.1	0.1	0.1
<i>maxF</i> _{ABC} (maximum allowable = 0.75 x <i>F</i> _{OFL})		0.075	0.075	0.075	0.075
Specified/recommended <i>F</i> _{ABC}		0.075	0.075	0.075	0.075
Specified/recommended OFL (t)		3,803	3,803	3,500	3,500
Specified/recommended ABC (t)	W	81	81	70	70
	C	2,009	2,009	1,879	1,879
	E	762	762	676	676
	GOA-wide	2,852	2,852	2,625	2,625
Is the stock being subjected to overfishing?		no	no	no	no
other skates					
Biomass		27,908	27,908	27,061	27,061
<i>F</i> _{OFL} (<i>F</i> = <i>M</i>)		0.1	0.1	0.1	0.1
<i>maxF</i> _{ABC} (maximum allowable = 0.75 x <i>F</i> _{OFL})		0.075	0.075	0.075	0.075
Specified/recommended <i>F</i> _{ABC}		0.075	0.075	0.075	0.075
Specified/recommended OFL (t)		2,791	2,791	2,706	2,706
Specified/recommended ABC (t)		2,093	2,093	2,030	2,030
Is the stock being subjected to overfishing?		no	no	no	no
(for Tier 5 stocks, data are not available to determine whether the stock is in an overfished condition)					

Source: Chapter 18 Gulf of Alaska Skates, NMFS SAFE Report, Olav M. Ormseth, AFSC, Seattle, WA.

Figure 7. NMFS GOA bottom trawl survey biomass trends for big and longnose skates, 1984-2011.



Error bars show plus/minus 2 standard deviations. The 2001 survey did not sample in the EGOA and is not included in the time series.

(Source: NPFMC Gulf of Alaska Skate SAFE Report)

Table 28. Historical Skate Harvest for GoA (1990 – 2007)

Year	NMFS Area	Vessels	Landings	Pounds ^a	State Waters	
					Pounds ^a	%
1990	Central GOA	41	113	3.0	<0.1	<1%
	Western GOA	7	30	0.2	0.0	0%
1991	Central GOA	121	262	4.9	<0.1	<1%
	Western GOA	42	87	0.3	<0.1	<1%
1992	Central GOA	200	493	6.0	0.7	12%
	Western GOA	63	144	0.9	0.2	20%
1993	Central GOA	168	507	5.9	0.5	8%
	Western GOA	26	70	0.0	<0.1	<1%
1994	Central GOA	190	483	5.9	0.5	8%
	Western GOA	30	78	0.0	<0.1	<1%
1995	Central GOA	188	857	17.2	2.4	14%
	Western GOA	40	62	0.0	<0.1	<1%
1996	Central GOA	166	963	31.7	5.3	17%
	Western GOA	38	62	1.0	<0.1	<1%
1997	Central GOA	179	1,274	40.4	7.4	18%
	Western GOA	26	41	0.7	<0.1	<1%
1998	Central GOA	130	677	16.2	1.7	10%
	Western GOA	36	53	0.6	<0.1	<1%
1999	Central GOA	94	477	9.4	0.2	2%
	Western GOA	34	72	0.9	<0.1	<1%
2000	Central GOA	102	852	20.3	0.9	4%
	Western GOA	45	101	2.3	<0.1	<1%
2001	Central GOA	133	805	17.4	1.3	7%
	Western GOA	45	81	0.6	<0.1	<1%
2002	Central GOA	97	611	15.9	0.7	4%
	Western GOA	46	91	2.1	<0.1	<1%
2003	Central GOA	167	959	74.1	11.9	16%
	Western GOA	66	181	3.9	0.1	3%
2004	Central GOA	178	691	35.7	2.2	6%
	Western GOA	36	70	1.7	0.1	4%
2005	Central GOA	121	734	31.0	2.2	7%
	Western GOA	47	76	0.6	<0.1	<1%
2006	Central GOA	138	1,000	35.1	5.6	16%
	Western GOA	45	83	1.2	<0.1	6%
2007	Central GOA	185	1,038	32.4	3.2	10%
	Western GOA	58	164	1.2	<0.1	4%

^a Total for all gear types, in hundred thousand pounds.

Complaints against the certified operation; recorded, reviewed, or actioned

Pacific cod fishing is conducted with 4 gear types, one of which is non-pelagic trawl gear, which contacts the sea floor. This form of trawl gear is the only effective way to harvest many of the species harvested off Alaska. However, the use of non-pelagic trawl gear is controversial for some stakeholder groups, and any MSC certification objections will likely highlight this gear type.

The Council has taken a two-pronged approach to address these concerns. First, habitat conservation areas have been established in the Bering Sea, Aleutian Islands, and Gulf of Alaska. These areas are designed to protect marine resources, biodiversity, and subsistence activities. Additionally, non-pelagic trawl gear is allowed only in a small percentage (5% - 6% by area) of the BSAI and GoA management areas. Second, industry has collaborated with scientists to mitigate the effects of trawls to the benthic habitat by raising trawl sweeps off the bottom, and reducing impacts by 90%. No formal complaints have been filed with AFDF as the certificate holder, or any of the companies or fishing organizations covered under the certificate for Pacific cod fisheries in either the Bering Sea/Aleutian Islands or Gulf of Alaska management areas.

Bering Sea skate egg concentration areas

The Council is currently considering designating several known areas of skate egg concentrations as Habitat Areas of Particular Concern (HAPC). Currently, the Council is considering up to six areas. HAPC designations may or may not be accompanied by additional management measures. The Environmental Analysis informing this action as well as enforcement concerns associated with potential area closures can be found at:

http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/conservation_issues/HAPC/SkateHAPC_InitRev312.pdf

GOA salmon bycatch in non--pollock fisheries

At its February 2012 meeting, the Council received a discussion paper describing options for reducing Chinook salmon bycatch in the GOA non--pollock fisheries. This action is in its early development, and the most recent information can be found at:

<http://www.fakr.noaa.gov/npfmc/PDFdocuments/bycatch/GOAchinookbycatch112.pdf>

Bering Sea canyons

Greenpeace, NMFS, and the University of California, Santa Barbara recently collaborated on a study to observe fishing effects in Bering Sea canyons. The abstract this report is below. The full study can be found here:

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0033885>

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