

SEASHARE

AGENDA C-1(b)
Supplemental
APRIL 2011

600 Ericksen Avenue NE
Suite 310
Bainbridge Island, WA 98110

Tel 206.842.3609
www.seashare.org

jharmon@seashare.org

March 7, 2011

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Eric Olson, Chairman
North Pacific Fisheries Management council
605 W 4th Av., Suite 305
Anchorage, AK 99501-2252

RE: Donation of bycaught salmon - Prohibited Species Donation (PSD) Program

Chairman Olson,

I wish to respectfully submit the following information to clarify/update several aspects of SeaShare's participation in the donation of bycaught salmon in the BSAI Pollock fishery.

Background:

SeaShare worked with fishermen, processors, and NMFS to establish the Prohibited Species Donation program. The first permit was issued to SeaShare (then Northwest Food Strategies) in 1996. SeaShare has subsequently applied for, and received, renewed permits every three years. The current permit was issued in 2008, and expires August 15, 2011. SeaShare is working with NMFS to submit documentation well ahead of the August deadline.

NMFS Permit:

The PSD permit "...authorizes SeaShare to distribute to economically disadvantaged individuals, Pacific salmon caught incidentally in the Groundfish trawl fisheries in the Bering Sea and Aleutian Islands management area (BSAI) and Gulf of Alaska (GOA)."

Authority: Title 50, Code of Regulations Section 679.26 – Prohibited Species Donation Program.

Participants:

SeaShare enrolls fishing companies to retain and process bycaught salmon for donation. A list of participants is submitted to NMFS. Those participants receive no compensation for the work and materials used to retain, process, and pack salmon for donation. The current list includes:

- 17 Factory Trawlers
- 2 Mother ships (and their 11 catcher boats)
- 5 Shore plants (and their 91 catcher boats)

Retention and Processing:

1. All participants are encouraged to throw back any bycatch that might survive, as well as any fish that are not wholesome or suitable for processing.
2. Each plant has different capabilities and limitations. At a minimum, all processors agree to H&G, freeze, and pack bycaught salmon that are retained.
3. Label and document all bycatch that is packed for SeaShare (SeaShare provides labels).
4. Deliver frozen bycatch to SeaShare's agents in Dutch Harbor, Seattle, or other locations.
5. Offal from bycatch may be sent to fishmeal. SeaShare worked with NMFS to understand the minimal impact (gain) that offal from bycatch has on a plant's overall fishmeal production.

Storage, freight, and re-processing:

SeaShare recruits other companies to donate (or discount) freight, storage, and re-processing services. All PSD fish are currently re-processed into steaks, and then packed into family size portions that can be distributed by food banks (most food bank clients are not familiar with handling or preparing frozen H&G fish). SeaShare receives no compensation from NMFS or other stakeholders for re-processing, storing and shipping; and works with local and regional grantors to support all of the associated costs of the PSD program.

Record-Keeping:

SeaShare maintains traceability throughout the entire PSD program. NMFS approves our record-keeping methods, and retains the right to review/inspect at any time. All packaging is labeled "SeaShare donation program – not for resale". Distribution is exclusively through Feeding America's national network of food banks, which has strict chain of custody guidelines to ensure that products do not enter the market.

SeaShare does not record salmon by species (chum vs. chinook), or by number of fish.

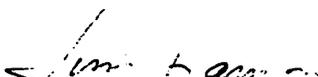
This is a voluntary program, and all participants choose when and how much to participate. Pounds donated are not necessarily a reflection of the amount of salmon caught during the season.

Utilization and benefit:

The PSD program – with the help of fishermen, processors, freight and cold storage companies - has generated over 2.2 million pounds of bycaught salmon since 1995. Instead of being discarded at sea, those fish were used to feed hungry Americans across the country.

Please contact me if I can answer any questions regarding SeaShare's participation.

Respectfully,



Jim Harmon

Alaska Seafood Cooperative Report to the North Pacific Fishery Management Council for the 2010 Fishery

March 25, 2011

Prepared by Jason Anderson and Beth Concepcion



Introduction

On September 14, 2007, the National Marine Fisheries Service (NMFS) published a final rule implementing Amendment 80 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands management area (BSAI). Amendment 80 provides specific groundfish and prohibited species catch (PSC) allocations to the non-American Fisheries Act (AFA) trawl catcher processor sector and allows the formation of cooperatives. Sector allocations and the formation of cooperatives were intended to assist compliance with the Groundfish Retention Standard (GRS) program.

On January 20, 2008, the Alaska Seafood Cooperative (AKSC) began fishing allocations under regulations implementing Amendment 80. This report summarizes AKSC, its catch for the 2010 fishing year, the processes implemented to ensure that catch limits are not exceeded, and issues affecting AKSC members.

AKSC membership

AKSC is comprised of the following six member companies, and seventeen non-AFA trawl catcher processors.

Company	Vessel	Length Overall
M/V Savage	Seafisher	211
Fishermen's Finest, Inc.	American No. 1	160
	U.S. Intrepid	184
Iquique U.S., L.L.C.	Arica	186
	Cape Horn	158
	Rebecca Irene	140
	Tremont	125
	Unimak	184
Ocean Peace	Ocean Peace	220
O'Hara Corporation	Constellation	165
	Defender	124
	Enterprise	124
	Harvester Enterprise	181
United States Seafoods, LLC	Seafreeze Alaska	296
	Legacy ¹	132
	Alliance	107
	Vaerdal	124

¹ The Prosperity LLP is assigned to the Legacy.

Coop management

AKSC activities are governed by a Board of Directors, which is appointed by AKSC Members. Additionally, owners, captains, crew, and company personnel participate and provide input to the cooperative management process. The Members executed a cooperative agreement after extensive discussion and negotiation that outlines harvest strategies, harvest shares, and agreement compliance provisions. The agreement is amended as necessary to improve cooperative management of allocations and PSC, and to comply with regulatory programs.

The AKSC Manager is responsible for the day-to-day management of the cooperative. This includes facilitating communication among the fleet, member companies, and AKSC staff; ensuring compliance with the AKSC agreement and regulatory programs; tracking the AKSC budget; coordinating Board meetings and AKSC activities; ensuring harvest shares are distributed in a timely and accurate manner; and managing AKSC office and staff. The Manager also completes all cooperative reporting requirements in a timely manner, including applying for annual catch allocations on behalf of AKSC. Finally, the Manager coordinates with other staff on research, protected species issues, and community outreach to provide catch and operational transparency.

AKSC also employs a full-time Data Manager. The Data Manager is responsible for tracking individual vessel catch and bycatch information relative to allocations; providing regular reports to the coop and individual vessel reports as requested; securely archiving data; identifying and resolving data errors; and working with the Alaska Region and Observer Program offices to ensure timely information streams. The Data Manager also provides Geographic Information System support and analysis as needed.

Finally, AKSC members employ Seastate, Inc., which assists as a third party in management activities. Seastate, Inc. is the direct observer data link for many of the processes and activities described in this document, specifically, identifying bycatch issues and tracking historic catch and bycatch trends.

Harvest strategy

AKSC has implemented several protocols and practices to maintain regulatory compliance and ensure allocations are not exceeded. These are described below.

Subsequent to receiving annual cooperative allocations, AKSC and Seastate, Inc. staffs calculate individual vessel harvest shares and PSC limits. For each internal harvest share and PSC allocation, a reserve is established so that both individual vessels and AKSC as a whole have a

buffer that will be reached prior to the allocation limit. Vessels may not fish into their reserve without Member approval.

The AKSC agreement also establishes a mechanism for Members to transfer quota among themselves. These transfers must be approved by the AKSC Manager, and may be facilitated by AKSC staff.

Catch monitoring

AKSC receives data from several different sources. Generally, this includes total catch and species composition information from the North Pacific Groundfish Observer Program, Alaska Fisheries Science Center; total catch and species composition information from the Alaska Region; and production data from the Alaska Region. These data are used by NMFS to debit quota accounts and, during 2010², to determine Groundfish Retention Standard (GRS) compliance.

The AKSC Data Manager receives observer data, which is archived in a database. The database allows the Data Manager to track various Amendment 80 quota accounts, bycatch amounts, catch of other non-Amendment 80 targets, and transfers between Members. The Data Manager uses the database to summarize catch information and distribute regular catch reports to vessels and AKSC members. The Data Manager also performs routine data quality checks on observer data, and resolves any discovered errors with individual vessels and NMFS.

NMFS Alaska Region quota catch information is provided to AKSC staff on a secure website. As noted above, this information constitutes official AKSC catch. As a quality control measure, the Data Manager compares these data with the corresponding observer data, and explores and resolves discrepancies.

In addition to receiving regular reports from AKSC staff, Seastate, Inc. provides each Member and AKSC staff access to a secure website. This webpage provides vessel owners with vessel-level catch information for Amendment 80 quota species, GOA sideboarded species, and other species of interest. Additionally, the Seastate, Inc. website displays information on vessel and cooperative GRS levels.

AKSC vessels submit daily production reports through a NMFS software program called Elandings. Because NMFS uses production information to calculate an annual GRS, AKSC also collects this information to keep a running tally of vessels' GRS'.

² On December 15, 2010, NMFS issued an emergency rule (75 FR 78172) exempting vessels from GRS regulations. AKSC vessels operated during 2010 under GRS regulations. Therefore, this reports summarizes AKSC GRS-related management activities and performance.

Observer information is transmitted from the vessel, to the Observer Program Office at the Alaska Fisheries Science Center, then to the Alaska Region office. Data undergoes initial error checking, and individual observer sample amounts are expanded to total catch amounts. During this process, these data are initially checked for errors.

By the time Alaska Region catch information is available to AKSC staff, company representatives, and vessel captains, it is two or three days old. To address this delay, companies have purchased software packages that expand raw observer sample data to total catch amounts, and assigned catch amounts to quota categories. These data expansions are based on the same algorithms that NMFS uses to expand raw observer sampling data. This software allows vessel captains to analyze catch amounts on a real time basis, and make better fishing decisions to maximize harvest amounts while minimizing the possibility of vessel overages.

To help ensure accurate quota accounting and compliance, NMFS requires vessels to implement an extensive monitoring package at their own expense:

- 200 percent observer coverage, nearly all hauls are sampled
- Motion-compensated observer scale
- Flow scale for weighing the entire catch
- No mixing of hauls
- No fish on the deck outside of the codend
- Only one conveyor line at the point the observer collects a sample
- Each vessel must be certified to maintain one of three bin monitoring options
- Larger observer sampling station
- Vessel Monitoring System

The above list is collectively designed to improve accuracy. High quality catch estimates are important to AKSC members and provide increased confidence in NMFS management information, thus facilitating intra-cooperative trades and quota management and oversight.

In addition to these extensive monitoring requirements, AKSC vessels and companies comply with recordkeeping and reporting regulations. While recordkeeping and reporting requirements are complex and create a significant burden to vessel captains and company representatives, these efforts create an authoritative, timely, and unambiguous record of quota harvested.

The Environmental Assessment/Regulatory Impact Review/Final Regulatory Flexibility Analysis prepared for regulations implementing Amendment 80 indicates that monitoring and catch accounting challenges are greater and more complex than other quota programs. To address

these challenges and ensure quota limits are not exceeded, NMFS has required and AKSC vessels have implemented the extensive and expensive monitoring program described above.

GOA sideboard management

Regulations limit Amendment 80 vessels to historic catch levels by establishing sideboard amounts for several species. To help manage GOA sideboard fisheries, AKSC established a GOA fishing plan. The 2010 GOA fishing plan described management measures AKSC utilized to ensure individual vessels had access to historical GOA catch amounts for certain rockfish fisheries, and halibut PSC.

Rockfish Pilot Program management

In 2010, AKSC vessels participated in the Rockfish Pilot Program Limited Access fishery, and others were members of a Rockfish Pilot Program cooperative. For the Limited Access fishery, AKSC staff communicated with NMFS to provide daily catch information in order to establish appropriate closure dates for Amendment 80 rockfish sideboards and the Rockfish Pilot Program catcher processor sideboards.

2010 AKSC Catch

The following tables provide AKSC catch. All data is rounded to the nearest whole number for reading simplicity. *AKSC catch during the 2010 fishing year fell within allocation levels, and no overages occurred.* It's important to understand that fishing behavior and catch amounts under any given year of cooperative operations may not reflect those of other years. Several examples are provided below.

AKSC vessels are concerned that individual vessel Pacific cod apportionments could severely constrain their ability to harvest other groundfish species at the end of a fishing year. Therefore, many vessels tend to conserve Pacific cod early in the year, and many have chosen to limit or eliminate Pacific cod directed fishing altogether. In 2010, some vessels were forced to temporarily leave the fishery due to concerns over reaching cod allocations, while other vessels were forced to significantly alter their fishing behavior due to the same concerns.

In 2010, ice conditions reduced large-scale directed flathead sole fishing opportunities on traditional fishing grounds and during typical time frames. Additionally, flathead sole fishing opportunities were constrained by concerns over large halibut biomass on the flathead grounds. To reduce overall halibut catch, AKSC vessels chose to alter fishing behavior and target species in areas of reduced halibut abundance. In years where halibut abundance on the flathead grounds is less significant and ice is less of a concern, vessels may choose to increase flathead sole effort.

AKSC initially apportions its annual NMFS-issued allocation to individual companies or vessels. Subsequently, AKSC companies are able to engage in transfers with other AKSC companies or vessels to maximize harvesting efficiencies. Because allocations are managed under hard caps, some portion of each of AKSC's allocations will be left unharvested to serve as a buffer prior to reaching allocation amounts. Total 2010 transfer amounts are shown in the tables below. These amounts include transfers between individual companies, and individual vessels within a company.

Bering Sea and Aleutian Islands AKSC Allocated Quota and Catch Amounts

Species	AKSC A80 Allocation (mt)	AKSC Catch (mt)	Total Transfer Amounts (mt)
Cod (Total)	*20,278	20,023	5,056
Yellowfin Sole	*110,733	74,034	28,679
Rock Sole	*58,863	44,558	10,160
Flathead	42,872	13,915	4,941
POP 541	1,551	1,515	138
POP 542	1,591	1,458	14
POP 543	2,665	2,583	24
Mackerel 541	9,282	9,234	2,280
Mackerel 542	9,863	7,826	746
Mackerel 543	7,036	6,727	418

Notes: AKSC received a yellowfin sole reallocation of 20,000 mt on September 8, a Pacific cod reallocation of 3,400 mt on September 8, and a rock sole reallocation of 6,000 mt on August 13. Allocation amounts marked with an asterisk "*" include those amounts. Total Transfer Amounts include transfers between companies, transfers between vessels within the same company when that information is available, and transfers into the cooperative from other sectors (rollovers).

Bering Sea and Aleutian Islands AKSC PSC Limits and Catch Amounts

Species	AKSC A80 Allocation	AKSC Catch	Total Transfer Amounts
Halibut Mortality (mt)	*2,094	1,668	463
King Crab Z1 (#)	*118,237	48,615	52,638
Bairdi Z1 (#)	*547,715	132,095	307,059
Bairdi Z2 (#)	*1,320,277	125,648	918,447
COBLZ Opilio (#)	1,461,308	163,136	112,664

Notes: Halibut mortality is reported as metric tons and crab mortality in numbers. AKSC received a halibut reallocation of 340 mt, a Zone 1 red king crab reallocation of 48,000, a Zone 1 Bairdi crab reallocation of 290,000, and a Zone 2 Bairdi crab reallocation of 880,000. All of these reallocations occurred on September 10. Allocation amounts marked with an asterisk "*" include those amounts. Total Transfer Amounts include transfers between companies, transfers between vessels within the same company when that information is available, and transfers into the cooperative from other sectors (rollovers).

Bering Sea and Aleutian Islands Salmon Catch Amounts

Species	AKSC Catch (#s)
Chinook	1,437
Non-Chinook	929

Notes: Salmon are reported as individual fish.

Groundfish Retention Standard

In addition to beginning Amendment 80 operations, Amendment 79 required AKSC to meet (GRS) requirements beginning in 2008. The GRS and Amendment 80 required the cooperative to annually retain a percentage of groundfish relative to their overall Bering Sea and Aleutian Islands catch. The GRS is applicable to AKSC in aggregate, and is phased in over a four year period according to the following table:

Groundfish Retention Standard	
GRS Schedule	Annual GRS
2008	65%
2009	75%
2010	80%
2011 and each year thereafter	85%

The GRS calculation is based on the proportion of groundfish retained. The GRS calculation numerator is the amount of groundfish retained over the course of a fishing year. Product recovery rates (PRR) published in regulation (Table 3 to 50 CFR 679) are applied to the weight of each species by product type. This amount is known as the round weight equivalent (RWE). Retained product weight is self reported by each vessel through a software program called Elandings.

The denominator of the GRS calculation is the total groundfish harvest by an Amendment 80 vessel over the course of a fishing year. Because vessels also catch non-groundfish species, NMFS and fishing companies must rely on observers to collect sub-samples from each haul. The proportion of groundfish in a sample is expanded to the total haul weight, as measured by a motion-compensated flow scale, to estimate the total amount of groundfish in each haul.

The cumulative AKSC GRS is calculated as the sum of all participating vessels' retained catch divided by the sum of all participating vessels' groundfish catch. *For 2010, AKSC achieved a*

GRS of 84 percent. This was 4 percent higher than mandated by GRS regulations. AKSC has complied with 2010 GRS retention requirements.

GRS In the Future

The Council identified two problems with the GRS program. First, NOAA Enforcement determined that prosecuting an apparent GRS violation was prohibitively expensive, and would require impractical enforcement resource allocation. These difficulties and costs arise from the need to verify retention estimates and substantiate records for each cooperative vessel. Second, the Council noted that estimates of groundfish retention used to establish GRS standards in the Amendment 79 analysis differ substantially from those produced from measures employed in the implementation of Amendment 79. These differences required retention well beyond that envisioned by the Council in Amendment 79.

The resultant costs and implementation problems associated with the GRS program prompted the Council to consider removing its implementing regulations through emergency action. NMFS agreed and on December 15, 2010, an emergency rule was issued to temporarily suspend GRS regulations (75 FR 78172). In the meantime, the Council initiated a parallel FMP amendment to permanently remove these regulations.

To continue high levels of groundfish retention in a transparent manner, the Amendment 80 fleet proposed to internally monitor and enforce groundfish retention according to the standards established under Amendment 79. This would be accomplished through a civil contract with substantial non-compliance fines, and an annual third party audit report provided to the Council. The implementation of the contract would mirror the details of Amendment 79 to avoid confusion, and would be calibrated to reflect differences between the calculation described in Amendment 79 and that used to enforce the GRS standard.

At its February 2011 meeting, the Council took final action to remove the GRS program. Also at this meeting, Amendment 80 sector representatives provided final details of the industry groundfish retention solution, and notified the Council that all members of the Amendment 80 sector were signatories to the groundfish retention contract. Details of the GRS problems, the industry solution, and the process for removing the GRS can be found in the EA/RIR/IRFA prepared for this action (<http://www.fakr.noaa.gov/npfmc/analyses/GRS211.pdf>).

While the December 15, 2010 emergency rule effectively nullified the GRS for 2010, all AKSC vessels had finished operations by December 8, 2010. Therefore, each vessel operated the entire fishing year under the assumption that the GRS would be effective.

According to Council discussions at its February 2011 meeting, a critical component of the industry monitored groundfish retention program is the third party audit. 2011 will be the first year of operating under this new system. However, to remain transparent to the public, AKSC has conducted a third party audit for 2010.

Findings and Future Issues

The following section highlights management programs and issues that concern AKSC members. These sections are titled:

- Pacific Cod
- Steller sea lion (SSL) Protection Measure Effects
- PSC Reductions
- GOA Specific Issues

Pacific Cod

Amendment 85 allocated 13.4 percent of the annual Pacific cod TAC to the Amendment 80 sector. This was based on an analysis of each sector's retained catch from 1995-2003. However, by using these years, Amendment 85 did not address a change in management structure in 1998 when Increased Retention/Increased Utilization (IRIU) regulations required vessels to retain 100 percent of all harvested cod. In addition, Amendment 85 did not consider the effect of the American Fisheries Act of 1999 which precluded vessels from participation in the pollock fishery which can have relatively higher levels of cod bycatch. Therefore the years 1995, 1996, and 1997 underestimated retained cod catch. According to Table 3-10 in the Amendment 85 EA/RIR/IRFA found on the NMFS website (<http://www.fakr.noaa.gov/analyses/amd85/amd85socdraft.pdf>), retained catch from 1998 – 2003 was much higher than from 1995 – 1997 and not less than 15.3 percent.

Table 3-10 BSAI Pacific cod annual harvest share by sector (retained harvest, excluding meal) including AFA 9 catch history, 1995–2003

SECTOR	1995	1996	1997	1998	1999	2000	2001	2002	2003	average
<60 HAL/Pot CVs	0.5%	0.1%	0.0%	0.0%	0.1%	0.2%	0.7%	0.9%	1.0%	0.4%
AFA Trawl CPs	5.0%	3.8%	4.0%	5.1%	2.6%	1.1%	0.9%	0.8%	0.8%	2.7%
AFA Trawl CVs	22.5%	26.5%	25.0%	22.8%	22.9%	22.4%	12.3%	20.3%	18.5%	21.5%
Jig CVs	0.3%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
Longline CPs	49.6%	42.8%	50.9%	50.8%	47.4%	46.6%	56.7%	47.7%	49.5%	49.1%
Longline CVs >60'	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.9%	0.1%	0.1%	0.1%
Non-AFA Trawl CPs	9.1%	9.2%	9.2%	13.3%	15.3%	16.0%	15.5%	17.9%	15.6%	13.5%
Non-AFA Trawl CVs	1.8%	1.7%	1.5%	0.9%	1.2%	1.7%	2.0%	3.5%	4.2%	2.1%
Pot CPs	2.5%	4.3%	2.3%	1.9%	2.2%	1.5%	2.0%	1.2%	0.8%	2.1%
Pot CVs >60'	8.6%	11.5%	7.1%	5.1%	8.1%	10.3%	9.1%	7.5%	9.5%	8.5%
Total	1	1	1	1	1	1	1	1	1	100.0%

Source: Harvest data are retained catch (excluding meal) from WPR reports and ADF&G fishtickets, 1995 - 2003. Each sector's annual harvest share was calculated for the individual year as a percentage of the total retained legal catch by all sectors.

Additionally, at the time of final action, the Council had information about 2004 and 2005 retained catch that indicated continued higher average catches than 1998-2003.

Amendment 80 was implemented simultaneously with Amendment 85, and allocated Pacific cod amounts among cooperatives and the Limited Access sector. For cooperatives, these allocations became a hard cap, and all fishing must stop when that cap is reached.

Pacific cod are caught incidentally in every Amendment 80 fishery, especially in higher volume fisheries such as yellowfin sole. During years with high Pacific cod biomass, the ratio of Pacific cod to other quota species creates a scenario where Pacific cod in effect becomes a prohibited species and is avoided. Rather than maximizing cod catch throughout the year, most AKSC captains are in a situation where they must avoid high concentrations of Pacific cod, sometimes to the detriment of otherwise low bycatch/high volume fishing. In 2010, only 3,068 mt of the 20,023 mt harvested by AKSC was reported in the cod target.

This problem is complicated by a disconnect between the annual TAC setting process and actual fishing conditions. For example, groundfish surveys conducted during 2009 inform the TAC setting process for 2010. However, actual biomass levels during 2010 may be higher than were seen during the 2009 survey. Additionally, environmental conditions change when and where these Pacific cod are found.

In 2010, AKSC harvested 20,023 mt of its 20,278 mt Pacific cod allocation, or 119 percent of its initial allocation. As individual companies neared their cod allocation limits, vessels stopped fishing and any remaining cod was consolidated onto a few vessels. Had additional cod been available, most vessels would have continued to fish. During 2010, cod was significantly limiting, even with a 3,400 mt rollover from other sectors. One company estimated that it lost 5 months of fishing, or about 12.5 percent of its fishing time. Had this rollover not been available, AKSC fishing would have been further curtailed.

Finally, SSL regulations designed to eliminate directed cod fishing later in the year require NMFS to place cod on bycatch status. After October 31, vessels encountering cod must remain below the maximum retainable amount (MRA) relative to other basis species on board the vessel. If a vessel encounters large volumes of cod early in a trip, the captain may be forced to discard cod even though this catch is debited against quota.

Discards required by MRA regulations count against the sector's hard cap and represent unnecessary waste. This problem is already being felt with the increased cod biomass in the Bering Sea and is likely to escalate in the future as cod stocks increase and incidental catch in flatfish fisheries would therefore be expected to increase as well. Therefore, a November 1 Pacific cod directed fishing closure is not necessary for the Amendment 80 sector. Removing this closure will reduce waste of Pacific cod caused by forced discards, and will also reduce the cost of avoiding cod that are an increasing fraction of the groundfish biomass.

SSL RPA Effects

On December 13, 2010, NMFS issued an interim final rule to implement additional SSL protection measures (75 FR 77535). These protection measures significantly reduced fishing opportunities for Atka mackerel and Pacific cod in the Aleutian Islands.

In our view, the interim final rule is based on a substantively and procedurally flawed final biological opinion. The jeopardy and adverse modification findings, as well as its Reasonable and Prudent Alternative (“RPA”) in the final biological opinion are (1) not based upon the best scientific and commercial data available; (2) the product of an inadequate rulemaking process, and (3) arbitrary and capricious.

Additionally, some of the anticipated spillover effects are summarized below:

- **PSC, Pacific cod, and other quota species.** Vessels that have historically targeted Atka mackerel in the Aleutians are highly specialized in this fishery. As such, they have not focused on flatfish, and may not have sufficient quota allocations to support moving into the flatfish fisheries. Furthermore, because Atka mackerel is a relatively low bycatch fishery, Atka mackerel-focused vessels may not have the PSC and Pacific cod allocations needed to prosecute the flatfish fishery.
- **Market effects.** If vessels affected by SSL regulations are able to effectively move away from PSC and Pacific cod concentrations, we expect additional flatfish to be harvested. As flatfish enters the market, prices may drop, further exacerbating the problem.
- **Other fisheries.** As vessels are displaced from Atka mackerel and Pacific cod fisheries, they will be looking for other non-allocated, low bycatch, high volume fisheries. This may create competition with other sectors interested in these fisheries and may initiate a “race for fish”.
- **Groundfish retention.** Atka mackerel vessels have historically experienced high retention in this fishery. Displacing vessels to fisheries with lower retention rates could create groundfish retention challenges.

PSC reductions

In 2008, 2009, and 2010, AKSC was able to operate within PSC allocations using 70, 83, and 81 percent of its halibut mortality allocation respectively. Additionally, AKSC used a lower portion of its crab limits during these years. However, as previously noted, fishing behavior, halibut distribution, and harvest under the first years of cooperative operations may not reflect those of subsequent years.

Additionally, note that Table 35 to 50 CFR 679 shown below requires annual PSC reductions through 2012 as part of Amendment 80. Prior to Amendment 80 AKSC members had access to

total trawl PSC amounts that exceeded Amendment 80 allocations. For example, the 2007 BSAI trawl halibut PSC limit was 3,400 mt.

Table 35 to Part 679 – Apportionment of Crab PSC and Halibut PSC Between the Amendment 80 and BSAI Trawl Limited Access Sectors

Fishery	Year	Halibut PSC limit in the BSAI	Zone 1 Red king crab PSC limit	C. opilio crab PSC limit (COBLZ)	Zone 1 C. bairdi crab PSC limit	Zone 2 C. bairdi crab PSC limit
			As a percentage of the total BSAI trawl PSC limit after allocation as PSQ			
Amendment 80 sector	2008	2,525 mt	62.48	61.44	52.64	29.59
	2009	2,475 mt	59.36	58.37	50.01	28.11
	2010	2,425 mt	56.23	55.3	47.38	26.63
	2011	2,375 mt	53.11	52.22	44.74	25.15
	2012 and all future years	2,325 mt	49.98	49.15	42.11	23.67
BSAI trawl limited access	All years	875 mt	30.58	32.14	46.99	46.81

Under Amendment 80, vessel captains are able to slow fishing operations, and move from areas with higher PSC rates. The consensus from AKSC vessel is that lower than normal halibut biomass has been seen in typical head and gut fishing areas. Therefore, AKSC is cautiously optimistic about these first three years of cooperative operations. Higher PSC abundance on flatfish fishing grounds coupled with Amendment 80 halibut and crab PSC annual reductions, and changes to fishing patterns due to water temperatures, ice conditions, and/or climate change could result in future PSC constraints.

The following table summarizes current and historical PSC usage through March 2 of each Amendment 80 fishing year, and shows annual variation among allocated PSC categories for the first months of operations.

Species	2008			2009			2010			2011		
	Usage Amount (mt)	Annual Allocation (mt)	% Usage	Usage Amount (mt)	Annual Allocation (mt)	% Usage	Usage Amount (mt)	Annual Allocation (mt)	% Usage	Usage Amount (mt)	Annual Allocation (mt)	% Usage
Halibut	187	1,837	10.19%	305	1,793	17.03%	308	1,754	17.57%	238	1,743	13.65%
King Crab Z1	10,622	78,631	13.51%	28,667	74,351	38.56%	16,600	70,237	23.63%	16,952	67,405	25.14%
Bairdi Z1	30,283	340,520	8.89%	37,733	321,922	11.72%	37,400	257,715	14.51%	25,936	247,017	10.50%
Bairdi Z2	389	580,311	0.07%	430	548,443	0.08%	4,085	440,277	0.93%	2,167	423,529	0.51%
Opilio (COBLZ)	931	1,632,432	0.06%	295	1,544,825	0.02%	28,625	1,461,309	1.96%	2,636	2,686,159	0.09%

Research and Outreach

In addition to harvesting and processing activities, AKSC is actively engaged in several projects to improve the natural and human environment affected by fishing operations. These are briefly described below.

Reducing halibut mortality

AKSC believes operating as a cooperative increases incentives for individual bycatch accountability and optimal use of halibut bycatch mortality limits. AKSC vessels now have a direct relationship between how they utilize their halibut bycatch mortality allowances and how much of their allocated and non-allocated target species are harvested. Therefore, AKSC companies are continuing to improve their utilization of halibut excluders and how they avoid bycatch hotspots through data sharing. Potential reductions in halibut mortality rates through improved halibut handling procedures is another important part of the AKSC's overall set of steps to make best use of its halibut bycatch allowances. Work in this area is of critical importance to the development of an adequate set of tools to accommodate the 50 MT per year reduction in the halibut bycatch mortality cap as part of Amendment 80. The following summarizes AKSC's recent EFP research to explore improved halibut handling procedures:

- Halibut bycatch mortality rates in flatfish and cod fisheries currently range from 70-80 percent. Because Amendment 80 allows vessels to avoid bycatch and slow fishing operations, halibut that is caught will spend more time in live tanks. Therefore, halibut mortality is expected to increase under Amendment 80 fishing conditions.
- The largest obstacle to reducing halibut mortality rates is the Amendment 80 catch monitoring requirements. To allow for accurate estimations of catch, including halibut bycatch, sorting and removal of PSC prior to observer sampling is currently prohibited.
- Most observers collect samples in a vessel's factory as catch moves from holding tanks to processing areas. Halibut near the back of the tank may not be discarded for up to 10 hours in some cases, and this time will increase under Amendment 80.
- To explore whether halibut accounting could occur on deck where halibut could be discarded in better condition, AKSC was issued an experimental fishing permit (EFP). Phase I of the EFP was conducted from May 27 – June 27, 2009 on three AKSC vessels. These vessels fished under the EFP but used their own Amendment 80 allocations of halibut PSC and groundfish.
- The average mortality rate for halibut sorted on deck was 45 percent. This was a reduction of almost 50% relative to the current average mortality rate assigned to the EFP target fisheries (75 percent is the average mortality rate applied to the BSAI flatfish fisheries currently).

- Average sorting time on deck for the EFP overall was approximately 27 minutes from the time the net was brought aboard to the time the last halibut was returned to the water or deck sorting was completed, whichever was longer. In practice, this included the time it took the crew to sort out the halibut (as little as 10 minutes on some tows) and the time it took the sea sampler on duty to measure and assess viability for each halibut.
- Most of the modified halibut handling procedures used for the EFP appeared to be feasible for the EFP vessels in the arrowtooth, flathead sole, rex sole and Pacific cod fisheries.
- The spring yellowfin sole fishery may not be a feasible candidate for alternative handling procedures due to greater catch amounts and very low halibut bycatch rates. Fall yellowfin sole fishing, however, is generally more like the cod and flathead sole fishing done in the EFP in terms of catch amounts per tow and the size and number of halibut in each tow, and might be a good candidate for reductions in halibut mortality rates with deck sorting.
- A subsequent Phase II to this EFP is being planned. This EFP could address many of the operational issues needed to implement modified halibut handling processes in a real world setting. These could include: utilizing technology to monitor crew sorting halibut on deck rather than employing additional sea samplers to complete this work, evaluating automated methods to rapidly weigh or measure halibut and addressing methodologies for halibut viability sub-sampling within current observer sampling constraints.

Community outreach

AKSC representatives have traveled to western Alaska communities to engage with community leaders. During several trips to Nome, Bethel, Dillingham, and Anchorage, AKSC met with representatives from the Bering Sea Elders Advisory Group, Kawerak, the Association of Village Council Presidents, the Bristol Bay Economic Development Corporation, the Bristol Bay Native Association, the Qayassic Walrus Commission, and the United States Fish and Wildlife Service. We discussed AKSC operations under Amendment 80, provided catch information, and discussed research to reduce trawl effects to the benthic habitat.

We negotiated a regulatory closure to protect western Alaska subsistence resources in the Etolin Strait/Nunivak Island area, while still maintaining access to important flatfish fishing grounds. And finally, we have engaged with residents of the Bristol Bay region to develop a mutually agreeable solution to the perceived issue of grounds pre-emption and bycatch concerns relative to small-scale halibut fishing opportunities in the area.

Because careful halibut bycatch management is so important to AKSC's ability to harvest its target species allocations, AKSC captains avoid areas with high halibut rates as much as possible. As high concentrations of yellowfin sole migrate across the Bering Sea shelf, AKSC

vessels follow these schools as they typically represent high catch per unit effort (CPUE) and low halibut bycatch. As the ice clears, large spawning schools of yellowfin sole congregate in very shallow water. At certain times of the year, these may be the only low bycatch areas. Displacement to other areas would result in higher CPUE, longer bottom times, increased costs, and additional habitat effects.

These shallow yellowfin spawning areas are sometimes adjacent to western Alaska communities. Community members have expressed concern to AKSC and the Council about all vessel activities, and their effects on local commercial and subsistence harvests. Our experience thus far has shown that effective communication between communities and the industry is possible and may preclude the need for the Council to take formal action in resolving disputes. We hope that in the future we may build on past success and increase the community level dialogue in order to address issues of mutual concern.

Northern Bering Sea Research Area (NBSRA)

On July 25th, 2008, NMFS issued a final rule closing the NBSRA (73 FR 43362) to non-pelagic trawling. Since then, the Alaska Fisheries Science Center has been developing a research plan to better understand the effects of a commercial scale fishery in this area. As ocean temperatures rise, fish stocks are expected to move north. While AKSC is interested in the possibility of a future commercial fishery in the NBSRA, we support a slow, reasoned approach to understanding trawl impacts to the habitat, marine mammals, fish stocks, and traditional activities. Fish stocks are healthy in traditional fishing grounds, and we believe the Council, NMFS, and fishery stakeholders have a rare opportunity for a natural experiment to understand trawl impacts, and make management decisions that meet national net benefit requirements.

Looking forward

The following is a list of regulatory changes that would increase efficiencies, add flexibility, and help AKSC vessels meet Amendment 80 goals. We welcome the opportunity to work with the Council and NMFS to accomplish these changes.

Change the January 20 annual season start date

January 20 has traditionally been the regulatory start date for all trawl fisheries. This date was established for several reasons, including providing trawl vessels with single fair start date several weeks after the holiday season. Because AKSC vessels are allocated most of their traditional target species, are allocated PSC limits, are subject to hard caps on these limits, and are subject to sideboards on non-traditionally harvested species, the Council has eliminated many of the competition scenarios the January 20 start date was in part designed to mitigate.

This artificial start date creates stress on many of the vendors that we depend on, particularly the shipyards, airlines and hotels. By moving the January 20 start date back to January 1 for the

Amendment 80 sector, AKSC vessels would have additional flexibility to schedule fishing operations around environmental and biological conditions of the fishery, and plan non-fishing or shipyard times. It would also provide twenty additional fishing days, which would be beneficial in allowing us to harvest our quotas.

Provide regulatory mechanism for inter-sector trades

With the formation of the freezer longline cooperative, inter-sector trades of allocated species has become possible. Allowing Amendment 80 and freezer longliners to transfer cod and halibut provides additional flexibility for both sectors.

Remove November 1 cod closure for trawl vessels

As noted above, SSL regulations designed to eliminate directed cod fishing later in the year require NMFS to place cod on bycatch status, and result in discards as vessels operate later in the year. Removing this closure will reduce waste of Pacific cod caused by forced discards, and will also reduce the cost of avoiding cod that are an increasing fraction of the groundfish biomass.

Summary

The Council has designed, and NMFS has implemented, a well-designed program that provides AKSC with the necessary tools to effectively manage Amendment 80 fisheries, minimize bycatch to the extent practicable, and increase retention. AKSC and its member companies are working hard to maximize the goals of Amendment 80 by implementing internal data management and quality control measures that enable companies and vessel captains to maximize allocations. Amendment 80 is arguably one of the most successful, highly regulated rationalization programs to date. For 2010, AKSC catch amounts for this complex multi-species fishery were well below regulatory limits, and the GRS exceeded minimum requirements. Additionally, Amendment 80 participants have worked with the Council and NMFS to address concerns with the GRS while maintaining high retention levels. While AKSC companies are pleased with these successes, they have identified management elements that could be improved, and look forward to addressing these with the Council and NMFS.

Attachment 1

FISHERIES INFORMATION SERVICES
413 SW Butterfield Place Corvallis, OR 97333
541-602-1609

Jason Anderson
Manager, Alaska Seafood Coop

March 23, 2011

PROCEDURES FOR AUDIT OF RETENTION COMPLIANCE STANDARDS FOR ALASKA SEAFOOD COOP

PURPOSE and DEFINITIONS:

The purpose was to provide an independent determination of annual retention rate of groundfish for Alaska Seafood Coop (ASC) boats in Bering Sea/Alcutians (BSAI) groundfish fisheries in 2010. The rate is defined as round weight equivalent of all retained groundfish (production) divided by observed total groundfish catch.

DATA SOURCES and CONFIDENTIALITY:

FIS agreed with ASC to keep all data confidential. All raw data is in the purview of National Marine Fisheries Services (NMFS). After receiving permissions from each company, NMFS Alaska Region staff provided to FIS data for each of the fourteen boats that participated in 2010 cooperative fisheries.

DATA SCOPE and FORMAT:

Data was received for 14 boats. There are two types of data. *Production* data was aggregated by week, species and product type, converted to round weight equivalence. *Observed total groundfish catch* is from the NMFS Catch Accounting System (CAS) and was aggregated by week, species group and round weight. Data was requested by week in order to exclude weeks for species on PSC status (required to be discarded; as it turned out, this situation did not apply in 2010).

DATA PROCESSING:

Through the use of Pivot tables, annual summaries by species for each boat were produced, including all FMP groundfish species listed on table 2a of the regulations. For each boat, total production was divided by total observed groundfish to determine its retention percentage. Total production for all boats was divided by total observed groundfish for all boats to determine the cooperative's retention percentage.

DATA RECONCILIATION and EVALUATION:

For each boat, FIS compared weeks with data between CAS and production. In one case, there was an extra week of production data. NMFS staff confirmed this resulted when a small amount of fish was observed one week but not processed until the next. Another boat's percentage appeared to be an outlier, much smaller than range of percentages of other boats. Coop staff ascertained that observed groundfish catch in observer database was incorrect, and Alaska Regional personnel subsequently re-ran the query and provided revised data to FIS.

DATA SUMMARY

The totals for all fourteen boats were 234,873 mt of production (in round weight) and 278,785 mt of observed groundfish, for a Coop rate of 84.2 %.

Janet Smoker

Gulf of Alaska Rockfish Best Use Cooperative

Final Report

December 15, 2010

Introduction:

In Section 802 of the Consolidated Appropriations Act of 2004 (Public Law 108-199), Congress required the Secretary of Commerce in consultation with the North Pacific Fishery Management Council (NPFMC) to establish a Central Gulf of Alaska Rockfish Pilot Program (RPP). The Council adopted the Program on June 6, 2005, and the Program was implemented by Final Rule on November 20, 2006.

Under the Rockfish Pilot Program, there are two options for the eligible trawl catcher/processors (CP): opt-out of the RPP or opt-in. If a CP opts-in to the program, the vessel can either participate in a cooperative or in a limited access fishery.

In the limited access fishery, the CPs fish on an amount of the three primary rockfish species [Pacific Ocean Perch (POP), Northern rockfish, Pelagic shelf rockfish (PSR)] that is derived from the catch history of those vessels not participating in cooperatives and a pro-rata share of the history of those CPs which opted out of the program. Secondary species in the limited access pool are managed on bycatch allowances.

For the cooperative, NMFS issues quota shares for the three primary rockfish species, and for four secondary species: Sablefish, Shorttraker rockfish, Roughey rockfish and Thornyhead rockfish. Each cooperative also receives a quota share of Halibut PSC mortality. The quota shares are then distributed among the participating vessels. All quota share species are managed as hard caps with 100% mandatory retention.

For the first three years of the RPP, Fishermen's Finest (FFI) chose to participate in the limited access fishery, rather than take the risk of exceeding hard cap allocations of secondary species – the amounts of which were much lower than the vessels' harvests (and retention) of those species in prior years. In anticipation of the new Rockfish Program where it was likely that CPs would no longer have the choice of a limited access fishery, FFI formed a cooperative for the 2010 CGOA rockfish fishery.

Membership of the Gulf of Alaska Rockfish Best Use Cooperative:

<u>Vessel Owner</u>	<u>Vessel Name</u>	<u>LLP</u>	<u>ADF&G No.</u>
North Pacific Fishing, Inc.	American No. 1	1879	36202
U.S. Fishing, LLC	U.S. Intrepid	2800	54392

Monitoring the Fishing Plan and Catch:

When NMFS established the Coop quota shares, the Captains were assigned their individual quota shares for each of the three primary rockfish species, the four secondary species, and the halibut PSC. The Captains were also informed of their sideboard allowances for the month of July, in keeping with the sideboard rules of the RPP.

NMFS was notified in advance of intent to fish in the RPP, in order for NMFS to have the opportunity to brief the observers. Each vessel is mandated to have two observers on board for the RPP, or while the vessel has RPP fish on board.

Each vessel has a catch monitoring program on board called "eHarvest". Observer files are downloaded to the eHarvest program after the observers sample the hauls. This program uses the same extrapolation methodology as the NMFS AK Region for determining official catch. In this way, the vessels have real time QS catch data on board.

When the observers send their files to NMFS, their data is checked at the Observer Program and then is extrapolated at the Region. It then is available to the NMFS data managers, and also to third party data managers such as the Alaska Seafood Cooperative and Seastate. Although the official NMFS data takes several days to process, and the eHarvest program information is available immediately, the coop bases its official total catch on the NMFS Account Balance.

The vessel Captains update the office daily with eHarvest catch data. The office compares the catch and QS balances with Seastate and with the NMFS region's Account Balance for the coop. If any of these databases do not match, then tow by tow comparisons are made between the eHarvest and the Seastate data (Seastate data is obtained directly from NMFS and we can look at it on the individual tow level). We may also confer with NMFS AK Region on haul information if discrepancies cannot be solved by looking into the Seastate data. Since the inception of the RPP, NMFS In-Season managers have been extremely helpful to industry from a regulatory and data perspective. Alaska Seafood Cooperative managers are also available for additional assistance in verifying or corroborating numbers if requested.

The vessel Captains communicate directly with one another, with the office, and have the ability to communicate directly with the third party data managers if necessary.

Retained and Discarded QS:

Due to 100% mandatory retention of the three primary rockfish and four secondary species under the program, there are no discards.

Sideboards:

The RPP allows that vessels which have history in other Gulf fisheries in the month of July can fish up to a sideboard level equivalent to their historic average catch in those fisheries. The coop fish plan details the timing of the prosecution of the sideboard fisheries, in addition to timing of the harvest of the CGOA rockfish QS. The *U.S. Intrepid* fished its sideboard West Yakutat rockfish starting on July 1st, prior to fishing its CGOA QS. The *American No. 1* did not harvest sideboard fisheries.

Transfers/Overages/Underages:

The last page shows the coop allocation, transfers in and out of the cooperative, and vessel harvests. The coop allocation and transfer table is copied directly from the NMFS Coop Account Balance webpage. The individual vessel harvests are provided by Seastate. The *American No. 1* transferred its unharvested QS to the *U.S. Intrepid* in July. The *U.S. Intrepid* then transferred its balance remaining to the *American No. 1* for a fall fishery. Additionally, there were four transfers of quota into and out of the cooperative:

Transfer out:	2.010 MT Sablefish to FCA Cooperative
Transfer in:	FCA Coop's remaining rockfish and halibut QS
Transfer in:	8 MT from POP Trident Offshore Cooperative
Transfer out:	2 MT Sablefish to Trident Offshore Cooperative

The first set of trades was with the FCA Cooperative, to cover a sablefish overage, and also to utilize their remaining unharvested quota shares since they were done fishing.

The second set of trades was with the Trident Offshore Cooperative, to cover our 2.9 MT POP overage and send them the unharvested balance of our sablefish. The trade of 8 MT for a 2.9 MT overage was to cover any potential increased overage from shifting numbers in our coop account balance due to observer debriefing. There was an increase in coop harvest shown in the account balances between the end of fishing in July, and the start of fishing in the coop again at the end of September. We thought it prudent to adjust for such a potential change.

The table of allocations, transfers, harvests and sideboards is attached.

Gulf of Alaska Rockfish Best Use 2010: Cooperative Allocations, Transfers, and Harvest

Entity	2009	2010	2011	2012	2013	2014	2015
--------	------	------	------	------	------	------	------

Entity	2009	2010	2011	2012	2013	2014	2015
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QUOTA SHARE

Entity	2009	2010	2011	2012	2013	2014	2015
CGOA Northern Rockfish CP Coop Rockfish_BUC	298.793	89.800	0.000	388.593	367.745	20.848	95
CGOA PSR CP Coop Rockfish_BUC	836.763	55.000	0.000	891.763	849.292	42.471	95
CGOA POP CP Coop Rockfish_BUC	920.760	108.000	0.000	1028.760	1023.692	5.068	100
CGOA Rougheye CP Coop Rockfish_BUC	154.006	178.600	0.000	332.606	81.082	251.524	24
CGOA Sablefish CP Coop Rockfish_BUC	58.855	0.000	4.010	54.845	54.746	0.099	100
CGOA Shorttraker CP Coop Rockfish_BUC	29.619	51.200	0.000	80.819	21.221	59.598	26
CGOA Thornyhead CP Coop Rockfish_BUC	44.348	40.400	0.000	84.748	37.897	46.851	45
CGOA Halibut CP Coop Rockfish_BUC	32.898	21.200	0.000	54.098	14.965	39.133	28

	A-1	USI	Total
	213.450	154.295	367.745
	351.340	497.952	849.292
	573.340	450.352	1023.692
	50.770	30.312	81.082
	26.240	28.506	54.746
	16.440	4.781	21.221
	20.690	17.207	37.897
	10.920	4.045	14.965

SIDEBOARDS

GOA West Yakutat POP CP Coop RPP SB Rockfish_BUC	217.000	0.000	0.000	217.000	215.248	1.752	99
GOA West Yakutat PSR CP Coop RPP SB Rockfish_BUC	47.000	0.000	0.000	47.000	12.960	34.040	28
GOA Halibut Deep Water Complex TRW CP Coop RPP SB Rockfish_BUC	5.000	0.000	0.000	5.000	0.565	4.435	11
GOA Halibut Shallow Water Complex TRW CP Coop RPP SB Rockfish_BUC	5.000	0.000	0.000	5.000	0.000	5.000	0

	0	215.248	215.248
	0	12.960	12.960
	0	0.565	0.565
	0	0	0

2010

AMERICAN FISHERIES ACT

ANNUAL CATCHER VESSEL INTERCOOP REPORT

TO THE

NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

Prepared by:

John Gruver

United Catcher Boats Association

Seattle, Washington

March 30, 2011

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-Third Party Audit for Amendment 84 attached at the end of this document-

Section 1. Introduction

1.1 Purpose of the Catcher Vessel Intercooperative Report

The AFA Catcher Vessel Intercooperative Report is a summary of the eight catcher vessel cooperative reports required by the American Fisheries Act (AFA) regulations. While the individual coop reports track the annual activities of each cooperative at the vessel level, a summary of AFA catcher vessel harvests in the Bering Sea and Gulf of Alaska fisheries is useful as NMFS allocates the catcher vessel sideboard caps and PSC caps & triggers in the aggregate, not by individual cooperatives. The Catcher Vessel Intercooperative Report provides the North Pacific Fisheries Management Council, and the public, with a simple means of evaluating the AFA catcher vessel fleet's aggregate fishing performance under the AFA regulations. Additionally, this report provides information beyond the required regulatory elements of the individual coop reports to provide a broader understanding of catcher vessel cooperative activities.

Finally, the AFA Cather Vessel Intercooperative Report provides aggregate fleet data required by Amendment 84 (see Appendix III).

1.2 The 2010 Catcher Vessel Intercooperative Agreement

The eight AFA catcher vessel cooperatives renewed the Intercooperative Agreement for 2010 with no significant changes from the 2009 Agreement. The 2010 Agreement continues to emphasize the commitment by all members towards reducing bycatch in each Bering Sea and Gulf of Alaska groundfish fishery in which they participate.

Primary elements of the Intercoop Agreement:

- 1) Allocation, monitoring, and compliance of the BSAI and GOA sideboard limits and PSC caps among the AFA catcher vessel cooperative members;
- 2) Allocation, monitoring, and compliance of BSAI pollock harvest inside the Steller sea lion conservation area;
- 3) Establishment of penalties for coops that exceed pollock and sideboard allocations;
- 4) Provides for the harvest of BSAI pacific cod by the "under 1700 mt" exempt vessels while complying with AFA PSC limits;
- 5) Establishment and monitoring of sideboard species transfers between cooperatives;
- 6) Promotes compliance of the Council's recommended sideboard measures and PSC limits while allowing for the maximum harvest of AFA pollock and sideboard allocations; and
- 7) Promotes reduction of prohibited species catch (PSC) in the Bering Sea pollock fishery.

A copy of the 2010 Catcher Vessel Intercoop Agreement is found in Appendix I.

1.3 AFA Pollock and BSAI/GOA Sideboard Enforcement Actions

No coop enforcement or penalty actions regarding the over-harvest of AFA pollock, directly fished BSAI sideboard fishery caps, directly fished GOA sideboard caps, and BSAI & GOA PSC limits occurred in 2010.

Section 2. Bering Sea Pollock Fishery

2.1 Allocations and Harvest

The 2010 Bering Sea pollock Total Allowable Catch (TAC) was initially set at 813,000 metric tons. A portion of TAC (10%) is set aside for the Community Development Quota (81,300 metric tons). From the remaining 731,700 metric tons, 24,768 metric tons is reserved to fund the Incidental Catch Allowance (ICA). The ICA is established to cover pollock harvested in other Bering Sea groundfish fisheries. The remaining 706,932 metric tons, the Directed Fishing Allowance (DFA), is allocated among the three AFA harvest sectors. The inshore sector is allocated 50% of the DFA (353,466 mt), the mothership sector is allocated 10% (70,693 mt), and the catcher/processor sector is allocated 40% (282,773 mt). Catcher vessels that historically delivered pollock to the c/p sector (High Seas Catchers' Coop) are allocated 8.5% of the c/p sector share (24,036 mt).

There are a total of 111 AFA qualified catcher vessels. The inshore sector has 98 qualified vessels of which 96 were members of the 6 active inshore cooperatives in 2010. For 2010 two inshore vessels participated in the Inshore Open Access fishery. The mothership sector has a total of 19 qualified catcher vessels; all are members of the Mothership Fleet Cooperative. Thirteen of the MFC catcher vessels are "dual qualified" for both the mothership and inshore sector fisheries. Seven catcher vessels are qualified for the catcher/processor sector and make up the High Seas Catchers' Cooperative.

The following information on Table 2.1 provides data for the number of members in each cooperative; each coop's allocation percentage; each coop's annual allocation; each coop's total directed pollock harvest; and the amount of pollock over or under the annual allocation.

Table 2.1

Source: Annual Catcher Vessel Coop Reports & NMFS

2010 AFA CATCHER VESSEL COOPERATIVES' ALLOCATIONS AND DIRECTED FISHING HARVESTS					
Cooperative	Number of Vessels in Coop	Annual Allocation Percentage	Annual Allocation	Harvest in Metric Tons	Over / (Under) Allocation
INSHORE CATCHER VESSEL COOPERATIVES					
Akutan Catcher Vessel Assoc.	36	32.024%	113,194	112,028.00	(1166)
Arctic Enterprise Assoc.	0	0.000%	0	0.00	0
Northern Victor Fleet Cooperative	13	9.378%	33,148	33,120.00	(28)
Peter Pan Fleet Cooperative	10	2.876%	10,166	9,438.00	(728)
Unalaska Fleet Cooperative	11	10.493%	37,089	37,085.20	(4)
UniSea Fleet Cooperative	14	25.954%	91,739	91,709.79	(29)
Westward Fleet Cooperative	12	18.488%	65,349	65,337.22	(12)
Inshore Coop Totals	96	99.213%	350,684	348,718	(1966)
OFFSHORE CATCHER VESSEL COOPERATIVES					
Mothership Fleet Cooperative	19	10.0% of DFA	70,693	70,577	(116)
High Seas Catchers Cooperative	7	3.4% of DFA	24,036	Details of the HSCC pollock harvest are covered in the joint PCC and HSCC report	

2.2 Salmon Bycatch Management

During 2010 all nine AFA cooperatives, catcher vessel and catcher/processors alike, and all CDQ groups were members to the Salmon Bycatch Management Agreement. This InterCooperative Agreement (ICA) is designed to meet the criteria required by the

Amendment 84 regulations. Amendment 84 provides ICA participants an exemption to the current regulatory Chinook Salmon Savings Area (CHSSA) and Chum Salmon and Savings Area (CSSA). The “A” season portion of the agreement focused on reducing Chinook bycatch and the “B” season portion focused on reducing both non-Chinook salmon (chum salmon greatly dominate the “other salmon” category) and Chinook salmon. A copy of the agreement is found in Appendix II.

The salmon agreement utilizes a “rolling hot spot” closure system which, twice weekly, identifies the areas of the Bering Sea pollock fishery with the highest bycatch rate and initiates “Savings Closures” for those areas over a trigger amount. Each week individual coops, based on their member’s recent bycatch performance, are assigned to a “tier level”. Tier 1 for coops with the best bycatch performance, tier 2 for medium performance, and tier 3 for the lowest performance. A coop’s tier level determines the amount of fishing area restriction the coop will have for the ensuing week. The agreement also incorporates an element of peer pressure on poor performing vessels via three types of “Dirty Twenty Lists” which are updated and published each week. These lists specifically name the vessels with the highest bycatch rates on: 1) a weekly, 2) a 2 week rolling average, and 3) a seasonal basis. Additionally, the agreement requires tow-by-tow bycatch reporting by all AFA pollock vessels. Sea State, Inc. has been contracted to gather the data, compile it into useful information, determine tier assignments and closure areas, and monitor closure compliance by the fishing vessels.

The NPFMC passed Amendment 84 in October of 2005, and while implementation of the amendment took some time, the fleet began fishing under Amendment 84 regulations in 2008. As previously mentioned Amendment 84 provides participating coops with an exemption to the suite of Chinook and “other salmon” regulatory salmon savings areas in the Bering Sea. To qualify, pollock cooperatives must enter into an acceptable intercooperative agreement (ICA) that, at a minimum, meets the required criteria set forth in the Amendment 84 regulations. The Salmon Bycatch Management Agreement, described above, exceeds those minimum requirements and has been accepted by NMFS. As previously mentioned all nine AFA cooperatives and all CDQ groups are parties to the Agreement in 2010.

In 2008 the Agreement was amended and restated in order to increase the amount of area available for Chinook salmon savings closures (the rolling hot spot closures) from 1,000 square miles to 1,500 Square miles. Also included in Appendix II is a technical correction to the Agreement. The technical Agreement was necessary to make the date for Sea State to re-set the B season Base Rate match up to the Amendment 84 regulations.

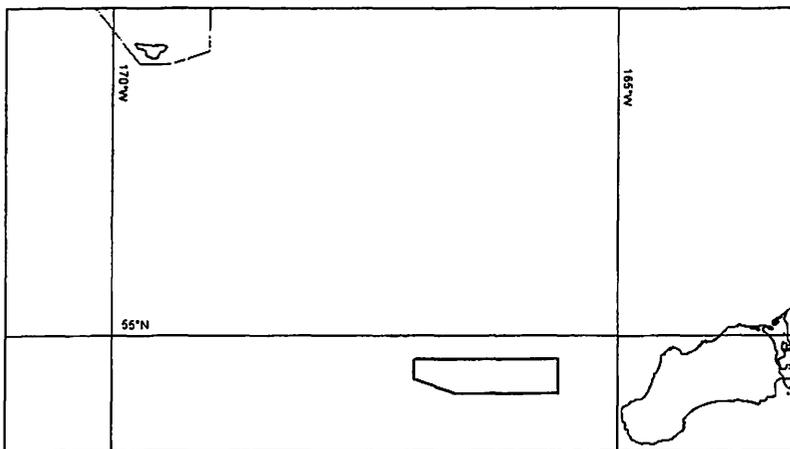
Amendment 84 Reporting Requirements

The Amendment 84 regulations require participating cooperatives to report several items; 1) the number of salmon taken by species and season by each vessel, 2) each member vessel's number of appearances on the weekly Dirty 20 list for both Chinook and "other salmon" categories, and 3) report any salmon savings closure compliance violations by their member vessels. The coops are also required to provide the number of salmon avoided as demonstrated by the movement of fishing effort away from the salmon savings areas. The complete report is available in Appendix III of this document and will be presented at the April 2011 NPFMC meeting.

A separate document regarding the "third party audit" of the program will also be presented to the North Pacific Fishery Management Council at their 2011 April meeting. The audit was conducted by ABR, Inc. and is attached at the end of this Intercoop Report.

Fixed Closure Area

In 2008 an additional Agreement for reducing Chinook bycatch in the A season was entered into by all AFA and CDQ pollock harvesters; membership in this Agreement remained the same for 2010. Called the Chinook Conservation Area Agreement, it closes an area located in the southeastern Bering Sea to all pollock fishing during the A season. This area has been identified with a history of consistently high Chinook bycatch during the winter season. Below is a chart of the Chinook Conservation Closure Area. The full Agreement can be found in Appendix IV.



Section 3. Sideboard Fishery Management

The American Fisheries Act directed the North Pacific Fisheries Management Council (NPFMC) to provide regulations aimed at protecting non-AFA vessels participating in other groundfish and crab fisheries from adverse impacts that may occur due to the

rationalization of Bering Sea pollock fishery. This mandate brought about the development of groundfish, crab, and prohibited species catch (PSC) sideboard limits by the NPFMC for the AFA fleet. Prior to the NPFMC Crab Rationalization Program, implemented in 2005, AFA catcher vessels eligible to participate in the Bristol Bay red king crab fishery were sideboarded to 10.96% of the general fishery guideline harvest level. However, under the Crab Rationalization program the AFA sideboards were lifted, the AFA fleet was issued quota shares, and participated in the program just the same as the non-AFA crab fleet. Consequently the AFA coop reports no longer include details of their member's participation in the Bristol Bay red king crab fishery.

Vessels with less than 1700 mt of historic catch in the BSAI pollock fishery and that meet minimum landing requirements in either the BSAI and/or GOA are granted exemptions to the BSAI cod fishery and/or GOA groundfish and PSC sideboards. Vessels in the Mothership cooperative also become exempt to BSAI cod sideboards after March 1. Exemptions to BSAI cod sideboards only apply to the directed fishery; all AFA BSAI cod boats, exempt and non-exempt alike, are subject to the PSC sideboard limits associated with the fishery.

NMFS restricts the non-exempt AFA catcher vessel fishing by an aggregate sideboard cap for each groundfish species category, and an associated PSC bycatch limit. In turn, the Intercoop Agreement manages the initial distribution, and re-distribution via intercoop transfers, of the aggregate sideboard caps and associated PSC among the eight catcher vessel coops based on their member's catch history. In some cases the assigned caps are so small that, without the harvest management and monitoring provided by the Intercoop Agreement, NMFS would not open those fisheries to directed fishing by the AFA non-exempt catcher vessels. BSAI cod exempt vessels must meet PSC bycatch standards or face losing their exempt status (see section 3.a. and 3.b. of the Intercoop Agreement in Appendix 1.)

Tables covering the directed groundfish sideboard fisheries prosecuted by the AFA non-exempt vessels in 2010 are located in Appendix V. These tables provide information on initial coop allocations of sideboard cap, the transfer of allocations between coops, the directed harvest by each coop, and the amount of sideboard cap that was remained unharvested by the AFA non-exempt fleet.

3.1 Groundfish Sideboards

The aggregate sideboard harvest tables occasionally report overages in one or more species not directly fished by the AFA non-exempt vessels. The overages occur as incidental catch in directed fisheries such as Bering Sea pollock and BSAI cod. While the coops have successfully managed the directed fisheries' sideboard limits, the incidental catch of species associated with those directed fisheries varies from season to season and from year to year. Because the sideboard limits are based on a three-year average it should be expected that the sideboard caps of species taken as incidental catch

would at times be exceeded. Additionally, rises in species abundance and changes in location may be different now than during the 3 year snapshot of the AFA sideboard years causing natural variability in the incidental catch of some species.

Table 3.1a Harvest data supplied by Annual Coop Reports & Sea State, Inc.

2010 BSAI AFA CATCHER VESSEL AGGREGATE GROUND FISH SIDEBOARD CATCH				
Species	Fishery	Sideboard Limit	Aggregate Catch; Directed & Non-Direct	Over / (Under) Sideboard Limit
Pacific Cod	Jig Gear	0	0	0
	Hook & Line	0	0	0
	Pot Gear	4	0	(4)
	CV < 60' H&L or Pot	2	0	(2)
	Trawl Gear CV	28,675	22,280	(6,395)
Sablefish	BS Trawl	107	0	(107)
	AI Trawl	28	0	(28)
Atka Mackerel	Eastern AI&BS	68	53	(16)
	Central AI	4	0	(4)
	Western AI	0	0	0
Yellowfin Sole	BSAI	*n/a	n/a	n/a
Rock Sole	BSAI	2,741	1,127	(1,614)
Greenland Turbot	BS	231	3	(228)
	AI	33	0	(33)
Arrowtooth	BSAI	4,399	752	(3,647)
Alaska Plaice	BSAI	1,874	7	(1,867)
Other Flatfish	BSAI	648	224	(424)
Flathead Sole	BS	2,706	1,262	(1,444)
POP	BS	326	105	(221)
	Eastern AI	29	1	(28)
	Central AI	10	0	(10)
	Western AI	0	0	0
Northern rockfish	BSAI	61	19	(42)
Shorthead	BSAI	1	0	(1)
Rougheye	BSAI	2	0.84	(1)
Other Rockfish	BS	2	4	2
	AI	4	1	(3)
Squid	BSAI	641	228	(414)
Other Species	BSAI	2,299	1,097	(1,202)

*no YFS sideboard limit in 2010

Table 3.1b

Harvest data supplied by Annual Coop Reports & Sea State, Inc.

2010 GOA AFA CATCHER VESSEL AGGREGATE GROUND FISH SIDEBOARD CATCH				
Species	Fishery	Sideboard Limit	Aggregate Catch; Directed & Non-Direct	Over / (Under) Sideboard Limit
Pollock	WYK	710	0	(710)
	SEO	3,231	0	(3,231)
	610 A,B,C,&D	15,878	3,897	(11,981)
	620 A,B,C,&D	3,278	1,708	(1,570)
	630 A,B,C,&D	3,877		(3,877)
	WGOA Inshore A&B	2,550	365	(2,185)
	WGOA Offshore A&B	213		(213)
	CGAO Inshore A&B	2,280	538	(1,742)
	CGOA Offshore A&B	265		(265)
	EGOA Inshore (annual)	14	0	(14)
	EGOA Offshore (annual)	2		(2)
Deep-water Flatfish	WGOA	0		0
	CGOA	185	20	(165)
	EGOA	36		(36)
Rex Sole	WGOA	1	5	4
	CGOA	246	89	(157)
	EGOA	5	0	(5)
Flathead Sole	WGOA	7	41	34
	CGOA	107	50	(57)
	EGOA	3	0	(3)
Shallow-water Flatfish	WGOA	70	2	(68)
	CGOA	763	82	(681)
	EGOA	32	0	(32)
Arrowtooth Flounder	WGOA	17	268	251
	CGOA	840	149	(691)
	EGOA	1	0	(1)
Sablefish	WGOA Trawl	0	0	0
	CGOA Trawl	58	8	(50)
	EGOA Trawl	9		(9)
POP	WGOA	7	2	(5)
	CGOA	803	7	(796)
	EGOA	184	12	(172)
Shortraker	WGOA	0	0	0
	CGOA	7	2	(5)
	EGOA	5	1	(4)
Rougheyeye	WGOA	0	1	1
	CGOA	20	4	(16)
	EGOA	4	5	1
Other Rockfish	WGOA	1		(1)
	CGOA	86	0	(86)
	EGOA	0		0

Table 3.1b continued

2010 GOA AFA CATCHER VESSEL AGGREGATE GROUND FISH SIDEBOARD CATCH				
Northern Rockfish	WGOA	1	0	(1)
	CGOA	66	1	(65)
Pelagic Shelf Rockfish	WGOA	0	0	0
	CGOA	0	1	1
	EGOA	8		(8)
Thornyhead Rockfish	WGOA	12	0	(12)
	CGOA	18	5	(13)
	EGOA	20	0	(20)
Big Skates	WGOA	4	0	(4)
	CGOA	13	19	6
	EGOA	4	0	(4)
Longnose Skates	WGOA	0	0	0
	CGOA	13	2	(11)
	EGOA	5		(5)
Other Skates	Gulfwide	13	1	(12)
DSR	SEO	1		(1)
Atka Mackerel	Gulfwide	62	0	(62)
Other Species	Gulfwide	28	62	34

3.2 PSC Sideboards

Tables 3.2a, 3.2b, and 3.2c cover prohibited species bycatch amounts taken by AFA catcher vessels participating in BSAI and GOA groundfish fisheries.

Table 3.2a

Data supplied by SeaState and Annual Coop Reports

2010 BSAI AFA CATCHER VESSEL AGGREGATE PSC SIDEBOARD CATCH				
PSC Species	Target Fishery	Sideboard Limit	Aggregate PSC Mortality	Over / (Under) Sideboard Limit
Halibut	Pacific Cod, Trawl	887	275	(612)
	Yellowfin Sole	101	0	(101)
	Pollock/A.Mack/O.Species*	5	0	(5)
Red King Crab, Zone 1	All AFA CV BSAI Fisheries (except pollock)	52,600	124	(52,476)
C.Opilio, COBLZ	All AFA CV BSAI Fisheries (except pollock)	652,604	3,318	(649,286)
C.Bairdi, Zone 1	All AFA CV BSAI Fisheries (except pollock)	244,593	14,535	(230,058)
C.Bairdi, Zone 2	All AFA CV BSAI Fisheries (except pollock)	418,567	combined with zone 1 data	n/a

Table 3.2b

Data supplied by Annual Coop Reports

2010 GOA NON-EXEMPT AFA CATCHER VESSEL PSC SIDEBOARD CATCH				
PSC Species	Target Fishery	Sideboard Limit	Aggregate PSC Catch	Over / (Under) Sideboard Limit
Halibut (mortality in metric tons)	Trawl, 1st Season Allowance			
	Shallow water Targets	153	4	(149)
	Deep water Targets	7	0	(7)
	Trawl, 2nd Season Allowance			
	Shallow water Targets	34	3	(34)
	Deep water Targets	21	0	(21)
	Trawl, 3rd Season Allowance			
	Shallow water Targets	68	0	(68)
	Deep water Targets	28	0	(28)
	Trawl, 4th Season Allowance			
	Shallow water Targets	51	4	(47)
	Deep water Targets	0	0	
	Trawl, 5th Season Allowance			
	All Targets	62	0	(62)
Shallow water Targets	Pollock, cod, shallow-water flatfish, flathead sole, atka mackerel, and "other species".			
Deep water Targets	Sablefish, rockfish, deep-water flatfish, rex sole, and arrowtooth flounder.			

Table 3.2c

Data supplied by Sea State, Inc.

2010 BSAI AFA CATCHER VESSEL HERRING BYCATCH		
PSC Species	Target Fishery	Bycatch
Herring	Pollock	393
	Cod	22

Appendix I

2010 AFA Catcher Vessel Intercooperative Agreement

2010 INTERCOOPERATIVE AGREEMENT

This 2010 INTERCOOPERATIVE AGREEMENT is entered into by and among HIGH SEAS CATCHERS COOPERATIVE (“High Seas”), MOTHERSHIP FLEET COOPERATIVE (“MFC”) and the “Inshore Coops”, i.e., AKUTAN CATCHER VESSEL ASSOCIATION, ARCTIC ENTERPRISE ASSOCIATION, NORTHERN VICTOR FLEET COOPERATIVE, PETER PAN FLEET COOPERATIVE, UNALASKA FLEET COOPERATIVE, UNISEA FLEET COOPERATIVE and WESTWARD FLEET COOPERATIVE, all of which are Washington Fish Marketing Act corporations, as of _____, 2010, with respect to the following facts:

A. High Seas, MFC and the Inshore Coops (together, the “Coops”) are composed of certain catcher vessels (the “Vessels”) eligible to harvest Bering Sea (“BS”) pollock under the American Fisheries Act (the “AFA”). High Seas and the MFC are composed of all of the catcher vessels eligible to harvest BS and AI pollock in the “catcher/processor” and “mothership” sectors of such fisheries, respectively. The Inshore Coops have each received an allocation of BS pollock in accordance with Section 210 of the AFA. The members of each of the Coops have allocated among themselves the pollock available to their respective Coop, and have agreed that an over-harvest of its allocation by any member shall subject such member to a penalty.

B. The North Pacific Fishery Management Council (the “Council”) has adopted “trigger amounts” of chinook, other salmon and herring (the “Trigger Amounts”). Attainment of a Trigger Amount causes certain “savings areas” to be closed to trawling for pollock for certain periods of time. The Coops are also subject to limits on their incidental catch of halibut and crab (the “PSC Limits”). Each Coop’s members have agreed to exercise their best efforts to conduct their fishing efforts such that their Coop operates within the Trigger Amounts and PSC Limits, and to comply with the related management measures.

C. Pursuant to Section 211(c) of the AFA, the Council has adopted certain measures to prevent the Vessels from exceeding in the aggregate their traditional harvest levels in certain fisheries other than BS pollock (the “Sideboards”). The members of each of the Coops have allocated the Sideboards limits among themselves, and have agreed that an over-harvest of a Sideboard limit by any member shall subject that member to a penalty.

D. The Coops are subject to certain time and area limits on their harvest of BS pollock in connection with Steller sea lion protection measures (the “RPAs”).

Now, therefore, the parties agree as follows:

1. Trigger Amount Management. The Coops agree to exercise all reasonable efforts to reduce their salmon and herring bycatch to the lowest commercially practical levels, and specifically agree to coordinate their members' fishing activities with the goal of achieving the lowest practicable bycatch rates. For purposes of this Section, Coop catch data produced by the Monitoring Agent (as identified in Section 6.a, below) in conformance with NMFS catch accounting and bycatch estimation procedures shall be presumed accurate.

a. Bycatch Reporting. Each Coop shall arrange to have each of their members' Vessels' bycatch data (to the fullest extent available, with tow-by-tow data being considered optimal) released directly from the NMFS Observer Program to the Monitoring Agent and the Intercoop Manager (as identified in Section 8, below). The Monitoring Agent and the Intercoop Manager are hereby authorized to release all such data in forms and to parties as they reasonably deem appropriate to promote bycatch reduction.

2. Sideboard Limits. Subject to applicable Sideboard exemptions (including the "1700 metric ton" BS/AI cod and Gulf of Alaska ("Gulf") groundfish Sideboard exemptions and the mothership sector BS/AI cod sideboard exemption), the Coops agree to limit their collective members' Vessels' aggregate annual harvest of each Sideboard species to the amount that the Coop members' Vessels' collective catch histories contribute to the annual Sideboard for such species, as calculated by the National Marine Fisheries Service ("NMFS") in accordance with 50 C.F.R. § 679.64(b). To give effect to this provision, each Coop shall (i) limit its non-exempt members' Vessels' aggregate annual harvest of each Sideboard species to the amount that such Vessels contribute to the aggregate annual Sideboard for such species; or (ii) in the case of two or more Coops entering into an intercooperative agreement under which the parties have agreed to limit their collective non-exempt members' Vessels' aggregate annual harvest of one or more Sideboard species to the amount that such Coops' members' Vessels' collective catch histories contribute to the annual Sideboard for such species, limit its members catch in compliance with such intercooperative agreement.

3. Sideboard Management. The Coops acknowledge and agree that coordinated Sideboard management is essential to insure compliance with the aggregate Sideboard limits established under the AFA. Therefore, the Coops agree to the procedures set forth in this Section 3. For purposes of this Section, Coop catch data produced by the Monitoring Agent in conformance with NMFS catch accounting and bycatch estimation procedures shall be presumed accurate. Vessels having made an observed trip may expedite the accounting of that trip's tow-by-tow data by directly submitting copies of the following NMFS forms, as filled out by the Observer, to the Monitoring Agent: Vessel Haul Form, Observer Haul Form, and Species Composition Form.

a. Sideboard and Sideboard-Related PSC Cap Allocation. The Monitoring Agent will annually allocate the BS/AI Pacific cod Sideboard (the "Cod

Sideboard”) in accordance with the terms and conditions of that certain Cod Allocation Agreement among the Coops dated as of June 1, 2000 (the “Cod Agreement”). The Monitoring Agent, in consultation with NMFS, will allocate all Sideboard species other than BS/AI Pacific cod and will allocate all PSC Caps (including those applicable to BS/AI Pacific cod) in accordance with this Section 3.a.

The Monitoring Agent will first reserve an amount of each such Sideboard species necessary to fund the bycatch needs of pollock and other directed groundfish fisheries in which the AFA catcher vessels participate. Then, the Monitoring Agent will initially allocate the BS, AI and Gulf non-exempt vessel Sideboard directed fishery allowances, exempt vessel Sideboard reserves and PSC Limits among the Coops as set forth herein. The allocations will be based on NMFS data and formulas to the extent feasible, and on the best available data otherwise. Each Coop agrees to exercise its best efforts to provide the Monitoring Agent with all catch data that the Monitoring Agent reasonably requests for purposes of calculating such allocations. Upon the Monitoring Agent having allocated the non-exempt and exempt vessel Sideboard allowances among the Coops, the Monitoring agent shall allocate the PSC Limits such that:

(i) each Coop shall receive PSC Limit allocations for each of the Sideboard fisheries in which its vessels operate without exemptions proportionate such Coop’s related Sideboard species allocations, provided that each Coop’s initial PSC Limit allocations related to non-exempt vessel BS/AI cod harvest shall be reduced by five percent (5%) to fund the “traditional time and area” buffer (the “Buffer”) provided to the exempt vessels pursuant to (ii), below; and

(ii) each Coop shall receive separate PSC Limit allocations for each of the fisheries in which one or more of its vessels operate on an exempt basis, proportionate to such vessels’ contribution to the related NMFS reserve, provided that each Coop’s initial “1700 mt” exempt vessel BS/AI cod PSC allocation shall be adjusted upward by a pro rata amount of the Buffer. In cases where an exempt vessel contributes less than 500 metric tons (“mt”) to the BS/AI cod exempt vessel reserve, the initial allocation of PSC relative to that vessel shall be based on a presumed contribution of 500 mt.

For purposes of this Section 3, the mothership sector catcher vessels shall be considered “non-exempt” prior to March 1, and their initial coop Sideboard and PSC Limit allocations shall be made accordingly. The mothership catcher vessels shall become “exempt” as of March 1, and thereupon shall become eligible for a reallocation of PSC pursuant to Subsection b., below, if as a coop group they have harvested their initial BS/AI cod Sideboard allocation without exceeding their initial allocation of PSC.

b. BS/AI and Gulf Cod PSC Reallocation. The Monitoring Agent will track the aggregate BS/AI and Gulf cod catch and halibut and crab bycatch of each Coop’s exempt vessels. Upon the Monitoring Agent determining that a Coop’s exempt vessels (as a group) have harvested their initial or subsequent allocation(s) of cod in the

BS/AI or Gulf cod fishery without exceeding the Coop's related allocation of exempt vessel PSC (as adjusted by intra or inter Coop transfers) (such Coop being a "Complying Coop"), the Monitoring Agent will reduce each Coop's (including the Complying Coop's) remaining allocation of cod-related PSC for such cod fishery (if any) pro rata, according to the proportion of its initial non-exempt allocation of such PSC vis-a-vis the other Coops, such that the sum of the reductions is the lesser of (i) the amount of PSC necessary for each exempt vessel in the Complying Coop to harvest an additional 300 mt of cod at the pre-Buffer non-exempt cod/PSC ratio, or (ii) the proportionate amounts of such PSC that the Monitoring Agent deems necessary for the Complying Coop's exempt vessels to operate at such ratio until such fishery is closed to catcher vessel trawling; provided that the sum of such reductions under (i) or (ii) above shall in no case exceed that amount of PSC calculated to harvest 1500 mt at the pre-Buffer non-exempt cod/PSC ratio. The Monitoring Agent will then increase the relevant Coop's exempt vessel cod-related PSC allocations for such fishery by the sum of such reductions. On the other hand, if a Coop's exempt vessels harvest their initial or subsequent cod-related PSC allocation for the BS/AI or Gulf cod fishery (as adjusted by inter or intra Coop transfers) before having harvested the Coop's cod allocations made available therewith, the Monitoring Agent will not increase such Coop's exempt vessel allocations, and such Coop shall require such vessels to cease their directed fishing in that cod fishery, notwithstanding their exemption. If the Monitoring Agent determines that a PSC reallocation under this Section has provided a Coop with PSC in excess of the amount necessary to fish until fishery closure, the Monitoring Agent will have the authority to release an amount of the surplus that the Monitoring Agent deems reasonable back to the contributing Coops.

c. BS/AI Cod Harvest Timing. To facilitate harvest of the full amount of the BS/AI cod Sideboard, each Coop agrees to manage its non-exempt vessels' BS/AI cod directed fishing harvest such that no more than sixty percent (60%) of the related initial PSC allocation is harvested prior to March 1.

d. Optimal PSC Utilization. Each Coop agrees to exercise its best efforts to manage its vessels such that their aggregate PSC catch (as determined by the Monitoring Agent in accordance with NMFS procedures) does not exceed the Coop's PSC Limit allocations, as adjusted by transfers with other Coops and pursuant to Subsection 3.b., above. Each Coop agrees to release to the Monitoring Agent on a timely basis for redistribution at no cost the PSC it determines is not necessary to harvest its Sideboard allocations.

e. Gulf of Alaska Groundfish Sideboard Exemption.

(i) The Coops acknowledge that the Council has stipulated that no Vessel shall be exempt from the Gulf of Alaska groundfish Sideboards in any year during which other vessels are permitted to lease any portion of such Vessel's BS or AI pollock allocations. The Coops acknowledge that the Council's stipulation was intended to prevent a Vessel from using its ability to transfer or license its Coop BS or AI pollock

allocation to increase its opportunity to harvest Gulf groundfish in excess of applicable Sideboards. The Coops agree to require that an exempt Vessel that actually exceeds an otherwise applicable Gulf groundfish Sideboard in 2010 shall not have transferred any amount of such Vessel's BS/AI pollock allocation for 2010 to another vessel such that the aggregate amount of such exempt Vessel's annual BS/AI pollock allocation is reduced by such transfer(s). The Coops agree that an exempt Vessel which actually exceeds a Gulf groundfish Sideboard and fails to comply with the BS/AI pollock transfer limitations of this Section shall be deemed to have over-harvested its Sideboard allocation, notwithstanding its exempt status, and shall be subject to the related over-harvest penalties per the enforcement provisions of its Coop's Membership Agreement and this Agreement. For purposes of this provision, a Vessel's pollock allocations shall be calculated net of the amount normally reserved for harvest by a Coop "sweep-up" Vessel for purposes of season and/or area harvest limit compliance.

(ii) The Coops agree that while AFA vessels exempt from Gulf of Alaska Sideboards are restricted as described in Section 3.e.(i), above, the Council, through Congressional direction, has implemented the Gulf of Alaska Rockfish Pilot Program (RPP) which recognized a different set of years to define each vessel's historic participation in the Gulf of Alaska rockfish fisheries than the AFA Sideboard years of 1995, 1996, and 1997. Therefore, for purposes of this section, an AFA Gulf exempt Vessel's rockfish Sideboard limits will be equal to their initial RPP allocations.

4. Over-harvest Prevention Measures.

a. Harvest Limits. The Coops agree to exercise their best efforts to prevent any of their members from exceeding their pollock allocation and Sideboard limits. In cases where a member has done so, the Coops agree to exercise their best efforts to prevent such over-harvest from affecting non-members and/or resulting in a violation of fishery regulations. To that end, the Coops agree to facilitate pollock allocation and Sideboard limit transfers among members when practicable, agree to transfer PSC Limit apportionments among Coops when practicable, and to issue "stop fishing" orders as appropriate when such transfers are not practicable. The Coops also agree to encourage their members to mitigate the effects of inadvertent over-harvests by making directed fishing and PSC Limit allocations available to other Coop members on reasonable terms and conditions. However, other than as provided in Section 4.f.(ii), below, nothing in this Section 4 shall constitute an affirmative obligation on the part of any Coop or its members to transfer an allocation at the request of another Coop or other members.

b. Pollock Allocation and Sideboard Penalties. The Coops acknowledge that notwithstanding the provisions of Section 4.a, above, adopting and enforcing appropriate penalties is necessary to create over-harvest disincentives. The Inshore Coops therefore each agree to adopt the uniform penalty for an Inshore Coop member exceeding its BS, AI or Gulf pollock directed fishing allocation amount or area or season proportion of one hundred fifty percent (150%) of the total ex-vessel value of such over-harvest. For purposes of this Subsection 4.b and Subsection 4.c, below,

provision, ex-vessel value shall be deemed to be the ex-vessel price paid by the processor(s) to which the over-harvesting member delivered for the over-harvested species during the season(s) in which the over-harvest takes place, and shall include all consideration paid for the over-harvested allocation, including but not limited to all bonuses and post season adjustments. The Coops each agree to adopt the uniform penalty amount of One Thousand Dollars (\$1,000.00) per metric ton for over-harvests in the directed BS, AI and Gulf Pacific cod fisheries, and the amount of Three Hundred Dollars (\$300.00) per metric ton for over-harvests in all other BS, AI and Gulf directed groundfish fisheries. Over-harvests shall be determined on the basis of the best available data. Harvest reports developed by the Monitoring Agent shall be presumed accurate in the absence of demonstrable error.

c. PSC Limit Enforcement. Upon a Coop receiving written notice from the Monitoring Agent that it does not have an adequate PSC Limit allocation to support further fishing activity by its members' vessels, such Coop shall immediately cause its members' vessels to cease fishing in the relevant directed fisheries. The Coops hereby adopt as a uniform penalty for each landing following such notice that includes a PSC species harvested in excess of a Coop's PSC Limit allocation an amount equal to twice the ex-vessel value of all commercially harvestable species delivered in such landing. For purposes of this Subsection, Coop catch data produced by the Monitoring Agent in conformance with NMFS catch accounting and bycatch estimation procedures will be presumed accurate. The Coops agree to take all actions and execute all documents reasonably necessary to give effect to this provision.

d. Liquidated Damages. The Coops acknowledge that the financial impact associated with over-harvesting an allocation or exceeding a Sideboard limit or PSC Limit are difficult to estimate, and that penalty amounts are therefore intended to be a substitute in all cases for direct, indirect and consequential damages. Therefore, the Coops agree that the penalty amounts established under 4.b. and 4.c., above are liquidated damages, the payment of which (together with reasonable costs of collection) shall satisfy a member's obligation with respect to any harvest in excess of an allocation, Sideboard or applicable PSC Cap. The Coops hereby waive any and all claims to direct, indirect or consequential damages related to such over-harvest.

e. Rights of Action. Each Coop agrees that the members of all other Coops shall have rights to initiate penalty actions and to be paid overharvest forfeitures and related costs of collection equivalent to such Coop's own members' rights. Each Coop agrees to take all corporate action necessary to give effect to this provision.

f. Indemnification.

(i) Each Coop (an "Indemnifying Coop") hereby agrees to indemnify, defend and hold harmless all other Coops and their members (the "Indemnitees") against all third party claims, legal actions and proceedings of any type

whatsoever (the "Actions"), and against all third party damages, including but not limited to all liabilities, obligations, judgments, penalties, fines, forfeitures, costs of defense and reasonable attorneys' fees (including fees incurred enforcing this indemnification) (together, the "Damages") that the Indemnitees incur as a result of an overharvest of a pollock allocation, Sideboard species or PSC Limit by a member of the Indemnifying Coop.

(ii) For purposes of this provision, in cases where an over-harvest by a member is (a) not willful or repeated; (b) is capable of being corrected by other members (of the same or other Coops) restraining their harvest(s), and timely written notice is provided to such members' Coop(s); and (c) for which the appropriate amount of liquidated damages is tendered by the originally over-harvesting member to a qualified third party escrow agent in readily available funds, the obligation of indemnification for third party claims related to the original over-harvest shall shift to the Coop(s) receiving notice and the tender of liquidated damages.

5. Steller Sea Lion-Related Management Measures.

a. Non-Exempt Vessels. Other than as necessary to give effect to exemptions for which its members qualify, each Inshore Coop agrees to limit the aggregate annual pollock harvest of its members per season and per area (as determined in accordance with NMFS accounting procedures related to such harvests) to the percentage of the annual inshore pollock directed fishing allowance generally permitted to be harvested during such season and/or in such area.

b. SCA Exemption for Vessels Equal to or Less than 99' in Overall Length. The Coops acknowledge that under the current Steller sea lion-related management measures, vessels equal to or less than 99 feet in length are eligible to harvest all of their BS pollock A season allocations inside the SCA. So long as this exemption remains in effect, the Coops agree that the Monitoring Agent in consultation with NMFS will calculate and reserve from the Coops' aggregate pollock allocations an amount of quota inside the SCA adequate to fund the total seasonal directed harvest of all members' Vessels equal to or less than 99 feet (the "99' Reserve"). The Monitoring Agent will then allocate the 99' Reserve among the Coops pro rata, according to the relative catch histories of their vessels under 99'. Each Coop shall in turn allocate its share of the 99' Reserve among its members operating vessels under 99' in length, prior to establishing the inside SCA allocations for its members' Vessels over 99' in length. The Coops agree to require that any license or transfer of pollock quota from a vessel equal to or less than 99' to a vessel over 99' shall be subject to generally applicable regulations concerning spatial and temporal distribution of catch, including but not limited to proportions which may be harvested inside the SCA, notwithstanding the exemption extended to vessels less than or equal to 99'.

6. Data Reporting.

a. Appointment of Monitoring Agent. The Coops acknowledge that it will not be possible to obtain the benefits associated with cooperative harvesting activity unless catch data is reported on a timely basis to a centralized monitoring and reporting agent (the "Monitoring Agent"). The Coops agree to independently contract with Sea State, Inc. as their agent for that purpose.

b. Data Gathering. Each Coop agrees to take all commercially reasonable actions to obtain catch data and other information that may be necessary for effective fishery management from its members as soon as reasonably possible, and to provide such data to the Monitoring Agent as soon as reasonably possible after receiving such data. Data produced for the Coops by the Monitoring Agent shall be presumed accurate, which presumption shall only be reputable upon clearly demonstrating inaccuracy.

7. Vessel Pre-registration. The Coops acknowledge that it may be necessary for their members to provide advance notice of their intent to employ Vessels in certain fisheries, to provide NMFS and the Coops with the ability to project catch rates and amounts. Each Coop agrees to obtain such elections from its members and report them to the Monitoring Agent on a timely basis.

8. Intercooperative Management. The Coops acknowledge that resolving issues related to cooperative harvesting operations will be a continuing process. Each Coop agrees to appoint a person to represent it in intercooperative matters. The Coops further agree to retain United Catcher Boats ("UCB") to provide ongoing intercooperative coordination services and an intercooperative manager (the "Intercoop Manager") through December 31, 2010. The Coops agree such services shall not include representing the Coops or any of them in political or general policy matters, other than as authorized by all Coops in advance.

9. Term. This Agreement shall take effect upon execution by all of the Coops. This Agreement shall expire on November 30, 2010. The Coops agree to meet in good faith negotiations concerning modification of this Agreement and extension of its term not later than October 1, 2010, with the express intent of replacing or extending this Agreement prior to November 30, 2010.

10. Miscellaneous.

a. No amendment to this Agreement shall be effective against a party hereto unless in writing and duly executed by such party. The parties agree to amend this Agreement as reasonably necessary to comply with changes in law, and policies and regulations implementing the American Fisheries Act.

b. This Agreement shall be governed by and construed in accordance with applicable federal law and the laws of the State of Washington.

c. This Agreement may be executed in counterparts which, when taken together, shall have the same effect as a fully executed original. Delivery of a signed copy of this Agreement by telefacsimile shall have the same effect as delivering a signed original.

d. The parties agree to execute any documents necessary or convenient to give effect to intents and purposes of this Agreement.

e. All notices required to be given under this Agreement shall be deemed given five (5) days following deposit in certified first class U.S. mail, postage prepaid, with the correct address, or upon the first business day following confirmed telefacsimile transmission to the recipient. Each Coop agrees to provide the name, postal address, telefacsimile number and e-mail address (if any) of its representative for purposes of receiving notices under this Agreement within three (3) days of executing this Agreement.

f. In the event that any provision of this Agreement is held to be invalid or unenforceable, such provision shall be deemed to be severed from this Agreement, and such holding shall not affect in any respect whatsoever the validity of the remainder of this Agreement.

g. Each Coop agrees to use its best efforts to resolve any disputes arising under this Agreement through direct negotiations. Other than disputes related to overharvest of pollock, Sideboard limits or PSC Limits in connection with which one or more Coops or their members seek an injunction, a restraining order or some other form of equitable relief, all disputes not resolved through direct negotiation and/or dispute resolution will be submitted to arbitration in Seattle, Washington upon the request of any party to this Agreement. The party's written request will include the name of the arbitrator selected by the party requesting arbitration. The other party will have ten (10) days to provide written notice of the name of the arbitrator it has selected, if any. If the other party timely selects a second arbitrator, the two arbitrators will select a third arbitrator within ten (10) days. If the other party does not timely select the second arbitrator, there shall be only the one arbitrator. The single arbitrator or the three (3) arbitrators so selected will schedule the arbitration hearing as soon as possible thereafter. Every arbitrator, however chosen, must have no material ties to any Coop or Coop member. The decision of the arbitrator (or in the case of a three (3) arbitrator panel, the decision of the majority) will be final and binding. The arbitration will be conducted under the rules of (but not by) the American Arbitration Association. The parties will be entitled to limited discovery as determined by the arbitrator(s) in its or their sole discretion. The arbitrator(s) will also determine the "prevailing party" and that party will be entitled to its reasonable costs, fees and expenses, including attorneys' and arbitrator fees, incurred in the action by said party. In no event will arbitration be available pursuant to this paragraph after the date when commencement of such legal or equitable proceedings based on such claim, dispute, or other matter in question would be barred by the applicable statute of limitations.

Appendix II
Amendment 84
Rolling Hot Spot Agreement
Continuation of the
2008 Amended and Restated
Salmon Bycatch Management Agreement

And

Technical Amendment

AMENDED AND RESTATED
BERING SEA POLLOCK FISHERY
ROLLING HOT SPOT CLOSURE
SALMON BYCATCH MANAGEMENT AGREEMENT

This AMENDED AND RESTATED BERING SEA POLLOCK FISHERY ROLLING HOT SPOT CLOSURE SALMON BYCATCH MANAGEMENT AGREEMENT is entered into by and among POLLOCK CONSERVATION COOPERATIVE (“PCC”), the HIGH SEAS CATCHERS COOPERATIVE (“High Seas”), MOTHERSHIP FLEET COOPERATIVE (“MFC”), the “Inshore Coops”, i.e., AKUTAN CATCHER VESSEL ASSOCIATION, ARCTIC ENTERPRISE ASSOCIATION, NORTHERN VICTOR FLEET COOPERATIVE, PETER PAN FLEET COOPERATIVE, UNALASKA FLEET COOPERATIVE, UNISEA FLEET COOPERATIVE and WESTWARD FLEET COOPERATIVE, and the “CDQ Groups”, i.e., ALEUTIAN PRIBILOF ISLAND COMMUNITY DEVELOPMENT ASSOCIATION, BRISTOL BAY ECONOMIC DEVELOPMENT CORPORATION, CENTRAL BERING SEA FISHERMEN’S ASSOCIATION, COASTAL VILLAGES REGION FUND, NORTON SOUND ECONOMIC DEVELOPMENT CORPORATION and YUKON DELTA FISHERIES DEVELOPMENT ASSOCIATION, and SEA STATE, INC. (“Sea State”) and UNITED CATCHER BOATS ASSOCIATION (“UCB”) as of _____, 2007. PCC, High Seas, MFC, and the Inshore Coops are hereafter collectively referred to as the “Coops”.

This Agreement is entered into with respect to the following facts:

RECITALS

Western Alaskans have expressed conservation and allocation concerns regarding the incidental catch of salmon in the Bering Sea pollock fishery. While such bycatch is regulated by the North Pacific Fishery Management Council (the “Council”) and the National Marine Fisheries Service (“NMFS”), the Coops desire to address this issue by inter-cooperative agreement, out of respect for the concerns of Western Alaskans, to avoid unnecessary incidental catch of salmon and to obviate the need for regulatory salmon savings areas.

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

AGREEMENT

1. Purpose of Agreement. This Amended and Restated Salmon Bycatch Management Agreement amends and supersedes that certain Salmon Bycatch Management Agreement entered into among the parties set forth above as of February 1, 2006. The purpose of this Agreement is to implement a private, contractual inter-cooperative program to reduce salmon bycatch in the Bering Sea directed pollock fishery, inclusive of both the Community Development Quota ("CDQ") and non-CDQ allocations (the "Fishery"). Each party to this Agreement agrees exercise all commercially reasonable efforts to achieve that purpose.

2. Monitoring and Management. The Coops shall retain Sea State to provide the data gathering, analysis, fleet monitoring and reporting services necessary to implement the bycatch management program contemplated under this Agreement. The Coops shall retain United Catcher Boats (UCB) to provide day-to-day management of inter-cooperative matters related to the performance of this Agreement.

3. "A" Season Bycatch Management. The parties agree that during the Fishery "A" seasons, Chinook salmon bycatch in the Fishery shall be managed on an inter-cooperative basis as follows. Sea State shall use a bycatch rate (the "Base Rate") as a trigger for identifying areas closed to pollock fishing by certain Coops ("Savings Areas"), and as a basis for determining each Coop's tier status, which in turn shall govern whether, and if so, when, each Coop's members may harvest pollock inside of a Savings Area. The Base Rate will be adjusted once during each "A" season in response to Chinook bycatch experienced during the season, to take into account fluctuations in Chinook abundance.

a. Initial Chinook Base Rate Calculation. The initial "A" season Chinook Base Rate shall be equal to the Fishery "A" season Chinook bycatch rate for the prior "A" season, calculated by dividing the total number of Chinook taken incidentally in the Fishery "A" season during the prior year by the total number of metric tons of Fishery "A" season pollock catch during the prior year, provided that if the initial "A" season Chinook Base Rate for any given year is less than or equal to .04 Chinook per metric ton of pollock, the initial Base Rate shall be .04 Chinook per metric ton, and if the initial Base Rate for any given year is equal to or greater than .06 Chinook per metric tone, the initial Base Rate shall be .06 Chinook per metric ton.

b. Chinook Base Rate In-Season Adjustment. On February 14 of each year, Sea State shall recalculate the "A" season Chinook Base Rate. The recalculated Base Rate shall be the Chinook bycatch rate for the then-current year, calculated by dividing the total number of Chinook salmon taken incidentally in the then-current Fishery "A" season by the total number of metric tons of Fishery "A" season pollock

catch during the then-current season (the “Fixed Base Rate”). Sea State shall also recalculate the “A” season Base Rate on February 14 of each year and weekly thereafter for the duration of the pollock “A” season by dividing the total number of Chinook salmon taken incidentally in the Fishery during the prior three (3) week period by the total number of metric tons of Fishery “A” season pollock catch during the same three (3) week period (the “Floating Base Rate”). The lower of the Fixed Base Rate or the Floating Base Rate (as recalculated each week during the remainder of the “A” season) shall become the governing Base Rate for purposes of this Section 3 as of the first “Thursday Announcement” and “Friday Closure” (as defined below) following recalculation and each Thursday Announcement and Friday Closure thereafter for the remainder of the “A” season.

c. Implementation of Salmon Savings Measures. Sea State shall use Fishery “A” season bycatch data from the period January 20 through January 29 of each year to provide Coops with preliminary information regarding the location and concentration of Chinook salmon, and to determine initial Savings Area closures and Coop Tier assignments (as defined below). Sea State shall implement Chinook Savings Area closures as appropriate commencing on January 30th of each year, and thereafter through the balance of each Fishery “A” season.

d. Cooperative Tier Assignments. Rate calculations for purposes of tier assignments will be based on each Coop’s pollock catch in the Fishery for the prior two weeks (the denominator) and the associated bycatch of Chinook salmon taken by its members (the numerator), with the exception of the initial tier assignments as described in Section 3.c. For purposes of this Section, a Coop’s salmon bycatch amount shall be based on observed, counted Chinook salmon (i.e., whole haul samples), or sample sizes sufficiently large that Sea State reasonably concludes that estimated number of Chinook salmon has a high probability of being accurate. Classification of inshore Coops shall be based on plant observer data, and not on tow-by-tow estimates from the fishing grounds.

- Coops with Chinook salmon bycatch rates of less than 75% of the Base Rate shall be assigned to “Tier 1”.
- Coops with Chinook salmon bycatch rates equal to or greater than 75% of the Base Rate but equal to or less than 125% of the Base Rate shall be assigned to “Tier 2”.
- Coops with Chinook salmon bycatch rates greater than 125% of the Base Rate shall be assigned to “Tier 3”.

e. Bycatch Hot Zone Identification. When the Fishery “A” season is open to any of the inshore, catcher/processor or mothership components, Sea State shall calculate the Chinook salmon bycatch rates for each Alaska Department of Fish and Game (“ADF&G”) statistical area for which Sea State receives a salmon bycatch report, and when feasible, for each lateral half of each such statistical area. Bycatch rates shall

be recalculated and updated every four (4) or seven (7) days during the season, immediately proceeding the closure announcements described in Section 3.f., below, as Sea State determines appropriate given the quality of data available for the area. The bycatch rates shall be calculated on the basis of reports Sea State determines to be adequately accurate, including NMFS observer reports and Coop vessel electronic log books, and may include reliable tow-by-tow estimates from the fishing grounds. In every case, rates calculated on the basis of the actual number of salmon observed per tow will be given priority over rates based on sampling and extrapolation.

f. “A” Season Salmon Savings Areas. On January 30 of each year and on each Thursday and on each Monday thereafter, for the duration of the Fishery “A” season, Sea State shall, subject to the criteria set forth below, provide notice to the Coops identifying one or more areas designated as “Chinook Savings Areas”, within which pollock fishing will be restricted on the basis of each Coop’s Tier status.

(i) Savings Area Designation Criteria. To qualify as a Chinook Savings Area, (a) an amount of pollock that Sea State in its sole discretion determines to be substantial must have been taken in the Savings Area during the period on which its designation as a Chinook Savings Area is based, or the area must have been designated a Chinook Savings Area for the prior notification period and there must be evidence satisfactory to Sea State in its sole discretion that suggests that Chinook bycatch rates in the area are not likely to have changed, and (b) the Chinook salmon bycatch rate in the area for the period on which its definition as a Savings Area is based must exceed the Base Rate. For purposes of (a), above, Sea State shall consider a pollock harvest of two percent (2%) of the total amount of pollock harvested in the Fishery during the period on which a Savings Area designation is based to be indicative of, but not dispositive of, whether a substantial amount of pollock has been harvested in an area.

(ii) Savings Area Boundaries and Limitations. Subject to the limits set forth in this Section, Chinook Savings Areas shall be defined by a series of latitude/longitude coordinates as Sea State determines appropriate to address Chinook bycatch. Notwithstanding the foregoing, the following limits will apply to designations of Chinook Savings Areas: (i) for any single closure period, the Chinook Savings Area(s) West of 168 degrees West may not exceed five hundred (500) square miles in area; (ii) the total area within all Chinook Savings Area closures during any single closure period may not exceed one thousand five hundred (1500) square miles; and (iii) there may be no more than two (2) distinct Chinook Savings Areas West of 168 degrees West longitude and no more than two (2) distinct Chinook Savings Areas East of 168 degrees West longitude during any single closure period.

g. Chinook Savings Area Closure Announcements. Chinook Savings Area closures announced on Thursdays (the “Thursday Announcement” of the “Friday Closures”) shall be effective from 6:00 pm the following Friday through 6:00 pm the following Tuesday, and Chinook Savings Area closures announced on Mondays (the “Monday Announcement” of “Tuesday Closures”) shall be effective from 6:00 pm the

following Tuesday through 6:00 pm the following Friday. Upon a Chinook Savings Area closure taking effect, fishing by Coop vessels participating in the Fishery shall be restricted pursuant to Subsection 3.h., below. Each Thursday Announcement shall include the following information: (i) season update on pollock harvest and Chinook bycatch by pollock fishery sector and in total; (ii) each Coop's updated rolling two week bycatch rate, associated Tier status, and Chinook Savings Area closure dates, times and days; (iii) the coordinates describing each Chinook Savings Area, and a map of the Area; (iv) Chinook bycatch rates for each Alaska Department of Fish and Game statistical area in which there was directed pollock fishing during the previous week; and (v) updated vessel performance lists, as defined in 3.i., below. Each Monday Announcement shall include the information described in clauses (i), (iii), (iv), and a reminder to each Coop of its Tier status.

h. Chinook Savings Area Implementation. During the Fishery "A" seasons, Savings Area closures shall apply to Coop member vessels as follows. Chinook Savings Areas announced as Friday Closures and as updated by Tuesday Closures shall be closed to fishing by Tier 3 Coop vessels for seven (7) days. Chinook Savings Area announced as Friday Closures shall be closed to fishing by Tier 2 Coop vessels through 6:00 pm the following Tuesday. Tier 1 Coop vessels may fish in Chinook Savings Areas closed to the Tier 2 and Tier 3 coops. For purposes of this Agreement, "fishing" shall have the meaning set forth in Section 7.a., below.

i. Vessel Performance Lists. On a weekly basis, Sea State shall provide the following vessel performance information to the Coops:

i. A list of the 20 Coop member vessels with the poorest season-to-date Chinook bycatch performance. Vessels shall be selected for the list by assigning each vessel a number of points for each time the vessel is on the weekly list described in (iii), below. The vessel on the top of the weekly list shall be assigned 20 points, the vessel in second place shall be assigned 19 points, and so on. Each vessel's point score shall be tabulated on a weekly basis, and the vessels with the top 20 point scores shall appear on the list. A vessel must have harvested more than 500 mt of pollock in the season to date to be placed on this list.

ii. A list of the 20 vessels with the highest Chinook salmon bycatch rates in excess of the Base Rate for the previous 2 weeks.

iii. A list of the 20 vessels with the highest Chinook salmon bycatch rates in excess of the Base Rate for the previous week.

j. Advisory Notices. Throughout the term of this Agreement, Sea State shall provide Chinook salmon "hot spot" advisory notices concerning areas of high bycatch that do not fall within Chinook Savings Area closures.

4. "B" Season Bycatch Management. The parties agree that during the Fishery "B" seasons, Chinook and chum salmon bycatch in the Fishery shall be managed on an inter-cooperative basis as follows. Sea State shall use a bycatch rate (the "Base Rate") as a trigger for identifying areas to be closed to pollock fishing by certain Coops ("Savings Areas"), and as a basis for determining each Coop's tier status, which in turn shall govern whether, and if so, when, each Coop's members may harvest pollock inside of a Savings Area. However, in contrast to "A" seasons, during which only Chinook salmon bycatch is used to determine Savings Areas closures and Coop tier status, during "B" seasons, Sea State shall monitor both Chinook and chum salmon bycatch, and may announce Savings Areas for either or both species, and Sea State shall assign each Coop both a Chinook and chum bycatch tier status. In addition, Sea State shall have the authority to declare up to two salmon Savings Areas in the Bering Sea region East of 168 degrees West longitude (the "East Region") and up to two salmon Savings Areas in the Bering Sea/Aleutian Islands region west of 168 degrees West longitude (the "West Region"). However, in cases where both Chinook and chum bycatch exceed the respective "B" season Base Rates within a region, Sea State shall announce Chinook Savings Area closures for that region, and provide non-binding avoidance recommendations for areas of high chum bycatch within that region. The chum salmon Base Rate shall be adjusted once during each "B" season in response to chum bycatch rates, to take into account fluctuations in chum salmon abundance. For the years 2006 and 2007, the initial "B" season Chinook Base Rate shall not be adjusted. Thereafter, the initial Chinook Base Rate shall be the 2007 Fishery "B" season Chinook average bycatch rate, unless and until the Fishery "B" season initial Base Rate is further amended.

a. Initial Chum Base Rate. The initial "B" season chum salmon Base Rate shall be 0.19 chum salmon per metric ton of pollock.

b. Chum Base Rate In-Season Adjustment. Commencing on July 1 of each year that this Agreement is in effect, and on each Thursday through the duration of each "B" season thereafter, Sea State shall recalculate the "B" season chum salmon Base Rate. The recalculated Base Rate shall be the three week rolling average of the Fishery "B" season chum bycatch rate for the then-current year. The recalculated Base Rate shall be the governing chum salmon Base Rate for purposes of each "Thursday Announcement" of a "Friday Closure" (as defined below) following recalculation.

c. "B" Season Chinook Salmon Base Rate. For the 2006 and 2007 BS/AI pollock "B" seasons, the Chinook salmon base rate shall be .05 Chinook salmon per metric ton of pollock. For the 2008 "B" season and thereafter, Sea State shall calculate a Base Rate by dividing the Chinook salmon bycatch during a period of the prior year's Fishery "B" season that Sea State determines in its sole discretion to be representative by the Coops' directed pollock harvest (including CDQ pollock) for the same period. The recalculated Base Rate shall become the governing Chinook salmon Base Rate for purposes of this Section 4 as of the first "Thursday Announcement" and "Friday Closure" (as defined below) following recalculation.

d. Implementation of Salmon Savings Measures. Sea State shall use Fishery “B” season bycatch data from fishing activity after June 10 of each year to provide Coops with preliminary information regarding the location and concentration of chum and Chinook salmon, and to determine initial Savings Area closures and Coop Tier assignments (as defined below). Sea State shall implement Savings Area closures as appropriate upon chum and/or Chinook bycatch rates exceeding the relevant Base Rate, and thereafter through the balance of each Fishery “B” season.

e. Cooperative Tier Assignments. Rate calculations for purposes of tier assignments shall be based on each Coop’s pollock catch in the Fishery for the prior two weeks (the denominator) and the associated bycatch of chum and Chinook salmon taken by its members (the numerators). For purposes of this Section, a Coop’s salmon bycatch amount shall be based on observed, counted chum and Chinook salmon (i.e., whole haul samples), or sample sizes sufficiently large that Sea State reasonably concludes that estimated number of chum and Chinook salmon has a high probability of being accurate. Classification of inshore Coops shall be based on plant observer data, and not on tow-by-tow estimates from the fishing grounds.

- Coops with chum and/or Chinook salmon bycatch rates of less than 75% of the applicable Base Rate shall be assigned to “Tier 1” for the relevant species.
- Coops with chum and/or Chinook salmon bycatch rates equal to or greater than 75% of the applicable Base Rate but equal to or less than 125% of the Base Rate shall be assigned to “Tier 2” for the relevant species.
- Coops with chum or Chinook salmon bycatch rates greater than 125% of the applicable Base Rate shall be assigned to “Tier 3” for the relevant species.

f. Bycatch Hot Zone Identification. When the Fishery “B” season is open to any of the inshore, catcher/processor or mothership components, on an ongoing basis Sea State shall calculate the bycatch rates for each Alaska Department of Fish and Game (“ADF&G”) statistical area for which Sea State receives a salmon bycatch report, and when feasible, for each lateral half of each such statistical area. Bycatch rates shall be recalculated and updated every four (4) or seven (7) days during the season, immediately preceding the closure announcements described in Section 4.g., below, as Sea State determines appropriate given the quality of data available for the area. The bycatch rates shall be calculated on the basis of reports Sea State determines to be adequately accurate, including reliable tow-by-tow estimates from the fishing grounds. In every case, rates calculated on the basis of the actual number of salmon observed per tow shall be given priority over rates based on sampling and extrapolation.

g. “B” Season Salmon Savings Areas. On each Thursday and on each Monday following June 10, for the duration of the Fishery “B” season, Sea State shall, subject to the criteria set forth below, provide notice to the Coops identifying one or more

areas designated as “Chinook Savings Areas” and/or “Chum Savings Areas”, within which pollock fishing shall be restricted on the basis of each Coop’s Tier status.

(i) Savings Area Designation Criteria. To qualify as a Chinook Savings Area, (a) an amount of pollock that Sea State in its sole discretion determines to be substantial must have been taken in the Savings Area during the period on which its designation as a Savings Area is based, or the area must have been designated a Savings Area for the prior notification period and there must be evidence satisfactory to Sea State in its sole discretion that suggests that salmon bycatch rates in the area are not likely to have changed, and (b) the salmon bycatch rate in the area for the period on which its definition as a Savings Area is based must exceed the relevant Base Rate. For purposes of (a), above, Sea State shall consider a pollock harvest of two percent (2%) of the total amount of pollock harvested in the Fishery during the period on which a Savings Area designation is based to be indicative of, but not dispositive of, whether a substantial amount of pollock has been harvested in an area.

(ii) Savings Area Boundaries and Limitations. Subject to the limits set forth in this Section, Savings Areas shall be defined by a series of latitude/longitude coordinates as Sea State determines appropriate to address salmon bycatch. Notwithstanding the foregoing, the following limits shall apply to designations of “B” season Savings Areas: (i) Chum Savings Area closures in the East Region may not exceed three thousand (3,000) square miles in total area during any single closure period; (ii) Chum Savings Areas in the West Region may not exceed one thousand (1,000) square miles in total area during any single closure period; (iii) the total area of all Chinook Savings Area closures during any single closure period may not exceed one thousand five hundred (1500) square miles; (iv) Chinook Savings Areas in the West Region may not exceed five hundred (500) square miles in total area during any single closure period; (v) there may be up to two (2) Savings Areas per Region per closure period; (vi) within either Region, Sea State may declare Chum Savings Area closures or Chinook Savings Area closures, but may not declare both Chum and Chinook Savings Areas. In the event that the Base Rates for both chum salmon and Chinook salmon are exceeded within a Region, assuming the other criteria for declaring a Savings Area are met, Sea State shall declare one or two Chinook Savings Areas in the Region, and issue a non-binding avoidance recommendation for the area(s) of high chum bycatch.

h. “B” Season Savings Area Closure Announcements. Fishery “B” season Savings Area closures announced on Thursdays (the “Thursday Announcement” of the “Friday Closures”) shall be effective from 6:00 pm the following Friday through 6:00 pm the following Tuesday, and Savings Area closures announced on Mondays (the “Monday Announcement” of “Tuesday Closures”) shall be effective from 6:00 pm the following Tuesday through 6:00 pm the following Friday. Upon a Savings Area closure taking effect, fishing by Coop vessels participating in the Fishery shall be restricted pursuant to Subsection 4.i., below. Each Thursday Announcement shall include the following information: (i) season update on pollock harvest and salmon bycatch by pollock fishery sector and in total; (ii) each Coop’s updated rolling two week chum

salmon bycatch rate, associated Tier status, and Savings Area closure dates, times and days; (iii) the coordinates describing each salmon Savings Area, and a map of the Area; (iv) salmon bycatch rates by species for each Alaska Department of Fish and Game statistical area in which there was directed pollock fishing during the previous week; and (v) updated vessel performance lists, as defined in 4.j., below. Each Monday Announcement shall include the information described in clauses (i), (iii), (iv), and a reminder to each Coop of its chum bycatch Tier status.

i. “B” Season Savings Area Implementation. During the Fishery “B” seasons, Savings Area closures shall apply to Coop member vessels as follows. Chum Savings Areas announced as Friday Closures and as updated by Tuesday Closures shall be closed to fishing by Tier 3 Coop vessels for seven days. Chum Savings Areas announced as Friday Closures shall be closed to fishing by Tier 2 Coop vessels through 6:00 pm the following Tuesday. Tier 1 Coop vessels may fish in Chum Savings Areas closed to the Tier 2 and Tier 3 Coop vessels. Chinook Savings Areas shall be closed to fishing by all Coop vessels, regardless of Tier status. For purposes of this Agreement, “fishing” shall have the meaning set forth in Section 7.a., below.

j. Vessel Performance Lists. On a weekly basis, Sea State shall provide two salmon bycatch performance lists to the Coops, one calculated on the basis of Chinook bycatch, the other calculated on the basis of chum bycatch:

i. A list of the 20 Coop member vessels with the poorest season-to-date bycatch performance. Vessels shall be selected for the list by assigning each vessel a number of points for each time the vessel is on the weekly list described in (iii), below. The vessel on the top of the weekly list shall be assigned 20 points, the vessel in second place shall be assigned 19 points, and so on. Each vessel’s point score shall be tabulated on a weekly basis, and the vessels with the top 20 point scores shall appear on the list. A vessel must have harvested more than 500 mt of pollock in the season to date to be placed on this list.

ii. A list of the 20 vessels with the highest bycatch rates for the previous 2 weeks in excess of the Base Rate.

iii. A list of the 20 vessels with the highest bycatch rates for the previous week in excess of the Base Rate.

k. Throughout the Fishery “B” season, Sea State shall provide salmon “hot spot” advisory notices concerning areas of high salmon bycatch that do not fall within Savings Area closures.

5. Inshore Vessels Landing Pollock to a Non-Associated Processor. The provisions of this Section 5 shall apply in circumstances under which a Coop member

elects to employ its vessel to deliver pollock to a processor with which the member's Coop is not affiliated (a "Non-affiliated Processor").

a. If a Coop member elects to employ its vessel to deliver pollock to "Non-affiliated Processor" under an Amendment 69 charter arrangement, prior to commencing the first fishing trip under such arrangement, the member shall execute and deliver to the Authorized Representative of the Coop into which it is being chartered (the "Charter Coop") and to the intercoop manager an adherence agreement under which such member agrees to comply with all of the applicable terms and conditions of the Charter Coop's Membership Agreement, and grants such Charter Coop authority to impose penalties as appropriate for any failure to comply with such terms and conditions. The member shall notify the intercoop manager of each delivery made in whole or in part under an Amendment 69 charter within two (2) days of making such delivery. All salmon taken as bycatch under an Amendment 69 charter shall be counted as Charter Coop bycatch, and the vessel shall be subject to the salmon Savings Area closures applicable to the Charter Coop in connection with each fishing trip made under an Amendment 69 charter.

b. If a member's vessel delivers to a Non-affiliated Processor from the member's Coop's ten percent (10%) "free market" allocation, such deliveries shall be subject to all of the terms and conditions of the member's Coop's Membership Agreement. All salmon taken as bycatch in connection with such deliveries shall be counted as the member's Coop's bycatch, and the vessel shall be subject to the salmon Savings Area closures applicable to the member's Coop in connection with all such deliveries.

c. If a member's vessel delivers to a Non-Affiliated processor fish harvested both under an Amendment 69 charter and from the member's Coop's free market allocation during a single fishing trip (such trip being a "Split Trip"), the member shall comply with the terms and conditions of the Membership Agreements of both the member's Coop and the Charter Coop, and, without limitation, shall comply with the more restrictive of the Savings Area closures applicable to each of such Coops. All salmon bycatch taken during a Split Trip shall be allocated between the member's Coop and the Charter Coop in proportion to the amount of pollock taken under each such Coop's allocation during each such trip.

6. Data Gathering and Reporting. The Coops acknowledge that the effectiveness of the bycatch management program being implemented under this Agreement depends on rapidly gathering, analyzing and disseminating accurate data concerning Chinook and chum salmon bycatch in the Fishery. The Coops therefore agree as follows.

a. Each Coop shall require its members to take all actions necessary to release their vessels' NMFS observer reports and official landing records to Sea State as soon as commercially practicable after such documents are completed. Each Coop shall request its members' vessels to exercise commercially reasonable efforts to report to Sea

State within 24 hours the location of, estimated pollock tonnage of and estimated number of Chinook and chum salmon in each trawl tow. PCC may satisfy its obligation under this section 6.a. by arranging to have its members' vessels' observer reports concerning salmon bycatch transmitted to Sea State. MFC and High Seas may satisfy their obligations under this Section by arranging to have the pollock amounts and Chinook and chum salmon counts for their members' vessels reported to Sea State by the observers on the processing vessels to which their members' vessels deliver. The Inshore Coops shall arrange for their vessels to report the crew's best estimate of the amount of pollock and the number of Chinook and chum salmon in the tow when reporting its location. Each Inshore Coop shall develop its own methods and means to accurately calculate (when feasible) or estimate the amount of pollock and the number of salmon contained in each tow by its members' vessels, and to rapidly and accurately report that information to Sea State.

b. The Inshore Coops acknowledge that the Vessel Monitoring System ("VMS") is the most efficient means for reporting tow-by-tow data to Sea State, and the Inshore Coops therefore agree to encourage their members to use the VMS system to do so.

c. Sea State shall from time to time announce a Chinook or chum bycatch rate that shall trigger an incident reporting requirement. Each Coop shall require its members' vessels to notify their coop manager (if applicable), the intercooperative manager and, if feasible, Sea State as soon as possible of any tow with a chum or Chinook salmon bycatch rate that the crew estimates to be equal to or greater than the incident reporting rate threshold.

7. Savings Area Closure Enforcement. Upon a Coop receiving a Savings Area closure notice which has the effect of closing one or more Savings Areas to fishing by its members' vessels under this Agreement, the Coop shall timely notify its members. Each Coop agrees to take enforcement action with respect to any violation of a Savings Area closure notice, and to collect the assessments set forth below in cases where a vessel is found to have violated a closure.

a. Sea State shall monitor the fishing activities of all Coops' members' vessels, and shall promptly report all apparent Savings Area violations to all Coops. For purposes of this Agreement, "fishing" shall mean all activity of a vessel between the time of initial gear deployment and final gear retrieval. For purposes of this Section 7.a., "gear deployment" and "gear retrieval" shall have the meanings given them in 50 C.F.R. 679.2 or its successor, as the same may be amended from time to time. Initial gear deployment shall mean setting trawl gear with an empty codend, and final gear retrieval

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b. Upon receiving notice of an

b. Upon receiving notice of an apparent violation from Sea State, the Board of Directors of the Coop to which the vessel belongs shall have one hundred and

eighty (180) days to take action in connection with the apparent violation, and to provide a report of the action taken and a copy of the record supporting that action to all other Coops. When the Board of Directors to which the vessel belongs provides its report, or if the Coop Board of Directors fails to provide its report within such 180 day period, then Sea State and/or UCB shall provide each other Coop, the CDQ Groups, the Association of Village Council Presidents ("AVCP"), Bering Sea Fishermen's Association ("BSFA"), Tanana Chiefs' Conference ("TCC") and Yukon River Drainage Fishermen's Association ("YRDFA") with the Coop's report (if provided) and the record developed by Sea State in connection with the apparent violation, and each of such parties shall have standing to pursue Savings Area closure enforcement actions equivalent to such Coop's own rights with respect to its members.

c. The Coops hereby adopt a uniform assessment for a skipper's first annual violation of a Savings Area closure of Ten Thousand Dollars (\$10,000.00), a uniform assessment for a skipper's second annual violation of a Savings Area closure of Fifteen Thousand Dollars (\$15,000.00), and a uniform assessment of Twenty Thousand Dollars (\$20,000.00) for a skipper's third and subsequent violations in a year. The Coops acknowledge that the damages resulting from violating a Savings Area closure are difficult to estimate, and that the foregoing assessment amounts are therefore intended to be a substitute in all cases for direct, indirect and consequential damages. Therefore, the Coops agree that the assessment amounts established under this Subsection 7.b are liquidated damages, the payment of which (together with reasonable costs of collection) shall satisfy a Coop's and its members' obligations related to a Savings Area closure violation. The Coops hereby waive any and all claims to direct, indirect or consequential damages related to such violation.

d. The Coops agree that any funds collected in connection with a violation of this agreement, in excess of those necessary to reimburse the prevailing party for its costs and attorneys fees, shall be used to support research concerning the stocks of origin of salmon taken incidentally in the Fishery. The Coops agree to consult with the CDQ Groups, AVCP, BSFA, TCC and YRDFA regarding the most appropriate use of such funds.

e. For purposes of this Section 7, State and Federal landing reports, observer data, VMS tracking data, vessel log books and plotter data and Coop catch data produced by the Sea State in conformance with NMFS catch accounting and bycatch estimation procedures shall be presumed accurate and sufficient for determining whether a vessel violated a Savings Area closure, absent a clear and compelling demonstration of manifest error. The Coops agree to take all actions and execute all documents necessary to give effect to this provision.

f. The Coops agree to require their members to obtain and maintain an operational VMS unit approved by Sea State on their vessels, provided that such units are available on a commercially reasonable basis. The Coops agree to cause their members to release their VMS tracking data to Sea State. Sea State agrees not to disclose any such

information, other than as specifically authorized under this Agreement, as necessary to fulfill the intents and purposes of this Agreement, or with prior consent from the affected vessel owner. The Coops agree that the damages resulting from vessels operating in non-compliance with this subsection are difficult to estimate, and the Coops therefore hereby adopt a uniform assessment of One Thousand Dollars (\$1,000.00) per day for each consecutive day over thirty (30) consecutive days that a Coop member's vessel is employed in the Fishery without an operational VMS unit approved by Sea State, provided such unit is available on a commercially reasonable basis.

8. Release and Waiver of All Claims Against SeaState and United Catcher Boats: Indemnification and Hold Harmless. The parties acknowledge that the effectiveness of this Agreement depends to a significant extent on Sea State's and UCB's discretion and judgment in designating and defining Savings Areas, determining each Coop's Tier status, monitoring compliance with Savings Area closures, and initiating and supporting enforcement actions under circumstances where a Coop member appears to have violated this Agreement. The parties further acknowledge that if Sea State or UCB were potentially liable for simple negligence in connection with such actions, it would be necessary for Sea State and UCB to charge a substantially larger fee for the services they provide in connection with this Agreement, to offset that potential liability. It is therefore in the parties' interest to reduce Sea State's and UCB's potential liability under this Agreement. Therefore, the Coops and the CDQ Groups hereby waive and release any and all claims against Sea State and UCB arising out of or relating to Sea State's or UCB's services in connection with this Agreement, other than those arising out of gross negligence or willful misconduct by Sea State or UCB. Further, the Coops jointly and severally agree to indemnify, defend and hold Sea State and UCB harmless against any third party claims asserted against Sea State or UCB arising out of or relating to Sea State's or UCB's services in connection with this Agreement, other than those arising out of gross negligence or willful misconduct by Sea State or UCB.

9. Coop Membership Agreement Amendments. To give effect to this Agreement, the Coops agree to cause each of their Membership Agreements to include the following provisions.

a. Each member shall acknowledge that its vessel's operations are governed by this Agreement, and shall agree to comply with its terms.

b. Each member shall authorize its Coop's Board of Directors to take all actions and execute all documents necessary to give effect to this Agreement.

c. Each member shall authorize its Coop Board of Directors to enforce this Agreement, and if the Board fails to do so within one hundred eighty (180) days of receiving notice from Sea State that a cooperative member may have failed to comply with the Agreement, each member shall authorize each other Coop, each of the CDQ groups, AVCP, BSFA, TCC and YRDFA to individually or collectively enforce this Agreement.

d. Each member shall agree to maintain an operational VMS unit approved by Sea State on its vessel at all times that its vessel is participating in the Fishery, provided such VMS unit is available on a commercially reasonable basis, and shall agree to cause its vessel's VMS tracking data to be released to Sea State on a basis that permits Sea State to determine whether the member's vessel has operated in compliance with this Agreement. Each Coop member shall release to Sea State its State and Federal landing reports, observer data, VMS tracking data, and vessel log books and plotter data for purposes of determining its compliance with this Agreement, and agrees that in the event Sea State concludes that its vessel may have violated a hot spot closure, Sea State may release such data as Sea State in its sole discretion determines appropriate to facilitate enforcement of this Agreement.

e. Each member shall agree that the information contained in the records identified in d., above, shall be presumed accurate absent a clear and compelling demonstration of manifest error, and shall be presumed sufficient to determine its compliance with this Agreement.

f. Each member shall agree that the damages resulting from violating a Savings Area closure are difficult to estimate, and that the assessment amounts provided under this Agreement are therefore intended to be a substitute in all cases for direct, indirect and consequential damages. Each member shall agree that its Coop Board of Directors may modify Savings Area violation assessment amounts from time to time, as necessary to maintain an effective deterrent to Savings Area violations. Each member shall agree that each trawl tow during which the member's vessel fishes in a Savings Area in violation of this Agreement shall constitute a separate violation for purposes of assessment calculation. Each member shall agree that damages for violating this Agreement shall apply on a strict liability basis, regardless of a member's lack of knowledge of the violation or intent to violate the agreement. Each member shall agree that actual damages for violating this Agreement would be difficult to calculate, and shall therefore agree to pay the assessment amounts established under this Agreement, as amended from time to time, as liquidated damages. Each member agrees to modify its skipper contracts to make its skipper(s) fully responsible for the assessments levied in connection with a breach of the agreement. Further, each member agrees that in the event a skipper fails to assume such assignment of liability, or in the event such assumption of liability is deemed invalid, the member shall be liable for the full amount of such assessment, and all related costs and attorneys' fees.

g. Each member shall agree that in connection with any action taken to enforce this Agreement, the prevailing party shall be entitled to the costs and fees it incurs in connection with such action, including attorneys' fees.

h. Each member shall agree that in addition to legal remedies, the Board of Directors of each cooperative, each of the CDQ groups, and BSFA and YRDFA shall

be entitled to injunctive relief in connection with the second and subsequent violations of this Agreement.

i. Each member shall agree to waive and release any and all claims against Sea State and UCB arising out of or relating to Sea State's or UCB's services in connection with this Agreement, other than those arising out of gross negligence or willful misconduct by Sea State or UCB.

j. Each member shall acknowledge that, notwithstanding the definition of "fishing" used in this Agreement (which is the consistent with the definition used by NMFS for logbook entries and observer reporting purposes), it is the Coops' policy that no member's vessel will be present in a Savings Area that is closed to fishing by such Coops' members' vessels unless and until such vessel's trawl doors have been fully retrieved or stored. Further, each member shall agree that, absent extenuating circumstances, such member exercise its best efforts to comply with this policy.

10. Term. This Agreement shall take effect as of November 30, 2007. The initial term of this Agreement shall extend through November 1, 2010. The term of this Agreement shall be automatically extended for an additional year as of September 15 each year it remains in effect, i.e., as of September 15, 2008, the new expiration date of this Agreement shall be November 1, 2011, and so on. A party to this Agreement may terminate its status as a party by providing written notice to all other parties to this Agreement to that effect, provided that the effective date of such party's termination shall be the expiration date of this Agreement in effect at the time the termination notice is delivered. For example, if a Coop provides termination notice on August 15, 2008, its termination shall not be effective until November 1, 2010. If a Coop provides termination notice on October 1, 2008, its termination shall not be effective until November 1, 2011. Notwithstanding any party's termination of its participation in this Agreement or the expiration of its term, the enforcement provisions of Section 7, above, shall survive with full force and effect.

11. Breach and Termination of Exemption. Each Coop acknowledges that, as of the opening of the 2008 "A" season Fishery, NMFS is expected to issue an annual exemption to the regulatory salmon savings closures (the "Exemptions") to each Coop that is a party to and complies with this Agreement. Further, each Coop acknowledges that a Coop's material breach of this Agreement that is not timely cured shall result in forfeiture of such Coop's right to retain its Exemption. The following shall constitute material breaches of this Agreement:

(i) a Coop failing to take enforcement action within one hundred eighty (180) days of being notified by Sea State of an apparent violation of a Savings Area closure by one or more of its members, as provided in Section 7.a, above;

(ii) a Coop failing to collect and/or disburse an assessment in compliance with this Agreement within one hundred eighty (180) days of a determination that its member(s) violated a Savings Area closure, as provided in Sections 7.b and 7.c, above;

(iii) a Coop failing to collect and/or disburse an assessment in compliance with this Agreement within one hundred eighty (180) days of a determination that a member of the Coop failed to maintain an available, operational VMS unit approved by Sea State on its vessel as provided in Section 7.e of this Agreement and/or failed to cause such vessel(s) to release their VMS tracking data to Sea State as provided in Section 7.e of this Agreement.

In the event of a material breach of this Agreement by a Coop that is not cured within thirty (30) days of such Coop's authorized representative receiving written notice of such breach from one or more other Coop(s), a CDQ Group, AVCP, BSFA, TCC or YRDFa, any one of such parties may demand that the breaching Coop tender its Exemption to NMFS, and such Coop shall do so within ten (10) days. If a Coop fails to timely tender its Exemption, any of such parties may seek injunctive relief requiring such Coop to tender its Exemption.

12. Annual Compliance Audit. The Coops shall annually retain an entity that is not a party to this Agreement (the "Compliance Auditor") to review and prepare a report concerning Sea State's performance of its monitoring and notification obligations under this Agreement and actions taken by the Coops in response to all notifications from Sea State to the Coops regarding potential violations of this Agreement. The Coops shall provide the CDQ Groups, AVCP, BSFA, TCC and YRDFa with an opportunity to participate in selecting the Compliance Auditor. Sea State and the Coops shall cooperate fully with the Compliance Auditor, and shall provide any information the Compliance Auditor requires to complete its review and report. If the Compliance Auditor identifies a failure to comply with this Agreement as part of its review, the Compliance Auditor shall notify all parties to this Agreement of the failure to comply, shall distribute to all parties to this Agreement the information used to identify the failure to comply, and shall provide notice of any such failures in the Compliance Auditor's final report.

13. Miscellaneous.

a. No amendment to this Agreement shall be effective against a party hereto unless in writing and duly executed by such party. The parties agree to amend this Agreement as reasonably necessary to conform with changes in law or circumstances.

b. This Agreement shall be governed by and construed in accordance with applicable federal law and the laws of the State of Washington.

c. This Agreement may be executed in counterparts which, when taken together, shall have the same effect as a fully executed original. Delivery of a signed

copy of this Agreement by telefacsimile shall have the same effect as delivering a signed original.

d. The parties agree to execute any documents necessary or convenient to give effect to the intents and purposes of this Agreement.

e. All notices required to be given under this Agreement shall be deemed given five (5) days following deposit in certified first class U.S. mail, postage prepaid, with the correct address, or upon the first business day following confirmed telefacsimile or e-mail transmission to the recipient. Each party to this Agreement agrees to provide the name, postal address, telefacsimile number and e-mail address of its duly authorized representative(s) for purposes of receiving notices under this Agreement within three (3) days of executing this Agreement.

f. In the event that any provision of this Agreement is held to be invalid or unenforceable, such provision shall be deemed to be severed from this Agreement, and such holding shall not affect in any respect whatsoever the validity of the remainder of this Agreement.

g. Each Coop agrees to use its best efforts to resolve any disputes arising under this Agreement through direct negotiations. Breaches of this Agreement for which a party seeks a remedy other than injunctive relief that are not resolved through direct negotiation shall be submitted to arbitration in Seattle, Washington upon the request of any party to this Agreement. The party's written request will include the name of the arbitrator selected by the party requesting arbitration. The other party will have ten (10) days to provide written notice of the name of the arbitrator it has selected, if any. If the other party timely selects a second arbitrator, the two arbitrators will select a third arbitrator within ten (10) days. If the other party does not timely select the second arbitrator, there shall be only the one arbitrator. The single arbitrator or the three (3) arbitrators so selected will schedule the arbitration hearing as soon as possible thereafter. Every arbitrator, however chosen, must have no material ties to any Coop or Coop member. The decision of the arbitrator (or in the case of a three (3) arbitrator panel, the decision of the majority) will be final and binding. The arbitration will be conducted under the rules of (but not by) the American Arbitration Association. The parties will be entitled to limited discovery as determined by the arbitrator(s) in its or their sole discretion. The arbitrator(s) will also determine the "prevailing party" and that party will be entitled to its reasonable costs, fees and expenses, including attorneys' and arbitrator fees, incurred in the action by said party. In no event will arbitration be available pursuant to this paragraph after the date when commencement of such legal or equitable proceedings based on such claim, dispute, or other matter in question would be barred by the applicable statute of limitations.

BERING SEA POLLOCK FISHERY
ROLLING HOT SPOT CLOSURE
SALMON BYCATCH MANAGEMENT AGREEMENT
AMENDMENT

This BERING SEA POLLOCK FISHERY ROLLING HOT SPOT CLOSURE SALMON BYCATCH MANAGEMENT AGREEMENT AMENDMENT is entered into by and among POLLOCK CONSERVATION COOPERATIVE (“PCC”), the HIGH SEAS CATCHERS COOPERATIVE (“High Seas”), MOTHERSHIP FLEET COOPERATIVE (“MFC”), the “Inshore Coops”, i.e., AKUTAN CATCHER VESSEL ASSOCIATION, ARCTIC ENTERPRISE ASSOCIATION, NORTHERN VICTOR FLEET COOPERATIVE, PETER PAN FLEET COOPERATIVE, UNALASKA FLEET COOPERATIVE, UNISEA FLEET COOPERATIVE and WESTWARD FLEET COOPERATIVE, and the “CDQ Groups”, i.e., ALEUTIAN PRIBILOF ISLAND COMMUNITY DEVELOPMENT ASSOCIATION, BRISTOL BAY ECONOMIC DEVELOPMENT CORPORATION, CENTRAL BERING SEA FISHERMEN’S ASSOCIATION, COASTAL VILLAGES REGION FUND, NORTON SOUND ECONOMIC DEVELOPMENT CORPORATION and YUKON DELTA FISHERIES DEVELOPMENT ASSOCIATION, and SEA STATE, INC. (“Sea State”) and UNITED CATCHER BOATS ASSOCIATION (“UCB”) as of _____, 2008. PCC, High Seas, MFC and the Inshore Coops are hereafter collectively referred to as the “Coops”.

This Agreement is entered into with respect to the following facts:

RECITALS

The National Marine Fisheries Service (“NMFS”) has requested several technical corrections to the Amended and Restated Bering Sea Rolling Hot Spot Closure Salmon Bycatch Management Agreement dated as of December 1, 2007 (the “Agreement”) in connection with NMFS’s review of the Agreement for compliance with the regulations implementing Amendment 84 to the Bering Sea Groundfish Fishery Management Plan. The Coops and the CDQ Groups wish to amend the Agreement per NMFS’s request.

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

AGREEMENT

1. Purpose of Agreement. This Amendment amends the Agreement. All capitalized terms not otherwise defined herein shall have the meaning given them in the Agreement.

2. Amendment to Section 4 of Agreement. Section 4 of the Agreement is amended to read as follows:

“4. “B” Season Bycatch Management. The parties agree that during the Fishery “B” seasons, Chinook and chum salmon bycatch in the Fishery shall be managed on an inter-cooperative basis as follows. Sea State shall use a bycatch rate (the “Base Rate”) as a trigger for identifying areas to be closed to pollock fishing by certain Coops (“Savings Areas”), and as a basis for determining each Coop’s tier status, which in turn shall govern whether, and if so, when, each Coop’s members may harvest pollock inside of a Savings Area. However, in contrast to “A” seasons, during which only Chinook salmon bycatch is used to determine Savings Areas closures and Coop tier status, during “B” seasons, Sea State shall monitor both Chinook and chum salmon bycatch, and may announce Savings Areas for either or both species, and Sea State shall assign each Coop both a Chinook and chum bycatch tier status. In addition, Sea State shall have the authority to declare up to two salmon Savings Areas in the Bering Sea region East of 168 degrees West longitude (the “East Region”) and up to two salmon Savings Areas in the Bering Sea/Aleutian Islands region west of 168 degrees West longitude (the “West Region”). However, in cases where both Chinook and chum bycatch exceed the respective “B” season Base Rates within a region, Sea State shall announce Chinook Savings Area closures for that region, and provide non-binding avoidance recommendations for areas of high chum bycatch within that region. The chum salmon Base Rate shall be adjusted once during each “B” season in response to chum bycatch rates, to take into account fluctuations in chum salmon abundance. For the years 2006 and 2007, the initial “B” season Chinook Base Rate shall not be adjusted. For 2008, the initial “B” season Chinook Base Rate shall be 0.05 Chinook salmon per metric ton of pollock. For the “B” season of the 2009 fishing year and each “B” season thereafter, the base rate shall be based on the Chinook salmon bycatch during a representative period of the prior year’s “B” season.

3. Amendment to Section 4.c of Agreement. Section 4.c of the Agreement is amended to read as follows:

“c. “B” Season Chinook Salmon Base Rate. For the 2008 BS/AI pollock “B” season, the Chinook salmon base rate shall be .05 Chinook salmon per metric ton of pollock. For the 2009 “B” season and thereafter, Sea State shall calculate a Base Rate by dividing the Chinook salmon bycatch during a period of the prior year’s Fishery “B” season that Sea State determines in its sole discretion

to be representative by the Coops' directed pollock harvest (including CDQ pollock) for the same period. The recalculated Base Rate shall become the governing Chinook salmon Base Rate for purposes of this Section 4 as of the first "Thursday Announcement" and "Friday Closure" (as defined below) following recalculation."

4. Definition of "Chum Salmon". The terms "chum" and "chum salmon" in the Agreement shall be construed as meaning "non-Chinook" salmon.

5. Miscellaneous.

a. This Agreement shall be governed by and construed in accordance with applicable federal law and the laws of the State of Washington.

b. This Agreement may be executed in counterparts which, when taken together, shall have the same effect as a fully executed original. Delivery of a signed copy of this Amendment by telefacsimile shall have the same effect as delivering a signed original.

Appendix III

2010 Amendment 84 Report

Report to the North Pacific Fishery Management Council
on the 2010
Bering Sea Pollock Intercooperative Salmon Avoidance
Agreement

Karl Haflinger, Sea State Inc. - Intercoop Monitor
John Gruver, AFA Catcher Vessel Intercooperative Manager

This report is to the North Pacific Fishery Management Council and covers the Bering Sea and Aleutian Islands Management Area (BSAI) Pollock Intercoop Salmon Avoidance Agreement ("ICA"). During the course of the fishery, the pollock Intercoop closed 20 areas to fishing in the 2010A season and 37 areas during the 2010 B season, based on high bycatch rates of chinook or chum salmon experienced by vessels working in the area. In addition, the "Chinook Conservation Area" (approximately 735 sq. miles) was again closed during the 2010 A season. Maps of the closures are shown in Appendix 1.

Under the terms of the ICA, applicants are to submit to the Council a report analyzing:

1. Number of salmon taken by species during the fishery
2. Estimated number of salmon avoided as demonstrated by the movement of fishing effort away from salmon hot-spots.
3. A list of each vessel's number of appearances on the weekly dirty 20 lists for both salmon species
4. A compliance/enforcement report that will include the results of an external audit designed to evaluate the accuracy of the approach used by Sea State to monitor compliance with the agreement, and a report on the effectiveness of enforcement measures stipulated under the ICA in cases of non-compliance. Examination of a

randomly selected subset of vessel/days representing 10% of the catch during each season will be used as the basis of the audit.

Number of salmon taken by species during the fishery:

For the sake of comparison we have included catch and bycatch amounts running back to 1993. These data are compiled from plant landing information for catcher vessels delivering to shoreside processors, and observer data for mothership catcher vessels and catcher-processors. The “other salmon” category includes all non-chinook salmon. Observer data for both offshore and shoreside deliveries show that only very small numbers of salmon other than chum in this category (for example, 152 unidentified, 31 pinks, and 5 silvers for the 2006B season EFP).

Table 1. Catch and bycatch of pollock and salmon in the directed pollock fishery by season and for full years, 2000 – 2009.

Year	A pollock'	A other salmon	A chinook	B pollock'	B other salmon	B chinook	Full year pollock'	Full year other salmon	Full year chinook
1993	604,118	1,555	17,941	740,569	242,473	21,105	1,344,687	244,028	39,046
1994	611,140	3,555	28,447	718,582	89,117	4,689	1,329,722	92,672	33,136
1995	641,444	1,937	10,921	647,865	17,625	4,421	1,289,308	19,562	15,341
1996	558,033	208	36,063	633,639	77,028	19,560	1,191,672	77,236	55,623
1997	550,891	2,107	10,470	546,988	64,504	34,073	1,097,879	66,611	44,544
1998	482,946	4,002	15,193	539,432	60,040	36,130	1,022,378	64,042	51,322
1999	346,512	349	5,768	511,211	44,261	4,614	857,723	44,610	10,381
2000	418,285	235	3,418	631,755	57,228	1,793	1,050,039	57,463	5,210
2001	538,107	1,867	16,464	813,022	50,948	13,663	1,351,130	52,815	30,126
2002	570,464	387	21,989	866,034	83,033	13,309	1,436,498	83,420	35,298
2003	576,868	3,274	30,981	876,784	170,688	13,444	1,453,651	173,963	44,425
2004	579,816	419	22,011	858,799	427,234	29,238	1,438,615	427,653	51,248
2005	573,887	574	26,678	878,618	637,957	41,499	1,452,505	638,531	68,178
2006	579,112	1,210	57,637	874,435	276,779	24,024	1,453,547	277,989	81,661
2007	544,273	8,038	70,845	775,261	82,641	49,020	1,319,534	90,679	119,866
2008	387,606	344	13,409	572,384	14,453	4,270	959,990	14,797	17,678
2009	313,763	31	10,618	469,128	38,040	2,262	782,891	38,071	12,881
2010	310,999	52	7,166	471,983	13,585	1,842	782,983	13,637	9,008

* For the years 1993-1999, total groundfish from P and B targets, available on files from NMFS site (below), were used instead of pollock.

Estimates of salmon bycatch for 1993-1999 are for all P and B trawl target fisheries, including CDQ, and are available on the NOAA Fisheries, Ak Region web site.

(<http://www.fakr.noaa.gov/sustainablefisheries/catchstats.htm>)

Estimates for 2000 – 2009 (compiled by Sea State, Inc) are for the pollock fishery only and were made using observer data when available and numbers of salmon counted at shore plants and reported on fish tickets for unobserved shoreside vessels.

Evaluation of salmon savings.

The evaluation of the number of salmon saved by the IC program is based on tracking vessels that fished in a closed area before it closed, and then comparing their subsequent bycatch to see if it was lower than expected if the area had not closed. Put more simply, we perform a before-and-after comparison of the bycatch observed and expected from the vessels that triggered the closure. The procedure is as follows:

1. Extract all observer data for haul locations falling inside a closure area, for a 5 day period preceding the closure. For shoreside catcher vessels, aggregate the hauls that have the same "start fishing date" so that hauls with the same bycatch rate are not artificially repeated. As an example, if 2 hauls from the same catcher vessel trip show up in the closed area, they will have the same bycatch rate because observers pro-rate bycatch evenly across all hauls. Consider them a single observation with a value equal to the sum of the two hauls' pollock and salmon.
2. Consider all of independent offshore sector (C/P and mothership) hauls, and combined "trip-level" hauls to be estimates of the bycatch ratio $R_i = \sum y_i / \sum x_i$, where y are counts of chinook or chum salmon, and x is the pollock catch from individual hauls (offshore sector) or grouped, same-trip hauls (shoreside), and i indicates a separate closure.
3. Extract the same haul or "grouped" haul information, for the same vessels, for the duration of the closure (either 3 or 4 days). Their associated bycatch is available from either observer or plant delivery information. Compute their expected bycatch had they been able to stay and fish inside the now-closed area, by summing the pollock catch of all vessels in this category, and multiplying this summed pollock catch by the matching bycatch ration, R_i above.
4. Compute the standard error of this estimated Y (overall salmon bycatch if vessels had stayed in the area and fished with bycatch rate R) treating R as a ratio estimator (Snedecor and Cochran, Statistical Methods, 8th Edition, p 452).

Avoidance results from the 2010 Intercoop Agreement

The results from these calculations for the 2010 A and B seasons are shown in tables 2a - 2c below. (Charts showing the closures issued for both seasons may be found at the end of this document. Because so many closures were issued, we have not produced a chart for each closure and instead have grouped closures by season and species on three separate charts.) During the A season there were 20 closures in addition to the full-season Chinook Conservation Area closure. Of these, there were 10 for which before-and after-closure observer data could be found from vessels fishing inside the areas before they closed

Table 2a summarizes of the results for both chinook savings resulting from these closures (Appendix Tables A1a-c show the underlying data, by closure, with associated standard errors). The results indicate that for the 19,087 mt of observed groundfish associated with boats that fished inside areas before they were closed, and that also had observers after closures 3,137 chinook were avoided. This represents a reduction of 73% from the bycatch of chinook that would have been expected had the vessels continued to fish in those closure areas for the duration of those closures. Table 2a also shows observed and expected chum numbers, but since chum bycatch during the A season is such a small part of the overall chum bycatch for the year, these numbers are not particularly significant.

Table 2b shows results obtained in a similar fashion for the B season. Thirty-seven closures were put in place during the B season, and of these, 16 closures had both pre- and post-closure observer data that allowed for an analysis of reductions. As with the A season, some closures were based on shoreside delivery information and VMS track inspection alone, leaving no pre-closure information for analysis. Table 2b indicates that the combination of chinook and chum closures resulted in 15,707 mt of pollock catch that could be tracked, with an associated 53% reduction in expected chinook take and 82% reduction in expected chum bycatch. Table 2c shows that for the entire year the chinook and chum reductions were 72% and 82%. Overall savings of chinook were similar to last year while chum reductions were much less (Table 3). The lower chum reductions could be expected due to the overall lower chum bycatch in 2010 (13,637 chum taken in 2010 vs. 38,071 in 2009).

Table 2a. Summary of 2010A Chinook closure effectiveness

A season results	Chinook closures
Pollock catch (after closure)	19,087
Actual chinook bycatch (in moved tows)	839
Expected chinook bycatch	3,137
Chinook savings	2,298
% reduction	73%
Actual chum bycatch	2
Expected chum bycatch	7
Chum savings	5
% reduction	71%

Table 2b. Summary of 2010B chinook and chum closure effectiveness

B season results	B Chinook closures	B Chum closures	Combined B closures
Pollock catch (after closure)	3,170	12,537	15,707
Actual chinook bycatch (in moved tows)	49	11	60
Expected chinook bycatch	57	72	129
Chinook savings	8	61	69
% reduction	14%	85%	53%
Actual chum bycatch	58	346	404
Expected chum bycatch	107	2,154	2,261
Chum savings	49	1,808	1,857
% reduction	46%	84%	82%

Table 2c. Full year chinook and chum closure effectiveness

Full year results (A + B)	A and B closures
Pollock catch (after closure)	34,794
Actual chinook bycatch (in moved tows)	899
Expected chinook bycatch	3,266
Chinook savings	2,367
% reduction	72%
Actual chum bycatch	406
Expected chum bycatch	2,268
Chum savings	1,862
% reduction	82%

Table 3. Hot spot closure effectiveness, 2006 - 2010.

Year	Pollock harvest moved from closures	% of pollock harvest affected	Chinook savings	% reduction	Chum savings	% reduction
2006B	41,691	7%	1,537	20%	15,419	67%
2007A	102,592	19%	35,550	70%		
2007B	182,111	23%	14,576	54%	86,410	70%
2008A	44,782	12%	4,953	66%		
2008B	7,419	1%	-533	-100%	965	73%
2009A	8,373	3%	2,068	95%		
2009B	11,936	3%	265	64%	7,438	74%
2010A	19,807	6%	2,298	71%		
2010B	15,707	3%	69	53%	1,857	82%

Compliance/ Enforcement

Two apparent violations were referred to the Akutan coop on November 2, 2009. The coop has until April 20, 2011 to meet and decide on the validity of these apparent violations.

An audit of Sea State compliance monitoring was awarded to ABR Inc of Fairbanks, Alaska. ABR is performing an independent review of 10% of the coop fishing records and associated VMS information. The final report for this audit states that:

“We found that our verdicts agreed with Sea State’s determination in all cases. Our 10% subsample did not identify any errors in Sea State’s original determinations, and we did not further investigate locations outside of our subsample”

Comments on the 2010 season

2010 chum bycatch represents the lowest number in the data series presented in Table 1 and Figure 1 below. Despite this very low catch, closures began on June 29 and were in effect sporadically through 9/26/10. After this, chinook closures took precedence. Chum closures were placed over the entire geographic range of the fishery (Appendix Figure A2-2).

Chinook bycatch in 2010 was lower than any year in the 1993 – 2010 series with the exception of 2000 (Table 1, Figure 1). The reduction in bycatch was seen in both seasons (Figure 2). Cold water conditions associated with extensive ice coverage was felt to many to be a contributing factor in the A season. The B season pattern seen in 2009, with most vessels leaving the grounds by October, was also apparent in 2010 and undoubtedly contributed to the low bycatch levels in the B season. In contrast to both A season chinook closures and B season chum closures, the B season chinook closures were confined to a relatively small range of the fishery, concentrated near Unimak Pass.

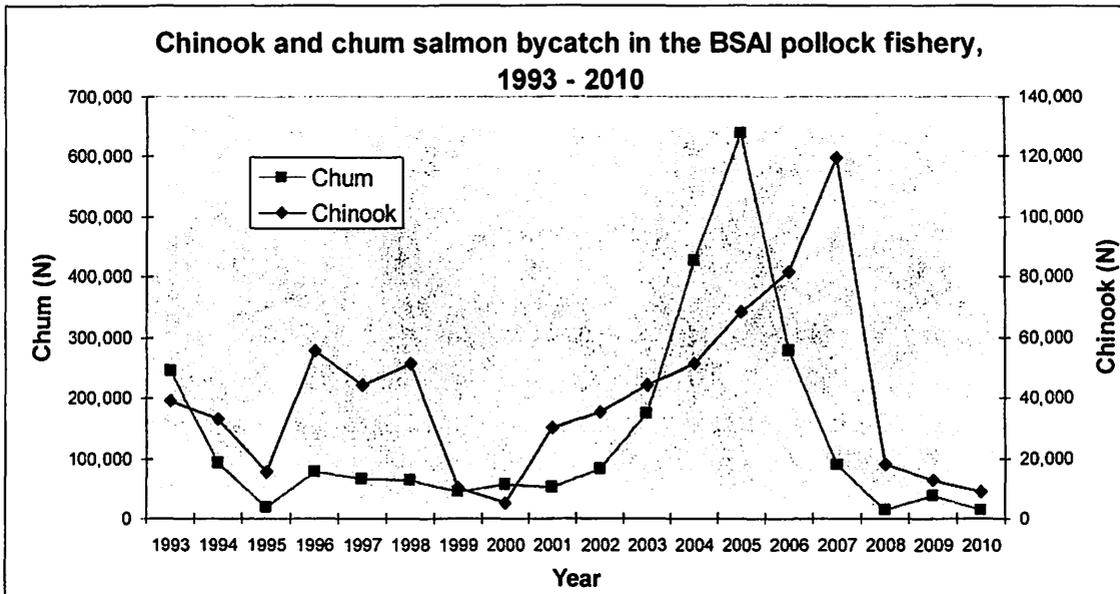


Figure 1. Chinook and chum bycatch in the pollock fishery, 1993 - 2010

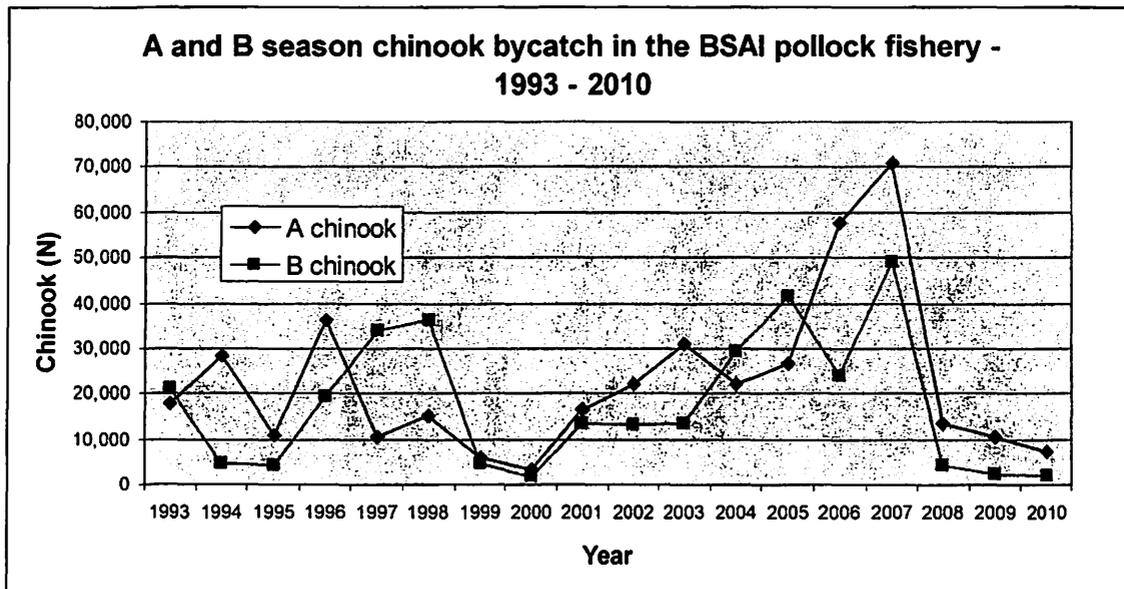


Figure 2. A and B season chinook bycatch in the pollock fishery, 1993 - 2010.

Appendix 1. Before-and-after closure fishing comparisons, by closure.

Table A1a. Chinook and chum salmon closure effectiveness, 2010 A season

Closure Type	Date	"After" closure pollock catch	"After" closure chinook	Estimated closed-area chinook catch	Chinook reduction (estimate - actual)	Std Err chinook	"After" closure chums	Estimated closed-area chum catch	Chum reduction (estimate - actual)	Std Err chum	Number of samples prior to closure	Number of samples after closure
Chinook	2/5/10	1,101	122	77	-45	10	0	0	0	0	17	9
Chinook	2/9/10	1,505	153	80	-73	8	2	0	-2	0	18	10
Chinook	2/12/10	2,461	83	286	203	41	0	5	5	2	12	10
Chinook	2/16/10	630	19	56	37	8	0	3	3	2	3	3
Chinook	2/19/10	8,435	284	2,233	1,949	73	0	0	0	0	26	12
Chinook	2/19/10	404	10	62	52	2	0	0	0	0	4	2
Chinook	3/5/10	2,604	133	160	27	5	0	0	0	0	12	3
Chinook	3/9/10	479	11	180	169		0	0	0		1	1
Chinook	3/12/10	244	0	4	4		0	0	0		1	1
Chinook	3/12/10	1,224	24	0	-24		0	0	0		1	1
Totals		19,087	839	3,137	2,298		2	7				

Table A1b. Chinook and chum salmon closure effectiveness, 2010 B season, by chinook closure.

Closure Type	Date	"After" closure pollock catch	"After" closure chinook	Estimated closed-area chinook catch	Chinook reduction (estimate - actual)	Std Err chinook	"After" closure chums	Estimated closed-area chum catch	Chum reduction (estimate - actual)	Std Err chum	Number of samples prior to closure	Number of samples after closure
Chinook	6/29/10	1,762	0	35	35	4	11	55	44	6	17	9
Chinook	7/2/10	682	0	0	0	0	2	14	12	2	6	3
Chinook	7/9/10	429	0	0	0		12	0	-12		1	1
Chinook	9/14/10	98	0	0	0		4	5	1		1	1
Chinook	9/24/10	159	14	15	1	6	29	33	4	10	8	5
Chinook	10/26/10	40	35	7	-28		0	0	0		1	1
Totals		3,170	49	57	8		58	107	49			

Table A1c. Chinook and chum salmon closure effectiveness, 2010 B season, by chum closure.

Closure Type	Date	"After" closure pollock catch	"After" closure chinook	Estimated closed-area chinook catch	Chinook reduction (estimate - actual)	Std Err chinook	"After" closure chums	Estimated closed-area chum catch	Chum reduction (estimate - actual)	Std Err chum	Number of samples prior to closure	Number of samples after closure
Chum	7/16/10	1,273	0	0	0	0	57	169	112	9	4	3
Chum	7/20/10	996	0	5	5	2	60	339	279	67	19	10
Chum	7/23/10	1,706	1	0	-1	0	136	457	321	28	8	9
Chum	7/27/10	2,014	0	0	0	0	38	66	27	6	4	3
Chum	7/30/10	870	5	0	-5	0	5	418	413	121	6	5
Chum	8/10/10	551	2	0	-2	0	3	111	108	28	6	3
Chum	8/13/10	74	0	0	0	0	2	21	19	26	3	2
Chum	8/27/10	3,303	0	0	0	0	29	409	380	26	9	5
Chum	9/7/10	1,375	0	5	5	1	16	102	86	9	15	6
Chum	9/24/10	375	3	63	60		0	63	63		1	1
Totals		12,537	11	72	61		346	2,154	1,807		75	

Appendix 2: Charts showing closures

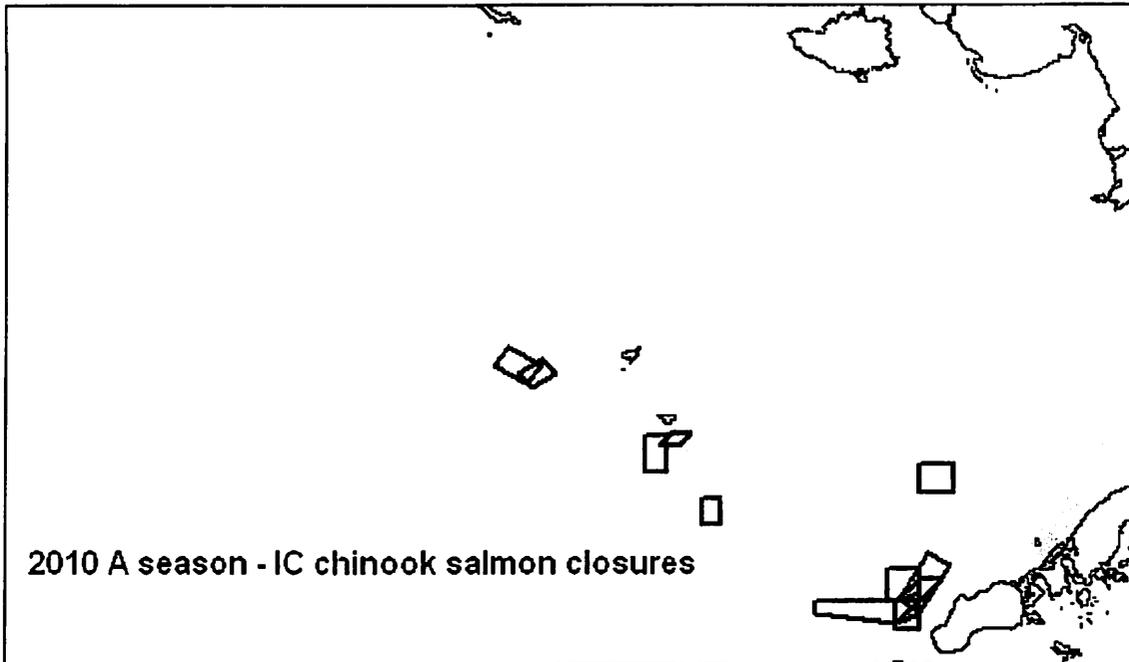


Figure A2-1. A season chinook closures

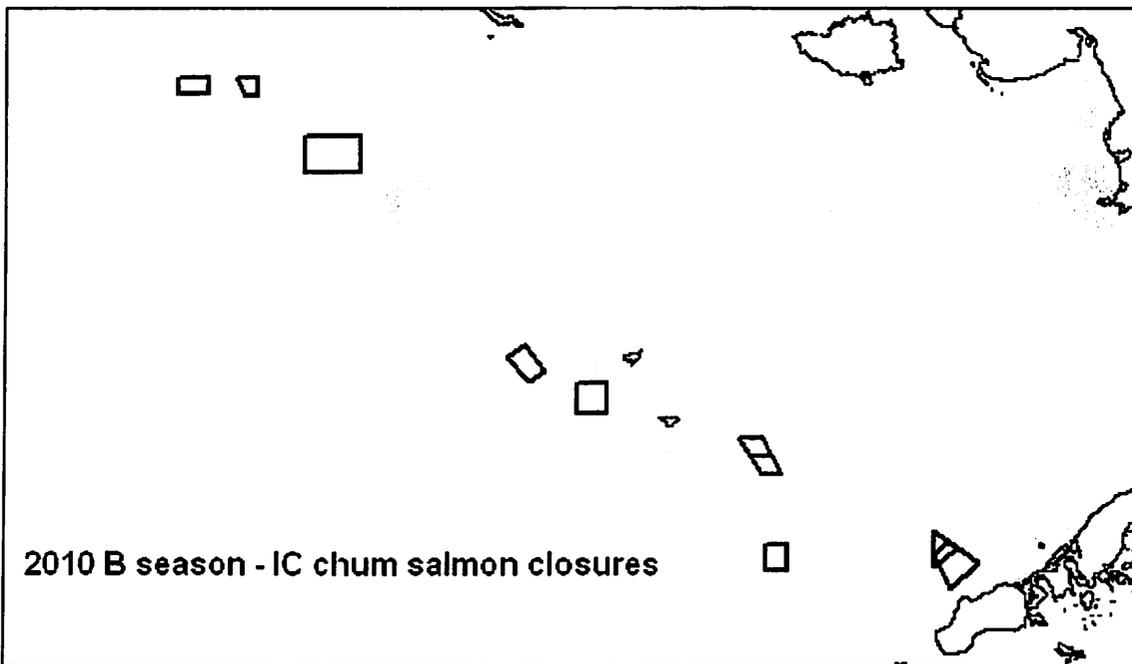


Figure A2-2 B season chum closures

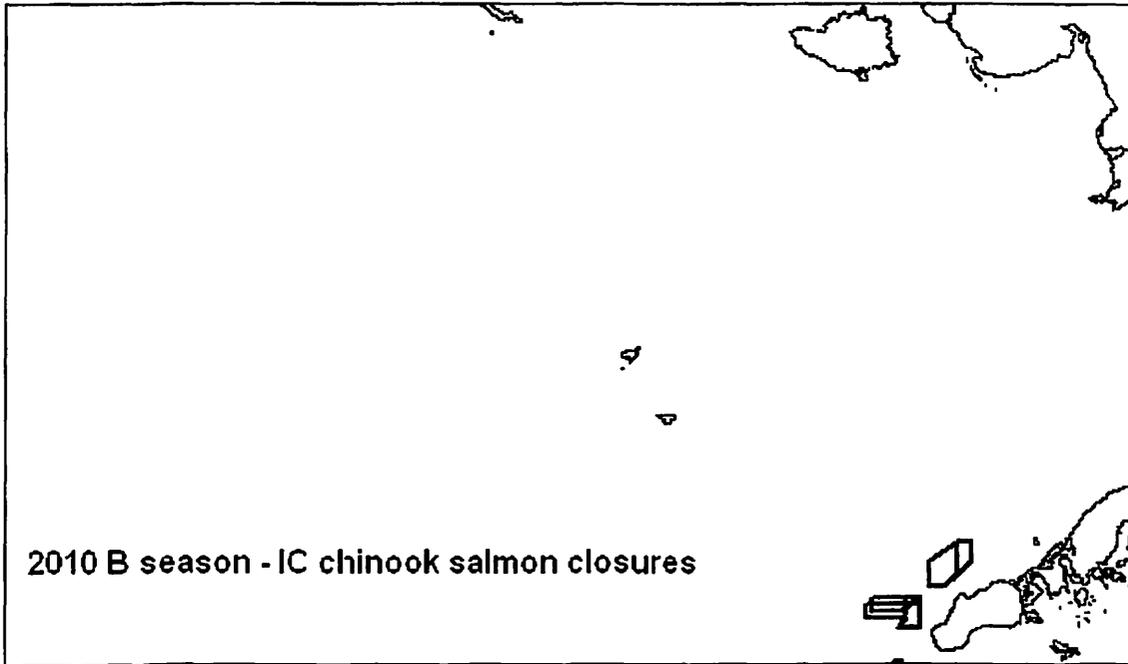


Figure A2-3. B season chinook closures

Appendix 3: Dirty 20 list appearances

Number of times each vessel was on a 2009 Chinook weekly dirty 20 list

Vessel	N times on list	Vessel	N times on list	Vessel	N times on list
AJ	0	GLADIATOR	4	PACIFIC EXPLORER	1
ALASKA OCEAN	4	GOLD RUSH	1	PACIFIC FURY	0
ALASKA ROSE	2	GOLDEN DAWN	6	PACIFIC GLACIER	2
ALASKAN COMMAND	3	GOLDEN PISCES	0	PACIFIC KNIGHT	0
ALDEBARAN	8	GREAT PACIFIC	1	PACIFIC MONARCH	0
ALEUTIAN CHALLENGER	0	GUN-MAR	0	PACIFIC PRINCE	0
ALSEA	2	HALF MOON BAY	1	PACIFIC RAM	0
ALYESKA	0	HAZEL LORRAINE	0	PACIFIC VIKING	6
AMERICAN BEAUTY	3	HICKORY WIND	0	PEGASUS	1
AMERICAN CHALLENGER	0	INTREPID EXPLORER	0	PEGGY JO	0
AMERICAN DYNASTY	1	ISLAND ENTERPRISE	5	PERSEVERANCE	1
AMERICAN EAGLE	2	KODIAK ENTERPRISE	2	POPADO II	0
AMERICAN TRIUMPH	2	LISA MELINDA	0	POSEIDON	3
ANITA J	2	MAJESTY	5	PREDATOR	0
ARCTIC EXPLORER	2	MARCY J	0	PROGRESS	3
ARCTIC FJORD	0	MARGARET LYN	0	PROVIDIAN	0
ARCTIC STORM	3	MAR-GUN	0	RAVEN	3
ARCTIC WIND	0	MARK I	1	ROYAL AMERICAN	1
ARCTURUS	2	MESSIAH	0	ROYAL ATLANTIC	1
ARGOSY	2	MISS BERDIE	0	SEA STORM	0
AURIGA	2	MISTY DAWN	1	SEA WOLF	3
AURORA	0	MORNING STAR	0	SEADAWN	0
BERING ROSE	6	MS AMY	0	SEATTLE ENTERPRISE	3
BLUE FOX	0	MUIR MILACH	0	SEEKER	2
BRISTOL EXPLORER	2	NEAHKAHNE	0	SOVEREIGNTY	4
CAITLIN ANN	1	NORDIC EXPLORER	0	STARBOUND	1
CALIFORNIA HORIZON	0	NORDIC FURY	1	STARFISH	0
CAPE KIWANDA	1	NORDIC STAR	1	STARLITE	1
CHELSEA K	0	NORTHERN EAGLE	2	STARWARD	1
COLLIER BROTHERS	0	NORTHERN GLACIER	0	STORM PETREL	3
COLUMBIA	5	NORTHERN HAWK	6	SUNSET BAY	1
COMMODORE	0	NORTHERN JAEGER	2	TOPAZ	4
DEFENDER	0	NORTHERN PATRIOT	4	TRACY ANNE	0
DESTINATION	2	NORTHWEST EXPLORER	0	TRAVELER	0
DOMINATOR	10	OCEAN EXPLORER	6	VANGUARD	5
DONA MARTITA	0	OCEAN HARVESTER	0	VESTERAALEN	0
ELIZABETH F	2	OCEAN HOPE 3	0	VIKING	1
EXCALIBUR II	1	OCEAN LEADER	1	VIKING EXPLORER	5
EXODUS	0	OCEAN ROVER	0	WALTER N	0
FIERCE ALLEGIANCE	0	OCEANIC	2	WESTERN DAWN	3
FORUM STAR	0	PACIFIC CHALLENGER	2	WESTWARD I	2

Number of times each vessel was on a 2009 chum weekly dirty 20 list

Vessel	N times on list	Vessel	N times on list	Vessel	N times on list
AJ	0	GLADIATOR	2	PACIFIC EXPLORER	4
ALASKA OCEAN	0	GOLD RUSH	2	PACIFIC FURY	0
ALASKA ROSE	2	GOLDEN DAWN	6	PACIFIC GLACIER	0
ALASKAN COMMAND	0	GOLDEN PISCES	5	PACIFIC KNIGHT	0
ALDEBARAN	4	GREAT PACIFIC	3	PACIFIC MONARCH	0
ALEUTIAN CHALLENGER	1	GUN-MAR	0	PACIFIC PRINCE	0
ALSEA	0	HALF MOON BAY	0	PACIFIC RAM	0
ALYESKA	0	HAZEL LORRAINE	2	PACIFIC VIKING	4
AMERICAN BEAUTY	3	HICKORY WIND	2	PEGASUS	0
AMERICAN CHALLENGER	0	INTREPID EXPLORER	0	PEGGY JO	0
AMERICAN DYNASTY	0	ISLAND ENTERPRISE	4	PERSEVERANCE	0
AMERICAN EAGLE	6	KODIAK ENTERPRISE	0	POPADO II	0
AMERICAN TRIUMPH	1	LISA MELINDA	0	POSEIDON	7
ANITA J	2	MAJESTY	7	PREDATOR	0
ARCTIC EXPLORER	4	MARCY J	2	PROGRESS	2
ARCTIC FJORD	1	MARGARET LYN	0	PROVIDIAN	0
ARCTIC STORM	1	MAR-GUN	0	RAVEN	0
ARCTIC WIND	1	MARK I	3	ROYAL AMERICAN	2
ARCTURUS	4	MESSIAH	0	ROYAL ATLANTIC	2
ARGOSY	0	MISS BERDIE	0	SEA STORM	0
AURIGA	0	MISTY DAWN	0	SEA WOLF	1
AURORA	0	MORNING STAR	5	SEADAWN	4
BERING ROSE	3	MS AMY	0	SEATTLE ENTERPRISE	3
BLUE FOX	0	MUIR MILACH	0	SEEKER	5
BRISTOL EXPLORER	3	NEAHKAHNE	0	SOVEREIGNTY	9
CAITLIN ANN	3	NORDIC EXPLORER	0	STARBOUND	2
CALIFORNIA HORIZON	1	NORDIC FURY	1	STARFISH	1
CAPE KIWANDA	0	NORDIC STAR	0	STARLITE	0
CHELSEA K	2	NORTHERN EAGLE	1	STARWARD	2
COLLIER BROTHERS	0	NORTHERN GLACIER	0	STORM PETREL	7
COLUMBIA	3	NORTHERN HAWK	0	SUNSET BAY	0
COMMODORE	4	NORTHERN JAEGER	3	TOPAZ	0
DEFENDER	3	NORTHERN PATRIOT	6	TRACY ANNE	0
DESTINATION	4	NORTHWEST EXPLORER	0	TRAVELER	4
DOMINATOR	3	OCEAN EXPLORER	4	VANGUARD	5
DONA MARTITA	0	OCEAN HARVESTER	0	VESTERAALEN	1
ELIZABETH F	1	OCEAN HOPE 3	0	VIKING	0
EXCALIBUR II	3	OCEAN LEADER	1	VIKING EXPLORER	1
EXODUS	0	OCEAN ROVER	1	WALTER N	1
FIERCE ALLEGIANCE	1	OCEANIC	2	WESTERN DAWN	6
FORUM STAR	0	PACIFIC CHALLENGER	3	WESTWARD I	0

Appendix IV

2010 Chinook Conservation Area Agreement

(Continuation of the 2008 Agreement)

CHINOOK SALMON CONSERVATION AREA AGREEMENT

This CHINOOK SALMON CONSERVATION AREA AGREEMENT is entered into by and among POLLOCK CONSERVATION COOPERATIVE (“PCC”), the HIGH SEAS CATCHERS COOPERATIVE (“High Seas”), MOTHERSHIP FLEET COOPERATIVE (“MFC”), the “Inshore Coops”, i.e., AKUTAN CATCHER VESSEL ASSOCIATION, ARCTIC ENTERPRISE ASSOCIATION, NORTHERN VICTOR FLEET COOPERATIVE, PETER PAN FLEET COOPERATIVE, UNALASKA FLEET COOPERATIVE, UNISEA FLEET COOPERATIVE and WESTWARD FLEET COOPERATIVE, and SEA STATE, INC. (“Sea State”) and UNITED CATCHER BOATS ASSOCIATION (“UCB”) as of _____, 2008. PCC, High Seas, MFC and the Inshore Coops are hereafter collectively referred to as the “Coops”. This Agreement is entered into with respect to the following facts:

RECITALS

The Coops are parties to that certain Amended and Restated Bering Sea Pollock Fishery Rolling Hot Spot Closure Salmon Bycatch Management Agreement dated December 1, 2007 (the “Salmon Bycatch Agreement”). The Coops believe that the effectiveness of the Salmon Bycatch Agreement may be enhanced by closing a certain area of the Bering Sea to pollock fishing by Coop member vessels during the Bering Sea pollock “A” season unless and until a determination is made that salmon bycatch rates within such closed area are not problematic.

Now, therefore, the parties agree as follows:

AGREEMENT

1. Purpose of Agreement. The purpose of this Agreement is to implement a Chinook salmon conservation area closure that enhances the effectiveness of the Salmon Bycatch Agreement. Each party to this Agreement agrees exercise all commercially reasonable efforts to achieve that purpose.

2. Monitoring and Management. The Coops shall retain Sea State to provide the data gathering, analysis, fleet monitoring and reporting services necessary to implement the Chinook salmon conservation area closure contemplated under this Agreement. The

Coops shall retain UCB to provide day-to-day management of inter-cooperative matters related to the performance of this Agreement.

3. Definitions. All capitalized terms not otherwise defined in this Agreement shall have the meaning given to them in the Salmon Bycatch Agreement.

4. Chinook Salmon Conservation Area Closure. The area described on the attached Exhibit A (the "Chinook Conservation Area") shall be closed to all pollock fishing by Coop member vessels, including but not limited to fishing for Community Development Quota pollock, from the opening of each Bering Sea pollock fishery "A" season until the earlier of (i) such time as Sea State authorizes pollock fishing to take place in the Chinook Conservation Area in accordance with this Agreement, and then only on the terms and conditions established by Sea State, or (ii) closure of the Bering Sea pollock fishery "A" season.

a. If Sea State determines in its sole discretion that it is reasonable to conduct test fishing within the Chinook Conservation Area, Sea State may establish a protocol under which Coop member vessels may conduct pollock fishing operations in such Area. The terms and conditions of such protocol shall have the same force and effect as the Chinook Conservation Area closure implemented under this Agreement, any violation of such terms shall constitute a breach of this Agreement, and the terms of Section 5, below shall apply to any violation of terms and conditions of such protocol.

b. If based on the results of test fishing activity within the Chinook Conservation Area Sea State determines in its sole discretion that Chinook salmon bycatch rates in the directed pollock fishery could be reduced by permitting pollock fishing to take place within the Chinook Conservation Area, Sea State may open the Chinook Conservation Area to pollock fishing, subject to the restrictions imposed under the Salmon Bycatch Agreement and any additional terms and conditions as Sea State may impose in its sole discretion.

5. Chinook Conservation Area Enforcement.

a. Sea State shall monitor the fishing activities of all Coops' members' vessels, and shall promptly report all apparent Chinook Conservation Area violations to all Coops. For purposes of this Agreement, "fishing" shall mean all activity of a vessel between the time of initial gear deployment and final gear retrieval. For purposes of this Section 5.a., "gear deployment" and "gear retrieval" shall have the meanings given them in 50 C.F.R. 679.2 or its successor, as the same may be amended from time to time. Initial gear deployment shall mean setting trawl gear with an empty codend, and final gear retrieval shall mean retrieving trawl gear to either pull a codend aboard the vessel or to deliver the codend to another vessel.

b. Upon receiving notice of an apparent violation from Sea State, the Board of Directors of the Coop to which the vessel belongs shall have one hundred and

eighty (180) days to take action in connection with the apparent violation, and to provide a report of the action taken and a copy of the record supporting that action to all other Coops. When the Board of Directors of the Coop to which the vessel belongs provides its report, or if the Coop Board of Directors fails to provide its report within such 180 day period, then Sea State and/or UCB shall distribute the Coop's report (if provided) and the record developed by Sea State in connection with the apparent violation to all other Coops, and each Coop shall have standing to pursue Chinook Conservation Area enforcement actions equivalent to such Coop's own rights with respect to its members.

c. The Coops hereby adopt a uniform assessment for a skipper's first annual violation of a Chinook Conservation Area closure of Ten Thousand Dollars (\$10,000.00), a uniform assessment for a skipper's second annual violation of a Chinook Conservation Area closure of Fifteen Thousand Dollars (\$15,000.00), and a uniform assessment of Twenty Thousand Dollars (\$20,000.00) for a skipper's third and subsequent annual violations. The Coops acknowledge that the damages resulting from violating a Chinook Conservation Area closure are difficult to estimate, and that the foregoing assessment amounts are therefore intended to be a substitute in all cases for direct, indirect and consequential damages. Therefore, the Coops agree that the assessment amounts established under this Subsection 5.c are liquidated damages, the payment of which (together with reasonable costs of collection) shall satisfy a Coop's and its members' obligations related to a Chinook Conservation Area closure violation. The Coops hereby waive any and all claims to direct, indirect or consequential damages related to such violation.

d. The Coops agree that any funds collected in connection with a violation of this agreement, in excess of those necessary to reimburse the prevailing party for its costs and attorneys fees, shall be used to support research concerning the stocks of origin of salmon taken incidentally in the Bering Sea pollock fishery.

e. For purposes of this Section 5, State and Federal landing reports, observer data, VMS tracking data, vessel log books and plotter data and Coop catch data produced by the Sea State in conformance with NMFS catch accounting and bycatch estimation procedures shall be presumed accurate and sufficient for determining whether a vessel violated a Chinook Conservation Area closure, absent a clear and compelling demonstration of manifest error. The Coops agree to take all actions and execute all documents necessary to give effect to this provision.

f. The Coops agree to require their members to obtain and maintain an operational VMS unit approved by Sea State on their vessels, provided that such units are available on a commercially reasonable basis. The Coops agree to cause their members to release their VMS tracking data to Sea State. Sea State agrees not to disclose any such information, other than as specifically authorized under this Agreement, as necessary to fulfill the intents and purposes of this Agreement, or with prior consent from the affected vessel owner. The Coops agree that the damages resulting from vessels operating in non-compliance with this subsection are difficult to estimate, and the Coops therefore

hereby adopt a uniform assessment of One Thousand Dollars (\$1,000.00) per day for each consecutive day over thirty (30) consecutive days that a Coop member's vessel is employed in the Fishery without an operational VMS unit approved by Sea State, provided such unit is available on a commercially reasonable basis.

6. Release and Waiver of All Claims Against Sea State and United Catcher Boats; Indemnification and Hold Harmless. The parties acknowledge that the effectiveness of this Agreement depends to a significant extent on Sea State's and UCB's discretion and judgment. The parties further acknowledge that if Sea State or UCB were potentially liable for simple negligence in connection with such actions, it would be necessary for Sea State and UCB to charge a substantially larger fee for the services they provide in connection with this Agreement, to offset that potential liability. It is therefore in the parties' interest to reduce Sea State's and UCB's potential liability under this Agreement. Therefore, the Coops hereby waive and release any and all claims against Sea State and UCB arising out of or relating to Sea State's or UCB's services in connection with this Agreement, other than those arising out of gross negligence or willful misconduct by Sea State or UCB. Further, the Coops jointly and severally agree to indemnify, defend and hold Sea State and UCB harmless against any third party claims asserted against Sea State or UCB arising out of or relating to Sea State's or UCB's services in connection with this Agreement, other than those arising out of gross negligence or willful misconduct by Sea State or UCB.

7. Coop Membership Agreement Amendments. To give effect to this Agreement, the Coops agree to cause each of their Membership Agreements to be amended to include the following provisions.

a. Each Coop member shall acknowledge that its vessel's operations are governed by this Agreement, and shall agree to comply with its terms.

b. Each Coop member shall authorize its Coop's Board of Directors to take all actions and execute all documents necessary to give effect to this Agreement.

c. Each Coop member shall authorize its Coop Board of Directors to enforce this Agreement, and each member shall authorize the other Coops to individually or collectively enforce this Agreement upon the passage of one hundred eighty (180) days from the date such Board receives notice from Sea State that a Coop member may have failed to comply with the Agreement.

d. Each Coop member shall release to Sea State its State and Federal landing reports, observer data, VMS tracking data, and vessel log books and plotter data for purposes of determining its compliance with this Agreement, and agrees that in the event Sea State concludes that its vessel may have violated a Chinook Conservation Area closure, Sea State may release such data as Sea State in its sole discretion determines appropriate to facilitate enforcement of this Agreement.

e. Each Coop member shall agree that the information contained in the records identified in d., above, shall be presumed accurate absent a clear and compelling demonstration of manifest error, and shall be presumed sufficient to determine its compliance with this Agreement.

f. Each Coop member shall agree that the damages resulting from violating a Chinook Conservation Area closure are difficult to estimate, and that the assessment amounts provided under this Agreement are therefore intended to be a substitute in all cases for direct, indirect and consequential damages. Each Coop member shall agree that its Coop Board of Directors may modify Chinook Conservation Area violation assessment amounts from time to time, as necessary to maintain an effective deterrent to Chinook Conservation Area violations. Each Coop member shall agree that each trawl tow during which the member's vessel fishes in a Chinook Conservation Area in violation of this Agreement shall constitute a separate violation for purposes of assessment calculation. Each Coop member shall agree that damages for violating this Agreement shall apply on a strict liability basis, regardless of a member's lack of knowledge of the violation or intent to violate the agreement. Each Coop member shall agree that actual damages for violating this Agreement would be difficult to calculate, and shall therefore agree to pay the assessment amounts established under this Agreement, as amended from time to time, as liquidated damages. Each Coop member shall agree to modify its skipper contracts to make its skipper(s) fully responsible for the assessments levied in connection with a breach of the agreement. Further, each Coop member shall agree that in the event a skipper fails to assume such assignment of liability, or in the event such assumption of liability is deemed invalid, the member shall be liable for the full amount of such assessment, and all related costs and attorneys' fees.

g. Each Coop member shall agree that in connection with any action taken to enforce this Agreement, the prevailing party shall be entitled to the costs and fees it incurs in connection with such action, including attorneys' fees.

h. Each Coop member shall agree that in addition to legal remedies, the Board of Directors of each cooperative shall be entitled to injunctive relief in connection with the second and subsequent violations of this Agreement.

i. Each Coop member shall agree to waive and release any and all claims against Sea State and UCB arising out of or relating to Sea State's or UCB's services in connection with this Agreement, other than those arising out of gross negligence or willful misconduct by Sea State or UCB.

8. Term. This Agreement shall take effect as of January 20, 2008. The initial term of this Agreement shall extend through November 1, 2008. The term of this Agreement shall be automatically extended for an additional year as of September 15 each year it remains in effect, i.e., as of September 15, 2008, the new expiration date of this Agreement shall be November 1, 2009, and so on. A party to this Agreement may

terminate its status as a party by providing written notice to all other parties to this Agreement to that effect, provided that the effective date of such party's termination shall be the expiration date of this Agreement in effect at the time the termination notice is delivered. For example, if a Coop provides termination notice on August 15, 2008, its termination shall not be effective until November 1, 2008. If a Coop provides termination notice on October 1, 2008, its termination shall not be effective until November 1, 2009. Notwithstanding any party's termination of its participation in this Agreement or the expiration of its term, the enforcement provisions of Section 5, above, shall survive with full force and effect.

9. Miscellaneous.

a. No amendment to this Agreement shall be effective against a party hereto unless in writing and duly executed by such party. The parties agree to amend this Agreement as reasonably necessary to conform with changes in law or circumstances.

b. This Agreement shall be governed by and construed in accordance with applicable federal law and the laws of the State of Washington.

c. This Agreement may be executed in counterparts which, when taken together, shall have the same effect as a fully executed original. Delivery of a signed copy of this Agreement by telefacsimile shall have the same effect as delivering a signed original.

d. The parties agree to execute any documents necessary or convenient to give effect to the intents and purposes of this Agreement.

e. All notices required to be given under this Agreement shall be deemed given five (5) days following deposit in certified first class U.S. mail, postage prepaid, with the correct address, or upon the first business day following confirmed telefacsimile or e-mail transmission to the recipient. Each party to this Agreement agrees to provide the name, postal address, telefacsimile number and e-mail address of its duly authorized representative(s) for purposes of receiving notices under this Agreement within three (3) days of executing this Agreement.

f. In the event that any provision of this Agreement is held to be invalid or unenforceable, such provision shall be deemed to be severed from this Agreement, and such holding shall not affect in any respect whatsoever the validity of the remainder of this Agreement.

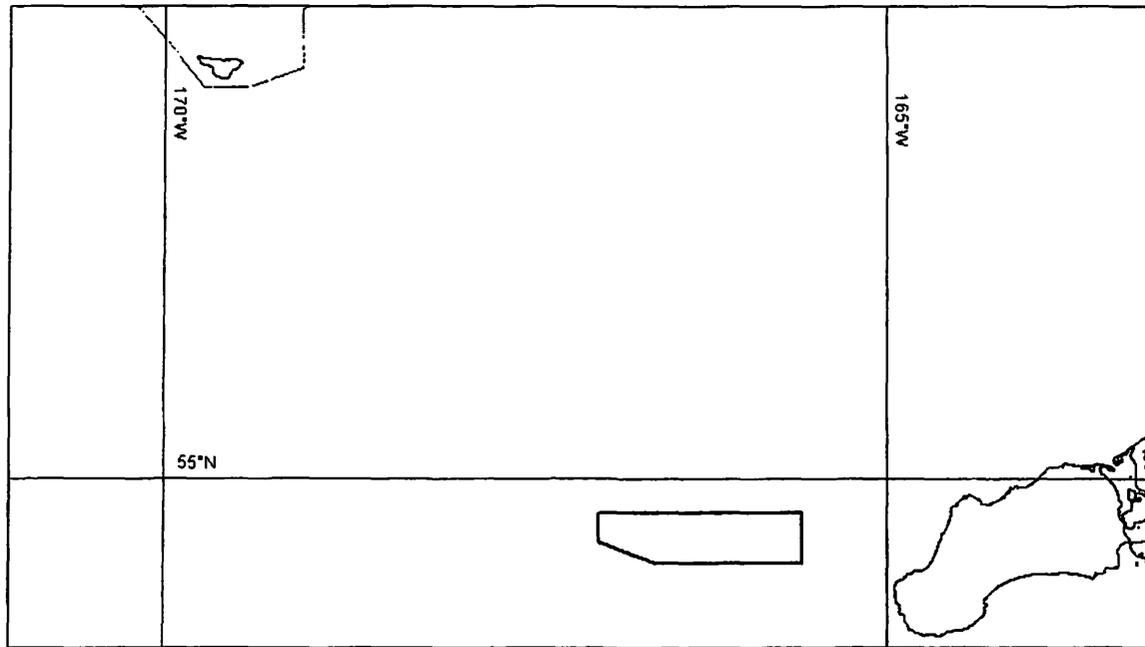
g. Each Coop agrees to use its best efforts to resolve any disputes arising under this Agreement through direct negotiations. Breaches of this Agreement for which a party seeks a remedy other than injunctive relief that are not resolved through direct negotiation shall be submitted to arbitration in Seattle, Washington upon the

request of any party to this Agreement. The party's written request will include the name of the arbitrator selected by the party requesting arbitration. The other party will have ten (10) days to provide written notice of the name of the arbitrator it has selected, if any. If the other party timely selects a second arbitrator, the two arbitrators will select a third arbitrator within ten (10) days. If the other party does not timely select the second arbitrator, there shall be only the one arbitrator. The single arbitrator or the three (3) arbitrators so selected will schedule the arbitration hearing as soon as possible thereafter. Every arbitrator, however chosen, must have no material ties to any Coop or Coop member. The decision of the arbitrator (or in the case of a three (3) arbitrator panel, the decision of the majority) will be final and binding. The arbitration will be conducted under the rules of (but not by) the American Arbitration Association. The parties will be entitled to limited discovery as determined by the arbitrator(s) in its or their sole discretion. The arbitrator(s) will also determine the "prevailing party" and that party will be entitled to its reasonable costs, fees and expenses, including attorneys' and arbitrator fees, incurred in the action by said party. In no event will arbitration be available pursuant to this paragraph after the date when commencement of such legal or equitable proceedings based on such claim, dispute, or other matter in question would be barred by the applicable statute of limitations.

Entered into as of the date first set forth above.

<p>Pollock Conservation Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>Pres.</u></p>	<p>High Seas Catchers Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>Exec. Dir.</u></p>
<p>Mothership Fleet Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>President</u></p>	<p>Akutan Catcher Vessel Association</p> <p>By <u>[Signature]</u></p> <p>Its <u>VP/MGR</u></p>
<p>Arctic Enterprise Association</p> <p>By <u>[Signature]</u></p> <p>Its <u>VP/MGR</u></p>	<p>Northern Victor Fleet Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>PRESIDENT</u></p>
<p>Peter Pan Fleet Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>PRESIDENT</u></p>	<p>Unalaska Fleet Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>President</u></p>
<p>Unisea Fleet Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>President</u></p>	<p>Westward Fleet Cooperative</p> <p>By <u>[Signature]</u></p> <p>Its <u>EXECUTIVE DIRECTOR</u></p>

Exhibit A. Chinook Salmon Conservation Area



Corner Coordinates:

Latitude		Longitude	
54	40	165	35
54	40	166	35
54	45	167	0
54	52	167	0
54	52	165	35

Appendix V

Coop Sideboard Caps, Transfers, and Harvest in

Directed Sideboard Fisheries

Prosecuted in 2010

Table 1. BSAI PACIFIC COD

Sideboard cap less bycatch requirements: 26,676

Coop	Initial Coop Sideboard Percentage	Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	29.83%	7,957	-32.01	7,925	3,937	3,988
High Seas Catchers Cooperative	10.57%	2,820	600.00	3,420	2,335	1,085
Mothership Fleet Cooperative	15.01%	4,004	-500.41	3,504	1,037	2,466
Northern Victor Cooperative	15.21%	4,057	500.41	4,558	2,527	2,031
Peter Pan Fleet Cooperative	1.56%	416		416	0	416
Unalaska Fleet Cooperative	7.89%	2,105	-600.00	1,505	0	1,505
UniSea Fleet Cooperative	11.99%	3,198	32.01	3,230	2,014	1,216
Westward Fleet Cooperative	7.94%	2,118		2,118	1,554	564
Intercoop Totals	100.00%	26,676	0.00	26,676	13,404	13,272

Table 2. AREA 610 POLLOCK

AFA CV Sideboard Cap (metric tons): 15,878

Coop	Coop Sideboard Percentage	Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	37.13%	5,896	-312.00	5584	752	4,832
High Seas Catchers Cooperative	0.31%	49	940.00	989	878	111
Mothership Fleet Cooperative	0.91%	144		144	0	144
Northern Victor Cooperative	6.58%	1,045	312.00	1357	1343	14
Peter Pan Fleet Cooperative	0.76%	121		121	0	121
Unalaska Fleet Cooperative	16.10%	2,556	93.00	2649	314	2,335
UniSea Fleet Cooperative	18.06%	2,868		2868	0	2,868
Westward Fleet Cooperative	20.14%	3,198	-1,033.00	2165	0	2,165
Intercoop Totals	100%	15,876	0.00	15,876	3,287	12,589

Table 3. AREA 620 POLLOCK

AFA CV Sideboard Cap (metric tons): 3,278

Coop	Coop Sideboard Percentage	Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	60.52%	1,984	-219	1765	661	1,104
High Seas Catchers Cooperative	1.80%	59	-47	12	0	12
Mothership Fleet Cooperative	0.21%	7		7	0	7
Northern Victor Cooperative	18.39%	603	-272	331	0	331
Peter Pan Fleet Cooperative	0.03%	1		1	0	1
Unalaska Fleet Cooperative	10.55%	346	760	1106	1021	85
UniSea Fleet Cooperative	0.00%	0		0	0	0
Westward Fleet Cooperative	8.49%	278	-222	56	0	56
Intercoop Totals	100%	3,278	0.00	3,278	1,682	1,596

Table 4. AREA 630 POLLOCK

AFA CV Sideboard Cap (metric tons): 3,877

Coop	Coop Sideboard Percentage	A Season Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	52.67%	2,042	-274	1,768	203	1,565
High Seas Catchers Cooperative	3.99%	155	-71	84		84
Mothership Fleet Cooperative	8.54%	331		331		331
Northern Victor Cooperative	11.46%	444	-146	298		298
Peter Pan Fleet Cooperative	6.18%	240	-240	0		0
Unalaska Fleet Cooperative	12.31%	477	892	1,369	1,351	18
UniSea Fleet Cooperative	1.41%	55		55		55
Westward Fleet Cooperative	3.43%	133	-61	72		72
IC Data Error Correction			-100			
Intercoop Totals	100%	3,877	0	3,977	1,554	2,423

Table 5. AREA 640 POLLOCK

Seasonal AFA CV Sideboard Cap (metric tons): 710

Coop	Coop Sideboard Percentage	Initial Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	7.18%	51	0	51	0	51
High Seas Catchers Cooperative	0.07%	0	0	0	0	0
Mothership Fleet Cooperative	0.00%	0	0	0	0	0
Northern Victor Cooperative	12.76%	91	0	91	0	91
Peter Pan Fleet Cooperative	0.00%	0	0	0	0	0
Unalaska Fleet Cooperative	0.00%	0	100	100	91	9
UniSea Fleet Cooperative	54.23%	385	-100	285	0	285
Westward Fleet Cooperative	25.76%	183	0	183	0	183
Intercoop Totals	100%	710	0	710	91	619

Seasonal AFA CV Sideboard Cap (metric tons): 2,550

Table 6. WESTERN GULF COD

Coop	Coop Sideboard Percentage	A Season Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan CV Assoc.	41.92%	1,069		1,069	0	1,069
HSCC	9.92%	253		253	0	253
Mothership Coop	5.35%	136		136	0	136
N. Victor Coop	11.09%	283		283	0	283
Peter Pan Fleet Coop	7.57%	193		193	117	76
Unalaska Fleet Coop	8.16%	208		208	0	208
UniSea Fleet Coop	8.08%	206		206	0	206
Westward Fleet Coop	7.93%	202		202	0	202
Intercoop Totals	100.02%	2,551	0	2,551	117	2,434

Table 7. CENTRAL GULF COD

Sideboard Cap (metric tons): 2,280

Coop	Coop Sideboard Percentage	A Season Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	50.23%	1,145		1,145	0	1,145
High Seas Catchers Cooperative	7.00%	160	-100	60	0	60
Mothership Fleet Cooperative	10.01%	228		228	0	228
Northern Victor Cooperative	5.29%	121		121	0	121
Peter Pan Fleet Cooperative	8.09%	184		184	0	184
Unalaska Fleet Cooperative	10.79%	246	223	469	367	102
UniSea Fleet Cooperative	0.00%	0		0	0	0
Westward Fleet Cooperative	8.59%	196	-123	73	0	73
Intercoop Totals	100%	2,280	0	2,280	367	1,913

Table 8. CENTRAL GULF SHALLOW-WATER FLATFISH

Sideboard Cap (metric tons): 763

Coop	Coop Sideboard Percentage	Initial Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	26.52%	202		202	0	202
High Seas Catchers Cooperative	10.22%	78		78	0	78
Mothership Fleet Cooperative	0.21%	2		2	0	2
Northern Victor Cooperative	0.23%	2		2	0	2
Peter Pan Fleet Cooperative	1.30%	10		10	0	10
Unalaska Fleet Cooperative	61.24%	467		467	59	408
UniSea Fleet Cooperative	0.00%	0		0	0	0
Westward Fleet Cooperative	0.29%	2		2	0	2
Intercoop Totals	100%	763	0	763	59	704

Seasonal AFA CV Sideboard Cap (metric tons): 840

Table 9. CENTRAL GULF ARROWTOOTH

Coop	Coop Sideboard Percentage	Initial Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	12.56%	106		106	0	106
High Seas Catchers Cooperative	2.06%	17		17	0	17
Mothership Fleet Cooperative	0.03%	0		0	0	0
Northern Victor Cooperative	0.00%	0		0	0	0
Peter Pan Fleet Cooperative	5.46%	46		46	0	46
Unalaska Fleet Cooperative	74.49%	626		626	370	256
UniSea Fleet Cooperative	0.00%	0		0	0	0
Westward Fleet Cooperative	5.40%	45		45	0	45
Intercoop Totals	100%	840	0	840	370	470

Seasonal AFA CV Sideboard Cap (metric tons): 246

Table 10. CENTRAL GULF REX SOLE

Coop	Coop Sideboard Percentage	Initial Sideboard Allocation (mt)	Sideboard Cap Transfers	Final Sideboard Allocation (mt)	Directed Catch	Remaining Sideboard Allocation
Akutan Catcher Vessel Assoc.	12.56%	31		31	0	31
High Seas Catchers Cooperative	2.06%	5		5	0	5
Mothership Fleet Cooperative	0.03%	0		0	0	0
Northern Victor Cooperative	0.00%	0		0	0	0
Peter Pan Fleet Cooperative	5.46%	13		13	0	13
Unalaska Fleet Cooperative	74.49%	183		183	73	110
UniSea Fleet Cooperative	0.00%	0		0	0	0
Westward Fleet Cooperative	5.40%	13		13	0	13
Intercoop Totals	100%	246	0	246	73	173

**AUDIT OF SALMON CLOSURE ZONE COMPLIANCE MONITORING,
BERING SEA POLLOCK FISHERY, 2010**

FINAL REPORT

Prepared for

Sea State Inc.
PO Box 74
Vashon, WA 98070

Prepared by

Christopher S. Swingley

ABR, Inc.—Environmental Research & Services
PO Box 80410
Fairbanks, AK 99708

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BACKGROUND

Closure zones were established for the Bering Sea pollock (*Theragra calcogramma*) fishery to ensure that fishing vessels would avoid areas with the potential for substantial bycatch of chinook and chum salmon (*Oncorhynchus tshawytscha* and *O. keta*). Vessel Monitoring System (VMS) units monitored the movement and location of fishing vessels, and fisheries observers and vessel logbooks recorded whether vessels were actively fishing. Sea State, Inc. establishes these closure zones and monitors vessel compliance of these zones using VMS data. In addition to these requirements, The National Oceanic and Atmospheric Administration (NOAA) Fisheries, Alaska Region, requires "an external audit designed to evaluate the accuracy of the approach used by Sea State to monitor compliance" be prepared for the pollock fishery. The audit, which NOAA required be based on an "[e]xamination of a randomly selected subset of vessel/days representing 10% of the catch" was conducted by ABR, Inc.—Environmental Research and Services (hereafter, ABR) for Sea State, Inc. This report presents the methods used to meet the selection criteria and the analytical methods and results of the audit.

STUDY OBJECTIVES

The objectives of the audit were twofold: (1) assess the compliance of fishing vessels within salmon closure zones by sampling 10% of the 2010 fishing effort, and (2) compare the audit findings with Sea State's conclusions regarding closure violations.

ASSUMPTIONS

The audit is based upon the following assumptions, which we have not independently verified:

1. Observer data and vessel logbook records are always correct, and these sources never report non-fishing activity when fishing actually was occurring.
2. The following data provided by Sea State are free from errors: the table of VMS locations; the tables of observer data indicating haul start and stop times,

and catch weights; and the table of fish ticket data indicating trip start and stop dates, and catch weights.

3. All coordinates specified in the VMS location tables and vessel closure announcements were in the same horizontal datum, namely World Geodetic System 1984 (WGS1984).

AUDIT METHODS

SUBSET SELECTION

The pollock fishery has three major sectors and we applied the 10% sampling criteria within each sector:

- Catcher/processors (CP)
- Catcher vessels supplying motherships (CVM)
- Catcher vessels supplying shoreside fish processors (CVS)

Although the NOAA Fisheries requirement stipulated that "vessel/days representing 10% of the catch" were to be audited, we did not interpret this literally because fish catches were not reported by day. Catch was reported for each haul and/or for each individual fishing trip. These catch totals might cover a portion of a day or portions of multiple days. We believe our sampling method, described below, was consistent with the intent of the permit stipulation.

Data collected by fisheries observers provided full coverage for the CP and CVM sectors, with start times, stop times, and catch weight for each haul. To randomly select vessel/days representing 10% of the catch (separately for each sector), individual hauls were selected without replacement until the total number of hauls exceeded 10% (Appendix I).

Only partial fisheries-observer data were available for the CVS sector because smaller CVS vessels only had an observer 30% of the time. The fish-ticket data provided full coverage for the fishing effort of the CVS sector. Fish tickets reported the catch for whole fishing trips rather than by day or by haul. To randomly sample vessel/days representing 10% catch in the CVS sector, fishing trips were selected without replacement until the total proportion of the catch

exceeded 10% (Appendix 2). For both observer and unobserved trips, data on vessel locations were assessed during hauls from 12:00 am on the reported "trip start date" until 11:59:59 pm on the day after the reported "activity date."

IDENTIFICATION OF CANDIDATE CLOSURE ZONE VIOLATIONS

Before performing any analyses on the VMS location data, we verified the closure locations and tier status information by examining all closure notification memos and building closure polygons based on these memos. The dates that a closure applied for each Permit cooperative unit (coop) was also recorded from the original memos.

All VMS points (i.e., a 'point' is a specific latitude-longitude coordinate for the fishing vessel) were then passed through a series of geoprocessing operations and database filters to reduce the full set of data down to a limited number of potential closure zone violations (Figure 1).

First, the VMS points were intersected with the dataset of closure polygons (i.e., the geographic area of the closure zones) for all points that were within a closure when the closure was operational. This overlay excluded all points that were outside of closure zones, or were inside zones when the closure was not in effect. Each occurrence of a point within a closure zone resulted in an output table row linking the VMS point with the closure zone.

Next, these intersections of VMS points and closures were reduced by removing all intersections that weren't part of the 10% random sample of trips or hauls we generated earlier. The remaining point / closure intersections represent the list of 'candidate' (i.e. possible) violation points.

BUFFER FILTER

There were four data providers for VMS locations, Faria, SkyMate / Nobletec, CLS America, and Thrane and Thrane. We only have information on the accuracy of the Thrane and Thrane system. For these locations we applied a two-stage buffering operation, forming a polygon from each point by adding and subtracting a pair of data transmission error terms (± 0.000333 degrees for rounding errors and ± 0.000667 degrees for truncation errors) to each location, and then

applying a second 30 meter buffer representing the positional accuracy of the satellite locations. For the other three systems, we had no information on how the data was transmitted, so we applied a simple 30 meter buffer around each point.

The buffered polygon boundaries around each location point were next compared to closure zone boundaries. When the buffer polygons were partially outside the closure zone of interest, the corresponding points were flagged as "excluded by buffer" and these points were eliminated from further consideration.

Because of the uncertainty surrounding the different systems, we performed an analysis designed to characterize the quality of the data for each system. We made a pass through the data to determine the speed and heading of each vessel from each point to the next point along their path, counting the number of points where speeds exceeds a reasonable threshold (we used both 15 knots and 30 knots) for vessels in the fleet while they were in the Bering Sea region.

The results of this analysis is not adequate to characterize the accuracy of individual points and was not used in filtering process, but it is useful in determining the data quality of each VMS provider.

TIER STATUS FILTER

Location points that still remained as candidate violations were then compared to the tier status reports to determine whether the vessel was exempt from the closure restrictions at the time of the candidate violation. Some closures applied to all vessels, regardless of tier status. Other closures were advisory only, and so technically did not apply to any vessels. The remainder of closures applied to only certain vessels—some vessels were exempt, based on past performance of their coop at avoiding salmon bycatch. Candidate violations that occurred when the vessel was exempt from closure restrictions were flagged as "exempt from closure due to tier status" and excluded from further consideration.

At this point, all remaining observations with observer data were considered closure zone violations. These observations were flagged as "possible violation."

Closure Violation Assessment Flowchart

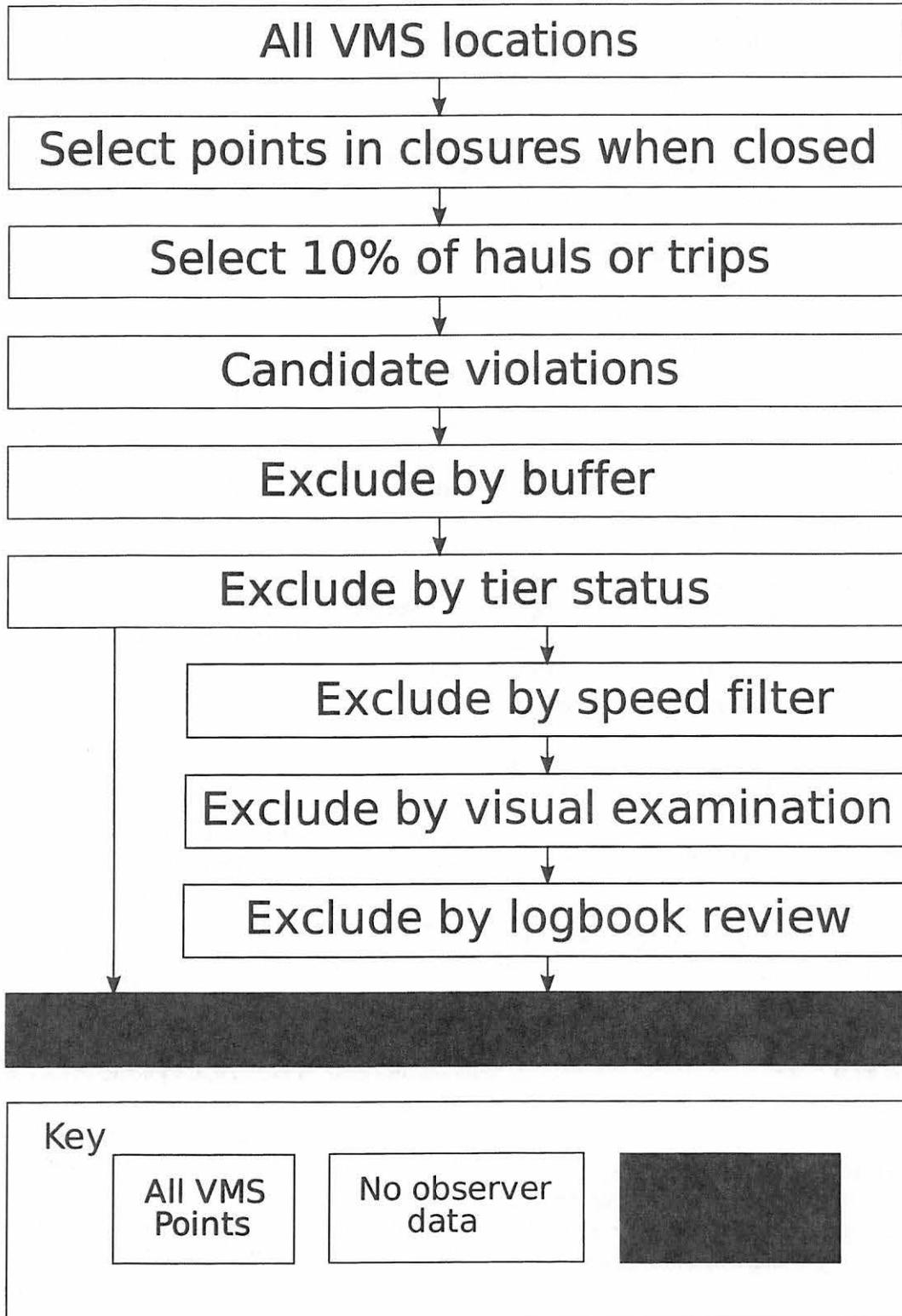


Figure 1. Closure violation assessment flowchart.

SPEED FILTER

The remaining undetermined location points were all from unobserved CVS-sector fishing trips. Because no observer was reporting when the vessel was actually fishing, the travel routes to and from the fishing areas were included, although vessels are allowed to travel through closure zones as long as they are not fishing. To deal with this problem, we applied the simple speed threshold we developed for our assessment of the 2006 season (Macander and Dissing 2007). This is an automated way to filter out many points that clearly corresponded to rapid vessel travel, rather than potential fishing activity.

The speed filter applied several criteria to candidate violations to determine whether they could be excluded on the basis of vessel speed. Locational points met the speed test criteria and were excluded based on a high sustained speed, if they had 1) GPS coordinates, 2) at least 5-min elapsed time from the previous point, 3) at least 5-min elapsed time to the next point, 4) a calculated speed of >5.6 knots from the previous point, and 5) a calculated speed of >5.6 knots to the next point. Accuracy of the speed filter was able to predict fishing activity correctly for 99.83% of examined points in 2006 (Macander and Dissing 2007). The low failure rate of this method is acceptable, especially because visual examination of the points in question is likely to have a similar, if not higher, failure rate.

To develop the data necessary to apply the speed filter, the minimum sustained speed and the time interval to and from successive VMS locations was calculated for all of the selected CVS trips. Speeds were calculated from the difference in time and the distance between successive VMS locations. These values corresponded to a minimum speed because vessels traveling a zig-zag course between two observations would have a speed higher than the calculated speed. Candidate violations from the unobserved CVS sector that met our speed test criteria were flagged as "excluded due to high sustained speed." These data were excluded from further consideration.

VISUAL EXAMINATION

The remaining CVS-sector candidate violations were reviewed manually. Clearly, some of the points that did not pass the conservative

speed test corresponded to non-fishing activity. For example, some points, which were just below the speed threshold, were along a straight line with several other points that did meet the criteria of the speed filter. Points that did not meet the speed test, but which were determined to correspond to running out to the fishing ground (based on visual review), were flagged as "excluded by manual review: vessel running." These data were excluded from further consideration.

VESSEL LOGBOOKS

For the remaining CVS-sector candidate violations without observer data, logbook records would be requested to determine whether the vessel was fishing at the time of the candidate violation. Points that were determined to correspond to non-fishing activity (based on review of logbooks) would be flagged as "excluded based on vessel logbook review: vessel not fishing." If the logbook was illegible, semi-legible, or inconsistent and a definitive determination could not be made, the point would be flagged as "possible violation: logbook unclear." Remaining points corresponded to fishing in closure zones, and would be flagged as "possible violation: logbook indicates fishing in closure."

Violations would be reported to Sea State and the North Pacific Fisheries Management Council (NPFMC). A database containing the relevant attribute data for these violations, and maps for each violation, would be provided to Sea State and NPFMC.

In this year's study, we found no possible violations of the closure zones, so the procedures related to log books and the reporting of violations was not necessary.

COMPARISON WITH SEA STATE DETERMINATIONS

A comparison of the violations reported by ABR was made to those reported by Sea State. All of the location points that were part of ABR's 10% selection were considered in this assessment.

RESULTS AND DISCUSSION

IDENTIFICATION OF CANDIDATE CLOSURE ZONE VIOLATIONS

IDENTIFYING CANDIDATE VIOLATIONS

The identification of candidate violations was entirely automated, without any interpretation or subjective thresholds (Table 1). This automated approach efficiently reduced the number of points requiring closer examination from 726,878 for the total fishery to the 316 locations that were assessed for potential closure zone violation.

CATEGORIZING CANDIDATE VIOLATIONS

A small degree of subjectivity is involved in setting the buffer distances and vessel speed thresholds, as well as in the process of reviewing vessel tracks manually. We believe, however, that our approach was cautious, well-documented, and reasonable. The buffers, tier status, and speed threshold tests, as applied here, reduced the number of candidate violation points from 316 to 2 (Table 2).

The 2 remaining points required manual examination. Visual examination to identify a vessel running and not fishing excluded both points. As a result, we found no potential closure zone violations in our 10% sample.

ANALYSIS OF VMS LOCATION SYSTEMS

Table 3 shows the results of our analysis of the accuracy of each of the VMS location providers. Of primary concern in this result is the high frequency of points from the SkyMate / Nobletec system where the speed calculated from one point to the next was greater than any of the vessels in the fleet could travel over the course of the typical VMS reporting interval (30 minutes). We recommend the data providers be required to identify the accuracy of their systems, preferably in such a way that the accuracy of individual points can be assessed, and that the reporting interval be more frequent.

COMPARISON WITH SEA STATE DETERMINATIONS

A complete list of candidate violations was compiled and for each candidate violation we identified, our verdict and the verdict of Sea State are listed (Appendix 3). A summary of the ABR and Sea State determinations (Tables 4 and 5) categorizes all verdicts. Table 4 shows all the candidate locations that were automatically excluded in Sea State's process, but which fell into one of our filters and were similarly excluded. Table 5 shows the combination of Sea State and ABR verdicts and how they were reached. We

Table 1. Number of vessel locations considered at different stages of the closure violation audit, Bering Sea pollock fishery, 2010.

	Catcher/Processor (CP)	Catcher Vessel / Mothership	Catcher Vessel / Shoreside, no Observer (CVS_NO)	Catcher Vessel /Shoreside, Shoreside, Observer (CVS_O)	Total
All VMS Locations (not separated by sector)					726,878
Select 10% of Hauls or Trips	3,023	1,035	22,492	7,458	34,008
Points in Closure when Closed (Candidate Violations)	19	39	112	146	316
Violations	0	0	0	0	0

Table 2. Results of ABR review of candidate violations of the closure zones, Bering Sea pollock fishery, 2010.

	Catcher/Processor (CP)	Catcher Vessel / Mothership (CVM)	Catcher Vessel / Shoreside, no Observer (CVS_NO)	Catcher Vessel / Shoreside, Observer (CVS_O)	Total
Candidate Violations	19	39	112	146	316
Excluded by Buffer	0	0	4	0	4
Excluded based on tier status	19	39	72	146	276
Excluded by speed filter	0	0	30	0	30
Excluded by visual review	0	0	2	0	2
Excluded by review of vessel logbook	0	0	0	0	0
Violations	0	0	0	0	0

Table 3. Speed analysis of four different VMS location providers, Bering Sea Pollock fishery, 2010.

VMS location system	Total locations	Locations with unlikely speeds (15 / 30 knots)	Frequency (%) (15 / 30 knots)
Faria	28,422	5 / 2	0.02 / 0.01
CLS America	40,871	2 / 0	0.00 / 0
SkyMate / Nobletec	91,527	2,716 / 1,039	2.97 / 1.13
Thrane and Thrane	530,099	219 / 87	0.04 / 0.02

Table 4. Comparison of ABR and uncategorized Sea State Inc. assessments of closure zone violations for the 10% catch of vessel/days reviewed by ABR, Bering Sea Pollock fishery, 2010.

ABR Verdict	Sea State Inc. Verdict	Number of Locations (Points)	Verdict in agreement?
Excluded: buffer	Excluded	2	Yes
Excluded: manual review, running	Excluded	2	Yes
Excluded: high sustained speed	Excluded	24	Yes
Excluded: tier status	Excluded	275	Yes
	Total Locations:	303	

Table 5. Comparison of ABR and categorized Sea State Inc. assessments of closure zone violations for the 10% catch of vessel/days reviewed by ABR, Bering Sea Pollock fishery, 2010.

ABR Verdict	Sea State Inc. Verdict	Number of Locations (Points)	Verdict in agreement?
Excluded: buffer	Excluded: Observed trip, not fishing	2	Yes
Excluded: high sustained speed	Excluded: manual review, running	2	Yes
Excluded: high sustained speed	Excluded: Observed trip, not fishing	4	Yes
Excluded: observed trip, not fishing	Excluded: Observed trip, not fishing	4	Yes
Excluded: tier status	Excluded: tier status	1	Yes
	Total Locations:	13	

found that our verdicts agreed with Sea State's determination in all cases. Our 10% subsample did not identify any errors in Sea State's original determinations, and we did not further investigate locations outside of our subsample.

CONCLUSIONS

Overall, ABR agreed with the determinations of Sea State for the 10% sample that we examined. Of points examined, our determination agreed with Sea State for all 34,008 candidate locations in our subsample. Minor discrepancies in the reason points were excluded were found, but this is because our filtering methods differed. Some points included in ABR's list of candidate violations were excluded from the Sea State analysis by preliminary filters based on other criteria, including instantaneous speed and tier status, and we were able to eliminate a lot of points from consideration using our speed filtering. Despite differences in methods, however, there was

complete agreement by ABR and Sea State on final verdicts of all fishing.

With the exception of the closure zone data, which we reconstruct from the closure documents, ABR's assessment was based on our review and processing of data tables developed and provided by Sea State, Inc. As a result, our audit does not systematically assess any errors that might have occurred during Sea State's data compilation process. This could be addressed in the future by extending the compliance audit to include a systematic comparison of raw data (for example, fish tickets and VMS files) with Sea State's tables for a fraction of each table.

LITERATURE CITED

Macander, M.J. and D, Dissing. 2007. Audit of salmon closure zone compliance monitoring Bering Sea pollock fishery. ABR, Inc.-Environmental Research & Services, Fairbanks, AK, 99708. pp. 48.