

Alaska Seafood Cooperative Report to the North Pacific Fishery Management Council for the 2014 Fishery

March 27, 2015

Prepared by Jason Anderson, Beth Concepcion, and Mark Fina



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 in improving groundfish retention.

On January 20, 2008, the Alaska Seafood Cooperative (AKSC) began fishing Amendment 80 allocations. This report summarizes AKSC, its catch for the 2014 fishing year, the processes implemented to ensure that catch limits are not exceeded, and issues affecting AKSC members.

AKSC membership

During 2014, AKSC was comprised of the following five member companies, and sixteen non-AFA trawl catcher processors.

Company	Vessel	Length Overall
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
	Unimak	184
Ocean Peace	Ocean Peace	219
	Seafisher	230
O'Hara Corporation	Constellation	165
	Defender	124
	Enterprise	124
United States Seafoods, LLC	Seafreeze Alaska	296
	Legacy ¹	132
	Alliance	107
	Ocean Alaska	107
	Vaerdal	124

¹ The Prosperity LLP is assigned to the Legacy.

Co-op management

AKSC activities are governed by a Board of Directors, which is appointed by AKSC Members (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 day-to-day cooperative management. 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 the AKSC office and staff. The Manager also completes all cooperative reporting requirements in a timely manner, including applying for annual AKSC catch allocations. 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 co-op; 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 AKSC has a buffer that will be reached prior to the allocation limit.

The AKSC agreement also establishes a mechanism for Members to transfer quota within the cooperative, and with other Amendment 80 cooperatives. 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 calculate groundfish retention.

The AKSC Data Manager receives observer data, which are 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 among 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 resolves discrepancies.

Each Member and AKSC staff have access to Seastate, Inc's secure website. This website provides 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 groundfish retention levels.

AKSC vessels submit daily production reports through a NMFS software program called Elandings. AKSC also collects this information to keep a running tally of vessels' groundfish retention through the Retention Compliance Standard (RCS). The RCS was developed in response to problems identified with the Groundfish Retention Standard (GRS), and is discussed further below.

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.

By the time Alaska Region catch information is available to AKSC staff, company representatives, and vessel captains, it is one or two days old. To address this delay, companies have purchased software packages that expand raw observer sample data to total catch amounts,

and assign catch amounts to quota categories. These data expansions mirror NMFS algorithms that expand raw observer sampling data. This software allows vessel captains to analyze catch amounts on a real time basis, and make informed fishing decisions to maximize harvest amounts while minimizing the possibility of overages.

To help ensure accurate quota accounting and compliance, NMFS requires vessels to implement the following elements of an extensive catch management and 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
- Designated observer sampling station
- Vessel Monitoring System

The above measures are designed to improve data quality. 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.

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 2014 GOA fishing plan described management measures AKSC utilized to limit individual vessels to historic halibut PSC levels.

2014 AKSC Catch

The following tables provide AKSC catch. All data is rounded to the nearest whole number for simplicity. *AKSC catch during the 2014 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.

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. Additionally, AKSC engaged in trades with another Amendment 80 cooperative. 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. Also, note that Steller sea lion restrictions prevented directed fishing in area 543, and both TAC and catch was constrained.

Bering Sea and Aleutian Islands AKSC Allocated Quota and Catch Amounts

Species	Initial AKSC A80 Allocation (mt)	AKSC A80 Allocation with rollovers and transfers (mt)	AKSC Catch (mt)
Cod	24,724	27,978	22,370
Yellowfin Sole	75,426	97,232	89,122
Rock Sole	48,505	52,201	34,109
Flathead Sole	13,566	15,320	10,521
POP 541	3,406	3,406	3,364
POP 542	2,458	2,458	2,422
POP 543	3,941	3,941	3,918
Mackerel 541	6,932	7,238	7,107
Mackerel 542	3,107	3,107	3,079
Mackerel 543	353	353	8

Bering Sea and Aleutian Islands AKSC PSC Limits and Catch Amounts

Species	Initial AKSC A80 Allocation (mt)	AKSC A80 Allocation with rollovers and transfers (mt)	AKSC Catch
Halibut Mortality (mt)	1,602	1,693	1,482
King Crab Z1 (#)	29,285	31,032	19,378
Bairdi Z1 (#)	257,941	258,277	88,214
Bairdi Z2 (#)	431,195	453,776	216,215
COBLZ Opilio (#)	3,150,269	3,380,963	204,851

Bering Sea and Aleutian Islands Salmon Catch Amounts

Species	AKSC Catch (#s)
Chinook	1,382
Non-Chinook	3,005

Notes: Salmon are reported as individual fish. Salmon numbers are estimated from basket sample extrapolations, and are not a census.

Northern Bristol Bay Trawl Area Yellowfin Sole and Halibut Catch Amounts

During presentation of the AKSC cooperative report at its April 2010 meeting, the Council requested that the following year's report include catch information from the Northern Bristol Bay Trawl Area (NBBTA). We are also including catch information for the 2014 fishery.

Species	AKSC Catch (mt)
Yellowfin Sole	11,812
Halibut	1.38

Retention Compliance Standard

The Retention Compliance Standard (RCS), a cooperative implemented retention program, replaced the GRS, the regulatory retention program, beginning in 2011. Regulations implementing the GRS were initially removed by NMFS through Emergency Rule, and then through final rule on February 25, 2013 (78 FR 12627). The GRS was removed due to implementation and enforcement issues that became evident after implementation of Amendment 80. Details of the GRS issues, 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>).

To continue high levels of groundfish retention in a transparent manner, the Amendment 80 sector developed the RCS to internally monitor and enforce groundfish retention according to the standards established under Amendment 79. The RCS is implemented 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 mirrors the details of Amendment 79 to avoid

confusion, and is calibrated to reflect differences between the calculation described in Amendment 79 and that used to enforce the GRS standard.

The RCS agreement, including the calculation methodology, is appended to this report.

The RCS required a 2014 groundfish retention of 85 percent; AKSC achieved a groundfish retention of 91.7%.

According to Council discussions at the February 2011 meeting, a critical component of the industry monitored groundfish retention program is a third party audit. The results of this audit are also appended to this report.

Reducing Halibut PSC

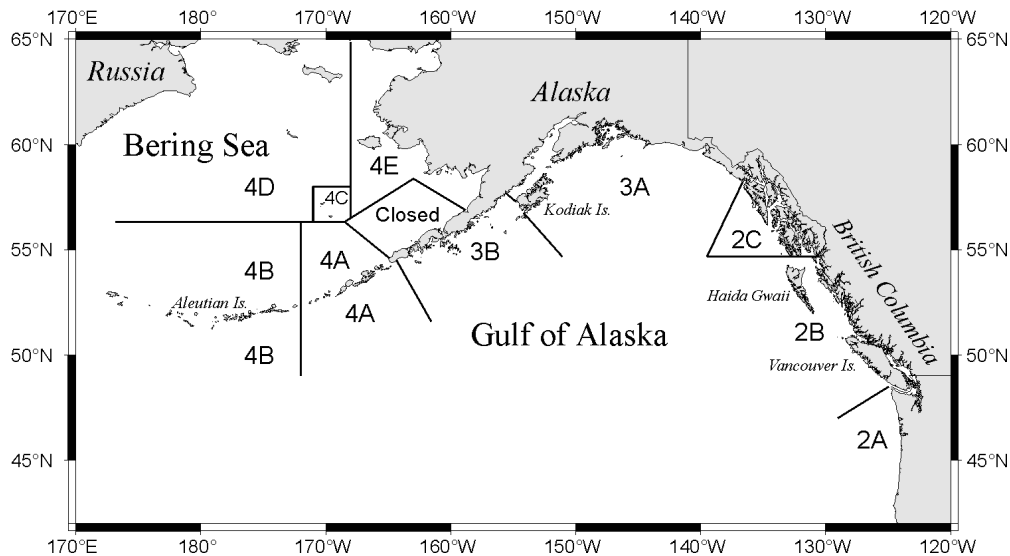
AKSC has realized significant halibut mortality reductions since implementation of Amendment 80 in 2008. The allocation of halibut to the Amendment 80 sector, as a whole, was reduced by 200 mt by Amendment 80. The structure of Amendment 80 also has facilitated reductions in halibut PSC usage. Target species and halibut limits are allocated to co-ops and each vessel or company is allocated a share of the co-op's total allocation of each target and PSC species. Since each vessel is both responsible for and protected by its share of the co-op's target and PSC allocations, potential for lost fishing opportunities has decreased and vessels are able move among target fisheries and areas to avoid halibut concentrations without sacrificing catch. Companies and captains have been more inclined to spend time fine-tuning halibut excluders, because they can increase catches through using less halibut. All vessels in AKSC use excluders; most carry a variety of excluders, since different excluders have different effectiveness depending on fishing conditions. The ending of the race for fish has also removed barriers to communication across the fleet. Captains regularly exchange information concerning locations of halibut concentrations and conditions affecting halibut, as each can improve their own performance with improved information.

In considering the effects of PSC limits, it is important to understand the dynamics of fishing under those limits. Halibut PSC allocations generate no direct revenues for the cooperative. Cooperative members only generate revenues from target species allocations. To maximize revenue potential, members need to conserve halibut PSC for use throughout the year. This means that early season fishing efforts must maintain low halibut bycatch to allow for more fishing opportunities and greater choices later in the year. Otherwise, unexpected halibut rates at the end of the year could preclude a vessel from executing its fishing plan. An early end to fishing is likely to not only affect the company's revenue stream, but also reduces crew shares and consequently crew retention as other crew opportunities may be more appealing. The cooperative typically sets aside a halibut reserve of 3 percent at the start of each year to address contingencies. Although this reserve could be used, it is anticipated that it will not be used.

Companies in the cooperative are competitors in many respects. As part of this competition, each company (and typically each vessel within a company) buffers its halibut PSC allocation to ensure that its vessels can fish the entire season. In combination with the cooperative's reserve, these buffers contribute to a considerable amount of cooperative's halibut PSC remaining at the end of the year. These buffers suggest that halibut caps are unlikely to solely define halibut usage by the sector, but that some portion of the cooperative's halibut PSC limit will be left on the table at year's end.

At its June 2014 meeting, the Council passed a motion requesting all BSAI sectors to "undertake voluntary efforts to reduce halibut mortalities in the BSAI resulting from PSC use by 10% from the current 5-year average levels through the 2014-2015 fishing season. A major impetus for this request was a decline in the estimated total halibut harvestable surplus (the Total Constant Exploitation Yield or TCEY) in the Area 4CDE management area, which includes the Pribilof Islands and Western Alaska. This decline in the TCEY, in part, led the Council, at the request of the US IPHC commissioners, to ask that each sector in the industry voluntarily work to reduce halibut PSC usage to 10 percent below its most recent 5-year average usage. In response, AKSC established protocols and targets for reducing its halibut usage in the second half of 2014 (July to December). Using these measures, AKSC reduced its halibut usage for the year and achieved the Council's reduction goal. As understood by the Council and industry, this 10 percent reduction was intended to mitigate declines in estimated total halibut harvestable surplus and would lead to increased catch limits for the directed halibut fishery.

At the December 2014 IPHC Interim Meeting, the IPHC received its staff's estimates of the harvestable surplus, as well as its estimate of the share of that harvestable surplus available to the directed fishery (the Fishery Constant Exploitation Yield or FCEY). These estimates suggested a substantial decrease in the halibut directed fishery catch limits would be needed because of an increase in bycatch from the 4CDE accounting area. The IPHC manages halibut in Area 4CDE and the closed area to the south of 4E as a single stock, although the fisheries in those areas are subject to separate catch limits for allocation purposes. In other words, the "4CDE accounting area" includes the 4CDE management area and the closed area for both management and catch accounting purposes.



Halibut Management Areas

Note: The Area 4CDE accounting area includes IPHC Areas 4C, 4D, 4E, and the Closed Area. The Area 4CDE accounting area is made up of NMFS management areas 508, 509, 512, 513, 514, 516, 521, 523, and 524.

The contradictory result from achievement of the Council’s 10 percent bycatch reduction target and the outcome of the IPHC stock assessment arose from a fundamental disconnect between the two management processes. While the Council’s management of halibut PSC equally weights all halibut bycatch mortality, the IPHC stock management includes a long term stock effect arising from all halibut bycatch and a direct effect of bycatch mortality of halibut that are over 26 inches in length (O26), thereby weighting the effects of changes in the O26 bycatch substantially more than the effects of bycatch of halibut under 26 inches in length (U26). Under this management, changes in the estimated level of O26 halibut bycatch directly affect the amount of harvestable surplus available to the directed halibut fishery, with a pound of O26 halibut bycatch mortality resulting in a pound reduction in the TAC available to the directed halibut fishery. In addition, the IPHC stock estimates divide the Bering Sea and Aleutian Islands into halibut management Areas 4A, 4B, and 4CDE. As a result, even when total O26 halibut bycatch in the Bering Sea and Aleutian Islands is unchanged, the distribution of the bycatch across halibut management areas can result in substantial changes in the harvestable biomass available to the directed fishery in a halibut management area.

In developing its estimates of the 2015 harvestable surplus available to the directed fishery, the IPHC revised its estimates of the share of bycatch made up of O26 halibut. In addition, the distribution of the bycatch across the halibut management areas changed, with an increase in the bycatch coming from the Area 4CDE accounting area. This upward adjustment resulted in a commensurate reduction in the harvestable surplus forecast to be available to the directed fishery.

At its December 2014 meeting, the Council reacted to the Area 4CDE reduction by considering a motion to request NMFS to take an emergency to make a blanket reduction of BSAI halibut PSC limits by 33 percent, the amount of a reduction estimated by the Council to be needed to provide a 1 million net pound fishery in Area 4CDE.

At the January 2015 IPHC meeting, AKSC provided the Commission with a presentation of halibut PSC reduction measures employed by the cooperative, an estimate of the reduction in Area 4CDE halibut PSC usage needed to result in a 1 million net pound fishery in that area, and the cooperative's proportional share of that reduction based on PSC usage. Based in part on the cooperative's presentation and presentations of other halibut bycatch users, the IPHC established a 2015 FCEY for Area 4CDE at status quo relative to the 2014 FCEY (1.285 million net pounds).

The outcome reflects the ability of the cooperative (and other BSAI halibut bycatch users) to quickly and effectively respond to halibut management issues in a way that the Council and NMFS are unable to. In the two months between the IPHC's interim and annual meeting, PSC users were able to develop plans to respond to the needs of directed halibut users based on the preliminary analysis that the IPHC uses to set the directed fishery catch limits. Relying on these internal cooperative measures allowed the IPHC to achieve the Council's halibut directed fishery management goals while mitigating the effects of halibut PSC reductions on directed users. For AKSC, instead of the suggested 33 percent reduction in the halibut limit, targeted reductions would achieve the same result with less than a 20 percent reduction from the current limit, without increasing usage in the other halibut management areas that are included in the BSAI. These directed actions are informative, as the Council considers the effects of various halibut PSC reductions, as well as the necessity and practicability of various cuts.

Halibut decksorting

Under current regulations, halibut mortality in trawl fisheries is exacerbated by the relatively long time that halibut remain out of the water on vessels prior to their release. Observer protocols require that all halibut be removed from the net and placed in a tank below deck to allow for observer sampling and weighing of catch, which occur in the factory. To reduce halibut mortality, we have recently (March 24th) received NMFS' approval of our application for an Exempted Fishing Permit (EFP) for 2015 that authorizes cooperative vessels to sort halibut on deck for expedited release to reduce mortality. Under the EFP, halibut released from the deck will be rigorously accounted for and viability testing will be conducted using IPHC-approved methods whenever deck sorting occurs.

Cooperative vessels have participated in two prior EFPs to deck sort halibut. In 2012, the most recent study which focused on a representative set of target flatfish fisheries for the Amendment 80 sector, the average mortality rate of halibut on deck sorted tows was approximately 60 percent compared to the normal discard mortality rate for those fisheries of approximately 80 percent.

Mortality rates of halibut increase substantially after a halibut has been out of the water for approximately 20 to 30 minutes. As a result, for tows where the 2012 deck sorting experiment took an extended period of time (i.e., over 30 minutes) little halibut mortality savings was realized. In the 2015 EFP, AKSC participants will concentrate deck sorting efforts on the first 20 minutes that the net is on deck. AKSC will also focus efforts on relatively large halibut. Based on the previous studies, this approach may yield substantially greater savings than a longer effort to return all halibut to the water from the deck. The current EFP application is also structured to allow captains to select when to use deck sorting. This is important because mandating it to occur on all hauls/targets/weather conditions was shown to be infeasible and counterproductive. The ability to choose when to use deck sorting allows captains to use the tool when it can achieve savings and addresses the problem seen in 2012 where EFP participants effectively had to opt out of the EFP for the remainder of the year when they were unable to do deck sorting on all tows due to weather conditions or fishing plans that included target fisheries that are impractical for deck sorting.

Despite these potential gains, challenges remain. The 2012 EFP was conducted during summer months, in ideal weather conditions, in the fisheries that fishermen felt were relatively good candidates for deck sorting. The tendency of the 2012 EFP to be conducted in fisheries that were expected to be good candidates for deck sorting was an outcome of the rules of the EFP, particularly that the participants had to conduct deck sorting in all tows once the EFP was started. The design of the 2015 EFP purposely avoids this restriction to ensure a better “experiment” in the sense of allowing us to see where fishermen can make deck sorting viable even if it does not occur on all tows during a trip. We do not currently know what fisheries are actually viable for deck sorting under these different and more realistic rules of engagement, and this will not be known until the 2015 EFP is completed. It is important to keep this context in mind as one considers the potential for deck sorting looking forward. While we have high expectation for the success of deck sorting, until we complete the current EFP, we will not know how viable deck sorting is across the suite of AKSC target fisheries and seasons.

Bad weather, fisheries with higher bycatch of halibut that are similar in size to target flatfish, deck layouts, and other circumstances are likely to limit the effectiveness of deck sorting. Results are likely to be tempered to the extent that we currently use excluders in our fisheries, which are designed to exclude large fish. During the 2012 EFP, vessels did not use excluders. To the extent that excluders are currently reducing halibut mortality, that savings is already being achieved without deck sorting and cannot be added to by deck sorting. All of these factors may affect results of halibut deck sorting.

Cooperative vessels are expected to begin deck sorting operations under the 2015 EFP at the end of April or beginning of May. Additionally, AKSC intends to work with NMFS and the Council to develop an EFP that would be implemented in 2016, which would build upon the 2015 work. AKSC intends to engage with the Fisheries Monitoring and Analysis Division, NMFS Alaska Region Office, and the Council in hopes of answering any remaining questions needed to

operationalize deck sorting as a regulatory tool for individual vessels to utilize to reduce halibut mortality. These include both the development of more specific monitoring protocols, as well as developing the catch accounting system to accommodate the different mortality rates for deck sorted halibut. The timing of a regulatory structure for deck sorting remains uncertain. In addition to resolving the management questions associated with deck sorting, neither the Council nor NMFS has begun any action that directly considers such a regulatory amendment.

Flatfish Flexibility

On September 23, 2014, NMFS issued a final rule that allows each cooperative and CDQ group to have access to a portion of the difference between each Amendment 80 flatfish species ABC and TAC, which can be used to trade allocated quota of one species for quota of another with NMFS. NMFS distributes specific percentages of the available surplus to each eligible group (co-op/CDQ) to prevent ABCs from being exceeded. By equally trading one flatfish quota for another, the 2 million mt OY cap would also not be exceeded.

We believe a flexible approach to flatfish harvests will increase opportunities for reducing PSC by increasing providing increased choice in targeting. The flexibility to make quota conversions will afford vessels the opportunity to move among the different flatfish targets, as long as the vessel holds adequate quota for any of the three included flatfish species.

Turbot Management

During 2014, AKSC and the Freezer Longline Coalition (FLC) engaged in negotiations at the request of the Council to manage turbot in both the Bering Sea and Aleutian Islands. AKSC and FLC companies represent the majority of the BSAI turbot harvest. AKSC harvests turbot incidentally to directed arrowtooth and Kamchatka founder fisheries, and FLC harvests turbot in a directed fishery. Turbot is an important component of each group's annual harvest.

AKSC and FLC recently signed a harvesting agreement that would allow both sectors to manage turbot harvest in a manner that ensures both sectors needs are met at various turbot TACs. The agreement is in place for the 2015 season and is a perpetual agreement.

Findings and Future Issues

The following section highlights management programs and issues that concern AKSC members. Most of these issues were described in previous cooperative reports and are available at: <http://www.fakr.noaa.gov/sustainablefisheries/amds/80/default.htm>. Issues discussed in these previous reports are briefly summarized in the bullets below. New issues are discussed subsequent to this summary.

Time/Area Closures that Reduce PSC Avoidance Flexibility

AKSC captains targeting flatfish on the Bering Sea shelf use several PSC reduction tools. Some of these rely on technology, such as excluders and gear modifications. However, often the most effective PSC reduction tool is to avoid areas with high PSC concentrations altogether. Captains initially assess PSC catch by watching haul dumping, then validating visual estimates with observer data. On-the-grounds communication among the fleet allows captains to focus on areas that produce low PSC rates and high target CPUEs.

Halibut tend to like water temperatures above 2 degrees Celsius. When the cold pool extends into the winter rock sole grounds, vessel captains may be able to avoid large halibut concentrations and access traditional rock sole fishing areas during times when rock sole school into spawning aggregations. During spring and summer yellowfin sole fishing, captains follow the ice edge as it retreats across the Bering Sea shelf. Typically, these ice edge fisheries feature colder water, and low halibut bycatch rates. When ice recedes from Kuskokwim Bay and the Northern Bristol Bay Trawl Area, yellowfin sole school for spawning in these areas and captains are able to access large yellowfin sole concentrations with very low halibut bycatch rates. As the water warms, halibut tend to move into these areas, typically the first or second week of June, and vessel captains look for lower bycatch fishing. The extent of the cold pool varies from year to year, and captains adapt to bottom temperatures by moving away from warmer water and higher halibut bycatch rates.

Anecdotal information from captains indicates that both the Red King Crab Savings Area (RKCSA) and the Area 516 closure from March 15-June 15 may limit PSC avoidance by constraining operational flexibility. During the rock sole fishery, captains are forced to stay in deeper water south of the RKCSA or in the 10-minute strip. Captains believe that halibut rates are often lower in shallower waters to the north, but are prohibited from accessing those areas. Similarly, as yellowfin sole migrate across the shelf, vessels experience low halibut bycatch accompanied with higher target CPUE, but must leave this clean fishing when schools move into the RKCSA or the 516 closure. Captains are forced to wait until concentrations pass through these areas, often experiencing poor fishing conditions.

Current evidence suggests that time/area closures intended to protect PSC may actually increase PSC. AKSC representatives have received initial support from Crab Plan Team to conduct experimental fishing within these time/area closures to evaluate the potential for reducing PSC by opening those areas. Summer trawl surveys, which are the only current means of assessing biomass levels within the closed areas, occur during times of year when fishing is not occurring in those areas, and fishing designed to assess PSC during typical fishing times and conditions may help with these evaluations. AKSC intends to continue to work with the Crab Plan Team to develop an experimental fishing design that would evaluate whether removing these closures would assist fishermen in avoiding PSC.

Pacific cod constraints

For various reasons, Pacific cod has become a constraining species for Amendment 80 fishermen, and most Pacific cod is harvested as bycatch in other target fisheries. In 2014, only 2,049 mt of the 22,370 mt harvested by AKSC (roughly 9%) was reported in the cod target. Addressing Pacific cod allocations would increase Amendment 80 operational efficiencies and provide additional opportunities for PSC avoidance.

Outreach

Over the last several years, AKSC representatives have met with the Bering Sea Elders Group (BSEG), Association of Village Council Presidents (AVCP), Trustees for Alaska, Native American Rights Fund, and Alaska Marine Conservation Council to consider whether current closures adequately protect western Alaska subsistence resources in the Etolin Strait/Nunivak Island area, while still maintaining access to important flatfish fishing grounds.

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 have high catch per unit effort (CPUE) and low halibut bycatch. As the ice clears, large yellowfin sole spawning schools 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 lower CPUE, higher bycatch, 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 vessel activities and their effects on local commercial and subsistence harvests.

In May of 2013, AKSC, BSEG, and AVCP announced a tentative agreement on the Kuskokwim Bay habitat conservation area. That agreement was signed and AKSC is following the terms of the agreement. Agreement highlights include:

1. Boundary adjustments near Nunivak Island, Kipnuk, and Cape Newenham
2. Establishing a working group that will meet in person twice a year. The working group will share information, review fisheries data and subsistence impacts, and work together to design and fund research that will be useful to all parties.

AKSC, AVCP, and BSEG continue to meet to discuss these and other issues.

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 achieve 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 2014, AKSC target catch amounts for this complex multi-species fishery were well utilized, PSC limits were well below regulatory limits, and the groundfish retention goals have been exceeded. 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

Amendment 80 Sector Retention Compliance Standard Agreement

The North Pacific Fishery Management Council established regulatory retention levels based on historic retention performance for the Amendment 80 fleet. However, while the Amendment 79 analysis in front of the Council examined historic retention rates based on observer estimates in the blend and catch accounting system, the Council ultimately chose to measure retention using groundfish retention standard (GRS) methodology.

Implementation of the GRS resulted in the discovery that the retention calculation methodologies used in the Amendment 79 analysis and the GRS were not equal. As described in the Appendix to this Agreement, these differences averaged nine (9) percent for the Alaska Seafood Cooperative (AKSC). In 2008, the first year of the program, the AKSC retained 91 percent of its groundfish as measured by the Amendment 79 calculation methodology, far beyond the 65 percent required by regulation. However, the GRS calculation methodology only measured retention at 77 percent.

At its June 2010 meeting, the North Pacific Fishery Management Council recommended that NMFS implement an emergency rule to temporarily remove groundfish retention standard regulations. The emergency rule would be in effect while a permanent FMP amendment solution is developed that addresses issues associated with Amendment 79 implementation and enforcement.

To continue to meet Council bycatch reduction goals during development of an alternative retention program, Amendment 80 participants have voluntarily agreed to maintain current high groundfish retention levels by complying with the following retention compliance standard (RCS). In this Agreement, the term "parties" refers to any Amendment 80 cooperative and individual entities assigned to the Amendment 80 limited access fishery.

1. Retention Compliance Standard. Parties agree to meet or exceed an annual RCS of 85 percent (see appendix) using the following calculation methodology:

$$RCS = \frac{\text{Retained Groundfish Catch (Production RWE)}}{\text{Observed Total Groundfish Catch (CAS)}} + 9\%$$

This is the same calculation methodology currently used by NMFS to calculate the GRS, and is annually calculated using the following data inputs:

- Retained groundfish catch is calculated as the total annual round weight equivalent of all retained groundfish species as reported in production data.
- Groundfish catch includes those species listed in Table 2a to 50 CFR 679.
- Observed total groundfish catch is calculated by flow scale measurements, less any non-groundfish, PSC species or groundfish species on prohibited species status.

The RCS is measured on an annual basis. Each Amendment 80 cooperative agrees to meet or exceed the RCS of 85 percent. Each entity participating in the Amendment 80 limited access fishery agrees to operate each of its vessels in such a manner that they meet or exceed the RCS of 85 percent.

2. Monitoring Service. Parties agree that Seastate, Inc. will calculate each vessel or cooperative's annual RCS. Parties agree to take all actions and execute all documents that may be necessary to enable the Monitoring Service to calculate the RCS. In the event of a disputed RCS, an entity or cooperative may verify that data and calculations are correct. However, parties agree to Seastate, Inc. RCS calculations for purposes of compliance with this agreement.

3. Liquidated Damages Calculation. Liquidated damages described below are based on the recommended range of penalties found in the *Draft Policy for the Assessment of Civil Administrative Penalties and Permit Sanctions, NOAA Office of the General Council – Enforcement and Litigation*. That document can be found at http://www.nmfs.noaa.gov/ole/draft_penalty_policy.pdf.

Number of Offenses	Liquidated Damages Amount
1 st	\$25,000
2 nd	\$50,000
3 rd and every thereafter	\$100,000

4. Notice of Apparent Breach. The Monitoring Service shall monitor compliance with the terms and conditions of this Agreement. The Monitoring Service shall notify each party of any party who is out of compliance with the RCS.

5. Liquidated Damages Collection and Related Expenses. A party will pay liquidated damage amounts within ten (10) days of the notification described above. Liquidated damages will be remitted to:

SeaShare

600 Erickson Avenue NE, Suite 310
Bainbridge Island, WA 98110

Liquidated damages amounts not paid when due shall accrue interest at a rate of interest equal to the prime rate of interest announced by Bank of America as of the last day of the voluntary compliance period plus twelve percent (12%). In addition to liquidated damages, parties shall be entitled to an award of the reasonable fees and expenses, including attorneys' fees, a party incurs in connection with any action the party pursues to collect liquidated damages from the party in breach of this Agreement.

6. Annual third party audit. Each party agrees to conduct an annual audit of the RCS calculation and the data used within the calculation. Results of this audit will be reported to the parties, and the Council (see below.)
7. NMFS and Council reporting. Each party agrees to report its annual RCS to the Council at each April Council meeting. Cooperatives will include the RCS in their annual cooperative report, and Amendment 80 limited access participants shall create an RCS report. Each report will include the results of the third party audit above.
8. Agreement Term and Termination. This Agreement shall take effect January 20, 2011 and shall remain in effect until replaced by regulations implementing a Council approved groundfish retention program or until amended by the parties.
9. Miscellaneous.
 - a. This Agreement contains the entire understanding of the parties as to the matters addressed herein, and supersedes all prior agreements related to the same. No amendment to this Agreement shall be effective against a party hereto unless in writing and duly executed by such party.
 - b. This Agreement shall be governed by and construed in accordance with applicable federal law and the laws of the State of Washington. Venue for any action related to this Agreement shall be in King County, Washington.
 - c. The parties agree to execute any documents necessary or convenient to give effect to the intents and purposes of this Agreement.

- d. All notices to be given hereunder shall be in writing and shall be deemed given upon the earlier of when received or three days after mailing addressed in accordance with the attached contact information.
- e. This Agreement shall be binding on the successors and assigns of all parties hereto.
- 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. Any dispute related to this Agreement shall be submitted to arbitration in Seattle, Washington upon written request of any party. The party's written request shall include the name of the arbitrator selected by the party requesting arbitration. The other party shall have twenty (20) days to provide written notice of the name of the arbitrator it has selected. If the other party timely provides such notice, the two arbitrators shall select a third arbitrator within twenty (20) days. If the other party fails to select an arbitrator within such period, then arbitration shall be conducted by the single arbitrator originally designated. However, if the other party responds within such period and designates an arbitrator, the three arbitrators so selected shall schedule the arbitration hearing as soon as possible thereafter. Every arbitrator, however chosen, shall have experience in, or experience advising entities that have experience in, the commercial fishing industry of the Bering Sea, shall have no material ties to either party to the dispute, or to any other Amendment 80 Quota Share holder unless the parties agree otherwise, and shall have executed a confidentiality agreement satisfactory to the parties. The decision of the arbitrator, or, in the case of a three-arbitrator panel, the decision of the majority, shall be final and binding. The arbitrator, or, in the case of a three-arbitrator panel, the majority of the arbitrators, shall select the rules of arbitration.
- h. Nothing contained in this Agreement shall be construed to make the parties to this Agreement partners, joint venturers, co-owners or participants in a joint or common undertaking. The parties may otherwise engage in or possess an interest in other business ventures of every nature and description, independently or with others, including but not limited to the ownership, financing,

management, employment by, lending to or otherwise
... of the business, which are similar to the business of the

Appendix 1

Analysis of Proposed Retention Compliance Standards

Amendment 79 currently requires that the Amendment 80 sector meet a retention standard that increases from 65% in 2008 to 85% in 2011. The Amendment 79 analysis examined the changes in retention percentages by looking at historical data. Throughout the analysis, computations of historical retention percentages and increased retention tonnages were made using “blend” and/or catch accounting system (CAS) data. Total catch and retained catch were derived from these data sources, both of which use a mixture of production and observer data as the basis for calculations. Thus, retention percentage based on the blend (from here on “blend” refers to either the older blend formula or the post-2003 CAS estimate) would be determined as:

$$Rb = \frac{\text{Retained catch (blend)}}{\text{Total catch (blend)}}$$

where (*blend*) indicates a data source that is comprised of a mix of observer and production data. The Council ultimately chose to define a groundfish retention standard expressed as the ratio of the round weight equivalent of retained product to total catch, or:

$$GRS = \frac{\text{Retained catch (production RWE)}}{\text{Total catch (blend)}}$$

Throughout the Amendment 79 analysis, there exists an implied assumption that the retention percentage calculated by the new GRS method would be the same as the retention percentage calculated by Rb. However, this assumption was not examined in the analysis and no production round-weight equivalents were presented that would allow a reader to compute the GRS standard that was adopted. Data presented below indicate that the GRS formula returns a significantly lower number than the Rb retention percentage calculation used throughout the analysis. The effect of this difference is to require much greater retention of catch by the Amendment 80 fleet than was anticipated by the Council.

The Amendment 80 sector had, preparatory to coop formation, requested blend, CAS, and WPR information from NMFS. An analysis of those historic data shows a marked contrast to results and conclusions on the effects of the various Amendment 79 alternatives presented in the analysis. In the first year of operation under Amendment 79, vessel operators were able to increase both Rb and GRS dramatically. The GRS is consistently less than Rb, and AKSC vessels were still only able to achieve 77% under the GRS calculation. Using the Amendment 79 analysis methodology (i.e., with Rb as a proxy for GRS), Rb increases from 77% to 91% between 2007 and 2008. However, the fleet’s apparent retention is still only 77% because it is now measured by GRS rather than Rb.

Harvest and retention by Blend/CAS and produce RWE for AKSC vessels. Tremont (<125') excluded 2005-2007 because of incomplete data. Seastate data received from NMFS.

Year	Blend / CAS total catch	Blend / CAS retained catch	Production report retained catch	Blend / CAS retention (Rb) %	Groundfish retention standard retention (GRS) %	Difference: CAS-GRS
1999	155,667	101,856	88,633	65%	57%	8%
2000	178,563	120,474	98,705	67%	55%	12%
2001	158,781	116,455	102,434	73%	65%	9%
2002	190,247	132,061	116,800	69%	61%	8%
2003	188,257	129,620	114,116	69%	61%	8%
2004	217,658	145,767	130,801	67%	60%	7%
2005	201,586	153,673	136,311	76%	68%	9%
2006	196,360	151,422	133,929	77%	68%	9%
2007	211,325	163,437	147,119	77%	70%	8%
2008	260,296	235,580	200,161	91%	77%	14%
2009	251,602	226,886	203,673	90%	81%	9%
Average	200,940	152,476	133,880	75%	66%	9%

The average difference between the 1999-2009 blend and GRS calculations is 9%. Therefore, GRS percentages would need to be adjusted downward to meet Council intended retention goals as they understood them during deliberations of Amendment 79. These adjustments are reflected in the following table.

GRS Schedule	Annual GRS	Annual RCS
2010	80%	71%
2011 and each year thereafter	85%	76%

[SIGNATURE PAGES FOLLOW]

Attachment 2

Fisheries Information Services
413 SW Butterfield Place, Corvallis, OR 97333
541-602-1609

Jason Anderson
Manager, Alaska Seafood Coop

March 26, 2014

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 (AFC) boats in Bering Sea/Aleutians (BSAI) groundfish fisheries in 2014. The Rate is defined as round weight equivalent of all retained groundfish (production) divided by observed total groundfish catch.

Data sources and Confidentiality:

All raw data is in the purview of National Marine Fisheries Services (NMFS). Using permission granted by each company, NMFS Alaska Region staff provided to FIS 2014 data from each of fourteen boats that participated in 2014 cooperative fisheries.

Date Scope and Format:

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 data was aggregated by week, species group and round weight.

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 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 AFC overall retention percentage.

Data Reconciliation and Evaluation:

For each boat, FIS compared weeks with data for observer and production files. There were two cases where there was a very small amount of production in a week without observer data, but both were consistent with processing happening a day after catch.

In 2014, there were no PSC-type NMFS closures in BSAI, so there was no need to figure out regulatory discards.

It is noted that for each boat, retained percentages are very similar to those determined for prior years. No outliers were detected.

Data Summary:

The totals (for all fourteen boats) were 235,414 mt of production (in round weight) and 284,760 mt of observed groundfish, for a coop retention rate of 82.7%.

Janet Smoker