

Alaska Groundfish Cooperative

Report to the North Pacific

Fishery Management Council

for the 2013 Fishery

01 March 2014

Introduction

On January 20th 2013, the Alaska Groundfish Cooperative (AGC) began fishing under regulations implementing Amendment 80. This report summarizes AGC operations during 2013.

AGC membership

AGC membership includes the following four companies, and nine non-AFA trawl catcher processors and/or permits.

Company	Vessel/Permit	LLP LOA
Arctic Sole Seafoods, Inc.	Ocean Cape	122
Tremont Vessel, LLC	Tremont	125
O'Hara Corporation	Harvester Enterprise	181
The Fishing Company of Alaska, Inc.	Alaska Juris	238
	Alaska Spirit	221
	Alaska Victory	227
	Alaska Warrior	215
	Alaska Ranger	203
	Alaska Voyager	228

Co-op Management

The AGC co-op manager is responsible for the management of the cooperative. This includes communications, regulatory compliance, catch and bycatch tracking, and QS management.

Transfers occurred during the year between co-op members, and between Am 80 cooperatives.

2011 was the first year for the Alaska Groundfish Cooperative. During the 2013 fishing year we lost 365 days of fishing due to shipyard time.

Catch Monitoring

The AGC manager receives observer data from the vessels fishing. Catch and species composition information is received from the Observer Program, and from NMFS Alaska Region. Production information is received from Alaska Region. All of these sources are used to ensure that the vessels do not exceed quotas. Software on the vessels allows the Captains to keep close track of quota usage.

Seastate, Inc. also monitors AGC catch and production, and the co-op manager is able to compare information through a secure web site to ensure any possible errors are caught and resolved.

GOA Sideboards

Some AGC vessels participated in the Rockfish Pilot Program Co-op fishery in the CGOA. These vessels are sideboarded under the rockfish program. One AGC vessel participated in the WGOA Am 80 rockfish sideboard fishery. At the time AGC's WGOA Am 80 sideboard eligible vessel left the GOA, no sideboard limits were exceeded.

2013 AGC Catch

The following tables provide AGC catch information. Data has been rounded to the nearest whole number. **All co-op catch during 2013 fell within allocation levels and no overages occurred.**

BSAI AGC Allocated Quota & PSC and Catch Amounts

Species	AGC Am 80 Allocation (mt)	AGC Catch (mt)	Total Transfer In (mt)	Total Transfer Out (mt)
Mackerel 541	7,271	7,269.02		
Mackerel 542	3,563	3,543.45		
Mackerel 543	783	73.67		
Flathead Sole	2,982	592.38		1,571
Pacific Cod	6,929	5,136.76		1,238
POP 541	4,077	4,063.91		
POP 542	2,939	2,909.38		
POP 543	4,728	4,704.09		
Rock Sole	20,348	6.834.03		3,707
Yellowfin Sole	59,403	18,450.57		15,063
Bairdi Z1 (#)	197,904	125,868	27,540	27,822
Bairdi Z2 (#)	473,655	126,787		91,456
Halibut Mortality (mt)	757	593.84		117
COBLZ Opilio (#)	2,483,863	107,231		324,093
Red King Crab (#)	20,188	8,119		2,753

BSAI Salmon Catch Amounts

Species	AGC Catch (#)
Chinook	201
Non-Chinook	114



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February 20, 2014

Materials and Methods:

Observer data were supplied to Sea State, Inc via the Northwest Groundfish Observer Program's password-protected web site. Logon credentials were supplied by all members of the Alaska Groundfish Cooperative. Production data were obtained via the NMFS Alaska Region e-Landings system, again using credentials supplied by member companies. Unsampled hauls in the observer data were extrapolated using standard methods documented by NMFS Alaska Region to produce total groundfish catch estimates in accord with those in the Alaska Region Catch Accounting System. Retained product data were expanded to round weight equivalents using published Product Recovery Rates (PRRs). Groundfish retention was then calculated according to the formula:

$$\text{Retention percentage} = \text{Retained catch (retained product RWE)} / \text{Total catch (CAS)}$$

For 2013, the Ak groundfish cooperative Total Catch (CAS) of FMP species was 75,347 mt. The round-weight equivalent of products (RWE) from this catch was 68,362 mt. The coop-wide retention percentage was 90.7%

Alaska Seafood Cooperative Report to the North Pacific Fishery Management Council for the 2013 Fishery

March 26, 2014

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 Amendment 80 allocations. This report summarizes AKSC, its catch for the 2013 fishing year, the processes implemented to ensure that catch limits are not exceeded, and issues affecting AKSC members.

AKSC membership

During 2013, 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.

Coop 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 coop; 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, and 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.

In addition to receiving regular reports from AKSC staff, Seastate, Inc. provides each Member and AKSC staff access to a secure website. This website 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 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 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 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 2013 GOA fishing plan described management measures AKSC utilized to limit individual vessels to historic halibut PSC levels.

2013 AKSC Catch

The following tables provide AKSC catch. All data is rounded to the nearest whole number for reading simplicity. *AKSC catch during the 2013 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 of these variations are provided below in the section titled *OY, TAC setting, Amendment 80 operations, and the need for increased flexibility.*

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.

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	25,319	31,521	27,123
Yellowfin Sole	80,543	95,606	91,335
Rock Sole	52,147	55,851	41,231
Flathead Sole	12,288	13,860	11,198
POP 541	3,612	3,612	3,594
POP 542	2,603	2,603	2,586
POP 543	4,189	4,189	4,116
Mackerel 541	5,348	5,348	5,261
Mackerel 542	2,414	2,414	2,398
Mackerel 543	517	517	39

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)	1,609	1,818	1,575
King Crab Z1 (#)	29,484	45,858	14,308
Bairdi Z1 (#)	259,427	583,199	113,778
Bairdi Z2 (#)	433,149	1,145,579	216,811
COBLZ Opilio (#)	2,975,772	4,849,365	284,898

Bering Sea and Aleutian Islands Salmon Catch Amounts

Species	AKSC Catch (#s)
Chinook	1,769
Non-Chinook	819

Notes: Salmon are reported as individual fish. Salmon numbers are estimated from basked 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 2013 fishery.

Species	AKSC Catch (mt)
Yellowfin Sole	7,375
Halibut	10.75

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 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 2013 groundfish retention of 85 percent; AKSC achieved a groundfish retention of 93.3%.

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 PSC

The following sections discuss PSC reduction opportunities and challenges for halibut, crab, and salmon.

Reducing Halibut PSC

Prior to Amendment 80, NMFS allocated halibut PSC to sector level season and target fisheries, thereby dictating when and where vessels fished. Vessels competitively raced among themselves for larger shares of target allocations, leading to a fear of reduced fishing opportunities for vessels that searched for lower bycatch areas or times.

Under Amendment 80, target and PSC are allocated to coops. Under AKSC's coop agreement, each vessel or company is then allocated an amount of the Coop total. Since vessels are responsible for their share of PSC, fear of lost fishing opportunities has decreased and vessels are free to move among fisheries and areas to avoid higher halibut concentrations. Competition has also decreased, communication amongst the fleet about PSC concentrations has increased, and companies are more inclined to spend time fine tuning bycatch avoidance devices such as halibut excluders.

Prior to Amendment 80, the sector had access to the full trawl halibut PSC cap. Amendment 80 allocated a portion of the trawl cap to each cooperative, and reduced the total halibut PSC allocation by 200 mt over four years. Since implementation of Amendment 80 in 2008, halibut has not been constraining, and most of the large potential halibut bycatch reductions have been achieved by removing disincentives against PSC avoidance. Additional gains are likely to be less substantial and more costly, but some opportunities remain.

Areas for improvement/continuing challenges

The following list describes challenges to reducing halibut PSC, and areas identified for improvement.

- Competing objectives complicate achieving gains in any one area. While Amendment 80 achieved significant bycatch reductions, captains have been asked to balance competing objectives. Under Amendment 80, we have a mandate to reduce all PSC bycatch (including three crab species), achieve high groundfish retention amounts, ensure Amendment 80 target caps are maximized yet not exceeded, and others.
- Time/area closures may prevent vessels from fishing in lowest bycatch areas and during low bycatch times.
- Reducing mortality of halibut bycatch under the required observer sampling procedures prevents any sorting on deck. This increases time out of water for halibut taken as bycatch. Sorting halibut from the catch on deck and returning them to the sea (after accounting catch and assessing viability) would reduce halibut mortality. Decreasing halibut mortality would reduce any impact of bycatch.
- Halibut bycatch rates near the end of the year tend to increase, which could be caused by several factors. Addressing this increase would reduce bycatch.

Based on these challenges and issues, internal measures and potential regulatory changes to reduce halibut PSC have been identified.

Internal measures to reduce halibut PSC

- Formalize best fishing practices. This could include a Seastate hotspot reporting program that expands upon current practices, on-grounds communication protocols, policy on avoiding end of the year spikes, and recommended fisheries, areas, and conditions for halibut excluder use. We are currently consulting with captains and other company personnel to help fine tune this list.
- Design incentives to reduce bycatch late in the year.
- Flatfish flexibility will allow trading of target allocations across different flatfish species to accommodate uncertainties allowing better use of available halibut. As halibut resources change and are affected by environmental conditions, flatfish flexibility will allow us to focus on species with the lowest halibut concentrations relative to target catch. The flatfish flexibility program is discussed further below.

Consideration of future regulatory actions

- Decksorting to reduce mortality rates of halibut bycatch is believed to be the most productive area to reduce total halibut mortality. Steps to address implementation challenges for decksorting are underway. These are described below.
- Reconsider red king crab savings area and 516 time closure. Anecdotal information from captains indicates that as flatfish schools migrate across the shelf, PSC rates may actually increase when vessels are not able to follow these concentrations through area closures. We are working with the crab industry to jointly propose an EFP to assess the utility of these longstanding closures that were originally intended for protecting crab but may no longer served that purpose. Reconsideration of these closed areas following the results of the EFP may also provide more flexibility to avoid halibut bycatch.
- Reconsider January 20th opening through an EFP to assess whether bycatch rates during the January 1-20 closure are lower.
- Reassess observer program sampling protocols to improve data quality through sampling regime changes. These could include evaluating census protocols for salmon, revised halibut accounting (see below), or others.

Halibut decksorting

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 continue to improve utilization of halibut excluders and bycatch hotspot avoidance through data sharing.

Potential reductions in halibut mortality rates through improved halibut handling procedures are another important part of the AKSC's goal to make best use of its halibut bycatch allowances. Increasing halibut survivability is critical to the development of an adequate set of tools to achieving additional decreases in total halibut mortality. During a 2012 EFP, AKSC explored alternative halibut handling procedures designed to return halibut to the sea faster, and decrease halibut mortality rates. Field work was conducted between May 27 and September 19, 2012 on four AKSC vessels: F/T Arica, F/T Constellation, F/T Vaerdal, and the F/T US Intrepid. Primary target fisheries included yellowfin sole (in "fall" fishing mode), arrowtooth flounder, flathead sole and rock sole. Other targets included cod, bottom pollock and rex sole. Participating vessels used their own groundfish and halibut PSC allocations.

Across all vessels and target fisheries (98 hauls), 81% of halibut by number and 87% by weight were sorted from catch on deck. The average halibut mortality rate for deck-sorted halibut was approximately 57%. On average, 6.1 halibut returned to the water per minute compared to 2.2 halibut during the 2009 EFP. The halibut sampling methodology prevented sorting delays on most hauls, but backlogs of halibut awaiting measurement and assessment were inevitable on a

few hauls with very high halibut catch rates.

Recent technological advances may allow for automated catch accounting for halibut sorted on deck. Camera systems developed for use in NMFS trawl survey applications could be used to accurately measure each halibut sorted on deck, and a weight could be applied to these halibut. Electronic monitoring systems could be used to verify that crew follow sorting protocols, eliminating the need for additional sea samplers.

We believe decksorting has the potential to significantly reduce halibut mortality in the near future, and hope to have additional feedback on this program for the Council at its June meeting. Steps are now underway to conduct a field trial of the camera system installed on a chute to get halibut overboard from the deck. Additional collaborative work with the Observer Program and Alaska Regional Office are necessary to address the remaining implementation challenges for decksorting.

Reducing Crab PSC

As a result of practicing conscientious fishing practices and employing innovative gear, crab PSC allocations have not been constraining since Amendment 80 implementation. Similar to halibut, captains are able to move away from crab concentrations, and communicate hot spots among the fleet. Additional crab PSC reductions could be achieved by increasing operational flexibility. For example, the RKCSA and 516 closures may exacerbate crab bycatch by forcing vessels to avoid target species aggregations as they move into closed areas.

Reducing Salmon PSC

AKSC is exploring ways to monitor and reduce salmon bycatch beyond currently low levels. These could include implementing whole haul sampling protocols similar to those required in the at sea pollock fishery, information sharing, and others. The At-sea Processors Association has agreed to share summarized salmon hot spot information, which AKSC captains are currently using to avoid salmon in the Bering Sea. We're exploring other data sources from United Catcher Boats that could expand our access to hot spot information. Cooperative members are also using the SeaShare program in both the Bering Sea and Gulf of Alaska fisheries.

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.

- 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 2013, only 6,470 mt of the 27,123 mt harvested by AKSC (roughly 24%) was reported

in the cod target. Addressing Pacific cod allocations would increase Amendment 80 operational efficiencies.

- 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. These closures are also expected to create spillover effects to other Amendment 80 fisheries.
- Since 2008, AKSC was able to operate within PSC allocations. AKSC used a lower portion of its halibut and crab limits during these years. However, fishing behavior, halibut distribution, and cooperative operations vary due to environmental and market conditions. Additionally, the current biomass features an increasing numbers of smaller halibut. These small halibut are difficult to exclude using traditional halibut excluders.

Achieving Optimum Yield

The following list includes potential methodologies for increasing catch under the 2 million mt OY limit.

Flatfish flexibility

At its April 2013 meeting, the Council took final action on a concept intended to provide additional harvesting flexibility for Amendment 80 flatfish species. Commonly known as flatfish flexibility, this is just one of several approaches that could be adopted by the Council to increase harvest under the 2 million mt optimum yield limit.

The flatfish flexibility proposed rule is pending, but expectations are that the program will be implemented for the 2015 fishing year. The following describes operational constraints under the current Amendment 80 management system, and how a flexible flatfish harvesting regime would increase harvest under the 2 million mt optimum yield (OY) limit.

As biomasses fluctuate over time, TACs are adjusted accordingly. During years where pollock, Pacific cod, and flatfish biomasses are simultaneously high, industry and the Council must make difficult allocation choices to remain below the statutory 2 million mt BSAI OY limit. During years when non-Amendment 80 species TACs are high, lowered Amendment 80 TACs result in reduced flexibility and may prematurely stop fishing, particularly with lower yellowfin sole, rock sole, flathead sole, and Pacific cod TACs. The Amendment 80 sector must support TAC amounts that reflect expected harvest levels for all species in a wide range of environmental conditions.

To ensure that cooperative quotas are not exceeded, AKSC distributes quota among each of its active vessels, and vessel captains are required by internal agreement to remain below their allocations. At the beginning of each year, companies establish fishing plans for their vessels based on expected environmental conditions, bycatch limitations, and market conditions. In

practice, these can rarely be estimated with any precision, and actual fishing plans change throughout the year.

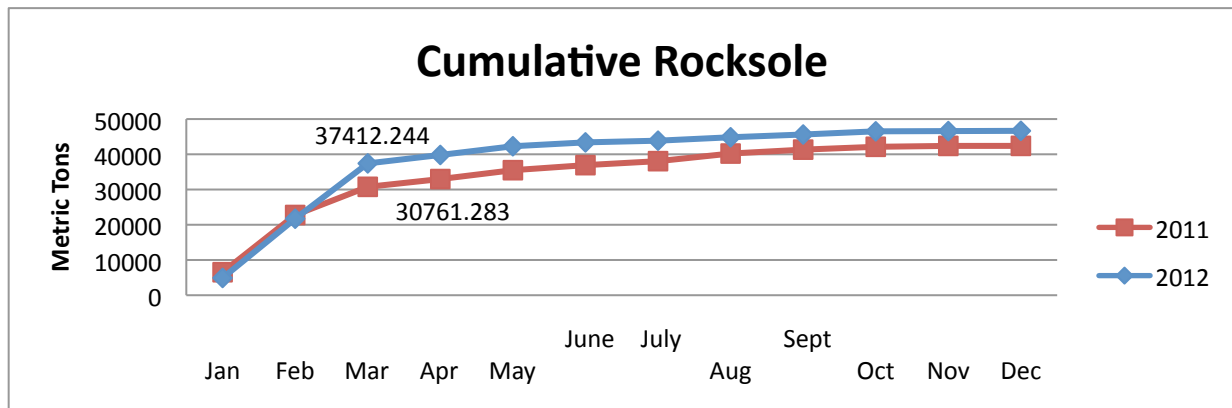
Early in the year, many companies make strategic trades in an effort to maximize their quota portfolio. However, catch rates, bycatch rates, ice conditions, vessel breakdowns, markets, and other variables are unpredictable. A prudent vessel operator balances these unknowns, and maintains quota balances to increase operational flexibility throughout the year.

Underharvesting potentially limiting species early in the year allows maximization of others throughout the remainder of the year.

Previous AKSC reports have described specific real-world examples of how increased flexibility would result in increased opportunities to maximize flatfish harvests, and the analysis largely captures these examples. However, we would like to highlight the following.

The 2012 rock sole fishery featured high target catch and low bycatch rates. As companies reached their target rock sole amounts, vessels began to look for other fisheries. Typically, flatfish vessels move into a yellowfin sole in the early spring after targeting rock sole. However, due to ice conditions, vessels were unable to access traditional yellowfin sole grounds. Some vessels moved to other fisheries with higher incidental rock sole and PSC catch, while some chose to suspend fishing operations rather than risking access to the productive summer and fall yellowfin sole fisheries, and others chose to continue to target rock sole, hoping for low rock sole rates in other fisheries for the remainder of the year.

Later in the spring, the ice receded, and vessels were able to access yellowfin sole grounds. However, as the following table shows, because 2012 environmental conditions resulted in additional rock sole harvested early in the year, captains spent significant time and effort avoiding rock sole the remainder of the year. By the end of March, significantly more rock sole had been harvested in 2012 compared to 2011.



Prior to Amendment 80 implementation, NMFS apportioned 15 percent of yellowfin sole, rock sole, and flathead sole TACs to the non-specified reserve (NSR). As harvest limits for species contributing to the NSR were reached, NMFS could reallocate quota from the NSR to increase

harvest of those species as long as the acceptable biological catch (ABC) for any given species was not exceeded. This structure increased management flexibility to address inseason variability and management constraints. Amendment 80 eliminated this process, instead allocating all yellowfin sole, rock sole, and flathead sole to individual sectors.

While exclusive allocations are useful for tailoring catches to allocations, the rigidity of TAC setting and uncertain catch composition continue to pose challenges to cooperative members attempting to maximize use of their allocations. In addition, market competition within the sector is a barrier to trades both inside the cooperative and across cooperatives, as each cooperative member times its targeting based on its own market choices.

The flexibility measure draws upon the NSR concept and allows Amendment 80 captains some additional operational flexibility to adapt to inseason and annual changes to fishing conditions. The measure uses a simple process for allowing Amendment 80 cooperatives and Community Development Quota (CDQ) groups access to additional yellowfin sole, flathead sole, or rock sole if inseason conditions warrant adjustments to TAC amounts, while at the same time maintaining the aggregate TAC amount for these three species.

In the above example, captains could have adapted to record ice extent by remaining in the rock sole fishery with the understanding that if later season yellowfin sole experienced high rock sole incidental catch rates, allocations among the flatfish fisheries could be adjusted and balanced.

Under this proposed allocation scenario, each cooperative and CDQ group would have access to a portion of the difference between each Amendment 80 flatfish species ABC and TAC. AKSC could essentially trade unallocated quota from one flatfish species for another allocated flatfish species if environmental or market conditions affect preseason fishing plans. By distributing specific trading right percentages to each eligible group, ABCs would not be exceeded. By equally trading one flatfish quota for another, the 2 million mt OY cap would not be exceeded.

In addition to providing increased harvest opportunities, we believe a flexible approach to flatfish harvest will increase opportunities for reducing PSC catch. During the summer months of 2012, vessels in the yellowfin sole fishery saw high cod and rock sole rates. Several captains attempted to avoid rock sole (a potentially limiting allocation at that time, because of early season restrictions discussed above), by targeting arrowtooth flounder, a fishery typically low in rock sole and cod. However, arrowtooth may, at times, be associated with high PSC rates.

Captains were forced to make decisions about whether to target arrowtooth flounder, with potentially high PSC rates, or enter the yellowfin sole fishery, with high rates of limiting rock sole. Luckily, the arrowtooth fishery didn't see high halibut PSC rates, and several vessels spent significant time avoiding rock sole while in the arrowtooth target. Incidentally, in September, rock sole and yellowfin sole separated, and vessels were able to re-enter the yellowfin sole fishery.

If a flexible management approach for flatfish was adopted, captains could make choices to avoid PSC rather than avoiding rock sole (or another flatfish with a constraining allocation).

Interpretation of the 2 million mt OY limit.

The current legislative limit 2 million mt OY limit could be interpreted more broadly, and applied to catch rather than TAC. In practice, BSAI TACs greater than 2.0 million tons would be specified, and NMFS could monitor and enforce a limit on total catch using current management rules. Another option could be to consider applying the 2 million mt OY limit to the Bering Sea only. These changes would likely require the Council to consider possible FMP changes.

Unspecified reserve

At the beginning of each year, NMFS typically reallocates unspecified reserve amounts to species they expect will reach TAC. However, because environmental conditions and fishing patterns change from year to year, prematurely allocating unspecified reserves may be inefficient and reduce harvesting flexibility later in the year. Additionally, increasing reserve amounts could increase flexibility for NMFS managers.

Flexible CDQ harvest

Currently, a captain is required to declare an entire haul as either CDQ or Amendment 80. If a particular allocated species is constraining, captains may choose to forego other species to not risk exceeding a quota. NMFS could account for individual CDQ species within an Amendment 80 haul without creating any additional catch accounting challenges and increasing operational flexibility.

Inter-sector transfers

Because the BSAI is largely allocated among catch share programs and each catch share program provides a high level of catch accounting, it may be possible to allow inter-sector transfers of species such as cod. For years when cod is constraining for Amendment 80 and is available from other sectors, this could create additional harvesting opportunities.

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 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 affects 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 in the process of being implemented. 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.

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 a single fair start date several weeks after the holiday season. Because AKSC vessels are allocated most of their traditional target species and PSC limits, subject to hard caps on these limits, the Council has eliminated many of the competition scenarios the January 20 start date was 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 quotas as species distributions change.

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. This proposal is being considered under the SSL EIS currently under development.

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 2013, 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 participating in businesses which are similar to the business of the other parties, and no party shall have any right by virtue of this Agreement in and to such independent ventures or to the income or profits therefrom, nor shall any party by virtue of this Agreement be subject to any obligations or liabilities arising out of or related to such businesses. The parties agree that their mutual obligations under this Agreement extend only to their groundfish retention activities, and nothing in this Agreement shall be construed as permitting or obligating its parties to collaborate in any other manner.

10. Faxed or Electronic Signatures; Counterparts. This agreement may be executed in any number of counterparts, each of which shall be an original, and all of which, taken together, shall constitute one and the same instrument. Signatures transmitted by facsimile or electronic mail are fully effective for all purposes.

EXECUTED as of December 27, 2010.

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]

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

Jason Anderson
Manager, Alaska Seafood Coop

February 17, 2014

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 (AFC) boats in Bering Sea/Aleutians (BSAI) groundfish fisheries in 2013. 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 in 2011, NMFS Alaska Region staff provided to FIS 2013 data from each of fourteen boats that participated in 2013 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 three cases where there was a very small amount of production in a week without observer data, but all three were consistent with processing happening a day after catch.

Per original agreement, amounts of groundfish required to be discarded after a PSC-type NMFS in-season closure were not included in the Observer tonnage total. In 2013, there were 77 mt of rockfish taken after PSC closures to rougheye in Aleutians, shortraker in BSAI and other rockfish in Aleutians. Additionally, 4,598 mt of Alaska plaice were discarded after its May 15 PSC closure.

It is noted that 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 232,657 mt of production (in round weight) and 275,836 mt of observed groundfish, for a coop retention rate of 84.3%.

Janet Smoker