

North Pacific Fishery Management Council

Current Issues

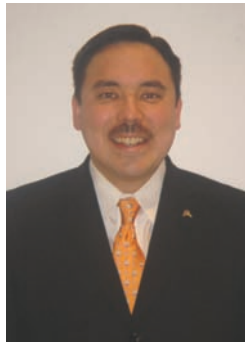
March 2008





Herman Savikko

A Message from the Chairman:



It is my pleasure to introduce this publication that summarizes the topics and issues currently being addressed by the Council. I believe that this synopsis will be a valuable reference document for stakeholders familiar with the Council process, as well as those who have not yet engaged in the process. For each issue, background information is provided along with a status report on upcoming Council action.

The North Pacific Fishery Management Council has a strong record of responsible stewardship using a scientifically-based, transparent, and deliberative process with public input incorporated into decision-making. In February, the Council reaffirmed its commitment to continue to seek ways to enhance stakeholder involvement in the management of our fisheries. This publication was developed to provide stakeholders with key information that is readily available and accessible. I hope you find it useful.

Thank you for taking the time to learn about the issues the Council will be addressing in the near future.

*Eric A. Olson
Council Chairman*

Current Issues

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AFSC

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AFSC

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USCG

Common Acronyms

ABC	Acceptable Biological Catch	IFQ	Individual Fishing Quotas
AFA	American Fisheries Act	IPHC	International Pacific Halibut Commission
AP	Advisory Panel	IRFA	Initial Regulatory Flexibility Analysis
ADF&G	Alaska Department of Fish and Game	IR/IU	Improved Retention/Improved Utilization
AFSC	Alaska Fisheries Science Center	LAMP	Local Area Management Plan
AMEF	Alaska Marine Ecosystem Forum	LAPP	Limited Access Privilege Program
APICDA	Aleutian and Pribilof Island Community Development Association	LLP	License Limitation Program
BSAI	Bering Sea and Aleutian Islands	MSA	Magnuson-Stevens Fishery Conservation and Management Act
CDQ	Community Development Quota	MPA	Marine Protection Area
CP	Catcher Processor	MSST	Minimum Stock Size Threshold
CV	Catcher Vessel	MSY	Maximum Sustainable Yield
EA	Environmental Assessment	mt	Metric Ton
EBS	Eastern Bering Sea	NEPA	National Environmental Protection Act
EFH	Essential Fish Habitat	nm	Nautical Miles
EIS	Environmental Impact Statement	NMFS	National Marine Fisheries Service
EPIRB	Emergency Position Indicating Radio Beacon	NOAA	National Oceanic and Atmospheric Administration
ESA	Endangered Species Act	NPFMC	North Pacific Fishery Management Council
F/V	Fishing Vessel	ODFW	Oregon Department of Fish and Wildlife
FEP	Fishery Ecosystem Plan	OFL	Overfishing Level
FR	Federal Register	POP	Pacific ocean perch
FMP	Fishery Management Plan	PSMFC	Pacific States Marine Fisheries Commission
GHL	Guideline Harvest Level	PSC	Prohibited species catch
GOA	Gulf of Alaska	QS	Quota Share
GRS	Groundfish Retention Standard	RIR	Regulatory Impact Review
HAPC	Habitat Areas of Particular Concern	SAFE	Stock Assessment and Fishery Evaluation
		SFA	Sustainable Fisheries Act
		SHARC	Subsistence Halibut Registration Certificate
		SSC	Scientific and Statistical Committee
		TAC	Total allowable catch
		USCG	United States Coast Guard
		USFWS	United States Fish and Wildlife Service
		VMS	Vessel Monitoring System
		WDFW	Washington Department of Fish and Wildlife





Diana Evans

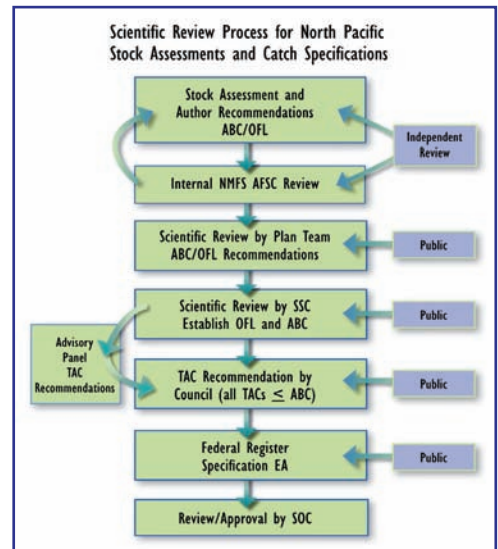
Groundfish Catch Limits

A CORNERSTONE FOR SUSTAINABILITY

Strict annual catch limits for every target fishery provide the most basic and effective management tool to ensure sustainable fisheries. In the North Pacific, a rigorous process in place for over 30 years ensures that annual quotas are set at conservative, sustainable levels.

SCIENTIFIC LIMITS

Three reference points are used for management of groundfish fisheries in the North Pacific. The **overfishing level (OFL)** is the harvest limit which should never be exceeded. It is based on the fishing mortality rate associated with producing the maximum sustainable yield on a continuing basis. The **acceptable biological catch (ABC)** is set lower than the OFL, as the annual sustainable harvest limit. The buffer between these reference points allows for uncertainty in single species stock assessments, ecosystem considerations, and operational management of the fishery. The **total allowable catch (TAC)** is the annual harvest limit that incorporates social and economic considerations. The FMP prescribes that TAC may equal but never exceed ABC, which is set lower than OFL. The sum of TACs for all groundfish stocks must also remain within the optimum yield range defined in the FMP. In the BSAI, the upper limit of the range is 2 million mt, which can be constraining. TAC may be set lower than ABC for a variety of reasons, such as to remain under the 2 million mt optimum yield limit; to increase a rebuilding rate or address other conservation issues; to limit incidental bycatch, for example of halibut; or to account for state water removals. Fisheries are managed in-season to achieve the TACs without exceeding the ABC or OFL.



Flow chart depicting the scientific review process for stock assessments and establishment of catch specifications, where $TAC \leq ABC < OFL$.

The reference points and catch limits are specified annually through an established process. The annual process of determining OFL and ABC specifications begins with the assignment of each stock to one of six “tiers” based on the availability of information about that stock. Stocks in Tier 1 have the most information, and those in Tier 6, the least. Application of a control rule for each tier prescribes the resulting OFL and ABC for each stock. For many groundfish stocks, the estimate of $F_{40\%}$ is used as a surrogate for F_{ABC} . $F_{40\%}$ is the fishing mortality rate at which the spawning biomass per recruit is reduced to 40% of its value in the equivalent unfished stock. The control rules for Tiers 1-3 also provide for automatic rebuilding, because if a stock falls below target biomass levels, ABC and OFL are drastically reduced.



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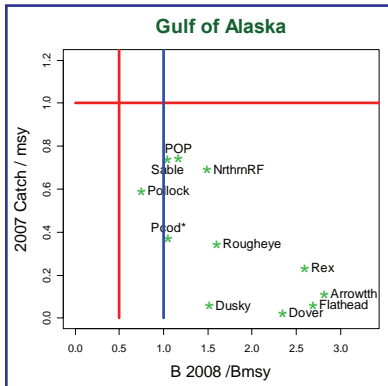
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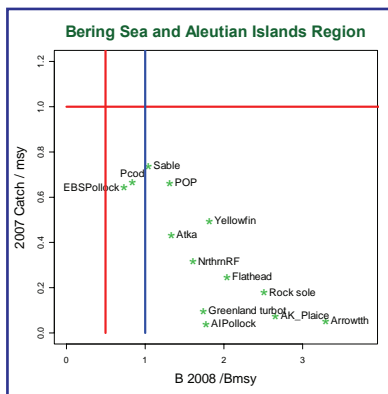
Goodman, D., Mangel, M., Parkes, G., Quinn, T., Restrepo, V., Smith, T., and K. Stokes. 2002. Scientific Review of the Harvest Strategy Currently Used in the BSAI and GOA Groundfish Fishery Management Plans. www.fakr.noaa.gov/npfmc/misc_pub/f40review1102.pdf

FMP References

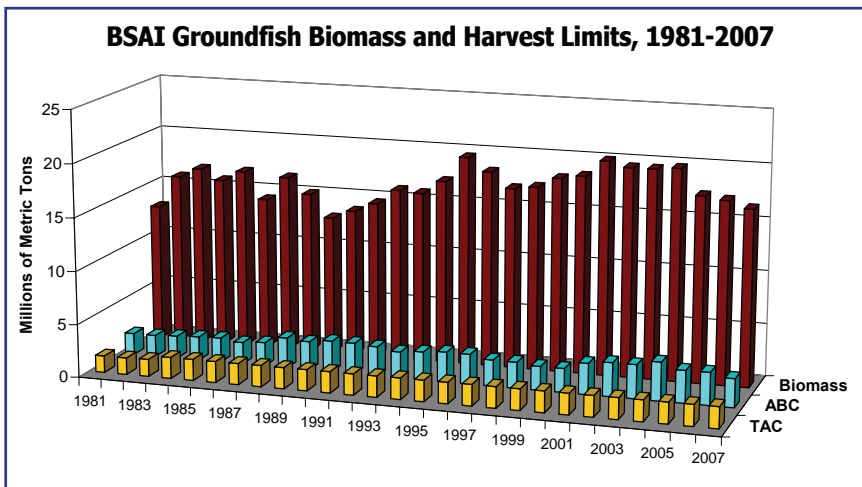
Forage fish category: BSAI Groundfish FMP Amendment 56, GOA Groundfish FMP Amendment 56; 64 FR 10952, implemented January 27, 1999.



Status of modeled GOA and BSAI groundfish stocks, relative to overfished and overfishing thresholds (indicated by red lines). The blue line indicates the target biomass, B_{MSY} .



Estimates of biomass, acceptable biological catch (ABC), and total allowable catch (TAC), in millions of tons, for groundfish in the BSAI from 1981-2007.



Scientists write an assessment of the status of each stock (or group of stocks), and include alternate model simulations and tier assignments to arrive at a recommendation for OFLs and ABCs. The Groundfish Plan Teams compile these assessments into a Stock Assessment and Fishery Evaluation (SAFE) report, develop their own recommendations (which may or may not agree with the stock assessment author), and present this information to the Council and its Scientific and Statistical Committee (SSC) and Advisory Panel (AP). The SSC is responsible for setting the Council's OFL and ABC limits, using the SAFE reports and Plan Team recommendations. The SSC retains the flexibility to adjust ABC and OFL values from the control rule, based on factors such as multispecies interactions and ecosystem considerations. The Council then sets the TAC levels at or below the ABC levels, incorporating recommendations from the Advisory Panel and public testimony.

POSITIVE RESULTS

In 2002, the Council commissioned an independent review of the basic exploitation strategies by a panel of internationally recognized scientists. The panel concluded that in a single-species/target-stock context, the TAC-setting process employed by the Council is a very conservative one, at least for Tiers 1 through 5 (no reliable estimates of biomass or natural mortality are available for stocks in Tier 6, and OFL and ABC are based on catch history), and the in-season monitoring and management system is adequate for implementing the TACs with little risk of exceeding them. In addition to this panel review, many of the groundfish stocks' harvest strategies have been independently reviewed by the Center for Independent Experts.

Annual catch limits have resulted in abundant fish stocks and sustainable fisheries. No groundfish stock is overfished or undergoing overfishing. Further, most stocks are well above target biomass levels (shown in the figure as B_{MSY} , the biomass level that produces maximum sustainable yield).

ON THE HORIZON

The Council and its SSC will review a pending proposed rule on national guidelines for annual catch limits, which is expected to be published in early 2008. Although the Magnuson-Stevens Act was reauthorized in 2007 to end overfishing by using the North Pacific annual catch limit specification process as a model, changes to the current specification process may be required.



SPECIES CATEGORIES DETERMINE MANAGEMENT STRATEGY

The GOA and BSAI Groundfish Fishery Management Plans (FMPs) define five categories of species, with different management strategies for each category. Species in all but the ‘target’ category are caught incidentally in directed fisheries for groundfish species.

- **Target species** are commercially important groundfish species for which a specific total allowable catch (TAC) is established annually, for individual species or species groups.
- **Prohibited species** in the FMP include several species of crabs, Pacific halibut, Pacific herring, steelhead trout, and the five species of Pacific salmon. As these are directly targeted in other domestic fisheries, they must be returned to the sea with a minimum of injury when caught in groundfish fisheries. In some cases, the FMP establishes catch limits for these species, such that once the limit is reached, directed groundfish fisheries in which the species is caught as bycatch are closed.



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The remaining species categories are those typically addressed under ‘non-target species’ management.

- The **other species** category includes species that are not currently commercially important, and which are not generally targeted by the fisheries. The assemblage includes sharks, sculpins, octopi, squids (in the GOA) and skates (in the BSAI). An aggregate TAC is set for this species category in each FMP area.
- The **forage fish** category includes a number of species that play a central role in the North Pacific Ocean food chain, and are consumed by a wide variety of fish, marine mammals, and seabirds. This category includes all species in the families Osmeridae, Bathylagidae, Myctophidae, Ammodytidae, Trichodontidae, Pholidae, Stichaeidae, Gonostomidae, and euphausiid shrimps. This category was created in the FMP in 1998, when directed fishing was prohibited for these species, as a recognition of their importance in the food web. A small amount of forage fish caught incidentally in other groundfish fisheries may be retained, and typically is processed into fishmeal. The forage fish incidental catch consists primarily of osmerids (capelin, eulachon, other smelts). Collectively, forage fish form only a small part of the groundfish total catch, typically comprising less than 0.1 percent of the directed harvests.

For More Information

Non-target species information on Council webpage, www.fakr.noaa.gov/npfmc/current_issues/non_target/non_target.htm

Magnuson-Stevens Act mandates on the use of annual catch limits and accountability measures to end overfishing, http://www.nmfs.noaa.gov/msa2007/ACL_scoping_3-2-07_FINAL.pdf

FMP References

Catch specifications for GOA ‘other species’ complex: GOA Groundfish Amendment 79; Council decision expected 2008.

- The **nonspecified species** category consists of all species not listed in the four groups above, including invertebrates. None of these species are managed. However, catches of some of these species in the commercial fishery are recorded by observers, as are catches during survey cruises.



Jay Orr, NMFS

REVISING MANAGEMENT OF 'OTHER SPECIES'

The 'other species' categories in the BSAI and GOA aggregate very different groups of animals under a common quota. Concerns that a species or species group could be disproportionately exploited under the aggregate TAC have resulted in a proposal to revise how these groups are managed. The 'other species' category includes species with diverse life histories, and in many cases little is known about their population dynamics and structure. Species that are long-lived and have low reproductive potential (sharks and skates) are particularly vulnerable to depletion, because it takes them longer to rebound from natural and fishing mortality. A lack of life history data and fishing data hampers assessments of stock status and bycatch effects.

The Council has initiated a stepwise process for addressing this issue. In 2005, skates were removed from the GOA 'other species' assemblage and are managed under separate TACs for big, longnose, and 'other' skates. In 2006, the TAC for the GOA other species assemblage was revised from an inflexible formula (5% of the combined TACs of all species not in the 'other species' complex) to allow the Council to set a lower TAC if appropriate. In 2008, the Council is scheduled to amend the GOA Groundfish FMP to set an overfishing level and acceptable biological catch for this complex, which would mirror their treatment in the BSAI FMP. In addition, the Council is also considering how to prioritize breaking out the eight remaining groups in the 'other species' categories, under the two FMPs. It has been proposed to move squid into the forage fish category, and move

octopus either into the forage fish category or to defer its management to the State of Alaska. Additionally, the Council is deliberating whether to add grenadiers to the TAC specification process in the GOA. Some of these analyses may be ready by the end of 2008.

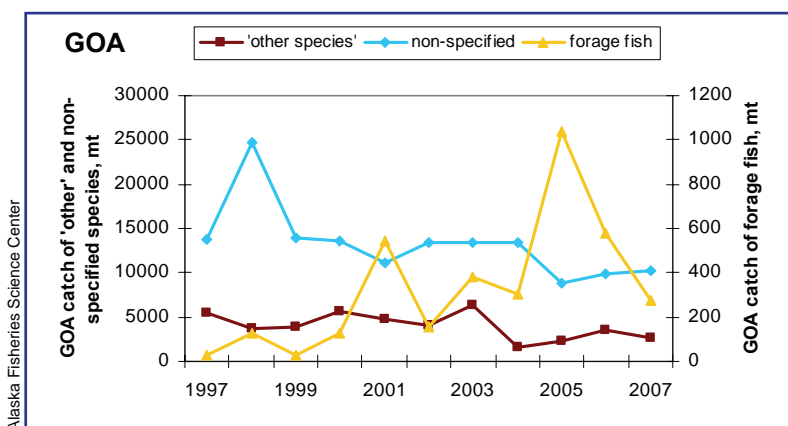
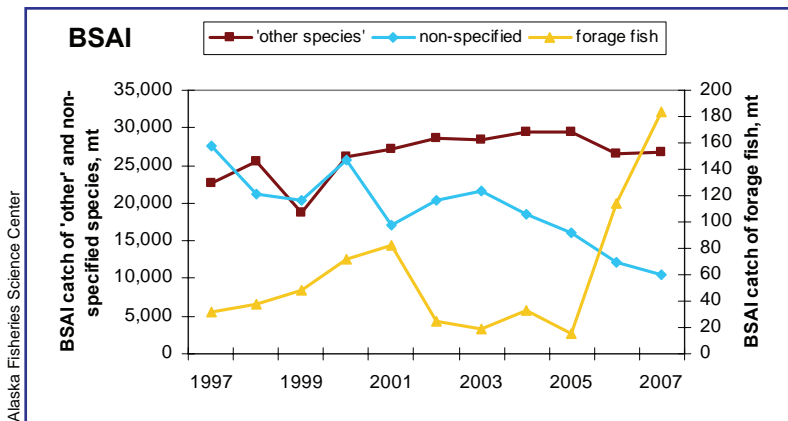
ON THE HORIZON

The Council's Non-Target Species Committee is active both in the development of the 'other species' management actions, as described above, and in more comprehensive approaches to address management of non-target species. The more comprehensive process is on hold pending rulemaking on annual catch limits and accountability measures. As currently proposed, the process would use data quality and species vulnerability (to overfishing) to 'sort' complexes, groups, and species to prioritize management strategies, using two categories: 'targets', or those species intended to be harvested; and 'non-targets', or those incidentally-caught. The management goal of target species categories would be to optimize sustainable yields, while the goal of non-target management would be to protect them from fishing effects.



Gordon Kruse

'Other species', forage fish, and non-specified species catch in BSAI and GOA groundfish fisheries, in mt, 1997-2007.





Marla Shawback

FEDERAL AND STATE PARTNERSHIP

The BSAI King and Tanner Crab Fishery Management Plan (FMP) establishes a State and Federal cooperative management regime that largely defers crab fisheries management to the State of Alaska, with Federal oversight. The FMP defines three categories of management measures:

1. those that are fixed in the FMP and require a Federal FMP amendment to change;
2. those that are framework-type measures that the State can change following criteria set out in the FMP; and
3. those measures that are neither rigidly specified nor frameworked in the FMP and are at the discretion of the State.

In the GOA, crab fisheries are managed solely by the State of Alaska. For most regions in the GOA, actual abundance estimates are limited and commercial fishing has been closed.

CATCH SPECIFICATIONS FOR BSAI CRAB FISHERIES

Specifying **overfishing levels** (OFLs) for each fishery is a Federal responsibility. The Magnuson-Stevens Fishery Conservation and Management Act requires each FMP to specify criteria for determining when a fishery is overfished or when overfishing is occurring. The Council and NOAA Fisheries annually evaluate total catch levels relative to OFLs to determine if stocks are overfished or are approaching an overfished condition. If either of these occurs, the Council must immediately end overfishing and develop an FMP amendment to rebuild the stock within two years.

The State is responsible for setting allowable harvest levels for the crab fisheries, following guidelines in the crab FMP. Catch levels established by the State must be in compliance with OFLs established in the FMP to prevent overfishing. For those stocks included under the Crab Rationalization Program (see below), a **total allowable catch** (TAC), expressed in pounds of crab, is specified. For other stocks, a **guideline harvest level** (GHL) is the preseason estimated level of allowable harvest which will not jeopardize the sustained yield of the stock. The GHL is expressed as a range, to allow the State to make in-season management decisions based on current data obtained from the fishery.

ALLOCATION OF CATCH LIMITS

The Crab Rationalization Program allocates BSAI crab resources among harvesters, processors, and coastal communities. 100% of the TAC is allocated as harvest shares, and processor quota shares are also issued. Crab fishing under the program began on August 15, 2005. Several crab fisheries under the FMP are excluded from the Program, including the Norton Sound red king crab fishery, which is operated under a “superexclusive” permit program intended to protect the interests of local, small-vessel



Mark Fina



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For More Information

Stock Assessment and Fishery Evaluation Report for the King and Tanner Crab Fisheries, 2007, www.fakr.noaa.gov/npfmc/SAFE/2007/CRABSAFE07.pdf

Environmental Assessment for proposed Amendment 24, to revise overfishing definitions, 2007. NPFMC, www.fakr.noaa.gov/npfmc/current_issues/crab/KTC24907.pdf

FMP References

Fishery Management Plan for Bering Sea / Aleutian Islands King and Tanner Crabs, www.fakr.noaa.gov/npfmc/fmp/crab/CRABFMP2004.pdf

Revised overfishing definitions: proposed Amendment 24 to the BSAI Crab FMP.

participants. An LLP license is required to participate in the FMP crab fisheries excluded from the Program.

The Community Development Quota (CDQ) program receives 10% of the TAC for all fisheries in the crab rationalization program except Western Aleutian stocks, and 7.5% of the Norton Sound fishery. Sixty-five communities located along the Bering Sea are eligible for the CDQ program, and these communities are aligned into six CDQ groups. 10% of the Western Aleutian Island golden king crab fishery is allocated to an entity representing the community of Adak. This allocation is managed similar to allocations made under the CDQ program.

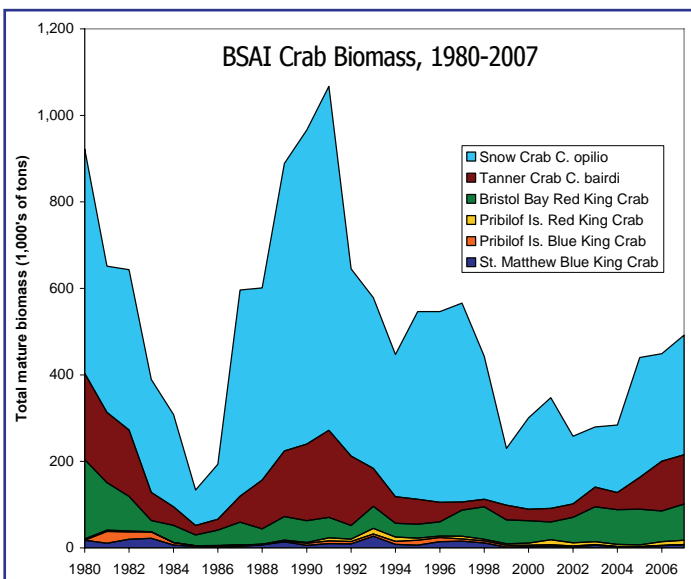
2007/2008 TACs for major crab fisheries

Bristol Bay red king crab:	20,383,000 lbs
Western Aleutian Islands (Adak) golden king crab (west of 174°W):	2,700,000 lbs
Eastern Aleutian Islands (Dutch Harbor) golden king crab (east of 174°W):	3,000,000 lbs
Bering Sea snow crab:	63,034,000 lbs
Bering Sea Tanner crab (east):	3,445,000 lbs
Bering Sea Tanner crab (west):	2,176,000 lbs

REVISED OVERFISHING DEFINITIONS

In December 2007, the Council took action under amendment 24 to revise the OFLs specified in the crab FMP. The amendment establishes a framework OFL tier system that provides a mechanism to continually improve the status determination criteria as new information becomes available. Revised OFLs use alternative biological reference points depending on the availability of and uncertainty about stock assessment data for each crab stock. Under the new procedure, the Council's Crab Plan Team and Scientific and Statistical Committee will review the stock assessments, including models and tier levels (which determine how OFL is calculated) for each stock. The Council will annually review crab stock OFLs. Overfishing is determined by calculating the total catch removals from all fishing sources compared to the calculated OFL for the same time period. Implementation of the amendment is awaiting approval from the Secretary of Commerce.

The amendment will also remove twelve state-managed stocks from the FMP, which will now be the sole responsibility of the State of Alaska. The stocks either have no directed fishery, a limited incidental or exploratory fishery, or the majority of catch occurs in State waters. With the removal of these stocks, all remaining crab stocks in the FMP will be subject either to the Crab Rationalization Program or the Norton Sound permit program.



ON THE HORIZON

The 2006 revision of the Magnuson-Stevens Act requires specification of annual catch limits for each Federal fishery. While the Council's recent crab catch specifications amendment should comply with annual catch limit requirements, there may be some technical revisions required once specific guidance is published.



Mark Fina



Mark Fina

REBUILDING DEPLETED STOCKS

The Sustainable Fisheries Act of 1996 required that overfished stocks be rebuilt as soon as possible, but no longer than in ten years, except under special circumstances. If the Secretary of Commerce determines that a fishery is overfished or approaching an overfished condition, the responsible fishery management council must revise the management program to stop overfishing, if it is occurring, and rebuild the stocks. Since 1996, there have been four stocks in the North Pacific that were deemed 'overfished', and rebuilding plans were developed and implemented for each. All four stocks were Bering Sea/Aleutian Island crab stocks. Environmental conditions for these stocks have resulted in sequential years of poor recruitment and contributed, with other factors, to the decline in abundance.



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A stock under the BSAI King and Tanner Crab fishery management plan (FMP) is deemed overfished if the spawning biomass is below a minimum stock size threshold (MSST), which is defined as 50% of the target biomass level (B_{MSY}). Currently, the rebuilding program for each stock includes adjustments to the State of Alaska harvest strategy, bycatch controls, and habitat protection measures. Stocks are considered rebuilt if the estimate of biomass is above the B_{MSY} level for two consecutive years.

BSAI Tanner Crab. A rebuilding program for Tanner crab (*Chionocetes bairdi*) was adopted by the Council in October 1999. The rebuilding program established a very conservative harvest strategy (including low exploitation rates and threshold female biomass levels), and reduced crab bycatch limits for the trawl fisheries. It was projected that the stock had a 50% probability of rebuilding to the B_{MSY} level in 10 years. The stock has now met the B_{MSY} threshold (189.6 million pounds) and is considered fully rebuilt.

For More Information

Stock Assessment and Fishery Evaluation Report for the King and Tanner Crab Fisheries, 2007, www.fakr.noaa.gov/npfmc/SAFE/2007/CRABSAFE07.pdf

FMP References

BSAI Tanner Crab: BSAI Crab Amd 11; 65 FR 38216, implemented June 20, 2000.

BSAI Snow Crab: BSAI Crab Amd 14; 66 FR 742, implemented January 4, 2001.

St Matthew Blue King Crab: BSAI Crab Amd 15; 65 FR 76175, implemented December 6, 2000.

Pribilof Blue King Crab: BSAI Crab Amd 17; 69 FR 17651, implemented April 5, 2004.

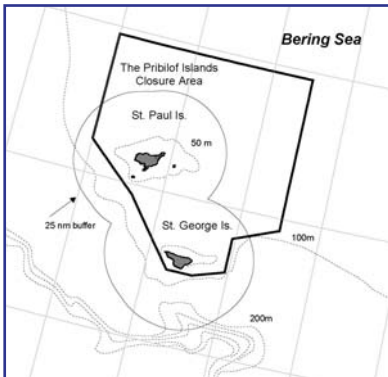
BSAI Snow Crab. A rebuilding program for snow crab (*C. opilio*) was adopted by the Council in June 2000. Rebuilding measures included very low exploitation rates, stair-stepped based on spawning biomass; minimum thresholds for establishing guideline harvest levels (GHLs); pot gear modifications to provide escapement of female and juvenile crabs; and a fishery closure when the stock falls below 50% MSST. Under the rebuilding plan, the stock had a 50% probability of rebuilding to the B_{MSY} level (921.6 million pounds) in 7 to 10 years. Estimated total mature biomass has been oscillating slightly above and below the MSST threshold since 1999. Mature biomass increased in 2007 relative to 2006 and remains above MSST for the third consecutive year but still remains below B_{MSY} .



Herman Savikko



All trawling is prohibited within the Pribilof Islands Habitat Conservation Area, to protect blue king crab habitat, as well as to reduce the bycatch of juvenile crab and halibut.



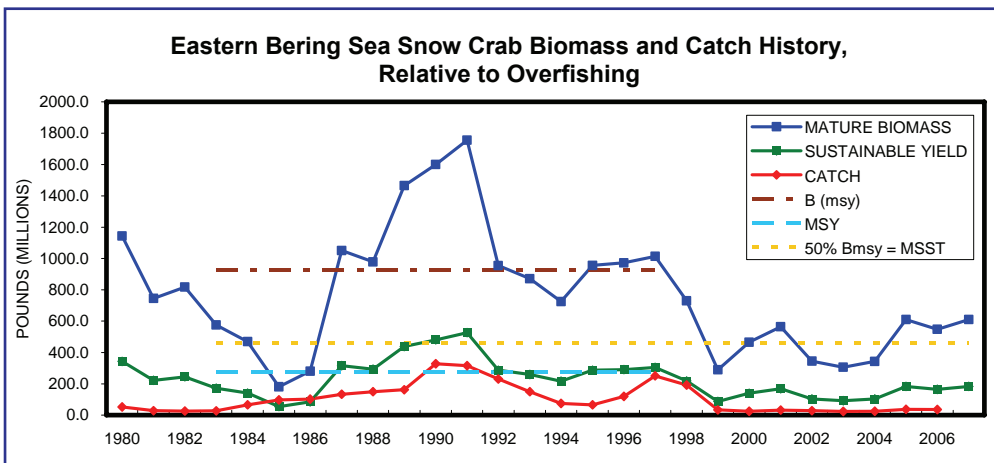
St. Matthew Blue King Crab. A rebuilding program for St. Matthew blue king crab was adopted by the Council in June 2000. The harvest strategy includes a conservative harvest rate based on biomass, a minimum stock threshold for fishery opening, minimum GHL requirements, and a maximum legal male harvest rate. The stock has not met the threshold measures included in the harvest strategy and has been closed to fishing since 1999. Rebuilding measures also included pot gear modifications to provide escapement of female and juvenile crabs, and closure of State waters around the island to all groundfish fishing to protect vulnerable egg-bearing female blue king crab that occupied these areas. Under the rebuilding plan, the stock had a 50% probability of rebuilding to the B_{MSY} level (22.0 million pounds) in 6 years. In 2007, total mature biomass was above the MSST for the second year in a row and trawl survey results indicated increased recruitment of smaller size classes of crabs. There continues to be uncertainty about the abundance of egg-bearing females for this stock as the trawl survey does not adequately measure inshore, rocky terrain, although a 2007 pot survey indicated an increase in these mature females from the previous 2004 survey.

Pribilof Blue King Crab. A rebuilding program for Pribilof blue king crab was adopted by the Council in October 2003. Bycatch controls and habitat protection measures for groundfish and crab fleets had already been implemented around the Pribilof Islands. Under the rebuilding plan, fishing is prohibited until the stock is completely rebuilt to B_{MSY} (13.2 million pounds). In addition, once rebuilt, the plan establishes an extremely conservative harvest strategy and a delayed opening for the second year the stock is above a minimum threshold. Under the rebuilding plan, the stock was projected to rebuild to the B_{MSY} level in 9-10 years, at a 50% probability. The stock continues to be at very low stock size, and little or no recruitment is apparent.

ON THE HORIZON

In December 2007, the Council took final action to revise overfishing definitions for all FMP crab stocks (Amendment 24). The Council's preferred alternative is a proposed tier system structured upon the availability of information for a given

stock. Once a stock is assigned to its appropriate tier, the tier determines how the OFL is calculated. The new OFL setting process is awaiting approval by the Secretary of Commerce, and may begin as soon as Spring 2008. Once the new overfishing definitions are in place, the rebuilding plans will need to be reconsidered in light of new information and criteria for stock recovery.





A SMALL FISHERY

The Alaska weathervane scallop (*Patinopecten caurinus*) fishery started in 1967 when two vessels harvested weathervane scallops from fishing grounds east of Kodiak Island. From its inception through early 1993, the scallop fishery was managed in-season without a defined fishery management plan. Closed waters and seasons were established to protect crabs and crab habitat. When catches declined in one bed, the few vessels participating would move to new areas.

Catch has fluctuated somewhat since the inception of the fishery. Catches in the early years were high, reaching a peak of 1.8 million pounds of shucked scallop meats in 1969. More recent catches have been in the order of 500,000 pounds per year, with ex-vessel prices ranging from \$5.25/lb in 2002 to \$8.00/lb in 2006.



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FEDERAL MANAGEMENT NEEDED

In the early 1990s, the Alaska weathervane scallop fishery expanded rapidly, with an influx of boats from the East Coast of the United States. Concerns about overharvest of scallops and bycatch of other commercially important species, such as crabs, prompted the Commissioner of the Alaska Department of Fish and Game (ADF&G) to designate the weathervane scallop fishery a high-impact emerging fishery in 1993. This designation required ADF&G to close the fishery and implement an interim management plan prior to reopening. The interim management plan included a provision for 100% onboard observer coverage to monitor crab bycatch and to collect biological and fishery data.

From 1967 until early 1995, all vessels participating in the Alaska scallop fishery were registered under the laws of the State of Alaska. Scallop fishing in both State and Federal waters was managed under state jurisdiction. In January 1995, the captain of a scallop fishing vessel returned his 1995 scallop interim use permit card to the State of Alaska Commercial Fisheries Entry Commission in Juneau and the F/V Mr Big proceeded to fish scallops in Alaska Federal waters with total disregard to harvest limits, observer coverage, and other management measures and regulations. In response to this unanticipated event, Federal waters were closed to scallop fishing by emergency rule to control unregulated fishing until a fishery management plan (FMP) could be implemented to close the fishery.

The Alaska Scallop FMP, which was approved on July 26, 1995, established a 1-year interim closure of federal waters to scallop fishing to prevent uncontrolled fishing. The fishery was reopened with Amendment 1 on August 1, 1996.

The scallop fishery is jointly managed by the National Marine Fisheries Service and ADF&G under the FMP. Management measures in the FMP fall into two categories: Category 1 measures are those delegated to the State for implementation, while Category 2 measures are limited access management measures and other measures which are fixed in the FMP, implemented by Federal regulation, and require an FMP amendment to change.

For More Information

Scallop Stock Assessment and Fishery Evaluation report,
www.fakr.noaa.gov/npfmc/SAFE/ScallopSAFE2008.pdf

FMP References

Fishery Management Plan for the Scallop Fishery off Alaska,
www.fakr.noaa.gov/npfmc/SAFE/ScallopSAFE2007.pdf



LIMITED ENTRY

In 1997, the Council adopted Amendment 2, a vessel moratorium under which 18 vessels qualified for Federal moratorium permits to fish weathervane scallops in Federal waters off Alaska. In 1999 the Federal moratorium program was replaced by a more restrictive License Limitation Program (Amendment 4). The Council created a total of 9 licenses with no area endorsements; each vessel is permitted to fish statewide. However, vessels that fished exclusively in the Cook Inlet Registration Area, where a single 6-foot dredge was the legal gear type during the qualifying period, were limited to using the same gear when fishing outside Cook Inlet. In 2005, the gear restriction was later modified under Amendment 10 to allow these vessels to fish 2 dredges with a combined maximum width of 20 feet.

FLEET FORMS VOLUNTARY COOPERATIVE

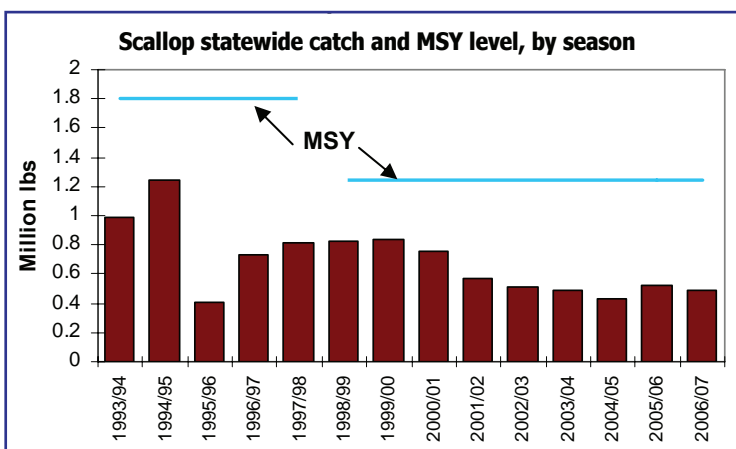
The License Limitation Program established a small closed class of license holders. In 2000, owners of 6 of the 9 licenses formed the North Pacific Scallop Cooperative under authority of the Fishermen's Cooperative Marketing Act. The cooperative regulates individual vessel allocations within the catch limits and crab bycatch caps, under the terms of their cooperative contract. Non-cooperative vessels are not bound by any contract provisions. The cooperative does not receive an exclusive allocation of the scallop harvest. Some owners opted to remove their boats from the fishery and arranged for their shares to be caught by other members of the cooperative.

OVERFISHING DEFINITIONS

The Magnuson-Stevens Act requires FMPs to establish an overfishing level for each stock. Overfishing is a level of fishing mortality that jeopardizes the capacity of a stock to produce maximum sustainable yield (MSY) on a continuing basis. Amendment 6 to the scallop FMP established the statewide MSY for weathervane scallops at 1.24 million lbs of shucked meats, based on the average catch from 1990-1997, excluding 1995. Optimum Yield was defined as 0-1.24 million lbs, and the overfishing control rule was defined as a fishing rate in excess of the natural mortality rate, which has been estimated at 12% per year statewide. The fishery is managed conservatively, with harvest levels well below MSY.

ON THE HORIZON

The Magnuson-Stevens Act was reauthorized in 2007 to require annual catch limits for all managed stocks. NMFS is preparing to issue a proposed rule on guidelines for annual catch limits, which is expected to be published in 2008. Because the scallop fishery is managed by ADF&G using guideline harvest ranges, rather than annual catch limits using a process involving peer review by the Council's Scientific and Statistical Committee, changes to the current specification process may be required.





Jeff Field

IDENTIFY AND PROTECT FISH HABITAT

The Magnuson-Stevens Act was amended in 1996 by the Sustainable Fisheries Act (SFA), which required each regional fishery management council to identify and protect essential fish habitat (EFH). EFH is defined in the Act as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The Councils were required by the SFA to amend their fishery management plans (FMPs) to:

- identify and describe EFH for all managed species;
- describe adverse impacts to EFH from fishing and non-fishing activities;
- recommend conservation and enhancement measures to protect and restore habitat; and
- recommend measures that minimize, to the extent practicable, adverse affects on EFH caused by fishing.

The North Pacific Council completed preparation of EFH amendments for each of its five FMPs in 1998. Following a legal challenge in 2000 on the sufficiency of these amendments to meet the requirements of the National Environmental Policy Act, the U.S. District Court required preparation of a revised EIS analysis.



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NEW MARINE PROTECTED AREAS ESTABLISHED

A 2,500+ page environmental impact statement was prepared to evaluate the total impacts of fishing on EFH, and evaluate alternatives to describe and conserve EFH from fishing impacts. The Council revised existing descriptions of EFH by incorporating the most recent scientific information and improved mapping. EFH is described as habitats within a general distribution for a life stage of a species, based on GIS data analysis. The Council also adopted a new approach for identifying habitat areas of particular concern as specific sites within EFH, thereby focusing conservation efforts on particular areas.

Although the analysis concluded that fisheries do have long term effects on habitat, these impacts were determined to be minimal and not detrimental to fish populations or their habitats. Nevertheless, in February 2005, the Council adopted several new marine protected areas (MPAs) to conserve EFH.

To minimize the effects of fishing on EFH, and more specifically to address concerns about the impacts of bottom trawling on benthic habitat (particularly on coral communities) in the Aleutian Islands, the Council took action to prohibit all bottom trawling in the Aleutians, except in small discrete “open” areas. Over 95% of the management area is closed to bottom trawling (277,100 nm²). Additionally, six areas with especially high density coral and sponge habitat are closed to all bottom-contact fishing gear (longlines, pots, trawls). These “coral garden” areas, which total 110 nm², are essentially marine reserves. To improve monitoring and enforcement of the Aleutian Island closures, a vessel monitoring system is required for all fishing vessels in the Aleutian management area.

In the Gulf of Alaska, bottom trawling for all groundfish species is also prohibited in 10 designated areas along the continental shelf. These MPAs, which are thought to contain high relief bottom and coral communities, total 2,086 nm².

For More Information

Witherell, D., and D. Woodby. 2005. Application of marine protected areas for sustainable production and marine biodiversity off Alaska. Marine Fisheries Review 67(1)1-27. spo.nmfs.noaa.gov/mfr671/mfr6711.pdf

FMP References

Revised EFH amendments: BSAI Groundfish Amendment 78, GOA Groundfish Amendment 73, BSAI Crab Amendment 16, Scallop Amendment 9, Salmon Amendment 7; 71 FR 36694, effective date June 28, 2006.

Bering Sea Habitat Conservation: proposed BSAI Groundfish Amendment 89.

RECENT FOCUS ON THE BERING SEA

In June 2007, the Council adopted precautionary measures to conserve benthic fish habitat in the Bering Sea by “freezing the footprint” of bottom trawling by limiting trawl effort only to those areas more recently trawled. If approved by the Secretary of Commerce (a decision is expected by mid-2008), the new measures would prohibit bottom trawling in a deep slope and basin area (47,000 nm²) and the Northern Bering Sea Research Area that includes the shelf waters to the north of St. Matthew Island (85,000 nm²).

The entire Northern Bering Sea Research Area will be closed to bottom trawling while a research plan is developed. The research plan may include an adaptive management design, which could allow bottom trawling in designated areas to evaluate effects, or research using other experimental fishing approaches. Specific areas within the Northern Bering Sea Research Area, however, will always remain closed to bottom trawling. The MPAs were established to conserve blue king crab habitat and other EFH where subsistence harvesting and small-scale local fisheries take place, and include the nearshore areas of Nunivak Island and Kuskokwim Bay, and around St. Lawrence and St. Matthew Islands. The research plan may also identify additional protection measures for blue king and snow crab, marine mammals, ESA-listed species, and subsistence needs for western Alaska communities in nearshore areas.

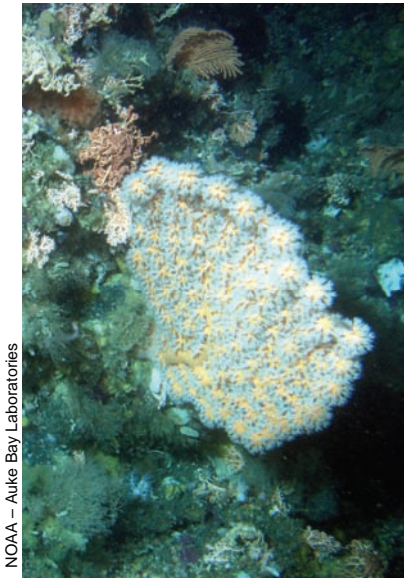
ON THE HORIZON

Gear modification requirements. Modifications to trawl sweeps (discs that would raise the sweeps off the seabed) were considered in the Bering Sea analysis, but it

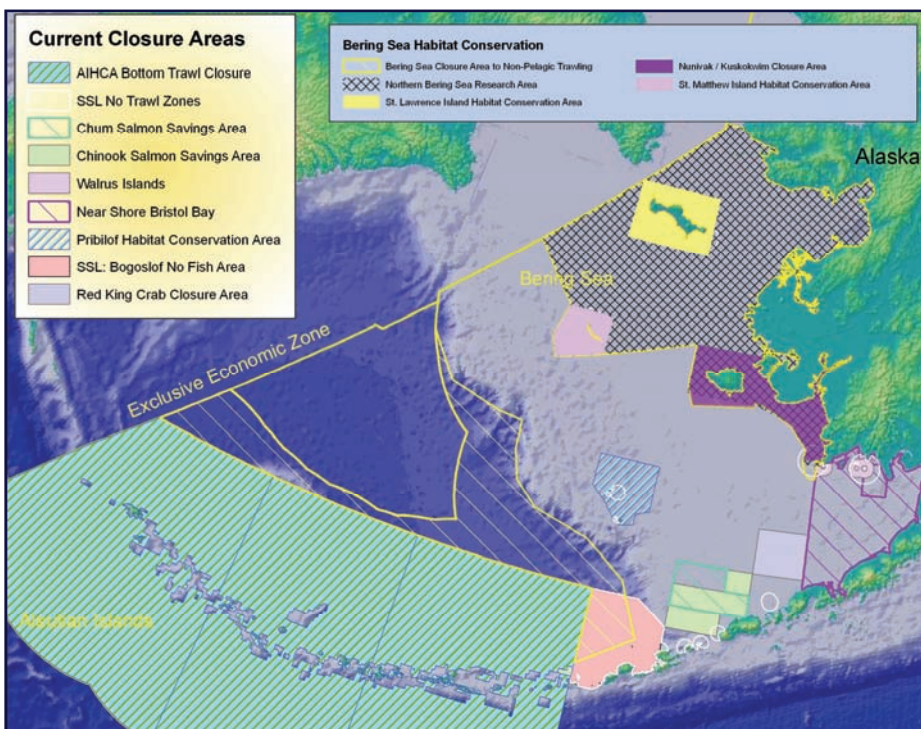
became apparent that additional field testing of the gear was necessary before these modifications could be regulated. Nevertheless, the Council endorsed trawl industry efforts to continue development of workable trawl sweep modifications.

Northern Bering Sea Research plan. Should the Bering Sea habitat amendment be approved, a research plan may be drafted in the coming year.

5-year EFH review. A 5-year review of EFH information is scheduled for 2011. As part of review, the Council has stated that it will review available research information regarding two of the GOA closed areas (Sanak and Albatross) to determine efficacy of continued closure.



NOAA – Auke Bay Laboratories





Habitat Areas of Particular Concern

PROTECTING RARE AND VULNERABLE HABITAT

The 1996 amendments to the Magnuson-Stevens Act required fishery management plans to describe and identify essential fish habitat (EFH), minimize to the extent practicable adverse effects on EFH caused by fishing, and identify other actions to encourage the conservation and enhancement of EFH. EFH is defined as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The EFH regulations also encourage, but do not require, the identification of habitat areas of particular concern (HAPCs) to provide greater focus to conservation and management efforts. The regulations state that specific types or areas of habitat within EFH should be identified as HAPC based on one or more of the following considerations:

- the importance of the ecological function provided by the habitat,
- the extent to which the habitat is sensitive to human-induced environmental degradation,
- whether, and to what extent, development activities are, or will be, stressing the habitat type, and
- the rarity of the habitat.



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A PROCESS FOR DESIGNATING HAPC

The HAPC identification process for the North Pacific begins with a determination of HAPC priorities by the Council. A call for nominations is then issued, to focus on specific sites consistent with those priorities. HAPC nomination proposals may be solicited every 3 years or on a schedule established by the Council.

For More Information

Witherell, D. and D. Woodby. 2005. Application of Marine protected Areas for Sustainable Production and Marine Biodiversity off Alaska. Marine Fisheries Review 67(1) 1-27. spo.nmfs.noaa.gov/mfr671/mfr6711.pdf

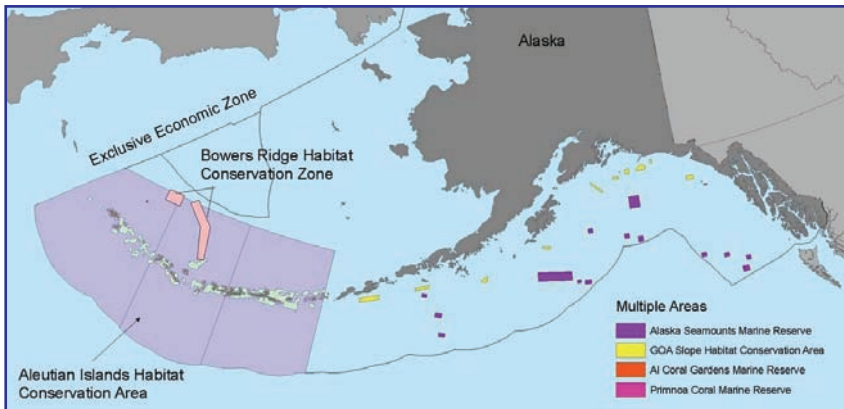
FMP References

HAPC designation and protection: BSAI Groundfish Amendment 65, BSAI Groundfish Amendment 65, BSAI Crab Amendment 12, Scallop Amendment 7, Salmon Amendment 8; 71 FR 36694, effective date June 28, 2006.

For the 2004 HAPC identification process, the Council designated two priorities: named seamounts in Alaska Federal waters, and coral areas with rockfish associations. The Council received 23 proposals from six different organizations. After an initial screening by staff, the proposals were reviewed by the Council’s Plan Teams, and assessed for management, enforcement, and socioeconomic issues. Ultimately, the Council identified a range of alternatives, staff completed an analysis, and in January 2005, the Council adopted several new HAPCs.

Twenty sites in the Gulf of Alaska and Aleutian Islands, consisting of seamounts and high density coral areas, were identified as HAPCs. To protect these sites and eliminate environmental impacts due to fishing, the Council prohibited fishing in these areas by gear types that contact the bottom. These sites and measures became effective in June 2006.



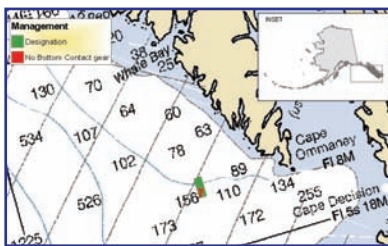


The Alaska Seamount Habitat Protection Area encompasses all 16 seamounts in Federal waters off Alaska, named on NOAA charts (Bowers, Brown, Chirikof, Marchand, Dall, Denson, Derickson, Dickins, Giacomini, Kodiak, Odessey, Patton, Quinn, Sirius, Unimak, and Welker). Bottom-contact fishing is prohibited in all of these HAPCs, an area which totals 5,329 nm².

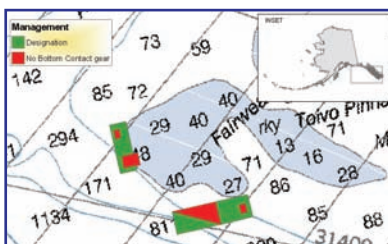
In Southeast Alaska, three sites with large aggregations (“thickets”) of long-lived Primnoa coral are also identified as HAPCs. These sites,

in the vicinity of Cape Ommaney and Fairweather grounds, total 67 nm². The Gulf of Alaska Coral Habitat Protection Area designates five zones within these sites where submersible observations have been made, totaling 13.5 nm². All bottom-contact gear (longlines, trawls, pots, dinglebar gear, etc.) is prohibited in this area.

In the Aleutian Islands region, the relatively unexplored Bowers Ridge was also identified as a HAPC. As a precautionary measure, the Council acted to prohibit mobile fishing gear that contacts the bottom within this 5,286 nm² area.



Gulf of Alaska Coral Habitat Protection Area – Cape Ommaney



Gulf of Alaska Coral Habitat Protection Area – Fairweather Grounds

RECENT ACTION

In December 2006, the SSC commented on the need for “further research on skate nursery areas to evaluate the spatial extent and uniqueness of these apparently critical habitat areas and on the importance of canyons”. At that meeting, the Council decided that skate nurseries would be considered as a priority in the next HAPC proposal cycle, as recommended by the SSC.

In June 2007, when the Council took final action on Bering Sea habitat conservation measures, the Council also received a staff report on the HAPC schedule. Although a motion was made to initiate a HAPC identification process and call for proposals, with site priorities being Bering Sea skate nursery areas and Bering Sea submarine canyons, the motion did not pass. The majority of Council members decided that a HAPC identification process would be premature, in part because there appeared to be no critical conservation concerns at the time for skate nurseries, and additional research on skate nurseries and canyon areas was needed.

ON THE HORIZON

Although the Council retains the flexibility to set the timing of the next HAPC identification process, the Council’s groundfish policy workplan identifies the next HAPC proposal period to begin in 2009, 3 years after the implementation of HAPC measures. Prior to any HAPC proposal review, however, the SSC has been asked to provide criteria to the Plan Teams for their evaluation of proposals.



Aleutian Islands Fishery Ecosystem Plan

APPLYING AN ECOSYSTEM APPROACH

The Council continues to adapt its management program to better accommodate ecosystem relationships and strive for ecological balance, as part of its overall ecosystem approach to fisheries management. Over the years, the Council has consistently adopted innovative management approaches that provide a multi-species, ecologically-aware perspective on fisheries.

The Aleutian Islands area is an ideal candidate for exploring new ecosystem-based management tools. The Aleutian Island ecosystem is complex, and is the least predictable of the ecosystems in which the Council currently manages. The ecosystem is ecologically and historically unique, and many Council management actions have focused on the area's important resources, such as Steller sea lions, seabirds, and benthic habitats that support coral and sponges, pollock, and Pacific cod. Far less is understood about the ecological interactions in the Aleutians than in the eastern Bering Sea, yet the two areas are managed jointly in the Federal fishery management plans.



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FISHERY ECOSYSTEM PLAN CONCEPT FOR ALASKA

The North Pacific Fishery Management Council began the Aleutian Islands Fishery Ecosystem Plan (FEP) as a pilot project, to see whether FEPs are a useful tool for Alaska. It is a policy and planning document that encompasses all fisheries in the Aleutian Islands ecosystem (groundfish, crab, halibut, scallop). The FEP is intended as an educational tool and resource that can provide the Council with both an 'early warning system' for signs of ecosystem change, and an ecological context for fishery management decisions affecting the Aleutian Islands area. The FEP should help the Council respond to changing conditions in a proactive rather than reactive mode.



Fishery Ecosystem Plan area: Alaskan Federal waters west of Samalga Pass.

For More Information

NPFMC. 2007. Overview of the Aleutian Islands Fishery Ecosystem Plan. December 2007.
www.fakr.noaa.gov/npfmc/current_issues/ecosystem/AIFEPbrochure1207.pdf

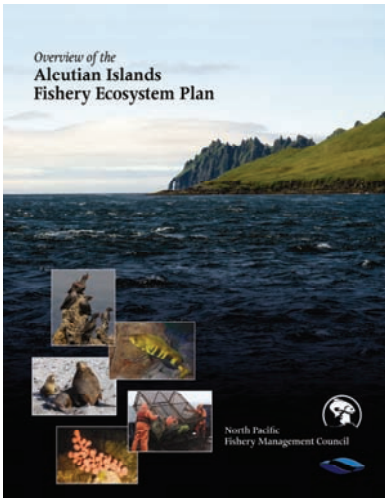
FMP References

Aleutian Islands Fishery Ecosystem Plan. December 2007.
www.fakr.noaa.gov/NPFMC

The FEP integrates information from various sources to describe the main physical, biological, and socioeconomic relationships that comprise the Aleutian Islands ecosystem. Key interactions are identified (see reverse), and subjected to a qualitative risk assessment to provide general guidance to the Council on priority issues for management attention and further research and analysis. This process followed a classic risk assessment framework, but relied on the expert opinions and building of consensus among the inter-agency FEP team, which drafted the FEP. The FEP uses the risk assessment to provide a discussion of priorities and considerations for the Council, related to each of the key interactions.

OVERARCHING CONSIDERATIONS FOR THE COUNCIL

The Council recently published an overview of the FEP. The FEP highlights priorities for fishery management, which are listed below.



Recognize the Aleutian Islands ecosystem as a distinct entity. Fishery managers should consider the Aleutian Islands area described in the FEP as an ecosystem with unique characteristics. The Aleutians are frequently considered conjointly with the eastern Bering Sea, but are subject to different processes and properties. An ecosystem-wide monitoring plan is needed to improve understanding of the area.

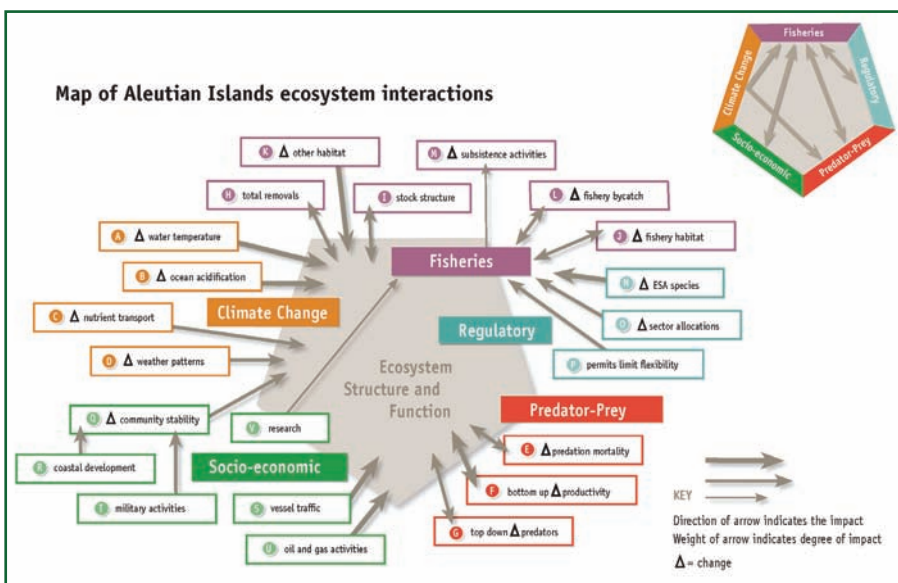
Improve the process to account for ecosystem considerations in fishery management. No group in the Council process is currently assigned with the primary task of integrating ecosystem information and providing ecosystem-level advice. Ecosystem information is often qualitative or interpretative, and it is up to the Council, as policymaker, to determine how to balance risks associated with unquantifiable ‘ecosystem considerations’.

Enhance dialogue with non-fishery agencies. It is important for the Council to interact with other agencies about activities affecting the ecosystem. The Council’s participation in the Alaska Marine Ecosystem Forum is an important step in this regard. The Council may also choose to engage individually with other agencies on particular issues.

ON THE HORIZON

The FEP is to be a living document, in which ecosystem interactions, indicator status, research priorities, and data gaps are periodically updated. The first iteration of the FEP, published in December 2007, was prepared by synthesizing currently available information about the Aleutian Islands ecosystem. While the Council recognizes that the FEP is a work in progress, the document can immediately be used to improve management action analyses, and to provide a

broader understanding of actions affecting the Aleutian Islands ecosystem. Additionally, through the identification of indicators and the assessment of risk, the FEP provides directions and priorities for further study.



The Council’s Ecosystem Committee is also considering further implementation of the FEP, by working through the various considerations and recommendations identified in the plan, and refining them for Council action. The FEP will be updated annually by the FEP team with new information, and re-evaluated periodically (e.g., every 3-5 years) for ecosystem trends and key interactions.



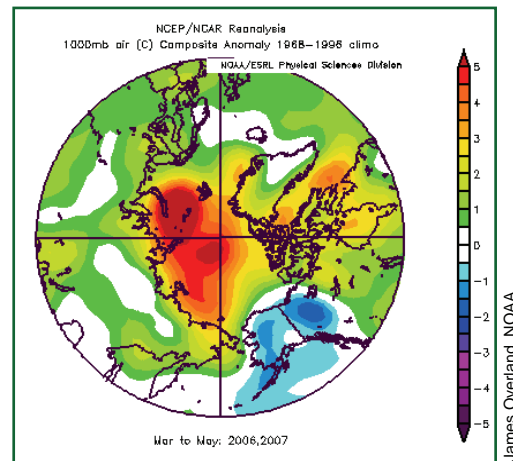
Susi Miller, USFWS

Arctic Fishery Management Plan

CHANGING CONDITIONS IN THE ALASKAN ARCTIC

The Arctic Ocean is a unique ecological environment that is experiencing change, partly due to climate warming and changes in seasonal ice cover. The potential long term consequences from these changes on the Arctic marine ecosystem are unknown, but effects on Arctic fauna (including polar bear, walrus, and seals) are already evident. Human use patterns are also changing, as vessels begin exploring new transportation routes through the Arctic.

To date, very little commercial fishing has occurred in this region, but changing conditions and migrating fish populations may create new opportunities. Except for salmon, the Council has never developed a fishery management plan (FMP) to extend over any but a small portion of the Alaskan Arctic, although the exclusive economic zone (Federal marine waters, from 3 – 200 nm off Alaska) of the Chukchi and Beaufort Seas is within its jurisdiction. Without a Federal FMP, the State of Alaska has authority to regulate fishing vessels registered with the State, but other domestic fishing vessels may be able to fish without regulation.



James Overland, NOAA

2006-07 average winter temperatures in the Arctic, compared to the average for 1968-1995, illustrate warming trends.



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FISHERY MANAGEMENT AUTHORITY

In October, 2006, the Council initiated the development of an Arctic FMP to establish Federal fishery management in the Alaskan Arctic, under the Magnuson-Stevens Fishery Conservation and Management Act. The FMP is necessary to prevent commercial fisheries from developing in the Arctic without a management framework in place and adequate scientific information on fish stocks. The Council's intent is that the FMP would initially close the Arctic waters to commercial fishing until adequate information and data are acquired upon which to make sound decisions about future fishery development and to understand the impacts of fishing on fish stocks and related components of the ecosystem. Imposing a commercial fishery closure is an appropriate and conservative strategy given the lack of available information, and the FMP will establish a management framework that prepares the Council for future decisions regarding fishery development.

The analysis includes an option to allow a small commercial red king crab fishery in the southern Chukchi Sea, as that fishery has occurred in the recent past. Otherwise, no commercial fishing would be allowed under the authority of the new Arctic FMP. Additionally, the Council's crab and scallop FMPs currently extend northward past Bering



US Coast Guard

For More Information

NOAA's Arctic webpage,
www.arctic.noaa.gov

Ocean climate information, NOAA's Pacific Marine Environmental Laboratory, oceans.pmel.noaa.gov

FMP References

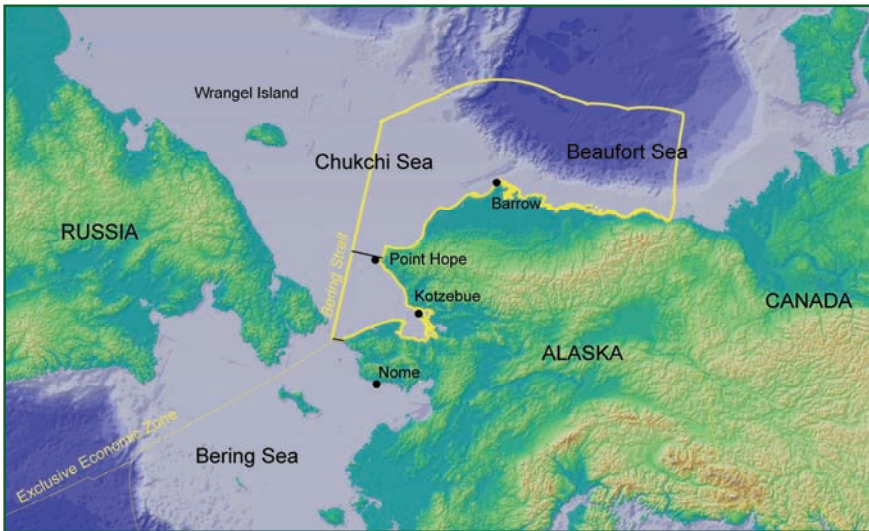
A new Arctic Fishery Management Plan.

Proposes Amendment 29 to the BSAI Crab FMP, and Amendment 13 to the Alaska Scallop FMP, to terminate their geographical area at Bering Strait.

Strait to cover a small portion of the Chukchi Sea; the Council is considering options to terminate their coverage to remain within the Bering Sea.

OUTREACH AND INVOLVEMENT OF ARCTIC COMMUNITIES

The Council has initiated an outreach program to involve local communities, organizations, and individuals as the Arctic FMP and accompanying documents are prepared. The Council is particularly seeking involvement of Native peoples in the process. The Council's intent is not to disrupt the subsistence lifestyle of Native peoples of the Alaskan Arctic, but to preserve small, local fisheries, be they commercial or subsistence/personal. Information on the development of an Arctic FMP has been presented to Native groups, local governments, Arctic communities, and has involved consultation with regional Native resource management entities from the North Slope, Northwest Alaska, and Norton Sound regions.



Proposed Arctic Management Area

ARCTIC FMP MANAGEMENT AREA

The Arctic Management Area will include all Federal marine waters of the Chukchi and Beaufort Seas, three to 200 nautical miles offshore of the coast of Alaska, from north of Bering Strait, westward to the U.S.-Russia Convention Line of 1867, and eastward to the U.S.-Canada maritime boundary.

ANALYTICAL PROCESS

The Council is considering four alternatives, including the status quo, to accomplish its purpose to close the Arctic management area to commercial fishing. The alternatives vary as to how they address the historic crab fishery in the Chukchi Sea, and how the Arctic FMP would interact with existing crab and scallop FMPs where their areas overlap. Environmental and economic analyses are being prepared to compare the effects of the alternatives. Extensive opportunity for public comment and input to the development of an Arctic FMP will be provided throughout this process. When completed, the Council will choose its preferred alternative, and the Council's recommendation to adopt an Arctic FMP will be forwarded to the Secretary of Commerce who also must approve the recommendation, at which time implementing regulations will be published and the FMP will become effective.

The tentative schedule is for the Council to review the FMP and accompanying analysis in June 2008. After a public review period, the Council would make a final recommendation later in 2008.



National Marine Mammal Laboratory



Susi Miller, USFWS



Lowell Fritz

Steller Sea Lion Protection Measures

REDUCING POTENTIAL FOR COMPETITION WITH FISHERIES

Because of a large population decline, Steller sea lions were listed as threatened under the Endangered Species Act (ESA) in 1990, and the western population of sea lions was listed as endangered in 1997. There does not appear to have been a single cause for the decline, and a number of factors may have been involved, including but not limited to intentional shooting, disease, ecosystem change, and competition with fisheries. With the initial ESA listing, fishery managers began to explore and implement actions to minimize potential impacts caused by fisheries in the region. Interactions of sea lions with fisheries may occur through competition, disturbance, and direct and incidental mortality. Because fish are prey for Steller sea lions, fishery regulations have focused on reducing potential effects of competition, and minimizing localized depletion of their prey. Studies have shown that major food items for Steller sea lions include pollock, Pacific cod, Atka mackerel, salmon, and octopus, as well as squid and capelin prior to 1978.



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To reduce potential effects of fisheries on Steller sea lions, the Council and NOAA Fisheries have implemented many measures over the years. In October 2001, following a federal court order for NOAA and the Council to further justify the fishery management program's impacts to Steller sea lions, a comprehensive and stringent suite of fishery management measures was developed by the Council's Reasonable and Prudent Alternative Committee (now the Steller Sea Lion Mitigation Committee) to minimize potential competition for prey between fisheries and the endangered western stock of Steller sea lions.

For More Information

National Research Council. 2003. The decline of the Steller sea lion in Alaskan waters: Untangling food webs and fishing nets. National Academy Press, Washington, D.C. 204p.

T. Loughlin and J. Tagart. 2006. Compendium of Steller sea lion related research, 2000-2006. www.fakr.noaa.gov/npfmc/current_is_sues/ssl/Compendium606.pdf

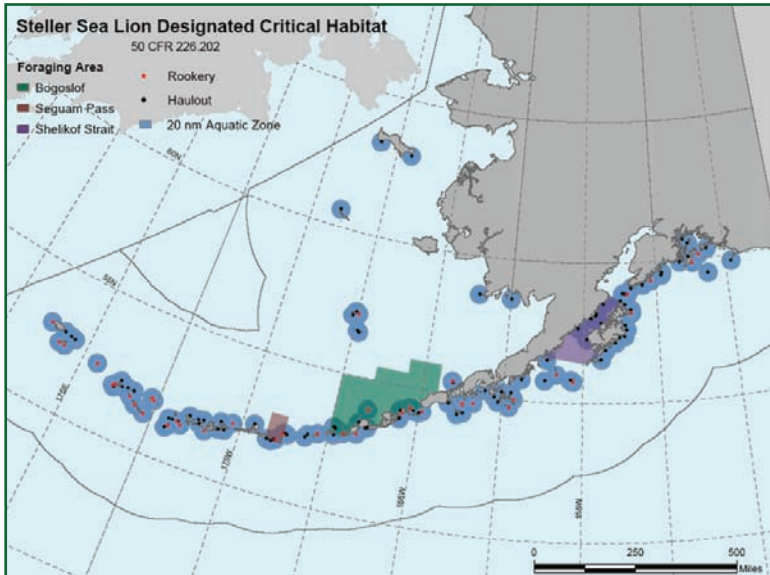
FMP References

Steller sea lion protection measures: implemented initially by emergency rule and then by regulatory amendment; 68 FR 204, effective January 2, 2003.

Management measures to reduce potential impacts of fisheries on Steller sea lions, by year of first implementation

- No shooting of Steller sea lions (1990)
- Limits on incidental kills caused by fisheries (1990)
- 3 nm no-entry buffer zones around rookeries (1990)
- 10-20 nm no-trawl zones around rookeries (1991)
- 10-20 nm no-pollock-fishing zones around haulouts (1999)
- Seasonal dispersion of fisheries for pollock (1991) and Atka mackerel (1999)
- Spatial dispersion of fisheries for Atka mackerel (1994) and pollock (1999)
- Precautionary harvest limits for Steller sea lion prey (1984)
- No directed fishing for forage fish (1998)
- Fishery and gear specific measures (2002)

The protection measures were implemented in January 2002 and included a sweeping array of fishery and gear-specific closed areas around Steller sea lion rookeries and haulouts, limitations of catch from critical habitat areas, and seasonal and area apportionments of the total allowable catch limits for pollock, Pacific cod, and Atka mackerel. NOAA Fisheries Office of Protected Resources determined that fisheries prosecuted under these measures would not jeopardize Steller sea lions or adversely modify their critical habitat, and the federal court case ended.



STATUS REPORT

A substantial amount of research has been conducted on Steller sea lions since 2001. Although the contribution of fisheries to Steller sea lion decline and recovery is still uncertain, over \$120 million in research has been applied to the problem and is shedding additional light on causes of the decline and impediments to recovery. Research has provided an enhanced understanding of sea lion abundance, behavior, diet preferences, pup production, foraging, and reactions to disturbance.

Monitoring studies have shown recent stability in Steller sea lion populations, and in some areas, slight increases. The western population increased approximately 3% per year between 2000 and 2004. This was the first recorded increase in the population

since the 1970s. Based on recent counts, the western stock is currently about 44,800 animals and may be increasing due to higher juvenile and adult survival, although some subareas are not showing increases. The eastern population is currently between 45,000 and 51,000 animals, and has been increasing at 3% per year for 30 years.

ON THE HORIZON

In 2005, the Council recommended that its Steller Sea Lion Mitigation Committee take proposals from the public and begin to develop recommendations for changes to Steller sea lion protection measures for the Alaskan groundfish fisheries. The Committee is in the final process of analyzing how the proposals received for changing fishery management measures may affect Steller sea lions and their habitat, including prey, and also how proposals might produce economic benefits. The Committee's work will culminate in a preliminary set of recommendations for Council consideration at its June 2008 meeting.

NOAA Fisheries recently finalized a Steller Sea Lion Recovery Plan and is preparing a status quo Biological Opinion, which will inform the Council's consideration of the recommended changes, with respect to the status of Steller sea lions. Any recommendations that are retained for further deliberation will be analyzed in an Environmental Impact Statement that will evaluate the effects of the proposed changes on the human (physical, biological, and socioeconomic) environment. The Council and NMFS are working toward completing their analytical process and decisionmaking so that any changes that may result could be effective for the 2010 fishing year.



Lowell Fritz



Lowell Fritz



Ian Jones

Seabird Avoidance Measures

SEABIRD INTERACTIONS – A CONSERVATION ISSUE

Fishing vessels in the North Pacific often encounter seabirds (e.g. albatrosses, fulmars, gulls, shearwaters) during the course of fishing. Many seabird species are attracted to fishing vessels in order to forage on bait, offal, discards, and other prey made available by fishing operations. The sight and sound of swarming birds can attract other birds from many miles around. These interactions can result in direct mortality for seabirds if they become entangled in fishing gear or strike the vessel or fishing gear while flying. Interactions with longline fisheries are of particular concern, as seabirds are attracted to sinking baited hooks and can become hooked and drowned.

The Alaska fishing industry and the Council have focused particular attention on conservation and protection of the short-tailed albatross, an endangered species listed under the U.S. Endangered Species Act. ‘Takes’ of four short-tailed albatrosses in longline groundfish fisheries, or two short-tails in the halibut fishery, within a two-year period would trigger re-initiation of a Section 7 consultation in these respective fisheries and consequently interrupt or even close Alaska’s demersal longline fisheries. Takes of only two short-tails over five years could disrupt or close the Alaskan trawl fisheries.



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For More Information

National Marine Fisheries Service webpage on seabird incidental take in fisheries,

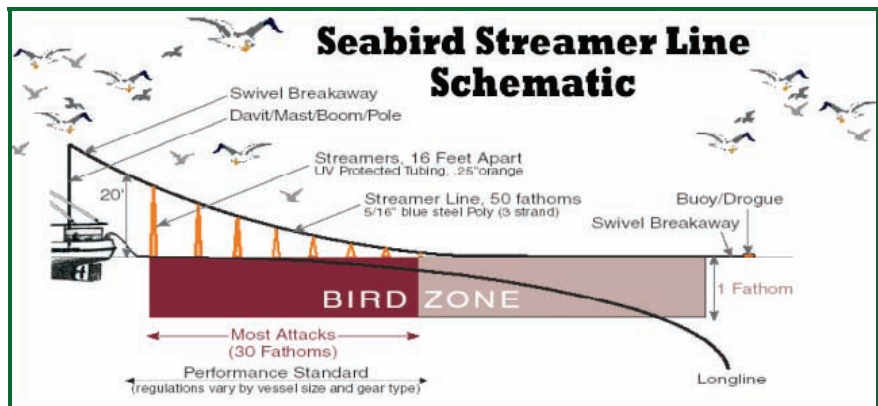
www.fakr.noaa.gov/protectedresources/seabirds.html

Washington Sea Grant Program webpage on collaborative research, www.wsg.washington.edu/mas/resources/seabird.html

FMP References

Revisions to seabird avoidance measures: regulatory amendment; 72 FR 71601, effective January 17, 2008.

Seabird avoidance measures for Alaska hook-and-line groundfish and halibut fisheries: regulatory amendment; 69 FR 1930, effective February 12, 2004.



MEASURES TO REDUCE MORTALITY

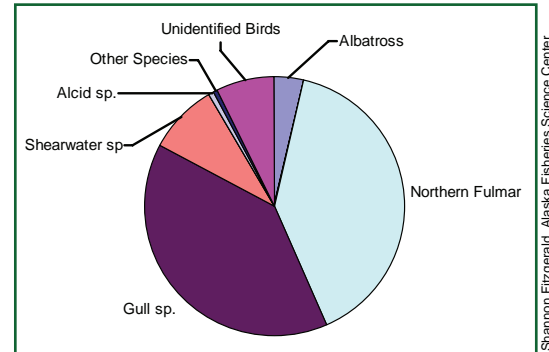
In 1996, the Council established mandatory seabird avoidance measures for the longline fisheries, and approved more stringent requirements in 2001. Seabird deterrent devices such as buoy bags or streamer lines are required for most groundfish longline fishing vessels. The Council has encouraged fishing industry initiatives to conduct research on new seabird avoidance measures, including studies on the effectiveness of paired streamer lines and integrated weight ground lines, and the development of techniques for minimizing seabird strikes with trawl warps and sonar transducer cables.

These research efforts, which were largely prompted by voluntary action on the part of the longline sector of the industry, indicated that paired streamer lines were nearly 100 percent effective at eliminating the catch of albatrosses and other surface-feeding birds. The sablefish and Pacific cod longline fishing fleets adopted this new technology two years before it was required, resulting in an eight-fold decrease in seabird mortality.



RECENT REGULATORY CHANGES

Since the implementation of the seabird avoidance measures, Washington and Alaska Sea Grant programs have continued to research seabird and fishery interactions. Based on Washington Sea Grant research projects investigating the occurrence of albatross and other seabird species in Alaskan inside waters, the Council approved new changes to seabird avoidance requirements.



Species composition of the estimated seabird bycatch in Alaskan demersal longline fisheries, 2002-2006.

Implemented in January 2008, the Council's action specified that the use of seabird avoidance measures would not be required in Prince William Sound, Cook Inlet, and inside waters in Southeast Alaska except in outer Chatham Strait, Dixon Entrance, and outer Cross Sound. The Council action also identified performance standards for small vessels (those greater than 26 ft and less than or equal to 55 ft length overall) fishing in outside waters, and modified how seabird deterrent devices be used by small vessels.

Seabird bycatch reduction

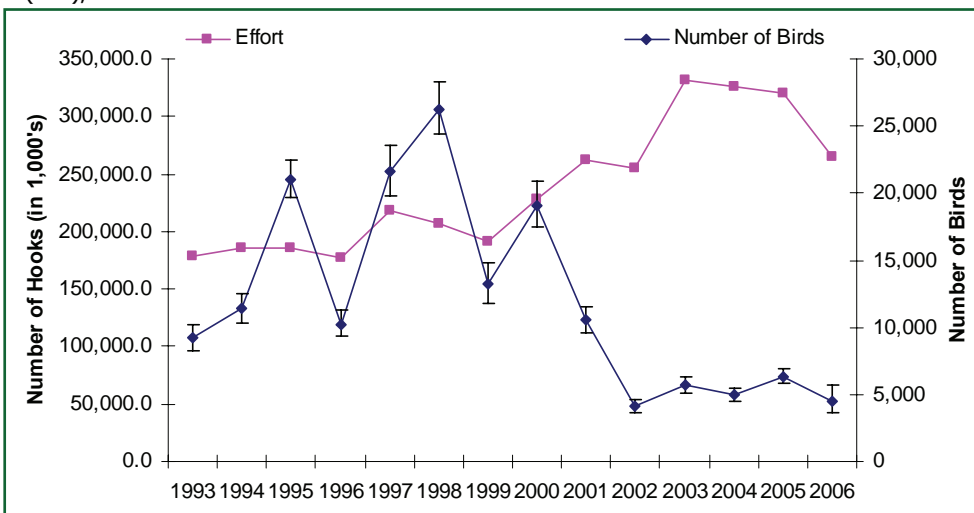
All seabirds, annual average:

1993-2000: 16,507
2002-2006: 5,137

Albatross, all species, annual average:

1993-2000: 1,051
2002-2006: 185

Alaskan demersal longline groundfish effort (pink) and estimated seabird bycatch in the longline fisheries (blue), 1993-2006.



ON THE HORIZON

The Council requested an analysis to consider relaxing seabird avoidance measures in International Pacific Halibut Commission (IPHC) Regulatory Area 4E (the northeastern Bering Sea) and potential subareas within. The main fishery in these waters is a small boat halibut fishery that attracts few seabirds and harvests small amounts of halibut at a slow rate. The use of buoy bags or other deterrence devices in this area may be dangerous in harsh weather. In consultation with the U.S. Fish and Wildlife Service, NOAA Fisheries staff have used statistical and spatial analysis of available short-tailed albatross data to help define areas within Area 4E where these albatross are not likely to occur and thus

where requirements for seabird avoidance measures might be relaxed. The Council is scheduled to review the analysis in April 2008 and make a final recommendation later in 2008.



Nicole Kimball



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For More Information

Alaska's Fishing Communities conferences, Alaska Sea Grant, seagrant.uaf.edu/conferences/fish-com2/index.html

FMP References

J.A. Sepez, B. Tilt, C. Package, H. Lazrus, I. Vaccaro. 2005. Community Profiles for North Pacific Fisheries – Alaska. NMFS-AFSC-160, www.afsc.noaa.gov/Publications/AFS-C-TM/NOAA-TM-AFSC-160/NOAA-TM-AFSC-160.pdf

CONSIDERING COMMUNITY IMPACTS

The 1996 amendments to the Magnuson-Stevens Act added a national standard that requires fishery management plans and regulations to consider the impact of conservation and management measures on fishing communities. Specifically, National Standard 8 states that “Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.” Within the Federal fishery management process there is a growing emphasis on considering the social impacts of fishery management actions, specifically effects on fishing communities. This is of particular importance in the North Pacific, where fishing communities are generally far less diversified, have fewer economic opportunities, and are more dependent on commercial fishing than most U.S. fishing communities outside of Alaska.

COMMUNITY MEASURES AND PROGRAMS

Ongoing assessment of community impacts has led the Council to undertake several different approaches to either minimizing impacts of a particular management action on fishing communities or sustaining or increasing access to fishery resources by communities. A number of community provisions have been incorporated into larger programs, as well as specific programs crafted to either further develop communities’ fishing economies or sustain existing access in the wake of new limited access regimes. Examples of these provisions and programs include:

- the Western Alaska Community Development Quota (CDQ) Program, which provides direct allocations of BSAI fisheries to six CDQ groups representing 65 western Alaska communities;
- the GOA community quota share purchase program, which allows 42 small GOA communities to purchase halibut and sablefish catcher vessel quota share;
- the community purchase provision in the BSAI crab rationalization program, which allows qualifying communities with crab processing history to purchase crab harvest shares;
- direct allocations to Adak of golden king crab and pollock in the Aleutian Islands, as mandated by Congress;
- halibut charter limited entry permits provided to 32 small GOA communities (charter moratorium program pending approval by the Secretary of Commerce).

EVOLVING PROCESS FOR SOCIOECONOMIC ANALYSIS

The Magnuson-Stevens Act was reauthorized in December 2006, and it included a section defining the requirements for any limited access privilege programs created by Councils or the Secretary of Commerce. Among those requirements is that the Council must consider the current and historical participation of fishing communities when establishing procedures for initial allocations under new limited access privilege programs. The Council must also consider the basic “cultural and social framework of the fishery,” especially through the



Mark Fina

Council's principles for outreach, communication, and stakeholder participation

- Use an open and clearly defined decision-making process.
- Make key information readily available and understandable.
- Actively conduct outreach and solicit stakeholder input.
- Involve stakeholders early and throughout the decision-making process.
- Foster responsive, interactive communication between stakeholders and decision makers.
- Use formal and informal participation measures.
- Include all stakeholder interests.



Nicole Kimball

development of policies to promote the sustained participation of small owner-operated fishing vessels and fishing-dependent communities. In addition, the Act outlines eligibility requirements for communities to participate in limited access privilege programs, and generally strengthens the position of communities and provides a path for Councils to include them in these types of exclusive allocation programs.

Several recent efforts have facilitated improved socioeconomic analysis and community participation in the fishery management process. NMFS recently produced a document entitled “Community Profiles for North Pacific Fisheries – Alaska”, which contains 136 short profiles of Alaska communities involved in North Pacific fisheries. This compilation provides baseline data on a comprehensive list of fishing communities in Alaska, and was ultimately used as a national template for community profiles. This report is intended to facilitate implementation of the federal laws that require consideration of communities, and improve available information to affected communities. The Council has also teamed with the North Pacific Research Board to develop comprehensive community profiles for 8 fishery-dependent communities (Unalaska, Kodiak, King Cove, Akutan, Adak, St. Paul, St. George, and Sand Point).

In 2004, the Council identified a priority to improve participation and consultation with communities and Alaska Native groups through revisions to its BSAI and GOA groundfish management policy. The policy contains a management approach and forty-five objectives, three of which are related to increasing Alaska Native and community consultation. This has been identified as one of several priority actions at this time, and an intended result is the development of 1) a protocol or strategy for improving the Alaska Native and community consultation process, and 2) a method for systematic documentation of such participation in the development of management actions.

The Council has also been a co-sponsor of two community conferences, in 2005 and 2006. The conferences spurred from the general need to assess impacts of fishery management actions on fishing communities, and the need to provide a forum for coastal residents, fishermen and seafood processors, and federal, state, municipal, and tribal representatives to work together in support of Alaska's coastal fishing economy. Understanding the fishery management process in the context of the current statutory and regulatory framework allows coastal communities to establish and assert policy positions, and to participate more effectively. These conferences are part of an ongoing effort to keep fisheries policy – and ways to improve the development of that policy – at the forefront.

ON THE HORIZON

Recently, the Council reviewed a draft approach to implementing the Council's groundfish policy workplan priority to increase Alaska Native and community consultation. The Council is considering a protocol to expand both formal and information consultation, including potentially creating a standing committee of community representatives to discuss ongoing issues of concern and specific, proposed management actions. As a separate action, the Council adopted seven core principles on stakeholder involvement, to guide its overall communication strategies and activities. The Council will continue to discuss and receive a report on these issues at each June Council meeting.



Herman Savikko

Alaska Marine Ecosystem Forum

NEED FOR INTERAGENCY COORDINATION

The U.S. Ocean Action Plan of 2004 acknowledged that jurisdiction over human activities affecting the oceans is distributed among many different agencies, and consequently, more systematic cooperation on ocean-related governance is needed. Regional collaborations and partnerships are highlighted as an important way to enhance ocean leadership and coordination.



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The North Pacific Fishery Management Council recognizes that fishery management decisions can be affected both positively and negatively by the actions of other entities, and vice versa. Alaska's state and federal waters form part of several large marine ecosystems, each with distinct natural processes and diverse human activities. Accordingly, in 2005, the Council, the State of Alaska, and NOAA's National Marine Fisheries Service approached other Federal and State agencies with jurisdiction over activities impacting marine waters, with a view to developing some mechanism for advancing regional collaboration. Through the course of the following year, a Memorandum of Understanding was agreed to by all entities.



Diana Evans

IMPROVING COMMUNICATION, SUPPORTING MUTUAL GOALS

The establishment of the Alaska Marine Ecosystem Forum (AMEF) brings together Alaska's Federal and State agencies as well as the North Pacific Fishery Management Council to address issues of shared responsibilities related to the marine ecosystems off Alaska's coast. The AMEF promotes the collective aim of Federal and State agencies and the North Pacific Fishery Management Council to achieve sustainable management and use of Alaska's marine ecosystems in the most effective and efficient manner, consistent with the missions of those agencies. Through coordinated and cooperative understanding, the AMEF seeks to ensure that the interests of the people, biota, and physical environment of Alaska's marine waters are well served.

For More Information

Meeting summaries are posted on the Council website, www.fakr.noaa.gov/npfmc/current_issues/ecosystem/Ecosystem.htm

US Ocean Action Plan, ocean.ceq.gov/actionplan.pdf

FMP References

Memorandum of Understanding for the Alaska Marine Ecosystem Forum, www.fakr.noaa.gov/npfmc/current_issues/ecosystem/AMEF_MOU.pdf

FEDERAL MEMBERS:

- North Pacific Fishery Management Council
- NOAA / National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- Minerals Management Service
- National Park Service
- Bureau of Land Management
- Environmental Protection Agency
- U.S. Forest Service
- U.S. Coast Guard
- U.S. Army Corps of Engineers
- Department of Defense/Alaskan Command

STATE OF ALASKA MEMBERS:

- Department of Environmental Conservation
- Department of Fish and Game
- Department of Natural Resources
- Department of Commerce, Community and Economic Development

The purpose of the AMEF is to provide a venue where participants may share information. The AMEF provides the following opportunities:

1. **Sharing Priorities:** Each agency may share its priorities for research, use, and management of resources, as appropriate. Increasing awareness and coordination among agencies and the public may lead to partnership opportunities and setting shared priorities.
2. **Sharing Data:** Provide an efficient forum for sharing information about human activities and natural processes affecting the specified marine ecosystem. The AMEF will discuss how synthesizing and sharing existing, unclassified, data and information can be accomplished and will identify sources of such information-sharing (websites; bibliographies of scientific research; contact information within agencies by issue; information on present, past, future activities for help with National Environmental Policy Act cumulative impact studies; present and future research plans and research priorities; and opportunities for partnership).
3. **Problem Solving:** Allow agencies to identify problems or to share lessons learned from previously solved problems.
4. **Joint Work:** Identify cooperative conservation opportunities that can be pursued at an agency-to-agency level under separate agreements.
5. **Forum Without Jurisdiction:** The AMEF will not have independent jurisdiction or authority and will not regulate any activity. No participating agency is required to obtain approval of other Alaska Marine Ecosystem Forum members before acting.

RECENT ACTION

The AMEF meets approximately twice a year. Each agency provides a briefing on issues of interest, and specific topics are addressed in more detail. The AMEF initially focused on the Aleutian Islands, but has since broadened its focus to other Alaskan areas, including the Arctic.

Timeline

November 2005 - interagency meeting to gauge interest in establishing an ecosystem forum

February 2006 - steering committee meeting to develop a suggested structure and function for a forum

April 2006 - interagency meeting to coordinate on ecosystem issues and finalize structure and function

September 2006 - first official AMEF meeting; Memorandum of Understanding signed

July 2007 - AMEF meeting, Aleutian Islands focus

January 2008 - AMEF meeting, Aleutian Islands and broader Alaska focus



Missile Defense Agency



Nicole Kimball



John Gauvin

SALMON AND POLLOCK BOTH IMPORTANT COMMERCIAL SPECIES

Salmon support large and critically important commercial, recreational, and subsistence fisheries throughout Alaska and elsewhere. Salmon management programs, including significant investments in hatchery capacity to supplement natural runs, occur in Russia, Korea, and Japan, as well as for North American stocks in Canada, Alaska, and the Pacific Northwest.

In addition, salmon are taken incidentally in offshore groundfish trawl fisheries, especially in the pollock pelagic trawl fishery. Nearly all salmon taken as bycatch are Chinook (*Oncorhynchus tshawytscha*) and chum salmon (*O. keta*). The origin of salmon taken as bycatch in the Bering Sea includes rivers in western, southcentral and southeast Alaska, Asia, British Columbia, Washington, and Oregon.



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HISTORY OF BYCATCH CONTROL MEASURES

In the mid-1990s, the Council and NOAA Fisheries implemented regulations to control the bycatch of chum and Chinook salmon taken in the BSAI trawl fisheries. These regulations established closures in areas and at times when salmon bycatch had been highest, based on historical observer data. The BSAI Groundfish Fishery Management Plan (FMP) specifies prohibited species catch (PSC) limits for catch of non-Chinook and Chinook salmon by the directed pollock fishery. When these limits are reached, the FMP authorizes regulatory measures to close the specified areas to directed fishing for pollock.

For Chinook salmon, the Chinook Salmon Savings Areas were established under BSAI Amendment 21b and revised under BSAI Amendment 58. These areas close to pollock trawling if 29,000 Chinook salmon are taken. The timing of the closure depends upon when the limit is reached:

1. If the limit is triggered before April 15, the areas close immediately through April 15. After April 15, the areas re-open, but are again closed from September 1-December 31.
2. If the limit is reached after April 15, but before September 1, the areas would close on September 1 through the end of the year.
3. If the limit is reached after September 1, the areas close immediately through the end of the year.

Amendment 82 further modified the areas to establish a separate Aleutian Islands subarea Chinook PSC limit of 700 fish, the attainment of which by the Aleutian Islands pollock fishery closes the area that is located in the Aleutian Islands (Area 1).

For non-Chinook salmon bycatch, the Chum Salmon Savings Area was established in 1994, by emergency rule, and then formalized under Amendment 35 in 1995. This area is closed to all trawling from August 1 through August 31. Additionally, if 42,000 non-Chinook salmon are caught in the Catcher Vessel Operational Area during the period August 15 through October 14, the area closes again from September 15-October 15.

For More Information

Witherell, D., D. Ackley, and C. Coon. 2002. "An Overview of Salmon Bycatch in Alaska Groundfish Fisheries". Alaska Fisheries Research Bulletin 2002 Summer; Vol. 9(1):53-64.

EA/RIR/IRFA for BSAI Groundfish FMP Amendment 84, to modify existing Chinook and chum salmon savings areas. October 2007.
www.fakr.noaa.gov/analyses/amd84/Am84_EARIRFRFAfr.pdf

FMP References

Salmon bycatch closure exemption: BSAI Groundfish FMP Amendment 84; 72 FR 61070, effective November 28, 2007.

Salmon bycatch EIS: proposed BSAI Groundfish Amendment 91.

FLEXIBLE MANAGEMENT TOOLS HELP WITH SALMON AVOIDANCE

Although the salmon closure areas are still effective in regulation, since August of 2006 the pollock fleet has been exempted from the closures, first under an exempted fishing permit, and then under Amendment 84. In 2004, information from the fishing fleet indicated that bycatch may have been exacerbated by the current regulatory closure regulations, as much higher salmon bycatch rates were reportedly encountered outside of the closure areas during closure periods. The Council considered other means to control salmon bycatch and allowed pollock cooperatives and community development quota groups participating in a binding inter-cooperative agreement to utilize a rolling hot spot closure system to adaptively close small areas with high salmon bycatch rates. Participants in the agreement are exempted from compliance with the regulatory savings area closures. Vessels fishing in trawl cod or flatfish target fisheries (who have very little salmon bycatch in their fisheries) are also exempt from the closures.

EXPERIMENTS WITH GEAR MODIFICATION

The pollock industry is also involved with developing a salmon excluder device for trawl gear, which allows salmon to escape from the trawl net underwater, while retaining pollock. The success of such devices relies on the different swimming behaviors of pollock and salmon. Through experimental fishery permits authorized by the Council and NOAA Fisheries, various iterations have been tested, and their use by pollock skippers is increasing.

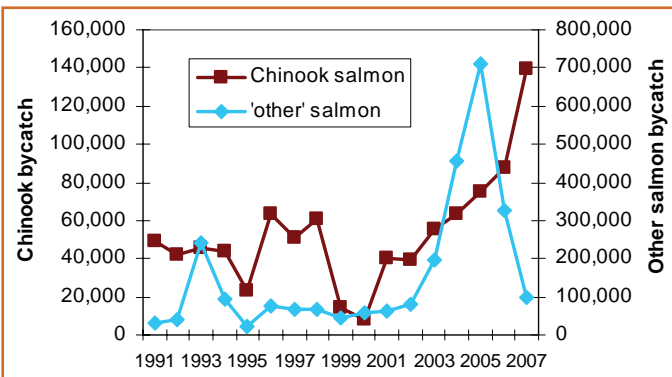
ON THE HORIZON

The Council is considering additional measures for BSAI salmon bycatch management. An Environmental Impact Statement (EIS) is under development which includes options for hard caps (PSC limits which, once attained, would close directed pollock fishing), triggered closures (PSC limits that would trigger new closure areas to be specified), and fixed closures (new areas that would be closed for a specified time period regardless of annual bycatch taken by the fleet). The Draft EIS is scheduled for review in June 2008, with a final decision anticipated for December 2008. Regulations implementing the Council's recommendations could be effective either in the fall of 2009 or for the beginning of the 2010 fishing year, depending on the provision.

The Council is also evaluating salmon bycatch in GOA groundfish trawl fisheries. Chinook salmon are taken regularly from the start of the trawl fisheries on January 20th through early April, and also in high quantities during June/July and September/October in the pollock fishery. Chum salmon are not taken in any great numbers until mid-June, after which they are taken regularly through the end of the season. No studies have been done to specifically address the origin of the GOA trawl fishery bycatch. For Gulf of Alaska fisheries, observer coverage is lower in many target fisheries due to the prevalence of smaller vessels in the GOA fishing fleet than in the Bering Sea fleet. Therefore estimates of salmon bycatch in GOA fisheries are less precise than those in Bering Sea fisheries. The Council has initiated a discussion paper of bycatch reduction measures for salmon; the paper is scheduled for review in June 2008.



Diana Stram



Chinook and 'other' salmon bycatch in the BSAI groundfish fisheries, 1991-2007, in numbers of fish.



John Gauvin



NOAA Fisheries

CRAB BYCATCH

Bycatch of crab occurs in the directed crab pot fisheries as well as groundfish and scallop fisheries. In the crab fisheries, crab bycatch includes females of target species, sublegal (small) males of target species, and non-target crab. In all other fisheries, crabs are a prohibited species, and must be discarded, so every crab caught incidentally is considered bycatch. Crabs caught as bycatch in trawl fisheries are thought to have a high mortality rate (estimated at 80%); in the scallop dredge and groundfish fixed gear fisheries, mortality is considered to be much lower (estimated at 40% and 20% respectively).



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Stock Assessment and Fishery Evaluation Report for the King and Tanner Crab Fisheries, 2007, www.fakr.noaa.gov/npfmc/SAFE/2007/CRABSAFE07.pdf

FMP References

Red king crab protection measures: BSAI Groundfish Amendment 37; 61 FR 65985, effective January 1, 1997.

Pribilof Islands Habitat Conservation Area: BSAI Groundfish Amendment 21a; 60 FR 4110, effective January 20, 1995.

BSAI BYCATCH CONTROL MEASURES

Bycatch control measures have been established in the Bering Sea and Aleutian Islands groundfish trawl fisheries for red king crab (*Paralithodes camtschaticus*), Tanner crab (*Chionoecetes bairdi*), and snow crab (*C. opilio*). There are two kinds of measures: area closures and prohibited species catch (PSC) limits.

BSAI Area closures

The *Red King Crab Savings Area* is closed year-round to non-pelagic trawling. Implemented under Amendment 37 to the BSAI FMP in 1996, the intent was to increase protection of adult red king crab and their habitat. A small subarea (south of 56°10') is opened to trawling under a specific PSC limit, during years of high red king crab years biomass, to allow access to productive rock sole fishing.

The *Nearshore Bristol Bay Closure*, east of 162° W, is also closed to all trawling, with the exception of a small area that remains open during April 1 to June 15 each year. Implemented under Amendment 37 in 1996, this closure protects juvenile red king crab and critical rearing habitat.

The *Crab and Halibut Protection Zone* has, for practical purposes, largely been superseded by the Nearshore Bristol Bay Closure. A small closure area extends west from March 15 to June 15.

The *Pribilof Islands Habitat Conservation Area* was established under amendment 21a to the BSAI FMP in 1995. All trawling is prohibited from the area to protect high concentrations of blue king crab and hair crab stocks, as well as reduce the bycatch of juvenile halibut and crab and mitigate any unobserved mortality or habitat modification that occurred due to trawling.

BSAI PSC limits

PSC limits have been established for red king crab, Tanner crab, and snow crab. The limits accrue for catch in a defined area, and fluctuate based on annual estimates of crab abundance. PSC limits are apportioned among fisheries in anticipation of their bycatch needs for the year. Attainment of PSC limits triggers a defined area closure for the relevant fishery.

Species	Area	PSC limit for 2007	Bycatch in 2007	
			number of crab	% of limit
RKC	Zone 1	197,000	86,417	44%
Tanner	Zone 1	980,000	163,580	17%
	Zone 2	2,970,000	516,345	17%
Snow	COBLZ	4,350,000	1,800,104	42%

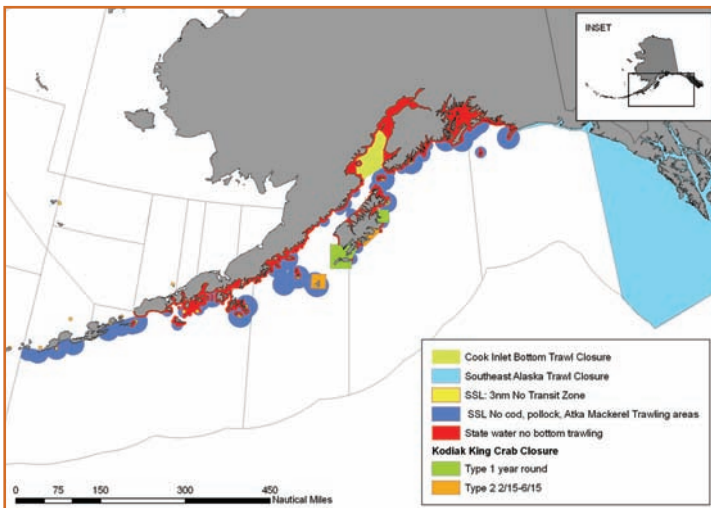


Mark Fina



NOAA Fisheries

Existing closures for the trawl fishery and for crab protection, in the Gulf of Alaska.



GOA BYCATCH CONTROL MEASURES

Bycatch of crabs is relatively low in GOA fisheries compared to the BSAI. The average number of red king crabs taken incidentally in all GOA fisheries for 2003-2007 was 200 crabs. Of this, 83% were in the trawl fishery (mostly rockfish and flatfish fisheries), 3% in the pot and 14% in the longline fishery. The highest bycatch of *C. bairdi* Tanner crab occurred primarily in the Pacific cod and flatfish trawl fisheries and in the pot fishery for Pacific cod. Trawl fishery bycatch has fluctuated through time, reaching a high of 306,767 crabs in 2006 to a low of 29,947 crabs in 1999. The average percent contribution from 2003-2007 by gear type was 60% from trawl fisheries and 39% from pot fisheries.

PSC limits for crab species in GOA groundfish fisheries have not been established, due in part to the precision (and extrapolation) of observer data estimates. Observer coverage is lower in many GOA target fisheries given the prevalence of smaller vessels in the GOA fishing fleet, and thus estimates of crab bycatch in GOA fisheries are less precise than in Bering Sea fisheries.

Area closures for GOA groundfish trawl and scallop fisheries.

The *Kodiak red king crab closures, Type 1 and Type II* were established in 1993 because of the poor condition of the king crab resource off Kodiak. Type I areas have very high king crab concentrations and are closed all year to all trawling except with pelagic gear. Type II areas are only closed to non-pelagic gear from February 15 through June 15, during the molting period, as trawl bycatch and mortality rates are highest during the spring months when king crab migrate inshore for reproduction.

Year-round *scallop closures* to scallop dredging, dating from 1995, were intended to reduce high bycatch of crab and avoid and protect biologically critical areas such as nursery areas for groundfish and shellfish.

A year-round *Southeast Alaska no trawl closure*, which prohibits trawl fishing east of 140° W. was implemented in 1998.

In 2000 the State of Alaska implemented a *State water no commercial bottom trawling closure* to protect nearshore habitats and species in State waters (0-3 nm).

The *Cook Inlet bottom trawl closure*, implemented in 2001, prohibits non-pelagic trawling in Cook Inlet to control crab bycatch mortality and protect crab habitat in an area with depressed king and Tanner crab stocks.

ON THE HORIZON

The Council first discussed bycatch reduction measures for salmon and crab species in the GOA groundfish fisheries in 2005. Originally part of GOA groundfish rationalization discussions, the Council will be considering this issue independently in June 2008. Species currently under consideration are red king crab, *C. bairdi* Tanner crab, Chinook salmon, and Chum (or 'other') salmon.



HALIBUT TAKEN INCIDENTAL TO GROUND FISH FISHERIES

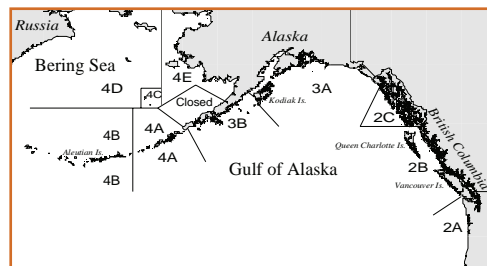
The Pacific halibut longline fishery was one of the first fully domestic fisheries to become established off Alaska. As the groundfish fisheries developed, regulations were implemented to limit bycatch of halibut, so as to minimize impacts on the domestic halibut fisheries. Interception of juvenile halibut (~30 cm and greater) often occurs in trawl fisheries targeting other groundfish species (such as rock sole, pollock, yellowfin sole, and Pacific cod). Incidental catch of halibut also occurs in groundfish hook and line and pot fisheries. Regulations require that all halibut caught incidentally must be discarded, regardless of whether the fish is living or dead.



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Pacific halibut fisheries in Alaska are managed cooperatively by the International Pacific Halibut Commission (IPHC), National Marine Fisheries Service (NMFS), the North Pacific Fishery Management Council, and the Alaska Department of Fish and Game, under authority granted by a treaty between the United States and Canada. The IPHC accounts for all halibut removals, including bycatch, in an annual coast wide stock assessment to determine an allowable catch limit for the directed halibut fishery in each of its regulatory areas. Halibut removals totaled 97 million lb (net weight) in 2007, of which the commercial catch was 73 million lb. Estimates of bycatch mortality of halibut in Alaska totaled 10.5 million lb in 2007, which is about 6 percent lower than 2006 and the lowest seen since 1987. Catch and discard mortality data are collected by observers who monitor the groundfish fleet.



IPHC Regulatory Areas for halibut.

For More Information

IPHC Report of Assessment and Research Activities, chapters on bycatch and wastage in the groundfish fisheries, www.iphc.washington.edu/halcom/pubs/rara/2007rara/2k7rara04.pdf

Witherell, D, and C. Pautzke. 1997. A brief history of bycatch management measures for Eastern Bering Sea groundfish fisheries. *Marine Fisheries Review* 59(4):15-22. www.fakr.noaa.gov/npfmc/sci_papers/MFR.pdf

FMP References

IFQ Program: BSAI / GOA Groundfish FMP Amendments 15/20; 58 FR 59375, implemented December 9, 2003.

BSAI pollock bottom trawl prohibition: BSAI Groundfish FMP Amendment 57; 65 FR 31105, effective June 15, 2000.

Head and gut cooperatives: BSAI Groundfish FMP Amendment 80; 72 FR 52668, effective October 15, 2007.

COUNCIL HISTORY OF BYCATCH MEASURES

Halibut bycatch is controlled in the groundfish fisheries using prohibited species catch (PSC) limits, applied to specific target fisheries. Unlike other PSC limits, which allocate total allowable bycatch, halibut PSC limits are for dead fish only; halibut returned live to the sea do not accrue toward the PSC limit. Most halibut taken as bycatch are juveniles, so the loss is viewed not just as immediate tonnage, but also as fish that would have grown larger and recruited into the directed halibut fisheries.

The halibut PSC limits in 2008 total over 3.8 million lb (2,300 mt) in the GOA and over 7.6 million lb (4,575 mt) in the BSAI. PSC limits are apportioned by target fishery, gear type, and season. Essentially, these bycatch quotas direct fisheries, by area or time, to regions where the highest volume or highest value target species may be harvested with minimal halibut bycatch. When any fishery exceeds its seasonal limit, directed fishing for that species must stop, and the species may not be retained incidentally in other directed fisheries. All other users and gear remain unaffected. In both the BSAI and GOA, halibut PSC limits

often prevent the annual quota of many groundfish species (particularly flatfish) from being harvested.

The Council has implemented several management measures to reduce halibut bycatch in groundfish fisheries. A major reduction occurred in 1995 with implementation of the individual fishing quota (IFQ) program (BSAI Amendment 15, GOA Amendment 20) for fixed gear sablefish and halibut fisheries. Halibut taken as bycatch in the sablefish IFQ fishery and other fixed gear fisheries can be retained using halibut IFQs, which resulted in an immediate reduction in annual PSC limits for the GOA hook-and-line fisheries from 1.2 million to 500,000 lb (750 to 300 mt). The Bering Sea trawl halibut PSC limit was reduced by 165,000 lb (100 mt) in 1999 when the Council adopted a requirement that only pelagic trawls can be used in the BSAI pollock fishery. Most recently, Amendment 80 will reduce the trawl halibut PSC limit by 83,000 lb (50 mt) per year over 4 years.

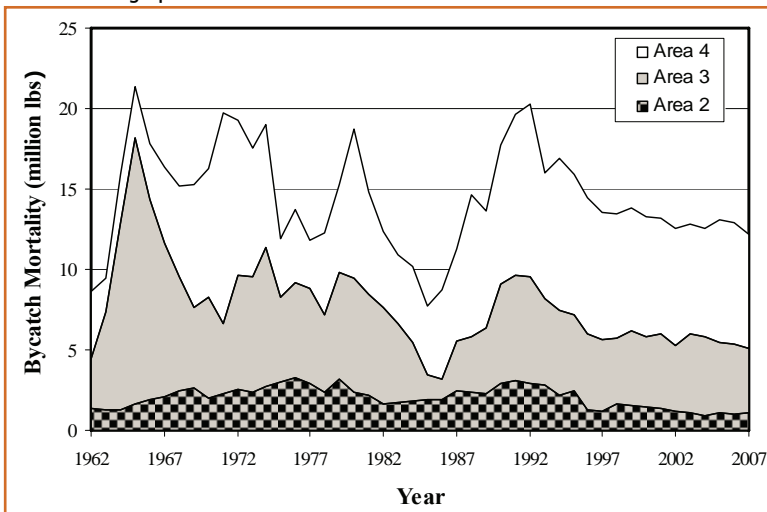
Other measures that have reduced halibut bycatch include seasonal and area allocations of groundfish quotas for selected target species, seasonal and year-round area closures, gear restrictions, careful release requirements, public reporting of individual bycatch rates, and gear modifications. Examples of the latter include biodegradable panels and halibut excluder devices that are required on all groundfish pots.

Amendment 50 to the BSAI Groundfish Fishery Management Plan implemented a halibut donation program in July, 1998. SeaShare, a NMFS-authorized distributor, acquires unintentionally-landed halibut bycatch (generally from trawl catcher vessels delivering to shoreside processors) in Dutch Harbor, Alaska, for donation to hunger relief programs. In 2007, halibut donations from shore-based catcher vessel trawlers that delivered to onshore processors UniSea, Inc. and Alyeska Seafoods totaled 35,000 lb. Since 1998, over 230,000 lb of halibut has been donated for hunger relief.



Andrea Hirschfeld, Groundfish Observer Program

Bycatch mortality in halibut regulatory areas, 1962-2007. Area totals are stacked on graph.



International Pacific Halibut Commission

ON THE HORIZON

The IPHC adopted a recommendation from its two advisory groups to host a workshop on bycatch programs and bycatch reduction strategies. The Commissioners directed IPHC staff to assemble material reviewing bycatch reduction targets, reduction methodology, progress in other jurisdictions, and update the 1991 IPHC Bycatch Work Group results. This information will be made available and used in planning for a bycatch workshop in 2009.



MANAGEMENT OF MULTISPECIES FISHERIES IS COMPLEX

Bycatch is defined in the Magnuson-Stevens Fishery Conservation and Management Act as fish that are harvested in a fishery but which are not sold or kept for personal use. This includes the portion of the catch that is discarded back into the sea and unobserved mortality due to a direct encounter with fishing gear that does not result in the capture of that species by a fisherman. Discards include species that must be returned to the sea by law (regulatory discards), and fish that are discarded at the discretion of the fisherman because they are not economically worthwhile to keep (economic discards).



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Economic discards include incidentally caught fish that were not targeted nor have commercial value; targeted fish that are of the wrong size (e.g., too small) or of an undesirable sex (e.g., males, when roe-bearing fish are desirable); targeted fish that are of low quality.

Regulatory discards are required when it is prohibited to retain a species in the fishery. This may be a comprehensive prohibition (e.g., salmon are prohibited species in the groundfish fishery), or may occur when, for example, the total allowable catch (TAC) for a target species is reached or approached, and that species may no longer be retained incidentally in other directed fisheries, or may only be kept up to certain limits (maximum retainable amounts).

BYCATCH CONTROLS – COUNCIL HISTORY

The Council has a long history of developing regulations that prohibit fishermen from fishing in ways that result in high levels of bycatch. For example, regulations can prohibit fishing in specific times or areas, can require the use of specific gear or gear modifications, and can restrict the use of catch or the level of bycatch. While reduction in waste is desirable, bycatch restrictions place greater economic burdens on the groundfish industry either by limiting fishing or reducing fishing efficiency. Some examples of measures implemented to reduce bycatch are:

- time and area closures to avoid high bycatch
- prohibited species catch limits and area closures
- gear modifications (biodegradable panels on pots to permit juvenile fish to escape; minimum mesh size requirements for trawl codends)
- legal gear (seines and gillnets have been prohibited since 1993)
- legal fishing practices (no roe-stripping of pollock, no bottom trawl gear in BSAI pollock fishery)
- rationalization programs (reducing the race for fish increases selectivity and efficiency)

EFFECTIVE MONITORING

A comprehensive accounting of bycatch in the groundfish fisheries is achieved through the extensive monitoring and reporting program. Observers onboard vessels and at shoreside processors provide estimates of total catch and species

For More Information

Alaska Groundfish Fisheries PSEIS Appendix F-5, Bycatch and Incidental Catch. 2004.
www.fakr.noaa.gov/sustainablefisheries/seis/final062004/Appen/App_F/app_f5.pdf

FMP References

Groundfish retention standard: BSAI Groundfish Amendment 79; 71 FR 17362, effective January 20, 2008.

Sector allocation and cooperatives: BSAI Groundfish Amendment 80; 72 FR 52668, effective October 15, 2007.



Mark Fina



David Fraser

composition, which allows for inseason management of the fishery. In addition, all permitted catcher vessels equal to or greater than 60 ft in overall length must maintain a daily fishing logbook regarding fishing activity and location. Catcher processors, motherships, shoreside processors and purchasing stations must maintain daily cumulative production logbooks that record information on fishing activity, haul receipt, production, and discards. Information on groundfish harvest, discard, receipt, and production are reported to NOAA Fisheries.

IMPROVED RETENTION AND IMPROVED UTILIZATION PROGRAM

Responding to what was considered unacceptably high levels of bycatch, the Council adopted an improved retention/improved utilization (IR/IU) program in 1998. The IR/IU program required 100 percent retention of pollock and cod in the BSAI and GOA, regardless of how or where they were caught (BSAI and GOA Amendments 49). No discarding of whole fish of these species is allowed, either prior to or subsequent to that species being brought on board the vessel, except as permitted in the regulations.

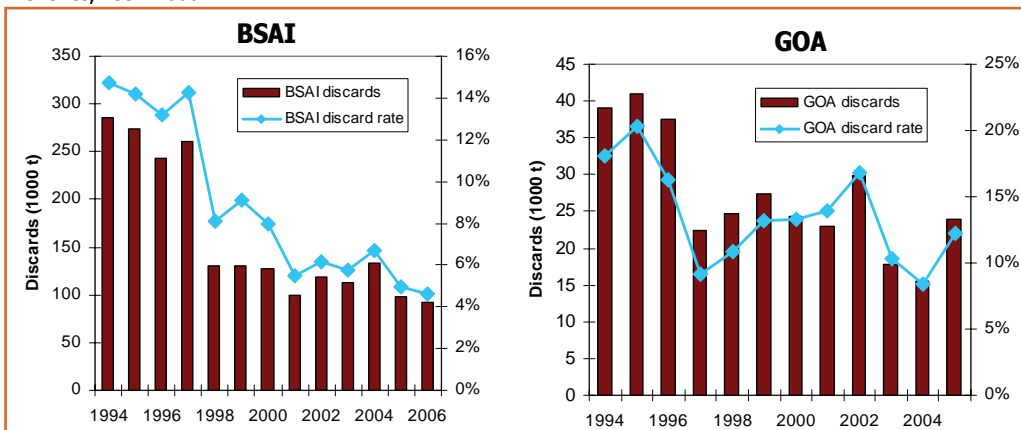
The IR/IU measure dramatically reduced the discards of pollock and cod in the groundfish fishery. In 1997, before the program began, about 260,000 mt of groundfish were discarded in the BSAI groundfish fishery, which was equivalent to about 14% of the total catch of managed groundfish species. Walleye pollock, Pacific cod, and flatfish comprised approximately 87 percent of this total. In 2007, about 100,000 mt of groundfish was discarded in the BSAI groundfish fisheries, representing about 5% of total catch of managed species.

RECENT ACTION

An overall minimum groundfish retention standard became effective in January 2008, under Amendment 79 to the BSAI Groundfish Fishery Management Plan. In the first year, 65% of all target groundfish that is caught by the head-and-gut sector in the Bering Sea and Aleutian Islands must be retained, increasing over four years to 85%.

Concurrently, the Council has developed a fishery cooperative for the head-and-gut sector (also known as the Amendment 80 sector), a program designed to provide this sector with the operational tools to adhere to the increased retention standards. 2008 is the first year this program has been operational. These measures are expected to further reduce the overall discards of groundfish in the North Pacific fisheries.

Overall discards and discard rate, as a percentage of total groundfish catch, in BSAI and GOA groundfish fisheries, 1994-2006.





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Halibut and Sablefish IFQ Program

SHORT AND DANGEROUS SEASONS

By 1990, the halibut and sablefish longline fisheries were exhibiting significant problems created by open access derby-style fisheries. With the constant increase of new entrants into the fishery, the fishing seasons had been reduced to several short seasons each year, with halibut seasons lasting only a day or two in some areas. The short seasons created a number of problems, including allocation conflicts, gear conflicts, deadloss from lost gear, increased bycatch and discard mortality, excess harvesting capacity, decrease in product wholesomeness, safety concerns, and economic instability in the fisheries and fishing communities.

A SHARE-BASED PROGRAM

The Pacific halibut and sablefish fixed gear fisheries have been managed under the individual fishing quota (IFQ) program since 1995. The program essentially assigns the privilege of harvesting a percentage of the sablefish and halibut quota to specific individuals with a history of harvest in the fisheries. The 'rights' given to each person are proportional to their fixed gear halibut and sablefish landings during the qualifying period and are represented as quota shares (QS). Under this program, only persons holding quota shares are allowed to make fixed gear landings of halibut and sablefish in the regulatory areas identified. There are several key provisions of the program: the process for initial allocation of QS; assignment of shares to vessel categories; share transfer provisions; use and ownership provisions; QS blocks to further guard against excessive consolidation; the annual process for allocating QS; and the establishment of Community Development Quotas (CDQ).

To qualify for an initial allocation of quota share, a person must have made legal landings of halibut or sablefish harvested with fixed gear during 1988-1990. Generally, if a vessel owner or lessee qualified, his/her initial quota share was based on their highest total landing of halibut for any 5 years of the 7-year base period 1984-1990. For sablefish, the initial quota share was based on the highest total landing of sablefish for any 5 years of the 6-year base period 1985-1990. Each person eligible to receive quota share had it assigned to one of four vessel categories: "A"-freezer vessels of any length; "B"- catcher vessels greater than 60'; "C"- catcher vessels less than or equal to 60' for sablefish, or between 35'-60' for halibut; "D"- catcher vessels less than or equal to 35' for halibut. Initial quota share was assigned to the vessel category based on the vessel in which a person's most recent fixed gear landings of groundfish or halibut were caught. Various restrictions on transfer and ownership were designed to maintain the owner/operator characteristics of the fleet, and to prevent consolidation of QS in the hands of a few participants.

POSITIVE RESULTS

The fixed gear halibut and sablefish IFQ program is considered a successful market-based management system that addressed overcapitalization and other issues. Some consolidation has occurred as expected, with the number of QS holders decreasing substantially in the first few years of the program and then stabilizing. Seasons were lengthened, with the halibut fishing season converted from several 24-hour period openers each year to an eight-month season from March 8 to November 15. Bycatch has been greatly reduced. To the extent



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Pautzke, C., and C. Oliver. 1997. Development of the individual fishing quota program for sablefish and halibut longline fisheries off Alaska, www.fakr.noaa.gov/npfmc/sci_papers/ifqpaper.htm

FMP References

IFQ Program: BSAI Groundfish Amendment 15, GOA Groundfish Amendment 20; 58 FR 59375, implemented December 9, 1993.



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Diana Evans

sablefish fishermen have halibut IFQ, this halibut is now retained and counted against the target quotas, as opposed to being caught as bycatch and discarded by regulation. The fisheries are also safer; instead of having to fish intensely under any weather conditions, fishermen can choose their fishing weather considering the seasons, grounds, and size and seaworthiness of their vessel. IFQs have reduced gear conflicts and fishing mortality due to lost gear within the sablefish and halibut fisheries, by reducing the competition for grounds over a short time. Product quality and price has also increased under the IFQ program, as fishermen and processors have more time to cater to the fresh fish market. Ex-vessel prices are at record highs.

REFINEMENTS TO THE PROGRAM

Since initial implementation, the Council has made numerous amendments to the halibut and sablefish IFQ program to relax the initial restrictions, including: 1) a one-time trade of QS/IFQ received under the CDQ compensation formula between parties in different regulatory areas; 2) a Catch Sharing Plan for the Area 4 subareas in the BSAI; 3) allowing vessels to fish IFQs in multiple areas without offloading, so long as there is an observer onboard; 4) allowing processing of non-IFQ species on a vessel with B, C, or D shares onboard; 5) allowing catcher vessel QS to be used on vessels of the same size class or smaller; 6) an increase in the sweep-up levels of halibut and sablefish QS blocks to 3,000 lbs for halibut and 5,000 lbs for sablefish; 7) allowing 2% deductions for ice and slime for halibut and sablefish landings, to standardize accounting of harvests; 8) allowing the use of pot longlines in the Bering Sea for sablefish; 10) allowing emergency transfer of IFQ to a surviving spouse, with leasing provisions for a period of three years; 11) a requirement for a 20% minimum interest in vessels for QS holders wishing to hire skippers; 12) allowing an increase the BSAI halibut QS use cap to 1.5%, from the existing limit of 0.5% of the total amount of halibut QS for regulatory areas 4A, 4B, 4C, 4D, and 4E, combined; and 13) allowing 42 Gulf of Alaska coastal communities to be eligible to hold commercial halibut and sablefish catcher vessel QS in Areas 2C, 3A, and 3B, for lease to community residents.

ON THE HORIZON

There are several other changes forthcoming to the program. In June 2006, the Council adopted amendments (1) to allow the use of pot longline gear in the Bering Sea IFQ and CDQ sablefish fisheries during June; (2) to allow temporary transfer of IFQs held by mobilized militia who are not otherwise authorized to hire a skipper; and (3) to withdraw halibut and sablefish QS from initial recipients who have never fished any of those shares across all regulatory areas, and allow a lottery if the amount of QS available for a lottery is more than the number of QS units equivalent to 50,000 lb for all regulatory areas in the year of the lottery. These recommendations are undergoing Secretarial review.

The Council is working on a regulatory amendment to address vessel ownership restrictions for purposes of using a hired master. In addition to the minimum 20% ownership interest, a person would need to demonstrate ownership in the vessel for at least 12 months, with an exemption for loss of a vessel.



Diana Evans

American Fisheries Act Pollock Cooperatives

ALLOCATION DISPUTE OVER POLLOCK SETTLED

The inshore/offshore allocations of Bering Sea pollock were extremely contentious decisions for the Council. Measures to address overcapacity in this fishery, beyond the license limitation program were limited, as the Magnuson-Stevens Act had been revised to include a 6-year (1995-2000) moratorium on development of new individual fishing quota systems. Following the Council's decision on the third iteration of the inshore/offshore allocation in June 1998, representatives from the catcher/processor sector sought congressional intervention, and representatives of other sectors soon joined in to protect or advance their economic interests in the BSAI pollock fishery. This group worked with Senator Stevens to draft legislation (S. 1221) that would address foreign ownership of fishing vessels and overcapacity in the Bering Sea pollock fishery. The American Fisheries Act (AFA) was signed into law in October 1998 as part of the Omnibus Appropriations Bill. The AFA contained several major provisions: U.S. ownership requirements, a permit/vessel buyout, a listing of qualified vessels, processor eligibility requirements, revised sector allocations, increased pollock allocation to the Community Development Quota (CDQ) Program, provision for fishery cooperatives, and sideboard provisions.

AFA Cooperatives, 2007

- Akutan Catcher Vessel Association
- Arctic Enterprise Association
- Catcher Vessel Intercooperative
- Pollock Conservation Cooperative
- High Seas Catchers' Cooperative
- Mothership Fleet Cooperative
- Northern Victor Fleet Cooperative
- Peter Pan Fleet Cooperative
- Unalaska Fleet Cooperative
- Unisea Fleet Cooperative
- Westward Fleet Cooperative



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For More Information

NPFMC. 2002. Report to the U.S. Congress and the Secretary of Commerce: Impacts of the American Fisheries Act. 308 p.

Oliver, C. 1999. Implementing the American Fisheries Act of 1998: Current and Future Actions by the National Fishery Law Symposium. www.fakr.noaa.gov/npfmc/sci_papers/afalaw.pdf

FMP References

AFA implementation: BSAI Groundfish FMP Amendment 61, GOA Groundfish FMP Amendment 61, BSAI Crab FMP Amendment 13, Scallop FMP Amendment 8; 67 FR 79692, effective December 30, 2002.

Proposed regulatory amendment to modify sideboards.

To reduce foreign ownership, the AFA required that all vessel-owning entities be at least 75% owned and controlled by U.S. citizens by October 1, 2001. Consequently, U.S. ownership is required for all vessels fishing in the U.S. Federal waters (with the exception of Western Pacific). Implementation of the ownership standards is the responsibility of the Maritime Administration of the U.S. Department of Transportation.

The provisions of the AFA included a \$95 million buyout and permanent retirement of the fishery permits for 9 named large factory catcher/processor vessels, thus reducing the pollock catcher/processor fleet to 20 qualified vessels. The buyout was comprised of two parts: \$20 million in direct payments to owners of catcher/processors (\$15 million to owners of the retired vessels and \$5 million to owners of 5 other named catcher/processors), and \$70 million in direct loan obligations (to compensate the owners of the nine retired vessels). This loan obligation would be paid by the inshore sector via a fee system amounting to 0.6 cents per pound of harvested pollock until the loan is fully repaid.

The AFA also limits eligibility for participation, specifically listing 3 eligible motherships (Excellence, Golden Alaska, and Ocean Pheonix), 19 catcher vessels eligible to deliver to motherships, 7 catcher vessels eligible to fish and deliver a suballocation to catcher/processors (American Challenger, Forum Star, Muir Milach, Neahkahnie, Ocean Harvester, Sea Storm, and Tracy Anne), and 20 catcher/processors eligible to participate in the offshore sector. For the inshore



Diana Stram



Diana Evans

sector, eligible processing plants and catcher vessels were defined based on catch or processing history, and a total of 112 catcher vessels and 8 processing plants qualified. The AFA specifies that pollock taken in the inshore sector's directed fishery can only be taken by qualified vessels and delivered to qualified processing plants. Thus, the AFA established the first limited entry program for processors in the United States.

The AFA settled the contentious inshore/offshore allocation issue by firmly establishing the allocation of BSAI pollock quota among the sectors. The CDQ Program allocation of the BSAI pollock total allowable catch was increased from 7.5% to 10%. The remaining pollock quota was allocated as follows: 50% to the inshore sector (catcher vessels delivering onshore), 40% to the offshore (catcher/processors), and 10% to motherships. Further, not less than 8.5% of the catcher/processors' directed allocation is available to the 7 eligible catcher vessels in the catcher/processor sector.

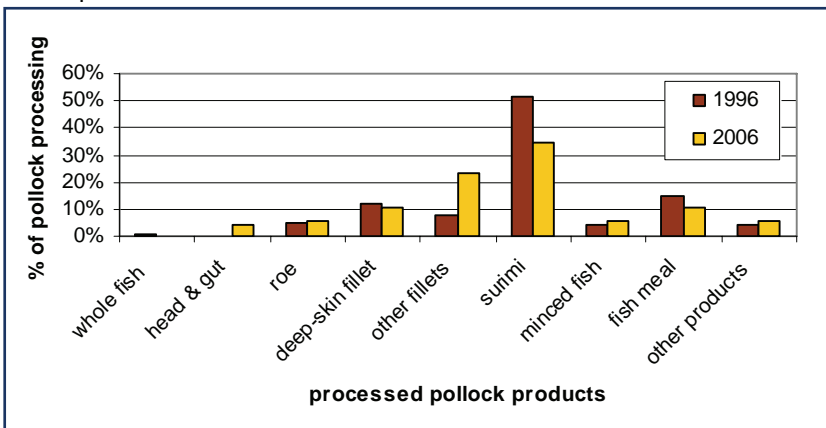
The AFA eliminated the race for pollock through the establishment of cooperatives with specific provisions for their allocations, structure, and participation by catcher vessels and processing plants, as well as annual reporting requirements and excessive share limits. In response to a directive in the AFA, the Council added measures to protect other fisheries from adverse effects arising from the exclusive pollock allocation. Cooperative fishing began under the AFA program in 1999.

The effects of AFA on the pollock industry were tremendous. Capacity was reduced, efficiency was increased, regulatory bycatch was reduced, a higher portion of the fish was utilized, and higher valued products were produced.

COUNCIL ACTION

In 1999 and 2000, the Council spent a substantial portion of each meeting to develop sideboard measures to protect other fisheries, as well as restrictions on cooperatives, monitoring requirements, and other measures to implement the AFA. While the permanent management program proposed under Amendments 61/61/13/8 was under analysis and development by the Council and NOAA Fisheries, the statutory deadlines in the AFA were met on an interim basis through several emergency interim rules.

Change in pollock processing from 1996 to 2006 illustrates that more effort is spent on processing higher value products since the AFA.



ON THE HORIZON

In December 2007, the Council initiated an analysis for a regulatory amendment to modify the GOA AFA catcher vessel groundfish harvest sideboards for Pacific cod and pollock. The Council is scheduled to review the analysis in June 2008.



Mark Fina

BSAI Crab Rationalization

A DANGEROUS RACE FOR CRAB

By 2000, the Bering Sea/Aleutian Islands crab industry had become extremely overcapitalized due to the derby-style nature of the fishery, and profits were beginning to plummet with reduced snow crab (*Chionoecetes opilio*) catch limits. The race to catch the annual harvest limit resulted in very short seasons, and reduced safety, product quality, and efficiency. To address the problems, the Council established a committee and started to develop alternatives and options for analysis. Congress further directed the Council to assess IFQs, processor shares, cooperatives, and community quotas for the crab fisheries as part of the Consolidated Appropriations Act of 2001.



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A SHARE-BASED PROGRAM

In June 2002, the Council unanimously recommended a voluntary cooperative program with 100 percent of the total allowable catch (TAC) allocated through harvest shares, as well as issuance of processor quota shares. For the harvest shares, 90% of the catcher vessel allocation for each fishery is issued as Class A shares (which require delivery to a processor holding individual processor quotas for that fishery), and the other 10% of the catcher vessel allocation is issued as Class B shares (which can be delivered to any processor). The dual allocations of harvesting and processing shares were intended to strike an equitable balance of the interests between the two sectors. The program also allocates 10% of the TAC to community development quota groups, and 3% of the harvest share pool to captains and crew (C shares).

Rationalized Crab Fisheries

- Western Aleutians golden king crab
- Eastern Aleutians golden king crab
- Western Aleutians red king crab
- Bristol Bay red king crab
- Pribilof red and blue king crab
- St. Matthew blue king crab
- Bering Sea snow crab
- Eastern Bering Sea Tanner crab
- Western Bering Sea Tanner crab

For More Information

Fina, M. 2005. Rationalization of the Bering Sea and Aleutian Islands crab fisheries. *Marine Policy* 29:311-322.

Fina, M. 2003. Development of rationalization programs in the North Pacific groundfish and crab fisheries. National Fishery Law Symposium. www.fakr.noaa.gov/npfmc/sci_papers/CrabRatz1003.pdf

FMP References

BSAI Crab Amendments 18 and 19; 70 FR 10174, effective April 1, 2005.

The program includes other important features. It protects historic distribution of landings and processing between North and South regions (with the Pribilof Islands in the North and the Aleutians and the Gulf of Alaska in the South). The program also includes use caps, an economic data collection system, a vessel monitoring system requirement, a fee system (up to 3%) to cover management costs and fund a loan program for entry level fishermen, sideboard caps limiting harvests of Gulf of Alaska groundfish by participants in the BSAI crab fisheries, a binding arbitration program for resolving price disputes between the harvesters and processors, and a schedule for comprehensive reviews of the program (18 months, 3 years, 5 years, and every 5 years thereafter).

Congress authorized the program (including issuance of quota shares to processors) as part of the Consolidated Appropriations Act of 2004. The program was implemented in 2005 as Amendments 18 (overall program) and 19 (binding arbitration modifications).

CHALLENGES AND CHANGES

Although consolidation of the fishery was one of the objectives of the program, the speed and magnitude of consolidation (from about 250 vessels down to less



Forrest Bowers



Mark Fina



Mark Fina

than 80 in the major fisheries) was a surprise to some fishermen who found themselves without a berth on the remaining participating vessels. In addition, during the first year of implementation, there was an increase in bycatch of small and female crabs in the red king crab fishery, and an increase in discards of lower-value legal size male crabs (those with a brown shell or covered with barnacles), which is also known as high grading. Potential stock effects were addressed immediately by a voluntary industry initiative and by ADF&G in their stock assessments.

The Council has refined the program over time as issues developed. In 2005, the Council discussed the management of Tanner crab (*C. bairdi*) stocks east and west of 166° W. longitude, and the Council decided to create two equivalent allocations for the two separate Tanner crab stocks, based on a person's history during the qualifying years regardless of where the harvest occurred. In February 2006, the Council adopted Amendment 21 that modified the timing for harvesters and processors to match shares and initiate arbitration proceedings. Amendment 25 implemented the 2006 revised Magnuson Stevens Act provision that authorized the conversion of catcher vessel owner quota shares and processing quota shares to newly created North Region catcher/processor owner quota shares. In December 2007, the Council adopted several new amendments to the program, including: Amendment 26 that would indefinitely exempt C shares from the 90/10 A share/B share split; Amendment 27 that would exempt certain custom processing from processing share use caps; and Amendment 28 that would allow for post-delivery transfers of any share type (A share IFQ/ B share IFQ, individual processing quota) to cover overages.

ON THE HORIZON

The Council is working on additional changes to the program, including:

- Modification of the active participation requirements for the acquisition and use of captain and crew shares (C shares);
- Extending the community protection measures (including the cooling off period and the rights of first refusal) for the community of St. George;
- Revising the arbitration regulations relative to market reports and non-binding price formulas;
- Adding a provision for immunity of arbitrators, arbitration organizations, market analysts, and third party data providers to ensure the independence of these persons;
- Recommendations to NOAA Fisheries Financial Services to define eligibility for the entry-level loan program for acquiring harvest shares, including participation requirements, borrowing limits, and share-holdings thresholds;
- Developing data collection quality and confidentiality protocols concerning data collected under the crab Economic Data Reporting program.

In October 2008, the Council is scheduled to receive the 3-year review of the crab rationalization program. The newly reconstituted crab advisory committee is making recommendations to revise a draft purpose and need statement and alternatives to potentially modify the basic program structure (which could include revision of the A share/B share split from the current 90/10 split). The analysis of these modifications is scheduled for initial review in October 2008.



Mark Fina

Central Gulf of Alaska Rockfish Pilot Program

THE RACE FOR ROCKFISH REDUCED PRODUCT VALUE

Pacific ocean perch, northern rockfish, and pelagic shelf rockfish (dusky, yellowtail, and widow rockfish) have historically been harvested primarily by trawl gear, with less than 1% taken by longlines or other gear. The rockfish fisheries in the Gulf of Alaska have been an important, yet short duration fishery for about 30 trawl catcher vessels and 5 trawl catcher processors that participated. The trawl season typically opened on or about July 1 and lasted for a week or two, with the fleet targeting Pacific ocean perch first and the other rockfish species thereafter. Rockfish taken by catcher vessels have traditionally been delivered to Kodiak processors, and due to the season timing and duration, more than half of the catch was processed into lower value whole and headed-and-gutted products rather than higher valued fillets.



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A HISTORY-BASED COOPERATIVE PROGRAM

The US Congress, through the Consolidated Appropriations Act of 2004 (Section 802), directed NOAA Fisheries (in consultation with the Council) to establish a two year pilot program for managing trawl fisheries for major rockfish species in the Central Regulatory Area of the Gulf of Alaska. In June 2005, the Council adopted the program as Amendment 68 to the GOA Groundfish Fishery Management Plan. Although the pilot program was originally established as a two year program (for 2007-2008), the Magnuson Stevens Reauthorization Act extended the program to 5 years.

Under the program, 95 percent of the directed fishery total allowable catches (TACs) of three target rockfish species (Pacific ocean perch, northern rockfish, and pelagic shelf rockfish) are allocated to the rockfish demonstration program. The remaining 5% of the TAC for these species is set aside to support an entry level fishery (50% trawl / 50% non-trawl) for vessels not eligible to participate. The demonstration program apportions the directed fishery TAC into 1) exclusive shares that are allocated to cooperatives, 2) rockfish program limited access fisheries, and 3) entry level limited access fisheries. Eligible harvesters can choose to join a cooperative or fish in the limited access fishery, or opt-out of the program (only catcher processors). Allocations to cooperatives are based on members' fishing histories. The allocation to the limited access fisheries are based on histories of eligible harvesters that choose to fish in the limited access. The fishery is open for the harvest of cooperative allocations from May 1 to November 15. The limited access fisheries open July 1 and close for each target rockfish species upon the harvest of the TAC of that species.

Rockfish Cooperatives, 2007

- Star of Kodiak
- North Pacific
- Ocean Beauty Seafoods
- International Seafoods of Alaska
- Western Alaska Fisheries
- Trident Offshore
- Fishing Company of Alaska (CP)

For More Information

Fina, M. 2007. A Share-Based Management Program for the Central Gulf of Alaska Rockfish Fishery. In: Heifetz et al. (Editors). *Biology, Assessment, and Management of North Pacific Rockfishes*. Alaska Sea Grant College Program AK-SG-07-01. pp. 295-313.
www.fakr.noaa.gov/npfmc/sci_papers/Rockfish905.pdf

FMP References

GOA Groundfish Amendment 68; 71 FR 67210, implemented December 20, 2006.

Persons who hold a limited license program license used for at least one directed rockfish landing in the Central Gulf of Alaska between 1996 and 2002 are eligible for the program. Each eligible license, in turn, is credited with history, based on all target rockfish species landings during the directed fishery from 1996 to 2002.



Mark Finna

Catcher processor license holders are eligible to join a catcher processor cooperative, with any other catcher processor license holder. Each catcher vessel license is eligible for a specific cooperative, which must be associated with a specific processor identified by its landings history from 1996 to 2000.

In addition to the allocation of target rockfish, cooperatives also receive allocations of valuable 'secondary species,' which include sablefish, shortspine thornyhead rockfish, Pacific cod (for catcher vessel cooperatives), and shortraker and roughey rockfish (for catcher processor cooperatives only). Allocations to each sector are based on the average percent of retained catch of the species in the target rockfish fisheries during the 1996 to 2002 qualifying period. The allocation is divided among cooperatives in a sector based on the share of the sector's target rockfish allocation received by the cooperative. The limited access fishery receives no allocation of these species, so catches are limited by regulatory maximum retainable amounts (which allow a certain percentage of incidental species to be retained with a target rockfish harvest). Each cooperative also receives an allocation of halibut prohibited species catch, which is based on historic halibut bycatch in the target rockfish fisheries and the target rockfish allocation of the cooperative, in a manner similar to the secondary species allocations.

The program includes other important features. Cooperatives must file a cooperative membership agreement with NMFS, containing a fishing plan, legal contractual obligations of members, and a monitoring program, and must annually report to the Council. Full retention of allocated species is required to eliminate waste. Use caps for individual vessels (5% for catcher vessels, 20% for catcher processors) and cooperatives (30% for catcher vessel cooperatives, 60% for catcher processors) prevent excessive consolidation of the fleet. Shoreside processors are also subject to use caps (30%), unless grandfathered at a higher level based on processing history. Sideboard restrictions and stand-down requirements prevent those cooperative member vessels not fishing their allocations from increasing effort in other fisheries.

Rationalized Central GOA Rockfish Fisheries

- Pacific Ocean Perch
- Northern Rockfish
- Pelagic Shelf Rockfish
- (Dusky Rockfish, Yellowtail Rockfish, Widow Rockfish)

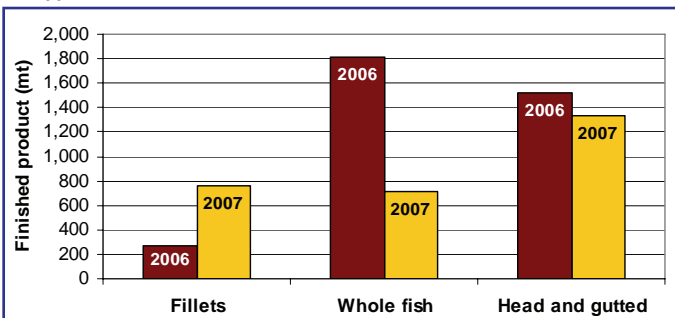
CHALLENGES AND CHANGES

In December 2007, the Council adopted an amendment to permit post-delivery transfers of cooperative quota (annual allocations to cooperatives) in the Central Gulf of Alaska rockfish pilot program. The action is intended to prevent harvest overages that could be covered by quota transfers, reducing enforcement costs and allowing for more complete harvest of the TAC. The amendment would apply no limits on the number or magnitude of post-delivery transfers, but would require that any transfers be completed within a set time period. In addition, vessels would not be permitted to begin a fishing trip without unused quota for all allocated species.

ON THE HORIZON

The Council is scheduled to receive a review of the program in June 2008. At that time, the Council will determine if further adjustments to the program are necessary.

Amount of processed Pacific ocean perch, northern rockfish, and pelagic shelf rockfish products in 2006 versus 2007.





Phil Dang



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For More Information

Amendment 80 program information on the NOAA Fisheries webpage, www.fakr.noaa.gov/sustainablefisheries/amds/80/default.htm

FMP References

BSAI Groundfish Amendment 80; 72 FR 52668, implemented October 15, 2007.

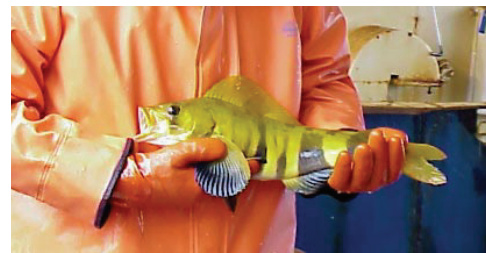
THE RACE FOR FISH PROVIDED INCENTIVE TO DISCARD

The Bering Sea flatfish fisheries, along with the Atka mackerel and Pacific ocean perch fisheries in the Aleutian Islands, have been prosecuted almost exclusively by a fleet of bottom trawl catcher vessels (the 'head-and-gut' fleet) that did not target pollock. This sector has historically had high discard rates relative to other groundfish fisheries off Alaska. In the multi-species flatfish fisheries, the lower valued fish (less valuable species, smaller fish, and fish without roe) were discarded, and only the more valuable fish retained. Typically, the fish were processed either with the head and guts removed, or frozen whole. The race for fish exacerbated economic discarding by providing incentives to discard the less valuable fish that used up processing time and limited freezer space.

A HISTORY-BASED COOPERATIVE PROGRAM

Reducing bycatch and waste of fishery resources has long been a priority for the Council. In 1996, the Council adopted BSAI Amendment 49 to require full retention of all pollock and Pacific cod beginning in 1998, with full retention of yellowfin sole and rocksole scheduled to start in 2003. In 2001, the Council decided to delay flatfish retention requirement by 18 months, but the amendment was partially disapproved by the Secretary, allowing for an indefinite delay. In June 2003, the Council adopted a groundfish retention standard (GRS) as Amendment 79, which requires minimum retention of flatfish on vessels greater than or equal to 125 feet length overall, gradually increasing from 65% to 85% over four years. The GRS became effective January 20, 2008.

The Council initiated development of Amendment 80 cooperatives in October 2002, and after a lengthy period of analysis, deliberation, and public input, took final action to adopt the program in June 2006. The Amendment 80 sector was defined by Congress in Section 219 of the Consolidated Appropriations Act of 2005, thus determining who may participate in the program. To qualify, vessels must have been a non-AFA trawl catcher processor and have a valid limited license permit (LLP) with a BSAI catcher/processor endorsement, and have processed more than 150 mt of groundfish (other than pollock) during the period 1997 through 2002.



Sarah Pautzke

The program allocates a portion of total allowable catches (TACs) for Atka mackerel, Pacific ocean perch, and 3 flatfish species (yellowfin sole, rock sole, and flathead sole), along with an allocation of prohibited species catch (PSC) quota for halibut and crab, to the Amendment 80 sector. All of the allocations are managed as a hard cap. These allocations are issued annually as quota share (QS) to owners of Amendment 80 vessels (or LLP holders if the vessel is 'lost'), based on the vessel's catch history from 1998-2004. The QS can be fished within a cooperative (comprised of at least 3 separate entities with at least 30% of the Amendment 80 vessels) as aggregated cooperative quota. Amendment 80 QS holders who do not form a cooperative arrangement with others are placed in



Amendment 80 Cooperative, 2007

Best Use Cooperative

Includes 17 of the 28 qualified
vessels

Percent of Amendment 80 quota share allocated to cooperative

47% of Pacific ocean perch
89% of flathead sole
76% of rock sole
60% of yellowfin sole
42% of Atka mackerel

Observer sampling station on
Amendment 80 F/V Seafisher. Shows
flowscale, table and platform scale,
video monitoring display, and display
for platform scale.



the limited access fishery, and continue to compete with each other for catch and PSC. Allocations of target species to the Amendment 80 sector are as follows:

- **Yellowfin sole** (up to 93% of the TAC, depending on overall TAC)
- **Rock sole** (100%)
- **Flathead sole** (100%)
- **Atka mackerel** (90-100% of the TAC depending on sub- area)
- **Aleutian Islands Pacific Ocean Perch** (90-98% depending on sub-area)

Allocation of halibut and crab PSC are made to the Amendment 80 sector and the BSAI trawl limited access sector. For the Amendment 80 sector, these PSC limits are reduced annually over the first 5 years following implementation. The program was implemented at the start of the 2008 fishery.

The program includes other important features. The minimum GRS requirements apply to all Amendment 80 vessels regardless of vessel size. Use caps were included in the program to limit the amount of QS a person can hold, the amount of cooperative quota a person can use, and the amount an individual vessel can harvest. Sideboards were added to limit the ability of Amendment 80 vessels from expanding their effort in Gulf of Alaska fisheries. An economic data collection program was included to assess impacts of the program. Additional monitoring and enforcement requirements were added to allow catch and PSC bycatch accounting on individual vessels, including: 200% observer coverage, scales, prohibition on mixing hauls, bin monitoring, and other requirements.

LEGAL CHALLENGES AND CHANGES

There are unresolved legal challenges to the program. In one recent case (*Fishing Company of Alaska v. Gutierrez*) the court vacated three monitoring and enforcement requirements that were included in the original Amendment 79 regulations. These provisions required that vessels not mix fish from different hauls in the same holding bin; that observers take samples of the catch from a single location with a clear line of sight between the holding bin and weighing scale; and that vessels operate only one scale at a give time. However, these same provisions still apply under Amendment 80.

RECENT ACTION AND ON THE HORIZON

In February 2008, the Council acted to allow cooperatives to engage in unlimited post-delivery transfers to cover quota overages. The Council postponed a decision on whether to adopt a measure to roll over unharvested TAC from the Amendment 80 limited access fishery to Amendment 80 cooperatives. Additionally, the Council requested a discussion paper to review the criteria for establishing cooperatives in the Amendment 80 sector.



Nicole Kimball

Community Development Quota Program

OPPORTUNITY FOR COASTAL COMMUNITIES

In 1991, the Council adopted a provision to the inshore/offshore analysis to allocate 7.5 percent of the BSAI pollock total allowable catch (TAC) to the Community Development Quota (CDQ) Program to provide communities with exclusive access to the commercial pollock fishery and thus, generate revenue for community development for disadvantaged coastal communities in western Alaska. The CDQ Program was approved in March 1992, and regulations were quickly developed. By June 1992, 56 eligible communities had organized into six regional non-profit corporations (CDQ groups) and applied for quota. In November 1992, the program was approved with quota allocations to the six individual CDQ groups. The CDQ groups harvested almost the entire 7.5% pollock allocation in the few remaining weeks of 1992.

The CDQ Program concept expanded quickly. The Council added halibut and sablefish to the CDQ Program when it took final action to establish an IFQ program for the commercial halibut and sablefish fisheries. For BSAI sablefish, 20% of the annual fixed gear TAC for each management subarea was allocated to the CDQ program. For halibut, the allocation differed based on halibut management areas in western Alaska: 100% in 4E, 50% in 4C, 20% in 4B, and 30% in 4D. Because halibut can be caught in the vicinity of some CDQ communities, these allocations were expected to provide real fishing opportunities for CDQ community residents. Compensation of quota share in other areas was made to accommodate those persons whose quota history was reduced by the CDQ allocations.

EVOLUTION OF THE PROGRAM

In June 1995, the Council voted to reauthorize the pollock CDQ Program for three years as part of its inshore/offshore allocation decision. Additionally, the Council voted to allocate 7.5% of all BSAI groundfish TACs and BSAI crab quotas to the CDQ Program, as part of its final action on a license limitation program for groundfish and crab fisheries. The Sustainable Fisheries Act, which amended the Magnuson-Stevens Act in 1996, cemented these CDQ allocations. Further, the 1996 amendments established a phase-in schedule for the allocation of BSAI crab: 3.5% in 1998, 5% in 1999, and 7.5% for 2000 onward, or until modified by the Council and approved by the Secretary. Between 1997 and 1998, additional communities were added to the program, for a total of 65. In 1999, the American Fisheries Act increased the CDQ program allocation of the BSAI pollock TAC to 10%.

The CDQ Program continues to evolve. In 2005, the Governor of Alaska appointed a blue ribbon panel to evaluate the CDQ Program. The panel's recommendations included changes to the allocation cycle, the allocation criteria, and the use of CDQ funds. The panel also recommended that 90% of the allocation be fixed in regulations, so that only 10% was subject to reallocation each allocation cycle. Continued concerns from the CDQ groups over the allocations led to Congressional action, in the form of the U.S. Coast Guard and Maritime Transportation Act that amended the Magnuson-Stevens Act in July 2006. This law revised the allocation process by fixing the current allocations among the CDQ groups through 2012, subject to change every 10 years thereafter. It also followed the recommendations of the blue ribbon panel,



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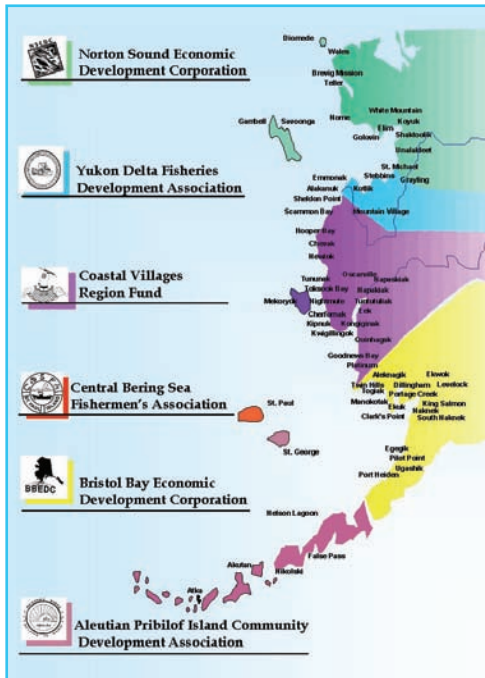
For More Information

National Research Council. 1999. Community development quota system in Alaska. National Academy Press, Washington, D.C. 228 p.

Ginter, J.C. 1995. The Alaska community development quota fisheries management program. Ocean and Coastal Management 28: 147-163.

FMP References

Proposed regulatory amendment to implement new CDQ provisions resulting from the reauthorized Magnuson-Stevens Act.



requiring that 90% of each CDQ group's allocation would be extended through each 10-year cycle. This law also made significant changes to all aspects of fisheries management, allocations, and government oversight related to the CDQ Program. Among those changes was the establishment of a CDQ Panel which comprises one member of each CDQ group. The panel must act unanimously and is charged with administering those aspects of the program not otherwise addressed in the Act, as well as coordinating the activities of the CDQ groups. In addition, the Act required that there would be a directed CDQ fishing allocation of 10% upon the establishment of any new quota program, fishing cooperative, sector allocation, or other rationalization program.

Just six months later, the Magnuson-Stevens Act was reauthorized (January 12, 2007) and included several more changes to the CDQ Program. Among those included a change requiring an increase in the current allocations for each BSAI directed fishery (other than halibut, sablefish, pollock, and crab) to a total allocation of 10.7%, effective January 1, 2008, and the same percentage for any new directed BSAI fishery that may be established. Similar to the original CDQ Program, the 10.7% allocation cannot be exceeded; the allocation must serve both the target and non-target needs of the CDQ groups.

BENEFITS OF THE PROGRAM

The most common component of the CDQ fisheries is the royalty payment derived from leasing the CDQ quota through partnerships with industry. Pollock royalties remain the largest source of revenue for the CDQ groups, typically accounting for over 80% of annual program revenues. CDQ groups have become active and significant participants in the commercial fishing industry by purchasing ownership interests in the Bering Sea fishing fleet. Typical community investments and projects engaged in by the groups include providing capital for fish buying stations and processing facilities; establishing vessel and gear revolving loan programs; developing port and harbor facilities; and providing funds for science and research. A large part of the program is also focused on employment and education. The CDQ groups have invested to varying degrees in vocational training programs and education scholarships. In addition, community residents are employed on commercial fishing vessels, in shoreside processing plants, with other associated projects (construction, welding, etc.) and with the CDQ corporations themselves.

ON THE HORIZON

The recent Magnuson-Stevens Act amendments made significant changes to all aspects of the CDQ Program. Part of the overall intent of the amendments was to reduce the government's role in program oversight, understanding that there remain continued responsibilities for the Department of Commerce, the Council, and the State of Alaska. In June 2006, the Council articulated its interest in being directly involved in CDQ actions related directly to fishery management or conservation, but only to be apprised of other actions.

NMFS continues to develop the necessary Federal regulations required to implement the new legislation. The Council will be provided with an update on those potential regulations, as well as approaches for revising the BSAI Fishery Management Plan to be consistent with the Act, in October 2008.



Nicole Kimball



APICDA



Cathy Coon

Charter Halibut

A COMMERCIAL AND GUIDED SPORT ALLOCATION

Increasing catches of halibut in the charter (or guided sport) halibut sector in the early 1990s raised concerns about localized depletion of halibut and the potential reallocation of halibut from the commercial halibut Individual Fish Quota (IFQ) fisheries to the charter fisheries in Southeast (Area 2C) and Southcentral (Area 3A) Alaska. In 1995, the Council developed a problem statement that identified issues regarding the maintenance of a stable, economically viable, and diverse commercial halibut industry; the quality of the recreational experience; access of subsistence users; and socioeconomic well-being of the coastal communities dependent on the halibut resource.



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The Council developed a number of actions to limit growth of the charter halibut sector. In 2000, the Council adopted a guideline harvest level (GHL) program for Area 2C and Area 3A. The GHL established a pre-season estimate of acceptable annual harvests for the halibut charter fishery, beginning in 2004. To allow for limited growth of the charter fleet while approximating historical harvest levels, the GHLs were based on 125% of the average of 1995-99 charter harvest estimates, as reported by ADF&G. The GHLs were set at 1,432,000 lb net weight in Area 2C (equivalent to 13.05% of the combined charter and commercial limit) and 3,650,000 lb net weight in Area 3A (14.11% of a combined charter and commercial limit). In the event of a reduction in either area's halibut biomass, as determined by the International Pacific Halibut Commission, the area GHL would be reduced incrementally in proportion to the quota reduction. Reductions in the GHL would be made using percentages of the average harvests from 1999 to 2000, as a reflection of more recent harvest levels.

For More Information

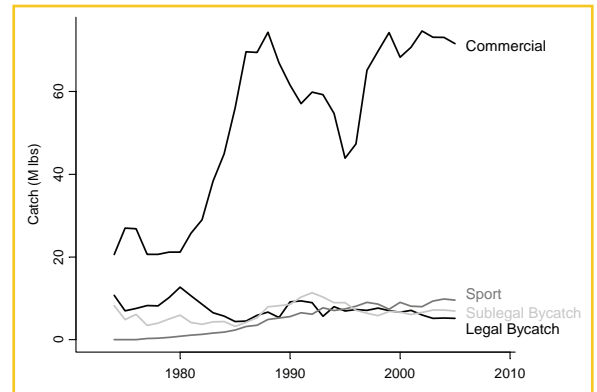
Halibut information on Council webpage, www.fakr.noaa.gov/npfmc/current_issues/halibut_issues/halibut.htm

Clark W. and S. Hare. Assessment of the Pacific halibut stock at the end of 2007. IPHC. www.iphc.washington.edu/halcom/research/sa/papers/sa07.pdf

FMP References

Charter halibut regulations, 50 CFR 300 Subpart E, 300.60 - 300.66, ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=9e06e97fc10a603187c408f185f96072&rgn=div6&view=text&node=50:7.0.2.11.1.5&idno=50

In April 2001, the Council adopted a quota share program for the halibut charter fishery based on participation during 1998 or 1999, and 2000. Following several years developing the proposed rule to implement the program, the National Marine Fisheries Service Administrator requested the Council to reaffirm its desire for this program. In December 2005, after two days of testimony from more than 150 members of the public, the Council withdrew the quota share program. Instead the Council appointed a stakeholder committee to examine a suite of management options proposed by the Alaska Department of Fish and Game prior to any further action.

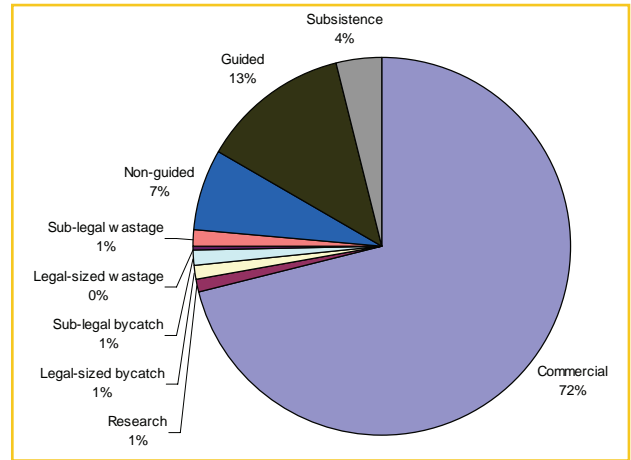


Commercial, sport (guided and non-guided), sublegal, and legal bycatch for all areas, 1974-2005.

Clark and Hare 2007

The GHL in Area 2C was exceeded in its first year of implementation, and by increasing amounts in each successive year. The GHL in Area 3A has never been exceeded. In 2007, in response to the overages in Area 2C, the 2-fish daily limit for charter customers was modified to require that one of the fish be less than or equal to 32 inches. In 2008, the GHL in Area 2C was reduced to 932,000 lb due to a reduction in halibut biomass in that area. A proposed rule is expected to be published in early April 2008 that may further reduce the daily limit to 1-fish of any size.

Charter halibut harvests as a percentage of halibut removals in directed halibut fisheries, 1995-2006. Bycatch in groundfish fisheries is not included.



Rex Murphy

ON THE HORIZON

In April 2007, the Council adopted a moratorium on entry into the charter halibut fisheries in Areas 2C and 3A using a control date of December 9, 2005. The moratorium program is comprised of several provisions, primary of which is a participation requirement that each licensed fishing guide business owner must have reported a minimum of 5 bottomfish trips on their logbooks during 2004 or 2005, as well as in the year prior to implementation, in order to qualify for a moratorium permit. A business owner would be issued a permit(s) based on the number of trips summed for all vessels in his best year of the qualification period, and would be limited to the number of permits equal to the highest number of vessels used in any one year during the qualifying period. In addition, individual vessels must meet a higher threshold of at least 15 bottomfish trips in order to receive a transferable permit; vessels that do not meet this threshold would receive a non-transferable permit. Regulations to implement the moratorium are being developed and should be published soon.

The Council is developing an analysis to replace the GHL program with a Catch Sharing Plan. The proposed plan would allocate either a fixed amount (poundage), a floating percentage of a combined charter and commercial quota, or a 50/50 mix of fixed pounds and floating percentage, to the charter sector, with the remainder of the combined quota allocated to the commercial IFQ sector. It would also allow charter halibut limited entry permit holders to lease halibut IFQ for use by anglers in the charter sector, thereby compensating the commercial sector for seasonal increases in the charter sector allocation. A stakeholder committee is also developing several share-based alternatives for the Council to consider in 2009.



Diana Stram



Mark Fina

License Limitation Program

A HISTORY-BASED PROGRAM TO LIMIT CAPACITY

In the mid-1990s, the Council began discussing ways to address overcapacity concerns in the groundfish fisheries. A license limitation program was proposed, and in 1995 a moratorium on entry of new vessels was implemented, to limit speculative entry into the fisheries while a more comprehensive program was being developed. The License Limitation Program (LLP) was eventually implemented in 2000, which limits access to the Federal groundfish and crab fisheries.

The LLP established criteria for issuing licenses to persons, based on fishing history of vessels. The initial criteria for general qualification were relatively minimal: one landing during a five year period (1988 – 1992). Licenses carry one or more fishing area endorsements (Bering Sea, Aleutian Islands, Central GOA, Western GOA, Southeast GOA), and also carry designations for operation type (catcher processor (CP) or catcher vessel (CV)), gear (trawl and/or fixed gear), and maximum vessel length. There are currently more than 1,800 groundfish licenses and 350 crab licenses. Several changes have been made to the program over the past several years, including establishing a BSAI Pacific cod endorsement for fixed gear (longline and pot) CVs and CPs over 60 ft. Participants must have this endorsement to fish in the directed BSAI Pacific cod fishery.



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CHANGES ON THE HORIZON

Since the program was first established, many trawl and fixed gear groundfish licenses have been inactive, thus incurring the term 'latent' licenses. The Council is considering removing latent licenses, to prevent their future re-entry into the fisheries. Although removing latent licenses may not have a near-term practical effect, over the long-term this may have the potential to limit overcrowding, increase efficiency, improve safety, and reduce bycatch, by slowing down the fisheries. License holders with recent participation in the fisheries would be protected from possible future use of latent licenses, and reduction of their gross revenue share due to this participation. The Council is currently considering two proposed amendments, for trawl and fixed gear groundfish licenses.

For More Information

GOA Groundfish management information on Council webpage, www.fakr.noaa.gov/npfmc/current_issues/groundfish/goacoop.htm

FMP References

Trawl recency: proposed BSAI / GOA Groundfish FMP Amendments 92/82.

Fixed gear recency: proposed GOA Groundfish FMP Amendment 81.

Trawl recency

Trawl groundfish fisheries are fully utilized in the BSAI and GOA. The proposed action would protect the current harvest share of trawl vessel participants who have made significant investments in the fisheries, and have recent harvests of BSAI and GOA groundfish, from other license holders with little or no recent history in the fisheries. Of particular concern is that GOA fisheries continue to remain limited access (not rationalized) fisheries, so competition in

Maximum potential reductions in trawl licenses

Catcher Processors	
Bering Sea	10%
Aleutian Islands	6%
Central GOA	26%
Western GOA	27%
Catcher Vessels	
Bering Sea	22%
Aleutian Islands	10%
Central GOA	52%
Western GOA	59%

these fisheries may continue to increase due to a number of factors, including the rationalization of other fisheries, favorable market prices, and a potential for harvest quota changes in future years.

The proposed action would remove the area endorsements (excluding Southeast GOA) on trawl CV and CP licenses if the license does not meet specified harvest thresholds. The recency thresholds have been determined by the Council to be one or two groundfish landings during 2000 – 2005 or 2000 – 2006. In effect, if the trawl license at issue has only one area endorsement and it does not meet the landing threshold selected, the entire license is extinguished. If the license has multiple area endorsements and it does not meet the landing threshold for a specific area, the license would be reissued with only the area endorsements for which it qualifies. In addition, there are options to create 12 to 15 new Aleutian Island endorsements for use on non-AFA trawl CV licenses. The Council is scheduled to take final action on this amendment at its April 2008 meeting.



Herman Savikko

GOA Fixed Gear Recency

The Gulf of Alaska groundfish fisheries are among the few remaining limited access (not rationalized) fisheries in Alaska. Of these fisheries, Pacific cod is the predominant groundfish species targeted by the fixed gear sectors in the GOA. As a result of the increased value of cod and declining harvest quotas in recent years, competition among fixed gear participants in the Western and Central Gulf groundfish fisheries has intensified, particularly during the A season (January-June), when fish are aggregated and of highest value.

The proposed action would extinguish GOA fixed gear licenses that do not meet minimum groundfish landings thresholds during a specific qualifying period (2000-2005 or 2000-2006). The action would potentially reduce the number of fixed gear licenses with Western GOA or Central GOA endorsements by up to 75%. As a result, the number of participants in the fisheries will be permanently capped at the number of available licenses, and new entrants will have to purchase an existing license if they wish to fish in federal waters. This action may enhance stability in the fishery, reduce competition among fixed gear participants, and protect historic catch shares of participants.

As part of the amendment, the Council may create gear-specific (pot or hook-and-line) Pacific cod endorsements on fixed gear licenses, which would be required to participate in directed Western and Central Gulf Pacific cod fisheries. Because Pacific cod is the predominant groundfish species targeted by the fixed gear sectors in the Western and Central GOA, fixed gear licenses without cod endorsements would have access to only a limited number of remaining open access fisheries.

The Council is scheduled to complete initial review of this amendment at its June 2008 meeting



Diana Evans



Herman Savikko



Diana Evans

Gulf of Alaska Pacific Cod Sector Allocations

GROUND FISH MANAGEMENT CHALLENGES

In 1999, the Council began developing a package of measures to rationalize the derby style GOA groundfish fisheries and address concerns regarding social and economic impacts of regulations on harvesters, processors, crew, and communities that depend on the GOA fisheries. Over the next few years, the Council developed and refined alternatives for a GOA groundfish rationalization program. In December 2006, however, the Council elected to delay further consideration of the comprehensive rationalization program and instead to proceed with the more discrete issues of allocating the Pacific cod resource to the various gear sectors and limiting future entry to the groundfish fisheries by extinguishing latent Limited License Program (LLP) licenses.



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GOA groundfish management information on Council webpage, www.fakr.noaa.gov/npfmc/current_issues/groundfish/goacoop.htm

FMP References

GOA Pacific cod sector allocations: proposed GOA Groundfish FMP Amendment 80.

GOA PACIFIC COD FISHERY

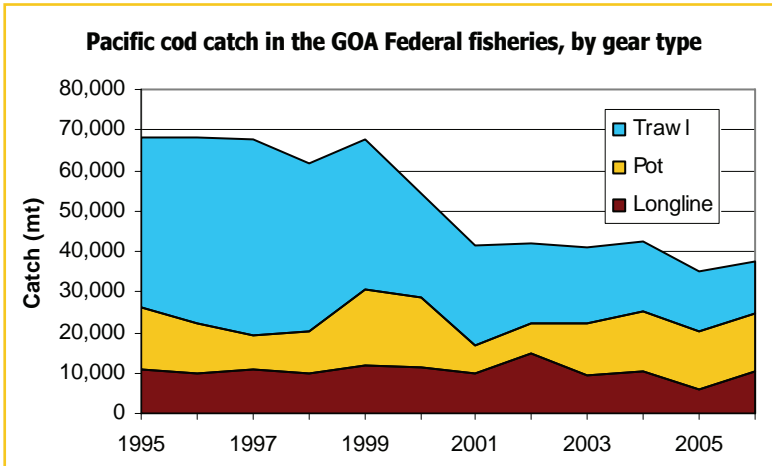
Pacific cod is the second major species (after pollock) in the commercial groundfish catch in the GOA. Pacific cod is one of the most valuable species targeted by the remaining open access fisheries in the GOA, and is the primary species targeted by the fixed gear sectors. The GOA Pacific cod resource is fished by multiple gear and operation types, principally pot, trawl, and hook-and-line catcher vessels, and hook-and-line catcher processors. Smaller amounts of cod are taken by other sectors, including catcher vessels using jig gear.

Currently, separate total allowable catches (TACs) are identified for Pacific cod in the Western, Central, and Eastern GOA regulatory areas. Final 2008 harvest specifications apportioned 54% of Pacific cod catch to the Central Gulf (29,453 mt), 39% to the Western Gulf (20,885 mt), and 7% to the Eastern Gulf (3,856 mt). TACs are apportioned 90% to the inshore sector and 10% offshore. TACs are also apportioned seasonally, with 60% allocated to the A season (January 1 – June 10) and 40 percent to the B season (September 1 - December 31). The A and B season apportionments were implemented in 2001 as a Steller sea lion protection measure. Currently, TACs are not allocated by gear or operation type, which results in derby-style race for fish and competition for shares of the TAC.



Herman Savikko

Competition for GOA Pacific cod has increased for a variety of reasons, including increased market value of cod products, rationalization of other fisheries in the BSAI and GOA, increased participation by fishermen displaced from other fisheries, reduced Federal TACs, and Steller sea lion mitigation measures, including the A/B seasonal split of the TACs. The competition among sectors in the fishery may contribute to higher rates of bycatch, discards, and out-of-season incidental catch of Pacific cod. Participants in the fisheries who have made long-term investments and are dependent on the fisheries face uncertainty as a result of the competition for catch shares.



Catch of Pacific cod in the Federal fisheries in the GOA has declined substantially since 1995, and most of this decline is reflected in reduced trawl catch. Beginning in 1997, 15% of the ABC was allocated to the State waters fishery (current allocation is 25% in the western and central GOA).

ON THE HORIZON

The Council is considering an amendment that would divide the Western and Central Gulf of Alaska Pacific cod TACs among gear and operation types, based on historic dependency and use by each sector. Sector allocations have the potential to enhance stability in the fishery, reduce competition among sectors, and preserve the historic distribution of catch among sectors. Without sector allocations, future harvests by some sectors may increase and impinge on the historic levels of catch by other sectors. Sector allocations may be a first step toward stabilizing the GOA Pacific cod fishery, and may enable the Council to begin

developing a series of management measures to address mitigation issues associated with Steller sea lion protection measures, and bycatch reduction.

Sector allocations would be based on historic catch, determined by one of two definitions: catch during 1995-2005 or 2000-2006. Since 1995, the proportion of catch harvested by the various sectors has changed, in some cases substantially. In general, the proportion of Central and Western GOA Pacific cod caught by trawl catcher vessels has declined, while the proportion caught by pot catcher vessels has increased. This trend is particularly apparent in the Western GOA. Depending on the range of qualifying years selected by the Council, the trawl catcher vessel allocation could range from 31 to 48 percent of the Western Gulf TAC. The pot catcher vessel allocation could range from 29 to 43 percent of the Western Gulf TAC. Differences among the various options are generally smaller for the Central Gulf.

The Council is also considering options that may create additional entry-level opportunities within the jig sector. During recent years, less than 1% of the Western and Central GOA TACs were harvested by jig vessels, but few jig vessels have elected to participate in the Federal Pacific cod fisheries. The federal

A and B seasons currently occur during winter and fall months when inclement weather conditions may limit participation by smaller vessels. Under current options, the jig sector could receive an initial allocation of 1 to 7 percent of the Western and Central Gulf TACs, and this allocation could be increased on a stairstep basis by 1 to 3 percent per year if at least 90 percent of this allocation is harvested during a given year.

Finally, the Council is considering options to add GOA Pacific cod endorsements to fixed gear licenses, similar to the BSAI fixed gear licenses implemented in 2003. Such endorsements would further limit entry to the GOA cod fishery and would create a defined group of licenses eligible to fish each of the fixed gear cod allocations.



Mark Fina



Diana Evans

SIDEBOARDS MAINTAIN HISTORIC BALANCE

With the advent of limited access privilege programs (LAPPs) in many of the North Pacific target fisheries over the last decade, sideboards have become a common tool to preserve fair access to fishing opportunities between LAPP and non-LAPP participants. An advantage of a LAPP is that participants have increased flexibility to optimize their efficiency and plan when and where to fish. Because many LAPP participants fish in multiple target fisheries, however, the flexibility that allows them to change their fishing patterns could also give participants a competitive advantage in other fisheries. For example, prior to the development of the LAPP, two fisheries may have occurred during the same time period, and fishermen would have to choose which fishery to participate in. The flexibility of the LAPP frees up participants to expand their participation in the non-LAPP target fishery, to the detriment those other fishermen dependant on the non-LAPP fishery. As a result, harvest limits, or “sideboards” in the non-LAPP fishery, may be placed on the LAPP participants to maintain the historic balance.



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Sideboard limits allow LAPP participants to continue to fish in other target fisheries, up to the level of their historic participation. Sideboard limits are not an allocation, and LAPP participants are not guaranteed any catch in the other, non-LAPP target fisheries. They must still compete against other fishermen to catch fish before the total allowable catch (TAC) is harvested.

AMERICAN FISHERIES ACT

The American Fisheries Act (AFA) of 1998 established a LAPP for the BSAI pollock target fishery. AFA catcher processors and catcher vessels are not allowed to harvest more than their traditional catch levels in other BSAI and GOA groundfish fisheries, except catcher processors are prohibited from harvesting GOA groundfish. For both sectors, sideboard limits for groundfish are based on retained catch in the other fisheries from 1995-97. They are also restricted by halibut and crab prohibited species catch (PSC) sideboard limits, based on historic use for catcher processors, and proportion of aggregate retained groundfish catch for catcher vessels. Some AFA catcher vessels with relatively low BSAI pollock landings are exempt from certain sideboard limits, as they have a high economic dependence on BSAI Pacific cod or GOA groundfish fisheries. The implementation of the crab rationalization program superseded AFA crab sideboard limits for harvesters and processors, and Amendment 80 modified some groundfish sideboard calculations for AFA participants.

For More Information

Information on the details of limited access privilege programs and sideboard limits, www.fakr.noaa.gov/sustainablefisheries/

FMP References

Sideboard regulations: 50 CFR 679.64 (AFA), 50 CFR 680.22 (crab rationalization), 50 CFR 679.82 (rockfish pilot program), 50 CFR 679.92 (Amendment 80), www.fakr.noaa.gov/regs/summary.htm

CRAB RATIONALIZATION

The Council’s BSAI crab rationalization program was implemented in 2005. Because few vessels had participated in both the crab and groundfish fisheries, the Council only included sideboard limits for non-AFA vessels qualifying for the Bering Sea snow crab fishery. These vessels are subject to sideboard limits for GOA groundfish generally, and also specifically for GOA Pacific cod. GOA groundfish sideboard limits for non-AFA crab vessels are based on their proportion of GOA groundfish landings from 1996 to 2000. In addition, participation in the GOA Pacific cod fishery is restricted to vessels that landed



Mark Fina

The Council is considering the following sideboard changes:

- Exempt non-AFA crab vessels from GOA Pacific cod sideboards on November 1st if the B season Pacific cod in the western and central GOA directed fisheries will not be fully harvested
- Change the GOA Pacific cod sideboard exemption qualifications for non-AFA crab vessels
- Exempt qualified non-AFA crab vessels from GOA pollock sideboards
- Adjust the Amendment 80 3rd season deep-water halibut PSC sideboard limit to account for halibut usage by rockfish pilot program catcher processors that join the limited access and opt-out fisheries
- Exempt catcher processors that participate in the rockfish pilot program and also belong to a cooperative in the BSAI under Amendment 80 from the July 1 – July 14 stand in the BSAI
- Change the GOA Pacific cod and pollock sideboard limits for the AFA catcher vessels

more than 50 mt of GOA groundfish during the same period. Non-AFA crab vessels that landed less than 100,000 lbs of Bering Sea snow crab and more than 500 mt of GOA Pacific cod between 1996 and 2000 are exempt from the GOA Pacific cod sideboard limits.

ROCKFISH PILOT PROGRAM

The Central GOA Rockfish Pilot Program was implemented in 2006, and includes a suite of GOA groundfish sideboard limits for catcher processors and catcher vessels. There are two broad categories of sideboards. The first sideboard category established catch limits, and are in effect only during the month of July. They are designed to restrict fishing during the historical month of the rockfish fishery, but allow eligible rockfish harvesters to participate in fisheries before and after that time period. Sideboard limits apply to harvest in other GOA rockfish fisheries (pelagic shelf rockfish, Pacific ocean perch, and northern rockfish) fisheries and halibut PSC (which limits participation in GOA flatfish fisheries).

In addition, there are also sideboards that prohibit catcher processors from directed fishing during the historic rockfish season. Those that join a rockfish cooperative are restricted from participating in directed fisheries in the BSAI and adjacent State waters from July 1 to July 14. Catcher processors that elect to fish in the limited access fishery and have more than 5% of the sector’s qualified catch of central GOA Pacific ocean perch may not participate in the GOA or BSAI groundfish fisheries from July 1 until 90% of the Pacific ocean perch that is allocated to the limited access fishery has been harvested. Finally, catcher processors that opt-out of the rockfish pilot program altogether may only participate in a directed fishery the license holder has historically participated in during the first week of July in at least two of the years from 1996 to 2002.

AMENDMENT 80

Amendment 80, implemented in 2008, allocates BSAI yellowfin sole, flathead sole, rock sole, Atka mackerel, and Aleutian Islands Pacific ocean perch to the head and gut trawl catcher processor sector, and allows qualified vessels to form cooperatives. The program establishes GOA groundfish sideboard limits for pollock, Pacific cod, Pacific ocean perch, northern rockfish, and pelagic shelf rockfish, as well as GOA halibut PSC. GOA sideboard restrictions are based on historic participation during 1998-2004. In addition, participation in the GOA flatfish fishery is prohibited for vessels with less than 10 weeks of history in the GOA flatfish fisheries. One vessel is exempt from the GOA halibut PSC sideboard limits, having fished 80% of its weeks in the GOA flatfish fisheries from 2000 through 2003.

ON THE HORIZON

The Council is considering changes to the GOA sideboard limits to address a number of issues, including ensuring full harvesting total allowable catch (TAC), relief for economically-dependent participants, and providing more fishing opportunities for participants who are not subject to sideboards. The Council is scheduled to review analyses in April and June 2008, and will make final recommendations later in 2008.



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For More Information

Fall, J., D. Koster, and M. Turek. 2007. Subsistence Harvests of Pacific Halibut in Alaska, 2006. ADF&G Technical Paper No. 333.
www.subsistence.adfg.state.ak.us/TechPap/TP333.pdf

Halibut subsistence fishery information,
www.fakr.noaa.gov/ram/subsistence/halibut.htm

FMP References

Regulatory amendment to implement program; 68 FR 18145, effective May 15 2003.

Regulations at 50 CFR 300 Subpart E, 300.60 - 300.66,
ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;sid=0c90b23b3f038f3072c58896761df915;rgn=div5;view=text;node=50%3A7.0.2.11.1;idno=50;cc=ecfr

AFFIRMING ALASKA NATIVE AND RURAL PRACTICES

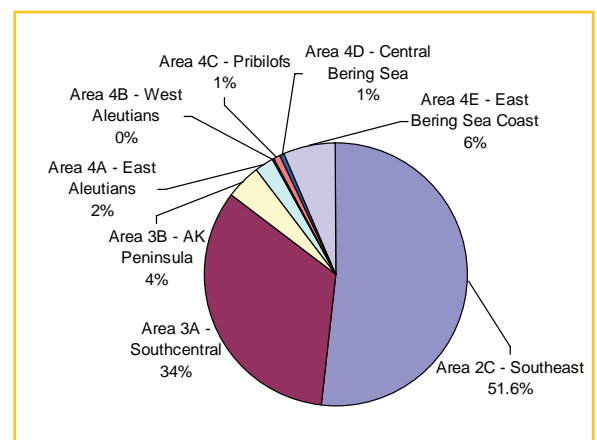
At the time of the implementation of the commercial halibut IFQ program in 1995, it became apparent that customary and traditional practices of taking halibut were not provided for in Federal regulations. The North Pacific Council responded by adopting recommendations that defined halibut subsistence, eligibility, allowable gear, trade, bag limits, and cooperative agreements for data monitoring. The subsistence halibut fishery was authorized in May 2003. Qualified individuals are residents of 117 rural communities or members of 123 Alaska Native tribes which traditionally use halibut. Commercial sale of subsistence halibut is prohibited. Participants must comply with the following conditions:

- hold a Subsistence Halibut Registration Certificate (SHARC);
- use legal gear of up to 30 hooks per longline, hand line, rod and reel, or spear;
- participate only in customary and traditional trade; and
- not exceed a daily harvest limit of 20 halibut.

CUSTOMARY AND TRADITIONAL USES

In Alaska's coastal areas, subsistence halibut fisheries are local, non-commercial, customary and traditional food fisheries that date back thousands of years. The subsistence program enables eligible rural Alaska residents, both Native and non-Native, who depend upon the taking of halibut for food and who have limited alternative food resources, to continue to take halibut for that purpose. The program conforms to Federal statutes that provide the opportunity for the continued existence of these traditional cultures and economies.

There are two types of SHARCs: Rural Registration Certificates, which are valid for two years, and Alaska Native tribal Registration Certificates, which are valid for four years. In 2006, 14,200 SHARCs were issued. These were split about 57% to rural residents and 43% to Tribal members. The main purpose for SHARCs is to create a list of participants from whom to collect effort and harvest information. Harvest data has been collected from SHARC holders by surveys conducted by the Alaska Department of Fish and Game Subsistence Division under contract to NMFS.



Percentage of subsistence halibut harvest, by regulatory area fished, 2006.

Fall et al. 2007

An estimated 5,909 individuals (or 42% of those with SHARCs) participated in the subsistence fishery for halibut in 2006, compared to 5,621 in 2005; 5,984 in



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2004; and 4,942 in 2003. The estimated harvest in 2006 was 54,089 halibut, comprising 1,125,312 pounds net weight. Of that total, 70 percent was harvested with setline gear and 30 percent with hand operated gear. The largest portion occurred in Area 2C (Southeast Alaska), 52%, followed by Area 3A (Southcentral Alaska), 34%. Subsistence harvests represent about 1.5% of the total halibut removals in Alaska in 2006. Subsistence fishers also harvested an estimated 16,945 rockfish and 3,486 lingcod in 2006 while fishing for halibut.

REFINEMENTS TO THE PROGRAM

Since implementation, the Council has made several changes to the subsistence halibut program. In 2005, regulations provided for three new types of permits. Tribes and communities may apply for and receive:

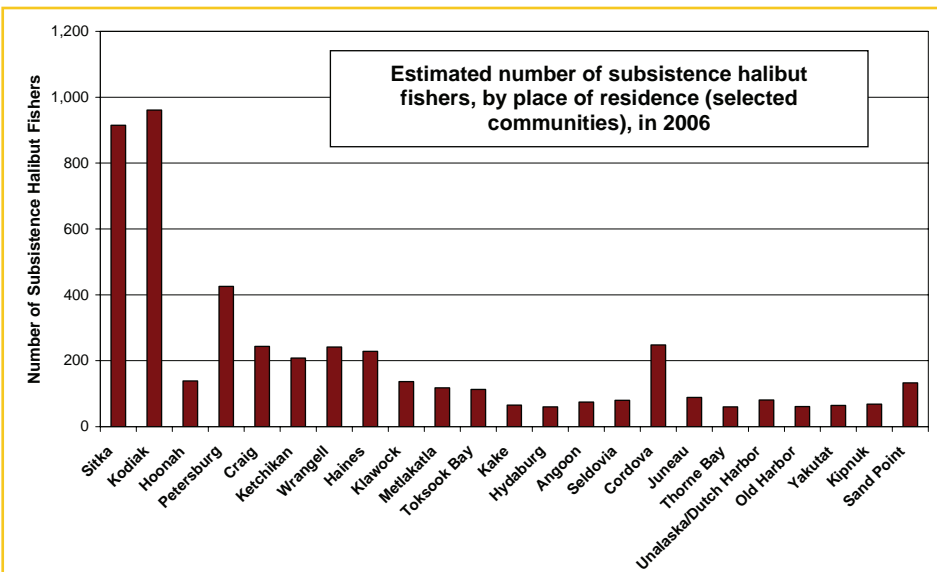
- community harvest permits in Area 2C only,
- educational permits in Area 2C and Area 3A, and
- ceremonial permits in Area 2C and Area 3A.

In December 2004, the Council recommended changes that would 1) reduce the subsistence gear limits in Kodiak and add seasonal gear and vessel limits in the Sitka Sound Local Area Management Plan (LAMP) area; 2) add Naukati to the list of eligible subsistence halibut communities; 3) implement a possession limit equal to two daily harvest and vessel limits to enhance enforcement; 4) revise the definition of charter vessel; 5) revise regulations allowing customary trade; and 6) allow the use of special permits within non-subsistence use areas by eligible tribes. The proposed rule to implement these changes is being drafted and is expected to be published soon.

ON THE HORIZON

The Council is developing a regulatory amendment to redefine eligibility for rural residents because some applicants have been deemed ineligible because they do not reside within the legal boundaries of the 117 rural communities

approved for inclusion in the program but otherwise conform to a rural subsistence lifestyle. The Council is scheduled to take action in June 2008. If approved by the Secretary of Commerce, implementation could occur as early as 2009.



Fall et al. 2007



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Diana Evans

Groundfish Observer Program

MONITORING THE FOREIGN FLEET

The National Marine Fisheries Service (NMFS) began placing observers on foreign fishing vessels operating off the Pacific Northwest and Alaskan coasts in 1973, initially, only upon invitation by host countries. In the early years of the program, the primary purpose of observers was to determine incidental catch rates of Pacific halibut in groundfish catches and to verify catch statistics in the Japanese crab fishery. Observer coverage greatly expanded with the implementation of the Magnuson-Stevens Act in 1976, which mandated that foreign vessels carry observers. In 1978, U.S. fishermen began large-scale fishing for groundfish through joint ventures with foreign processing vessels, but by 1991, all foreign processing within Alaskan Federal waters was terminated. The domestic observer program emerged during those transition years.



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EVOLVING TO A DOMESTIC PROGRAM

The current domestic observer program was authorized under Amendments 13 and 18 to the groundfish fishery management plans for the BSAI and GOA, respectively. Under this program, NMFS provides operational oversight, certification training, definition of observer sampling duties and methods, debriefing of observers, and management of the data. Vessel and processing plant owners contract directly with observer companies and pay for the cost of the observers, and the costs associated with managing the program are paid for by the Federal government.

The 1990 Observer Program established coverage levels in Federal regulations for most vessels and processors based on vessel length and amount of groundfish processed, respectively. Coverage levels have been increased to implement certain limited access programs with increased monitoring needs, such as the Western Alaska Community Development Quota Program and the BSAI pollock and flatfish fisheries, but aside from these, coverage requirements for the groundfish fleets of the BSAI and GOA have remained largely unchanged.

For More Information

History of Council's consideration of observer program restructuring, www.fakr.noaa.gov/npfmc/current_issues/observer/observer.htm

Observer program webpage at the NMFS Alaska Fisheries Science Center, www.afsc.noaa.gov/FMA/

FMP References

Observer Program regulatory changes: proposed Regulatory Amendment. Analysis available at www.fakr.noaa.gov/npfmc/current_issues/observer/observer.htm

The North Pacific Groundfish Observer Program is the largest observer program in the United States. It is also one of only two observer programs that are primarily paid for by the fishing industry. The mission of the observer program is to provide the highest quality data to promote stewardship of the North Pacific living marine resources for the benefit of the nation. Data collected by the program are used for a wide variety of purposes including: stock assessment; monitoring groundfish quotas; monitoring the bycatch of groundfish and non-groundfish species; assessing the effects of the groundfish fishery on other living marine resources and their habitat; and assessing methods intended to improve the conservation and management of groundfish and other living marine resources.

Observer coverage in 2007
373 individual observers
296 vessels
22 processing facilities
<hr/>
35,355 total observer days

CHALLENGES AND CHANGES

In designing the domestic Observer Program in 1989, NMFS and the Council had limited options because the Magnuson-Stevens Act provided no authority to charge the domestic industry fees to pay for the cost of observers, and Congress provided no funds to cover the cost of observers (which is still the case today). The need for observers and the data they provide was sufficiently critical that the Council and NMFS proceeded with Observer Program regulations under Amendments 13/18. The regulations establishing coverage requirements and requiring vessels and processors to contract for observer services were considered “interim” at the time. Efforts to change the existing service delivery model for the program have been unsuccessful as of yet for various reasons, and the “interim” Observer Program has since been extended several times.

Concerns with the existing program arise from the inability of NMFS to decide when and where observers should be deployed, inflexible coverage levels established in regulation, disproportionate cost issues among the various fishing fleets, and the difficulty to respond to evolving data and management needs in individual fisheries. In the past several years, the Council and NMFS have renewed efforts to develop a new system for observer funding and deployment. In general, the program was to be restructured such that NMFS would contract directly with observer providers for observer coverage, and place observers on vessels and in processing plants when determined necessary. The intent was to fund the program through a fee system and/or direct Federal funding.

As recently as June 2006, options for a restructured program were before the Council, but the existing program was ultimately maintained, given that two fundamental, external obstacles continue to exist. The two obstacles were: 1) new statutory authorization was necessary to assess different fees against different fisheries or fishery sectors, as proposed in the analysis; and 2) uncertainty in the estimate of costs resulting from a change to a fee-based system due to the applicability of the Service Contract Act and Fair Labor Standards Act with regard to observer compensation issues. The Council indicated its intent to reconsider the amendment when these issues were resolved.

The 2006 reauthorization of the Magnuson-Stevens Act provides flexibility for the Council to establish a system of fees, which may vary by fishery, management area, or observer coverage level, to pay for the cost of implementing a fisheries research plan. The second impediment to restructuring, however, remains unresolved. NMFS continues to seek guidance from Department of Labor and has initiated an internal process to document labor costs associated with current direct NMFS contracts for observer services.

ON THE HORIZON

Currently, the Council is focusing its efforts on several administrative, operational, and procedural changes to the existing Observer Program that are necessary regardless of observer restructuring. The Council is scheduled to take final action at its April 2008 meeting.



Diana Stram

General observer coverage requirements

Vessels < 60 ft LOA (and halibut vessels)	None
Vessels ≥60 ft but <125 ft LOA	30% of fishing time
Vessels ≥125 ft LOA	100% of fishing time
Processing plants	100% of time
Dedicated access privilege programs	Additional coverage requirements

LOA = length overall



Mark Fina



Diana Evans

Vessel Monitoring Systems

A MONITORING TOOL THAT PROVIDES MANY BENEFITS

A Vessel Monitoring System (VMS) combines a global positioning system unit and a radio, and sends periodic signals to overhead satellites so the location of the vessel carrying it can be tracked. Benefits of VMS coverage include:

- **Enforcement:** Knowledge about the location of the fleet can make it easier for the Coast Guard to enforce a wide range of safety and fishery regulations.
- **Inseason management:** VMS is used by inseason managers to determine when to open and close fisheries by providing information on levels of effort in particular areas at particular times.
- **Safety:** The Coast Guard is using VMS in search and rescue efforts, because VMS can provide location information quicker than Emergency Position Indicating Radio Beacons (EPIRBs) when distress calls come in. Additionally, VMS provides the Coast Guard with locations of nearby vessels that can assist more quickly.
- **Scientific information:** Spatial data on fishing effort is important for evaluating impacts of fishing and changes to fishery regulations. VMS information also supplements observer reports, particularly on smaller vessels with limited or no observer coverage.
- **Other benefits:** Vessel operators, family, and owners benefit from their private use of VMS systems by remotely monitoring vessel locations.



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The average cost of acquiring a VMS unit is estimated to be about \$2,100, which includes purchase, shipping, installation, and initialization costs with the National Marine Fisheries Service. Annual operation costs run approximately \$190 per vessel, which covers costs of transmission, maintenance, and repairs.

For More Information

VMS frequently asked questions on NOAA Fisheries Office of Law Enforcement webpage, www.nmfs.noaa.gov/ole/ak_faqs.html

FMP References

Dinglebar VMS exemption: proposed Regulatory Amendment.

REQUIRED ONE FISHERY AT A TIME

Over time, the Council has adopted VMS requirements for different fisheries to meet specific objectives. The following is a brief timeline of when VMS requirements became effective.

- 2000 – Required for vessels in Atka mackerel fishery (Steller sea lion critical habitat protection).
- 2002 – Required for federally permitted vessels fishing cod, pollock and Atka mackerel (Steller sea lion protection).
- 2003 – Authorized for halibut fishery to allow exemption from check-in requirements in Area 4.
- 2005 – Required for vessels fishing in the BSAI crab rationalization program.
- 2006 – Required on all federally permitted vessels in the Aleutian Islands, and bottom-tending gear vessels in the GOA (essential fish habitat conservation).
- 2007 – Required for vessels participating in the Central GOA Rockfish Pilot Program. Authorized in the sablefish fishery as an alternative to the clearance requirement.
- 2008 – Required for vessels in the Amendment 80 sector.

COVERAGE BY AREA

Overall, a significant portion of the vessels fishing for groundfish and crabs off Alaska is currently required to carry VMS. A summary of the requirements and affected fleets, by area, is provided below.

Aleutian Islands: VMS is required on all vessels with a federal fishing permit, regardless of vessel size, fishery, or gear type, even if operating in state waters.

Gulf of Alaska: VMS is required on any federally-permitted vessel using mobile bottom contact gear (i.e, bottom trawls, dinglebar gear, or scallop dredges), and on vessels that target pollock or Pacific cod (there is no directed Atka mackerel fishery in GOA) using pelagic trawls, bottom trawls, longlines, or pots (jig gear is exempted), and on vessels participating in the central GOA rockfish cooperative program. In other words, VMS is required on all trawlers as well as the bigger longline and pot vessels in the GOA. For the most part, the only federally-permitted vessels that do not have VMS are some longliners targeting halibut or sablefish, and smaller vessels using jig gear to catch Pacific cod. Of course, there are other vessels that fish in state waters only, or that target salmon or other state-managed fisheries which do not require VMS.

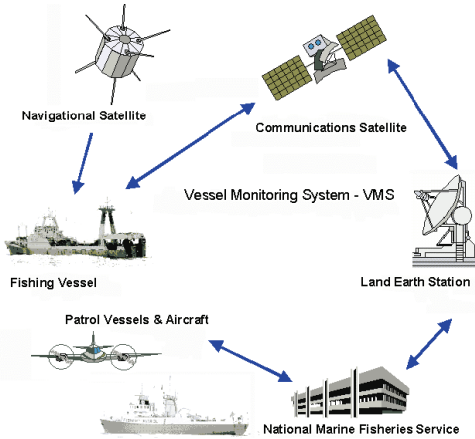
Bering Sea: VMS is required on vessels that target pollock, Atka mackerel, or Pacific cod using pelagic trawls, bottom trawls, longlines, or pots (jig gear is exempted), as well as vessels in the Amendment 80 sector. This covers nearly all of the Bering Sea groundfish fleet, with the exception of the local halibut fleet (mostly community development quota fisheries); and a couple of vessels using jig gear to catch Pacific cod. VMS is also required on vessels fishing for crab species covered under the crab rationalization program. Vessels fishing for non-groundfish species (e.g., salmon) do not need VMS.

CHALLENGES AND CHANGES

In February 2007, the Council reviewed an initial draft of a comprehensive VMS program that would greatly increase the number of commercial fishing vessels operating in Federal waters off Alaska which would be required to carry a transmitting VMS. After much deliberation, the Council decided to postpone indefinitely any further work on a comprehensive VMS program. The Council noted that other tools may be available to address specific problems or enforcement needs for specific circumstances, and a 'one-size-fits-all' solution may not be optimal.

ON THE HORIZON

In June 2008, the Council is scheduled to take final action on an amendment that considers exempting vessels using dinglebar gear from VMS requirements. The VMS requirement for this fishery was originally implemented to assist with monitoring of the habitat closure areas in Southeast Alaska. However, recent information suggests that given the distribution of the fishing effort relative to the corals, along with the small size of and relative costs to the fleet, this requirement may not be necessary.



Schematic of how VMS works.



Diana Evans



NOAA Fisheries

COUNCILS PROVIDE RESEARCH RECOMMENDATIONS

The Magnuson-Stevens Act requires regional fishery management councils to develop, in conjunction with their Scientific and Statistical Committee (SSC), 5-year research priorities for fisheries, fisheries interactions, habitats, and other areas of research that are necessary for management purposes. These priorities are to be submitted to the Secretary of Commerce and the regional science centers of the National Marine Fisheries Service (NMFS) for their consideration in developing research priorities and budgets for the region of the Council.

At each June meeting, the Council develops a list of research priorities, based on input from the Plan Teams and recommendations from the SSC. These priorities are then disseminated to the Secretary and NMFS, as well as to the North Pacific Research Board, various universities, the US Coast Guard, Alaska Department of Fish and Game, and other entities likely to conduct or fund this research. The following is a summary of the 5-year research needs and priorities adopted by the Council in June 2007.



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FISHERIES RESEARCH PRIORITIES

Stock Assessments: The highest priority is to fund and complete the annual and biennial surveys in the GOA, Aleutian Islands, and eastern Bering Sea, which provide baseline distribution and abundance data that form the foundation for stock assessments. Surveys in the northern Bering Sea and Arctic Ocean will become increasingly important in the future. The second priority is to continue and expand cooperative research efforts to supplement existing surveys to provide seasonal or species specific information. And lastly, stock assessments of “other species” and non-target crab should be improved through development of alternative indices of abundance (and biomass) and fishing mortality, and improved life history information. Little information is available for sculpins, skates, octopuses, squids, grenadiers and some sharks.

Fishery Performance and Monitoring: Improvements in at-sea observations are needed in several areas: (1) species-specific identification of priority species on scientific surveys, (2) review and revision of observer deployment and coverage to adequately characterize total catch, as well as a review of sampling procedures (e.g., basket versus whole haul) employed by observers that form the basis for total catch estimation, (3) improved means of data collection especially on small vessels, and (4) improved biological data collection of bycatch species (e.g., octopus, squid, skates, sharks, and non-target crab). In addition, estimation methods for total catch and fishing mortality of all target and non-target species at the stock and fishery level could be improved with revised observer deployment, use of flow scales, and other methods.

Fishery Management: The first priority is to evaluate the effectiveness of setting acceptable biological catch and overfishing levels using Tier 5 and 6 approaches for rockfishes and other poorly assessed species (e.g., squid, octopus, skates, non-target crab). Second is to develop suitable indicators and indicator species to advance an ecosystem approach to fisheries management. A related priority is the development of forecasting tools that incorporate ecosystem indicators into single or multi-species stock assessments to conduct management strategy evaluations under differing assumptions regarding climate and market

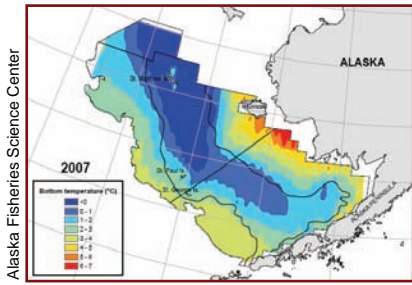
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Alaska Fisheries Science Center
webpage, www.afsc.noaa.gov/

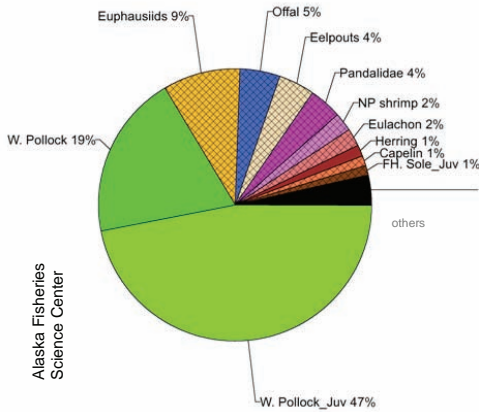
North Pacific Research Board
webpage, www.nprb.org/

FMP References

Council research priorities for 2007,
www.fakr.noaa.gov/npfmc/misc_pub/research_priorities07.pdf

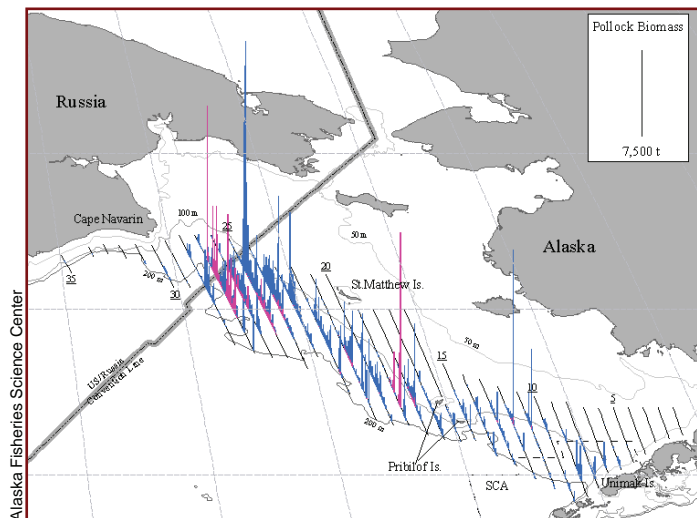


Sea bottom temperature profile from NMFS surveys, 2007.



Diet of BSAI arrowtooth flounder.

Estimates of pollock biomass from the 2007 eastern Bering Sea echo-integration trawl survey. Adult pollock are in blue, and juvenile pollock (less than 30cm) in pink.



demands. Spatially explicit stock assessments that allow for management to be linked appropriately to stock boundaries and habitat use are also needed.

FISHERIES INTERACTIONS RESEARCH PRIORITIES

Bycatch: Research should be done to improve the estimation of total incidental catch of tier 2 marine mammals and seabirds. For groundfish, better estimates of discard mortality rates by gear and fishery are needed to estimate more accurately total bycatch mortality for all discarded species, with an emphasis on crabs, skates, sharks, rays, and octopus. Further research is also needed on gear modifications and fishing practices for reducing bycatch, particularly for prohibited species.

Expanded Ecosystem Studies: Research is needed to understand the effects of climate change. Changes in ocean temperature and acidity may affect managed species and lower trophic levels, and additional monitoring may be necessary. Studies are also needed on the implications of food web interactions and global warming, ocean acidification, and selective fishing. For instance, studies are needed to fully evaluate selective removal of some components of the ecosystem (e.g., Pacific cod, pollock) relative to others (e.g., arrowtooth flounder).

Protected Species Interactions: There remain a number of scientific questions with regards to population dynamics, life history and assessment of protected species including Steller sea lions, northern fur seals, spectacled eider, and short-tailed albatross. Studies on fishery interaction at the local level are also needed to fully evaluate potential local effects of fishing on other components of the ecosystem (e.g., marine mammals and seabirds). Lastly, research should also be done on the economic, social, and cultural valuation (e.g., consumptive use, passive use, non-consumptive use) of protected species.

HABITAT RESEARCH PRIORITIES

Improved habitat maps are required to identify essential fish habitat and distributions of various substrates and habitat types, including habitat-forming living substrates.

PRIORITIES FOR OTHER AREAS OF RESEARCH

Research is needed to develop an ongoing database of product inventories (and trade volume and prices) for principal shellfish, groundfish, and salmon harvested by US fisheries in the North Pacific and Eastern Bering Sea. Analyses of current determinants of ex-vessel, wholesale, international, and retail demands for principal seafood products from the GOA and BSAI is also needed. Additional research is needed to understand the direct and indirect impacts of crab rationalization on Kodiak and other Gulf communities. And lastly, work needs to be done to develop a framework for collection of economic information on commercial, recreational, charter fishing, and fish processing to meet the requirements of the MSA.

ON THE HORIZON

In June, the Council will comprehensively review its research needs and will revise the 5-year priorities as necessary.



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Produced by NPFMC under NOAA Award # NA03NMF4410302