

Fisheries Monitoring and Analysis Division's North Pacific Observer Program

Pre-class Reading Study Guide

Congratulations on being accepted into job training and welcome to the Fisheries Monitoring and Analysis Division's North Pacific Observer Program!

You will soon be attending a 15 day (3-week) training course that has been called "intense" by many observer trainees. To prepare for training, you are required to read the documents outlined below. These documents should be provided to you by your employer or they can also be found on the Fisheries Monitoring and Analysis Division's web site by clicking the *Pre-Class reading material* link at:

<http://www.afsc.noaa.gov/FMA/training.htm>

On the first day of your training, you will be given a "Pre-class Reading Quiz" over these materials and the minimum passing score is 80%. The emphasis of the quiz is upon the material contained in the Observer Sampling Manual as described below. It is "open book", and you will be provided with all the needed materials on the first day of training. The attached sample quiz questions will illustrate the level of difficulty you can expect in the "Pre-Class Reading Quiz". If you do not receive a passing score on the pre-class reading quiz, you will be provided with one re-take opportunity. Failure of the re-take will result in dismissal from class. Your performance on the "Pre-Class Reading Quiz" is an indicator of your level of preparedness for the training and is one of many tools used to evaluate your ability to be deployed as an observer in the Alaska fisheries.

The "Observer's Guide to Federal Groundfish Management off Alaska"

This is a reference document that describes Federal Fishery Management and its application in Alaska's groundfish fisheries. It is supplemental information and describes management programs that use observer data and affect observer's duties. This guide is intended to provide you with a basic understanding of the management programs in Alaska and may be used as a reference.

Selected Sections of the 2018 Observer Sampling Manual

Introduction Chapter, Essential Information Chapter, Trip Data Chapter, Inseason Advising, Mid-Cruise and Final Debriefing Chapter, Glossary

These are five select sections of the large "Observer Sampling Manual" that will be supplied to you in class. The "Observer Sampling Manual" is your primary source of information to use during your deployment and provides all the information you need to successfully collect quality data for the North Pacific Observer Program. Read these sections carefully. They are essential, yet not all of this information will be covered in detail during training. Reading these sections is intended to familiarize you with the basic information that is presented during the first days of class. You will refer to the manual often in class and at sea.

It is strongly encouraged that you review the entire observer manual before coming to class. The entire manual can be found on the Fisheries Monitoring and Analysis Division's web site at:

<http://www.afsc.noaa.gov/FMA/document.htm>. The current year's manual will be available in late November. In the interim, the previous year's manual will suffice for your review.

Sample Quiz

1. Write out words that make following acronyms:

D
O
C

N
O
A
A

N
M
F
S

A
F
S
C

F
M
A

2. Name three gear types used in Alaska groundfish fisheries.

3. What is the Exclusive Economic Zone?

- a. The territorial waters of the United States.
- b. An area where only US vessels are allowed to travel.
- c. A claim to management of resources up to 200 nautical miles from the US coast.
- d. An area managed by the state of Alaska.

4. Who manages king and Tanner crab?

- a. ADFG
- b. IPHC
- c. NMFS
- d. USCG

5. If your assigned vessel provides you with an email access for personal communication, what is important for you to know?

6. Rank the following 15 Data Collection Priorities in order of their priority:

- _____ Collect additional biological data on prohibited species.
- _____ Record incidental takes of short-tailed albatross and other seabird species of interest. Collect seabird species of interest specimens. Rehabilitate injured short-tailed albatross and other species of interest if possible.
- _____ Record fishing effort and catch information. Make an independent estimate for as many hauls as possible. Record all calculations for your independent catch estimates in your logbook.
- _____ Complete research projects as assigned.
- _____ Send your data to the Observer Program in Seattle.
- _____ Record takes of marine mammals. Collect snouts or heads from pinnipeds (except walrus), and tissue samples from cetaceans.
- _____ From hauls sampled for composition, collect sexed length frequency samples from the appropriate species.
- _____ From hauls sampled for composition, collect otoliths from the appropriate species.
- _____ From hauls sampled for species composition, record seabird specimen and tag information.
- _____ Record sightings of seabird “species of interest.”
- _____ Sample for species composition per protocols in this manual.
- _____ Complete stomach collections.
- _____ Record sightings of marine mammals.
- _____ Record sightings of or interactions with other seabird species.
- _____ Collect salmon retention data

7. What is a *Deck Form*?

- a. The shape of a trawl deck
- b. A waterproof form for recording all raw data
- c. Something you fax to NMFS
- d. The shape a fish assumes when lying on a deck.

8. Is the following statement true or false?

Any photos taken by an observer while assigned to a vessel, even if taken with a personal camera, are the property of the National Marine Fisheries Service.

9. How often should you make an entry in the Daily Notes section of the Observer Logbook?

10. Number the steps to random sampling in order:

- _____ Define the sample design
- _____ Define the sample population
- _____ Number the units consecutively
- _____ Define the target population
- _____ Create a sample frame
- _____ Generate random numbers
- _____ Define the sample units
- _____ Sample the randomly chosen units
- _____ Select the units from which to sample

11. Is the following statement true or false?

A trip is defined as any time a vessel that you are assigned to unties from the dock at a port, floating processor, tender vessel, or tramper; and upon completion of that trip the vessel returns and ties up to a dock in a port, at a processor, or a tramper.

12. What section of the Observer Logbook may be recorded in pencil?
13. Which fishery is managed by an Individual Fishing Quota (IFQ) system?
- a. Pacific cod
 - b. Atka mackerel
 - c. Pollock
 - d. Sablefish
14. How many National Standards for Fishery Conservation and Management are contained in the Magnuson-Stevens Fishery Conservation and Management Act?
15. Which of the following will **NOT** result in an increase in the quality of composition data?
- a. Develop a sample frame of equal size units and collect random samples
 - b. Take multiple samples
 - c. Make sample units as large as possible, while maintaining a consistent sample size within each haul.
 - d. Grab extra fish from the population to make your samples more representative of what you are seeing

Sample Quiz Answers

1. Department Of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center
Fisheries Monitoring and Analysis Division
2. Trawl, Longline and Pot vessels
3. c. A claim to management of resources up to 200 nautical miles from the US coast
4. a. ADFG
5. The messages sent and received on these systems are not secure or confidential.
6. 7, 2, 3, 14, 6, 1, 9, 8, 10, 13, 5, 11, 12, 15, 4
7. b. A waterproof form for recording data
8. True
9. Every day
10. 5, 2, 6, 1, 4, 7, 3, 9, 8
11. True
12. Calculations
13. d. Sablefish
14. Ten
15. d. Grab extra fish from the population to make your samples more representative of what you are seeing

Observer's Guide
To
Federal Groundfish Management
off Alaska

2012

Revised 11/7/2011

Acronym Guide

ABC	Allowable Biological Catch
ADFG	Alaska Department of Fish and Game
AFA	American Fisheries Act of 1998
BSAI	Bering Sea & Aleutian Islands
CDP	Community Development Plan
CDQ	Community Development Quota
EEZ	Exclusive Economic Zone
GOA	Gulf of Alaska
IFQ	Individual Fishing Quota
IPHC	International Pacific Halibut Commission
MRA	Maximum Retainable Amount
LAPP	Limited Access Privilege Program
MSCDQ	Multi-species Community Development Quota
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum Sustainable Yield
NMFS	National Marine Fisheries Service
NPFMC	North Pacific Fishery Management Council
NSR	Non-Specific Reserve
OFL	Over fishing Level
OY	Optimum Yield
PSC	Prohibited Species Cap
PSQ	Prohibited Species Quota (for CDQ)
TAC	Total Allowable Catch

Observer's Guide to Federal Groundfish Management off Alaska

Table of Contents

Federal Fisheries Management	1
The Magnuson-Stevens Fishery Conservation and Management Act.....	1
Fishery Management Councils	2
Fishery Management Plans.....	2
Implementing Fishery Management.....	3
The Code of Federal Regulations	3
Fisheries Management Tools.....	4
Open Access Fisheries.....	4
Limited Access Fisheries.....	5
Benefits and Costs of Limited Access Fisheries	6
Fisheries Management in the EEZ off Alaska	7
BSAI and GOA FMP Elements.....	7
Groundfish Catch Quotas	7
Quota allocation	8
Individual Fishing Quotas (IFQ).....	18
CDQ Fisheries.....	10
CDQ History.....	11
CDQ Groups.....	11
CDQ group responsibilities	13
CDQ Catch Reporting	13
The American Fisheries Act	14
History of the AFA.....	14
The BSAI Pollock Fishery Today	15
Amendment 80.....	16
Central Gulf of Alaska Rockfish Program.....	17
References.....	18

Fishery Management Terms

Allocation - Distribution of the opportunity to fish among user groups or individuals.

Acceptable (or allowable) Biological Catch (ABC) - The amount of harvest a stock can sustain in a given year to maintain MSY (see below).

Catch Per Unit of Effort (CPUE) - The number of fish caught per amount of effort. Typically, effort is a combination of gear type, gear size, and length of time gear is used. CPUE is often used as a measurement of relative abundance for a particular fish.

Catch Shares – A fishery management term used to describe limited access fisheries that allocate fishery resources to certain groups, individuals, or communities.

Limited Access Privilege Program – A management program that gives entities exclusive rights to a resource, as defined by the Magnuson-Stevens Act.

Maximum Sustainable Yield (MSY) - The largest average catch that can be taken continuously from a stock under average environmental conditions.

Optimum Yield (OY) - The harvest level for a species that achieves the greatest overall benefits, including economic, social, and biological considerations. Optimum yield is different from maximum sustainable yield (MSY) in that MSY considers only the biology of the species.

Overcapitalization - A high level of investment in a fishery results in a fishing effort level that is not economically productive. Too many vessels operating in a fishery or increased effort through technological advances may drive down profits.

Overfishing - Harvesting at a rate that will exceed the management goal (general definition). A rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce MSY on a continuing basis (MSA definition). An Overfishing Level (OFL) is determined for every species or species group for which there is a TAC.

Stock - A grouping of fish usually based on genetic relationship, geographic distribution, and movement patterns. Also used to describe a managed unit of fish.

Stock Assessment - An evaluation of the size and/or health of a predefined population. It includes all the activities that fishery biologists do to describe the conditions or status of a stock. The result of a stock assessment is a report on the health of a stock and recommendations that would maintain or restore the stock.

Total Allowable Catch (TAC) - The annual recommended harvest level for a species or species group. The Regional Council sets a TAC within the range of the Acceptable Biological Catch (ABC).

Alaska Groundfish Fishery Websites of Interest

NMFS Alaska Region Homepage	www.fakr.noaa.gov
North Pacific Fishery Management Council	www.fakr.noaa.gov/npfmc
NOAA Fisheries Homepage	www.noaa.gov/fisheries.html
Alaska Fisheries Science Center	www.afsc.noaa.gov/
North Pacific Groundfish Observer Program	http://www.afsc.noaa.gov/FMA/default.htm
U.S. Coast Guard 17 th District	http://www.uscg.mil/d17/

Federal Fisheries Management

This overview describes the general framework for Federal management of fisheries.

The Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 (MSA) was enacted to provide for the conservation and management of the fisheries of the United States. It established a management system for the living marine resources of the continental shelf surrounding the United States.

The central goals of the MSA include the long-term health and stability of fisheries; while protecting, restoring, and promoting fisheries through conservation and management.

It has been re-authorized and revised several times, most recently in 2006. At the time of its enactment, a major goal was to replace foreign fishing with U.S. fishing vessels. This was achieved by 1992. The focus of the current MSA is “sustainable fisheries”.

Exclusive Economic Zone (EEZ). State waters extend to 3 miles offshore. U.S. territorial water (i.e.-the U.S. border) extends to 12 miles offshore. The U.S. claims management of the Living Marine Resources (LMR) from 3 to 200 miles offshore. Most coastal nations claim an EEZ.

Regional Fishery Management Councils. Eight regional fishery management councils are established by the MSA to develop Fishery Management Plans for the EEZ. Councils are overseen by the U.S. Secretary of Commerce and are composed of members from state and federal agencies, tribes, and private citizens who are knowledgeable about the fisheries.

Fishery Management Plans (FMP). Management plans for the fisheries operating in the federal EEZ are developed by the Regional Councils and submitted to the Secretary of Commerce for approval.

National Standards. Ten National Standards for fishery conservation and management are contained in the MSA. All Fishery Management Plans must comply with these standards. NMFS publishes descriptive guidelines for councils to help them comply with these standards.

Essential Fish Habitat (EFH). The MSA mandates that councils and federal agencies describe and identify EFH, including adverse impacts and conservation and enhancement measures. All federal agencies must consult NMFS about any action they take which may adversely affect EFH.

Bycatch Reduction. The MSA mandates that a standardized reporting methodology be established to assess the amount and type of bycatch occurring in the fishery, and include measures to minimize bycatch and to minimize the mortality of bycatch which cannot be avoided.

Observers. The MSA does not mandate observers in any fishery, but does set standards for fisheries where federal observers are required. For example, there is a requirement for observer programs to have vessel safety standards, and to specify circumstances when a vessel would not be required to have an observer. Under Section 307, it is prohibited to “assault, resist, oppose, impede, intimidate, sexually harass, bribe, or interfere with any observer or data collector employed by NMFS or contracted to carry out responsibilities under this Act”. Specifically for Alaska, the MSA allows the North Pacific Fishery Management Council to establish a system of fees to pay for the observer program.

Community Development Quotas (CDQ). The North Pacific Fishery Management Council was mandated to establish a CDQ program for western Alaska. The MSA lists which communities are qualified to participate. The western Pacific is also authorized to have a CDQ program.

Limited Access Privilege Programs (LAPPs). The MSA lists the requirements for establishing LAPPs in fisheries that are overfished or determined to be overcapitalized in order to reduce capacity and promote fishing safety, conservation and management, and social and economic benefits.

Fishery Management Councils

The MSA stipulates the makeup of each council. Members represent NMFS, state fishery agencies, persons knowledgeable about the fisheries, and federally recognized tribes. The Regional Administrator of NMFS is a voting member of any council. Each member state's fishery agency also has a voting seat. Non-voting members include the U.S. Coast Guard, U.S. Fish and Wildlife Service, the U.S. Department of State, and the Interstate Marine Fisheries Commission of that area (Atlantic, Gulf, or Pacific States Marine Fisheries Commission).

Appointed members represent their states and are experienced and knowledgeable in fisheries. Appointed members are nominated by the Governors of member states and approved by the Secretary of Commerce. The Governor must consult with representatives of commercial and recreational fishing interests before submitting three names, one of which is the preferred choice. The Secretary must also receive disclosures of the individual's financial interests because that person may not vote on matters that will have a pronounced effect on that appointee. Once appointed by the Secretary, they serve a three year term, and cannot serve more than three consecutive terms. Terms begin August 11 each year.

Councils have Scientific and Statistical Committees (SSC) and Advisory Panels (AP) that make recommendations to the Council. Scientific and Statistical Committees are made up of professionals knowledgeable in technical areas such as fisheries biology, statistics, economics, etc. Advisory Panels are made up of people knowledgeable in commercial or recreational fisheries, or who represent other interests. The members of these committees are appointed by the council annually and serve 3 year terms.

Each council has a full time Director and staff to assist in writing FMPs, coordinate meetings, conduct public hearings, provide information to the public, conduct research, and write reports to the Secretary of Commerce (when requested).

Fishery Management Plans

States have management authority over the fisheries out to 200 miles until a Regional Council (or the Secretary of Commerce) develops a Fishery Management Plan (FMP). A Fishery Management Plan describes the fishery's species, biology, participants, problems, and management measures. Once a FMP is in place, it can be altered by the amendment process. Councils, NMFS, the states, and the public all have input on developing and changing FMPs.

Full Amendments change the intent of the FMP and must be approved by the Secretary of Commerce. An amendment must conform to federal laws and the National Standards of the MSA. Amendments often address several issues. For example, in 1989, BSAI Amendment 13 established the observer program, set target species definitions and seasons, established areas closed for walrus protection, and allocated sablefish by gear type.

Regulatory Amendments change a FMP, but are within the framework and intent of the FMP, including any full amendments. They are initiated at the council level and must be approved by the regional director of NMFS. They are the most common type of council action.

Emergency Actions are an implementation of regulatory policy in response to urgent issues. They are valid for 180 days, and can be extended another 180 days. Emergency actions are usually followed by a full or regulatory amendment if they are addressing a permanent need. Emergency Actions are often put in place while regulatory amendments are under the public review process.

Secretarial Plans are written by the Secretary of Commerce for highly migratory species, or if a council is unable to act on a fishery problem in a timely manner.

MSA National Standards for Fishery Conservation & Management

1. Conservation and management measures will prevent overfishing while achieving, on a continuing basis, the optimum yield for each fishery.
2. Conservation and management measures will be based on the best scientific information available.
3. To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.
4. Conservation and management measure shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various US fishers, such allocation shall be (a) fair and equitable to all fishers; (b) reasonably calculated to promote conservation; and (c) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.
5. Conservation and management measures shall, where practicable, promote efficiency and the utilization of fishery resources, except that no such measures shall have economic allocation as their sole purpose.
6. Conservation and management measures shall take into account and allow for variations among, and contingencies in, fishery resources and catches.
7. Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.
8. Conservation and management measures shall, consistent with the conservation requirements of this Act, take into account the importance of fishery resources to fishing communities in order to (a) provide for the sustained participation of those communities, and (b) to the extent practicable, minimize adverse economic impacts on those communities.
9. Conservation and management measures shall, to the extent practicable, (a) minimize bycatch and (b) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.
10. Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea

Implementing Fishery Management

Commercial fisheries that take place in the EEZ are federal fisheries managed by federal regulations. Some state regulations also apply. The crab and scallop FMPs in Alaska, for example, name the State of Alaska as having the management authority for the fishery. The following section briefly describes how federal management is implemented.

The Code of Federal Regulations

The Code of Federal Regulations (CFR) is the civil laws of the United States. Federal laws are derived through legislation passed by Congress and signed by the President (or sometimes by overriding presidential vetoes). These laws give authority and direction to the federal agencies. Federal agencies write regulations to support new legislation, and change regulations to meet the intent of public laws or keep up with changing conditions.

Regulation changes made by councils, NMFS, or other federal agencies must be preceded by either an Environmental Impact Statement (EIS) or an Environmental Analysis/Regulatory Impact Review (EA/RIR) to meet the National Environmental Policy Act (NEPA). These documents address the effects of the new regulations on the natural and socioeconomic environments and allow for public review.

To become a federal regulation, the public must be given proper notice and have opportunity to comment on the new rules. Agencies provide this via the Federal Register, which is published every business day of the federal government. Three major parts of the Federal Register are Proposed Rules, Rules and Regulations (Final rules), and Notices.

Proposed Rules include a description of the need for the new rules, the proposed text of the regulations to support the new rule, descriptions of the affected businesses and entities, and instructions on whom to contact and how to submit comments. The minimum time for public comments is 30 days.

Eventually, the new rule may be published as a “**Final Rule.**” The Final Rule goes into effect no sooner than 30 days from its published date. The publication includes responses to all comments received on the proposed rule, any changes from the proposed rule, and the changed regulations as they will appear in the CFR. If an FMP amendment, the Secretary of Commerce must approve the Final Rule before publication.

Fisheries Management Tools

The agencies responsible for managing fisheries use various tools to maintain a target level of fishing.

Some examples are:

- Quotas (limiting catch)
- Time/area closures (seasons)
- Trip limits
- Gear/vessel type restrictions
- Retainable bycatch restrictions
- Limited access (license limitation)
- Sex or size restrictions

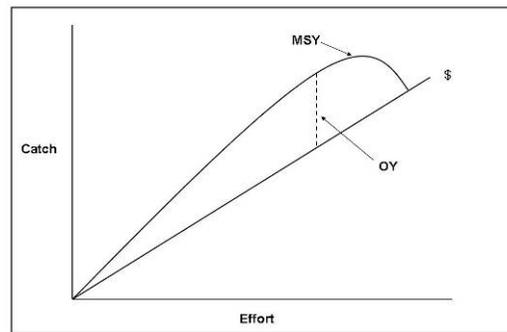


Figure 1. Maximum Sustained Yield and Optimum Yield.

Optimum Yield

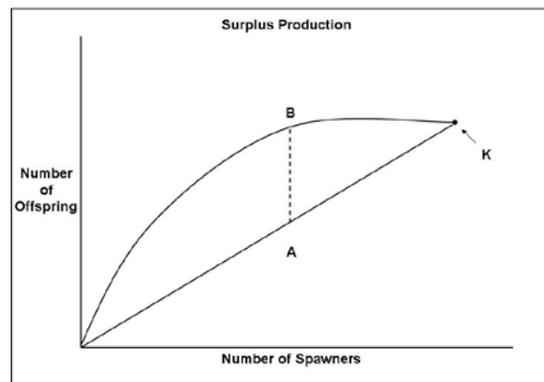
Federal Fishery Management Plans meet the MSA standards and the specific needs of the fisheries in a way that is fair and equitable to all, with the greatest benefit to the nation.

Maximum Sustainable Yield (MSY) is the most removal a biomass can continually support. If the catch level consistently exceeds MSY, the biomass will reduce. A decline in catch-per-unit-effort (CPUE) may be an indicator of exceeding MSY.

Optimum Yield (OY) is defined in the MSA as 1) the yield that will produce the greatest overall benefit to the nation, 2) MSY reduced by economic, social, or ecological factors, and 3) a level of fishing that provides for rebuilding of overfished stocks. In federal fishery management, stocks are managed at OY, which is less than MSY.

Surplus Production

Natural (unfished) populations tend to increase until reaching the Carrying Capacity (K) of their environment. The straight line (origin to K) represents the situation where the number of offspring increases on a one-to-one basis with the number of spawners. The curved line shows that the number of offspring increases faster than the number of spawners, until some point where additional spawners do not significantly increase offspring numbers. Fishing reduces the number of spawners, moving to the left from K. The line A-B represents the maximum “surplus production” created by fishing and the removal of adult fish.



Open Access Fisheries

By definition, an open access fishery is open for anyone to participate. In an open access fishery, those fishermen who can catch the most will profit the most. Those who cannot compete get smarter, bigger, or quit. This is the way fisheries have been conducted for years--where everyone has an equal chance at the fish, and those who are most successful prevail.

Historically, North Pacific fisheries have been “open access,” with Total Allowable Catch (TAC) quotas as a primary fishery management tool. A TAC without limits on participation provides incentives for each vessel to harvest as much fish as quickly as possible before the fishery is closed.

There are problems with open access management. Modern fish harvesting and processing allows fish to be found, caught, and processed faster. Often, more and larger vessels enter a fishery than the resource can support. The result is very competitive fishing, and the total catch is taken with a smaller profit for each vessel. Eventually, those profits may not support their investments, a result of “overcapitalization”.

Limited Access Fisheries

Open access and overcapitalization can create fast-paced, intense fishing that is often called “derby fishing” or an “olympic style” fishery. The fishery is difficult to manage at Optimum or Maximum Sustainable Yield because the catch rate is high and seasons are short. In the competition to catch as much as possible, fishermen have little incentive to avoid bycatch and high discard rates, or produce a higher quality product. The fishery creates a surge of product in the market leading to lower prices for the fishermen and lower quality for consumers.

Since the implementation of the MSA, most federally managed fisheries have become limited access fisheries. Permits and licenses limit access to marine resources. Overcapitalization has been addressed in the North Pacific with measures such as License Limitation and Limited Access Privilege Programs.

- License Limitation or Limited Entry Programs restrict the number of vessels or permits that participate in a fishery. To qualify, vessels must have had participation in the fishery. The North Pacific groundfish, scallop, and crab fisheries are under a License Limitation Program.
- Community Development Quota programs (CDQ) allocate fish and crab to qualified groups for economic development.
- Limited Access Privilege Programs (LAPPs) provide a group of harvesters with exclusive harvest privileges to a resource. *Catch Shares* is a general term used to describe these programs.
 - Individual Fishing Quotas (IFQ) assigns percentage shares of the TAC to vessels or persons, usually based on historical fishing effort. These shares can be sold or leased. The IFQ fisheries off Alaska include sablefish, halibut, and Bering Sea king and Tanner crab.
 - American Fisheries Act (AFA) pollock vessels in the BSAI form private agreements (known as fishery cooperatives) between the fishery participants. The participants agree to catch limits for each company or vessel. Fishery cooperatives are not formed by laws or regulations, but regulations specify rules concerning the formation of these co-ops.
 - Amendment 80 to the BSAI Groundfish FMP allows non-AFA catcher processor trawlers in the BSAI to form fishery cooperatives and receive a specific allocation of Atka mackerel, yellowfin sole, rock sole, flathead sole, Pacific Ocean perch, and Pacific cod.
 - Central Gulf of Alaska Rockfish program vessels share the GOA rockfish quota through the formation of cooperatives.

Benefits and Costs of Limited Access Fisheries

Benefits

- Limiting access slows down the “race for fish”. Managers are able to monitor the catch levels of the fleet, avoid overfishing and maintain Optimum Yield.
- Reducing the “race for fish” may reduce bycatch or fishing for immature fish.
- Limiting participation and making the participants “stakeholders” in a fishery may provide more incentive to conserve the resource.
- Excess harvesting and processing capacity (overcapitalization) may be reduced.
- Product quality and value may increase in a slower-paced fishery.
- Fish can be caught when the market dictates a need, resulting in higher prices.
- Safety may be improved since the pressure to fish in unsafe conditions is reduced.

Costs

- Communities that have been dependent on fisheries may lose jobs and revenues.
- Fewer processors and vessels are needed, reducing the number of employees needed.
- The assignment of ownership is a politicized process. Individuals or groups are inevitably excluded. Some individuals profit from the “windfall” where licenses and IFQs granted to them for free can be sold for profit.
- The cost for new fishermen and vessels to enter the fishery is increased.
- Administrative costs for management and enforcement can be higher.
- Sometimes licenses are issued to more participants than the fishery can support, and some type of capacity reduction (buyout) is necessary to fully achieve the intended benefits of limited access.

Common Property Resources: The Tragedy of the Commons

A common property resource, by definition, has free and open access to users. There are no exclusive rights and no controls over the amount of capital and labor that can make use of the resource.

This freedom to use can lead to waste. Garret Hardin, in 1968, described problems associated with common property resources using the “commons”-- public grazing land in old England. In the commons, the grass disappeared as more and more sheep were allowed to graze. Greed and lack of management caused “The Tragedy of the Commons”, which illustrates several problems with common property resources.

- For each user, the individual benefits of obtaining more livestock outweighed the individual loss of a little more grazing space. One more sheep directly increases the profits of a single individual, but the cost of the extra grazing is shared among all users.
- As an individual, there is little incentive to conserve the resource. If you curtail your own resource use, others will use it up and benefit from it without you.
- If you don't keep up or keep ahead of your neighbor you will lose out, and you won't be able to make a living or provide for your family.

This can result is the loss of the resource. There must be rules (regulations) to guide the use of common property. The government regulates the use of common property resources to ensure future benefits. Some entity needs to make the rules and manage the resource and some entity has to enforce them.

Fisheries Management in the EEZ off Alaska

Observers are an essential part of the management of the federal fisheries in the EEZ off Alaska. A basic knowledge of federal groundfish management in Alaska will help you perform as an observer.

The federal fisheries in the EEZ off Alaska are managed by the Alaska Region of the National Marine Fisheries Service, based on FMPs developed by the North Pacific Fishery Management Council (NPFMC). The makeup of the NPFMC is set by the Magnuson-Stevens Act to be eleven voting members, representing Alaska, Washington, and Oregon; and four non-voting members.

The Scientific and Statistical Committee (SSC) of the North Pacific Council has 15 members. The SSC assists in the development, collection, and evaluation of scientific information that is relevant to the council's development and amendments to Fishery Management Plans.

The Advisory Panel (AP) of the NPFMC has 20 members representing industry sectors, communities, sport fishing, environmental groups, observers, and other special interests. As the name implies, the panel advises the council and makes recommendations to assist in the development of Fishery Management Plans.

Plan Teams, comprised mostly of scientists, produce the annual Stock Assessment and Fishery Evaluation (SAFE) reports. The stock assessment section includes recommended

acceptable biological catch (ABC) levels for each stock and stock complex managed under the FMPs. The fishery evaluation section describes the socioeconomic status of the fisheries. The ABC recommendations, together with social and economic factors, are considered by the Council in determining total allowable catches (TACs) and other management strategies for the fisheries.

Other committees are formed when needed. For example, the NPFMC has an Observer Advisory Committee, a Crab Rationalization Committee, an Essential Fish Habitat Committee, and others. Like the SSC and AP, members are appointed by the council members for one year terms.

BSAI and GOA FMP Elements

Groundfish Catch Quotas

Annual quotas for each species or species groups are set by the NPFMC. BSAI and GOA plan teams meet and determine a Biomass estimate, Acceptable Biological Catch (ABC), Overfishing Limit (OFL), and recommend a Total Allowable Catch (TAC) to the Council. These are detailed in the BSAI or GOA Stock Assessment and Fishery Evaluation (SAFE) reports. In December, the Council sets a TAC for each species or species group for the upcoming year, which is limited to a total of 2 million metric tons in the BSAI. The FMPs define Optimum Yield as 1.4-2.0 million metric tons in the BSAI and 116,000 - 800,000 metric tons in the GOA. The annual specifications are published in the Federal Register.

The North Pacific Fishery Management Council

Voting members:

NMFS Alaska Region Administrator
Alaska Department of Fish and Game
Oregon Department of Fisheries and Wildlife
Washington Department of Fisheries and Wildlife
5 appointees from the Governor of Alaska
2 appointees from the Governor of Washington

Non-voting members:

U.S. Coast Guard 17th District Commander
U.S. Department of State
Pacific States Marine Fisheries Commission
U.S. Fish and Wildlife Service

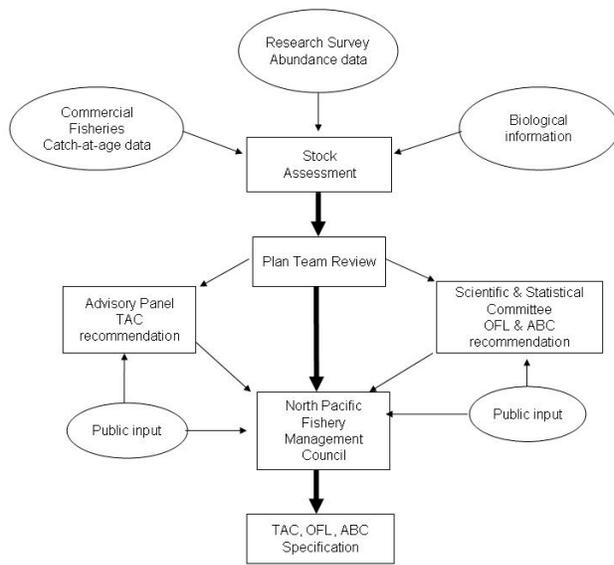


Figure 2. Annual harvest specification process for the Federal groundfish fisheries of Alaska (Witherall 1997).

“Non-specific”, meaning that it is a total tonnage, not any specific species or species group. NMFS may apportion NSR to any contributing species group to allow for overages of quotas, or if determined that a stock size is larger than estimated. In many years the NSR is left mostly unused.

Quota allocation

Once a TAC is specified for a species or species group, the FMP prescribes how it is allocated. The NSR is deducted from certain species, and then percentages of the available TAC are allocated to sectors of the fishery. Sectors can be gear types, or inshore and offshore sectors within a gear type.

The BSAI Pacific cod TAC has the most complex allocation scheme (Figure 4). Each gear type has seasonal allowances of the species quota and halibut Prohibited Species Caps (PSC). Pot and jig vessels have no halibut PSC. Trawl vessels are also subject to time/area closures of other PSCs.

Directed Fishing. Vessels and plants are determined to be in a target fishery based on the predominant retained species or species group by fishing trip according to Weekly Processor Reports (WPR) and Observer data (species composition data and percent retained). A fishing trip begins by fishing and ends by offloading, season closure, changing areas, or switching gear. Once a vessel or a processor is determined to be in a target fishery, the regulations of that specific fishery apply.

Retention of bycatch species is limited to a Maximum Retainable Amount (MRA) that varies by the species and target fishery. For example, a vessel targeting Pacific Cod in the BSAI can retain pollock up to 20% of the round weight of retained P. Cod, but can only retain sablefish up to 1% of the P. Cod round weight.

All managed species or species groups, at any given time, fall into one of three status categories. “Open” species can be a target fishery, where a vessel retains more of them than anything else. After a seasonal allocation of TAC or PSC has been taken, they become “Bycatch” status, and the Maximum Retainable Amount rules apply. Once the entire TAC has been caught, they may be placed in “Prohibited” status, and cannot be retained.

The plan teams and council determine OFL and ABC specifications by assigning 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. Species or species groups are placed into appropriate tier based on several factors. Tier 1 and 2 are based on estimates of MSY. For Tier 1, statistical uncertainty can be estimated; while Tier 2 is used for species for which it cannot. Tiers 3 and 4 are based on spawning per recruit. In Tier 3, recruitment can be estimated; but not in Tier 4. Tier 5 is based on natural mortality rate. Tier 6 is based on average catch.

The Non-Specific Reserve (NSR) is a management tool that acts as a “safety margin” and allows for uncertainty in ABCs. 15-20% of some TACs are set aside, leaving the remainder as the quota. The NSR is

There are many species affected by fisheries that are “non-specified” or “non-allocated”. There is no quota for these species and no limits placed on their catch. Some examples are poachers, lumpsuckers, and grenadiers. These species are not considered to be of economic importance and are not included in annual specifications.

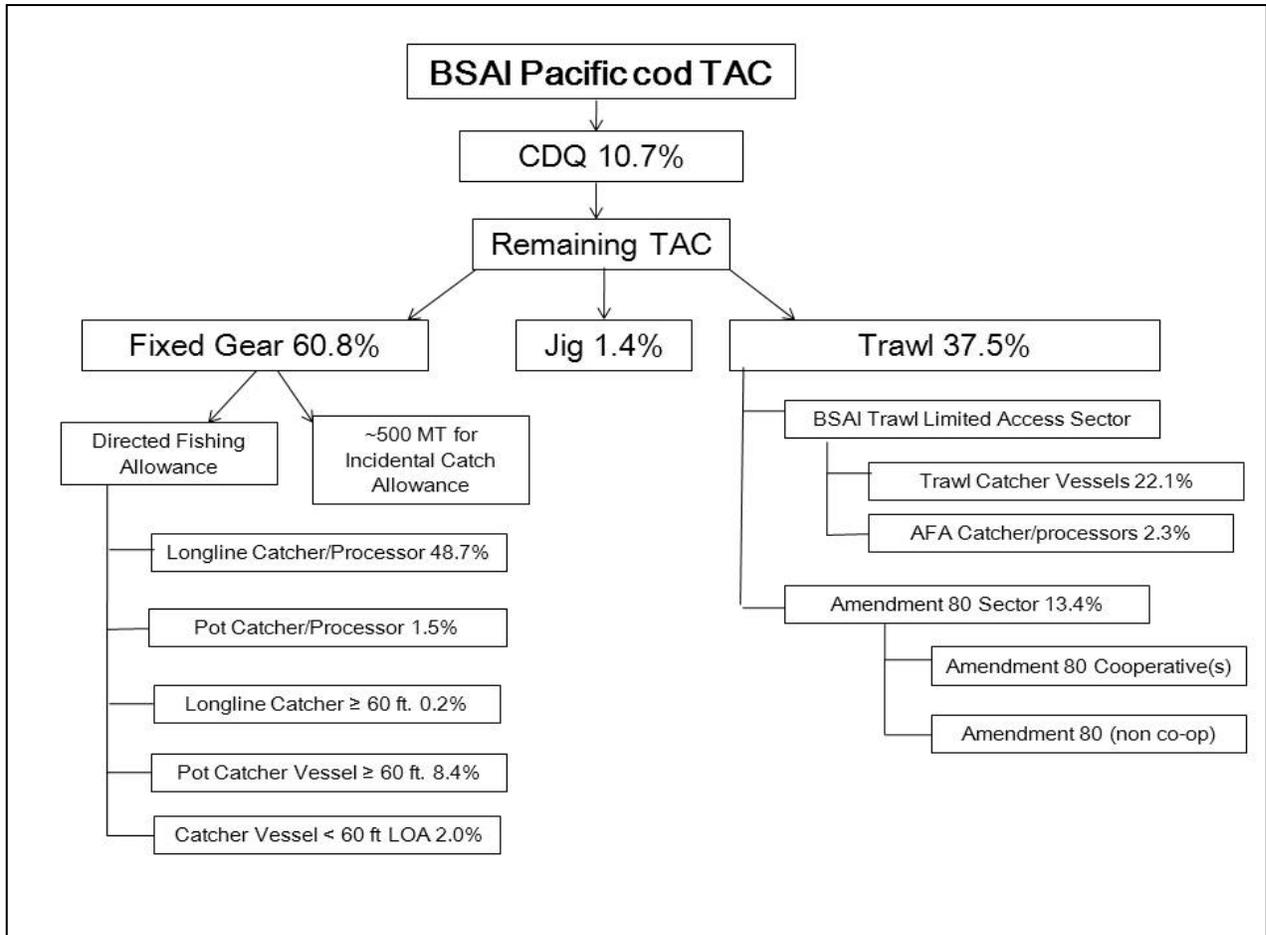


Figure 3. Pacific cod allocation in the BSAI (as of 2011). This species is harvested by all gear types and sectors. Over time, the allocations have been separated to various sectors.

Prohibited Species Caps (PSC). Pacific halibut, salmon, Bairdi Tanner crab, opilio Tanner crab, red king crab, and Pacific herring have catch limits set for the trawl fisheries. The halibut PSC for longliners is the only non-trawl PSC. Pot and jig gear have no PSCs. Exceeding these caps triggers time and area closures. Halibut and salmon PSCs close the target fisheries, while other PSCs are applicable to a certain defined area and time.

Halibut PSC is based upon the mortality, not the total catch of halibut. A mortality rate is determined for each target fishery based upon halibut viability (or injury) data collected by observers over multiple years (usually a 10 year average). Every December, the IPHC makes recommendations to the NPFMC, who then adopt a Discard Mortality Rate (DMR) for each fishery.

During the fishery, halibut catch is extrapolated based on observer data and processor reports, then the mortality rate is applied. The fishery is closed (i.e.-cannot target that species) when it reaches the PSC. Because a fishery cannot occur without a halibut bycatch allocation, it is essentially closed until more halibut mortality is available. In some fisheries, halibut mortality is allocated seasonally. “Unused” halibut mortality can be re-apportioned to later seasonal allotments. Refer to the BSAI FMP or the annual catch allocations to see details on each fishery.

Endangered Species. The Endangered Species Act (ESA) requires all federal actions (such as FMPs) to minimize impacts on listed species. Several Endangered species interact with Alaska’s groundfish fishery.

Protection of the endangered western U.S. stock of Steller sea lions (west of 144° W) changed the timing and distribution of the pollock, Pacific cod, and Atka mackerel fisheries in 1998. Competition for groundfish is a possible factor that has contributed to the decline, and may impede the recovery of the endangered population. NMFS is the agency responsible to protect and rebuild the Steller sea lion population. To reduce the potential of localized depletion of fish, the fisheries are temporally and spatially distributed over several seasons. The pollock, Pacific cod, and Atka mackerel fisheries have limits to their catch within the designated Steller sea lion Critical Habitat during the January-June fishing period.

The short-tailed albatross is present in the fisheries. Seabird avoidance measures are required on longline vessels to limit the bycatch of all bird species.

Improved Retention/Improved Utilization and the Groundfish Retention Standard. In 1998, rules were implemented to improve the retention and utilization of pollock and Pacific cod. In all fisheries, regardless of gear type, those species must be retained up to the amount specified in regulation. This provides incentive to avoid catching these species as bycatch and increases the utilization of those that are caught as target or bycatch species. GOA shallow water flatfish were added as IR/TU species in 2003.

In 2008, a new Groundfish Retention Standard was added to the BSAI FMP for non-AFA catcher/processor trawl vessels (Amendment 80 fleet). Amendment 79 began with 65% retention of all groundfish caught by and increased 5% each year to 85% in 2011. Because of the difficulty in calculating and enforcing the GRS standard, it has been temporarily suspended while alternatives to the current regulations are explored.

Individual Fishing Quotas (IFQ)

In 1995, the North Pacific Fishery Management Council implemented the largest IFQ fishery in the world in the Alaska halibut and sablefish fixed gear fisheries. Vessel owners and leaseholders that fished for sablefish or halibut in 1988-1990 were allotted “shares” of the TAC, and these shares are identified by area and three categories of vessel size. The amount of catch allotted was based upon the best year’s landings in the mid to late 1980s. These shares can be sold, leased, or transferred, and those transactions are approved by NMFS. The landings of fish at processing plants are logged against the IFQ by using electronic cards similar to debit cards.

Community Development Quota

The Western Alaska Community Development Quota (CDQ) Program allocates a percentage of the Bering Sea and Aleutian Islands fisheries quotas to eligible communities.

The purpose of the CDQ program is to:

- Provide communities with the means to develop ongoing commercial fishing activities.
- Create employment opportunities.
- Attract capital for fisheries business investments.
- Develop infrastructure.
- Generally promote positive social and economic conditions.

Community Development Quotas were sought after since the early days of the domestic groundfish fisheries as a means to develop long-term economic stability for remote communities in western Alaska. After passage of the MSA, the U.S. fleet expanded and foreign fishing phased out. By the early 1990's, the fishery was already "Americanized" and being labeled as "overcapitalized".

Most rural coastal communities of western Alaska were unable to capitalize on the expansion of the U.S. controlled fisheries due to several factors. The area is sparsely populated and economically depressed, having little "cash economy". Much of the population holds strongly to Native traditions and rely on subsistence hunting and fishing to supplement modest incomes from salmon fishing or other small businesses. Most villages are not located in major groundfish fishing areas and did not have the knowledge or means to get involved in the fishery. Major investments in groundfish fishing came from companies based in Washington and Oregon, and foreign nations such as Japan and Norway.

In 1992, a pollock CDQ program was implemented with an allocation of 7.5% of the TAC. The amendment provided the original framework of the current CDQ program with communities forming CDQ groups, applying for quota, and "partnering" with fishing companies to harvest their quota.

In 1995, halibut and sablefish CDQ was established along with the IFQ program.

In 1998, The CDQ program expanded to include at least 7.5% of all groundfish and crab species.

In 1999, The American Fisheries Act increased the BSAI pollock CDQ allocation to 10% of the TAC.

In 2006, the amended MSA increased the CDQ allocation to 10% of all directed fisheries in the BSAI (except for halibut, sablefish, pollock and crab). Additionally, a 7% allowance for non-target needs was implemented for a total of 10.7% of the TAC of CDQ species. Crab CDQ allocations were increased to 10% of the Bering Sea king and Tanner crab fisheries.

Since the implementation of the CDQ program, CDQ groups have become major investors and business partners in the groundfish fleet and have developed fisheries related businesses and infrastructure.

CDQ Groups

A CDQ group is a non-profit corporation formed by an association of western Alaska communities. The six CDQ groups are comprised of qualifying villages. They must be within 50 nm of the Bering Sea, have a historical dependence on the Bering Sea, and not have previously developed a substantial participation in Bering Sea fisheries. Each village has a member on the board of their CDQ group, and the board must consist of at least 75% fishermen.

Community Development Plans

A CDQ group develops a Community Development Plan (CDP) that includes an allocation request (groundfish, crab, halibut, & PSCs) and economic development projects. These CDPs and allocation requests are reviewed and approved by the Western Alaska Community Development Association (WACDA). The six member WACDA is comprised of one representative of each CDQ group and is required to have unanimous approval of any recommendations.

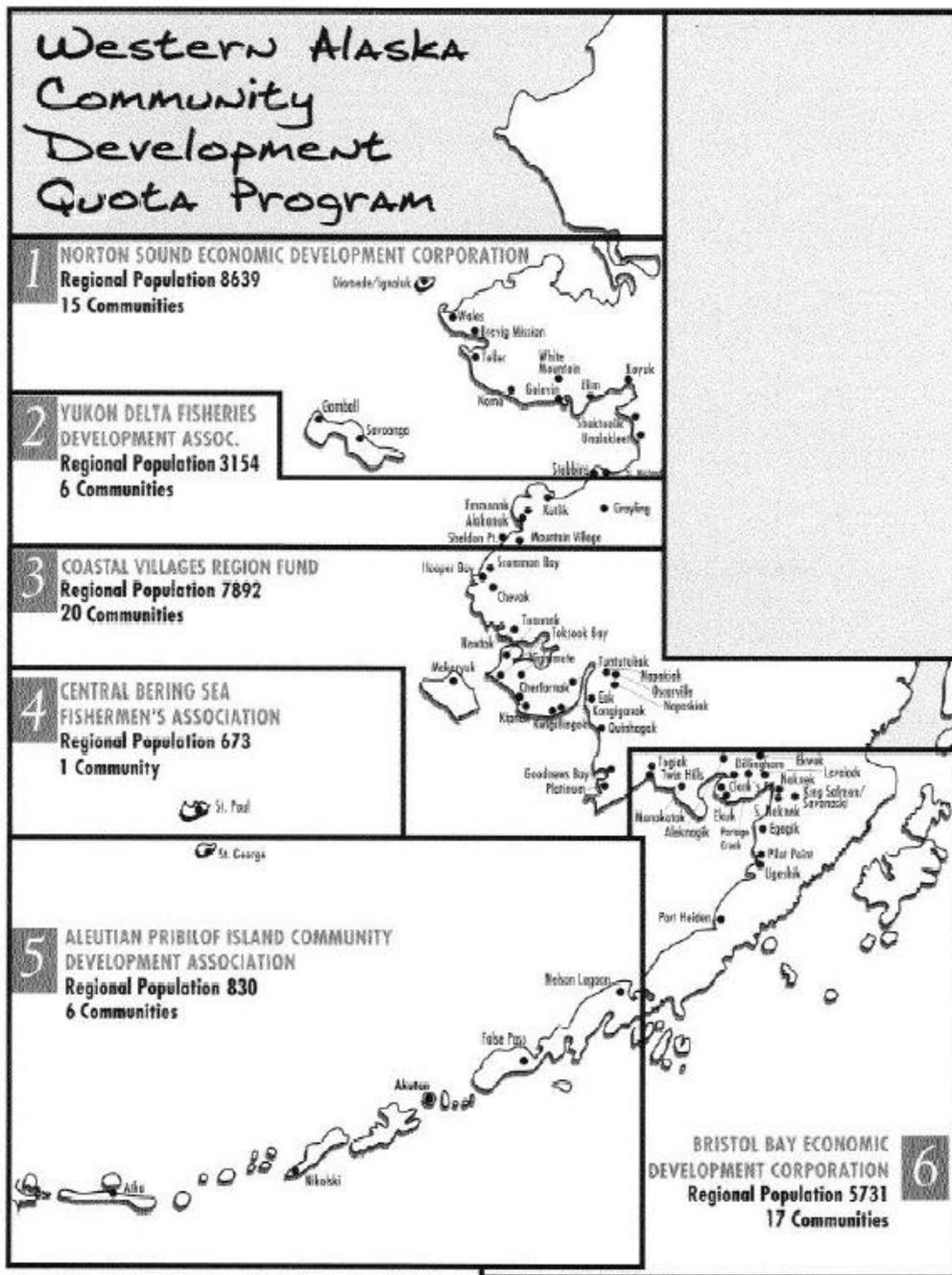


Figure 3. Alaska Community Development Quota Groups (source: NOAA)

Allocation Request

A percentage allocation of each species or species group is requested by the CDQ groups in 10 year cycles. The Council (NPFMC) is consulted, and NMFS has the final approval of the quota allocations. Allocations are granted as percentages of the CDQ portion of TACs and PSCs. These percentage allocations are applied to the TAC of each CDQ species on an annual basis.

BSAI Species	CDQ Program Allocation
(most) Groundfish Fisheries	10.7% of TAC
Pollock	10% of TAC
Fixed-Gear Sablefish	20% of TAC
Trawl Sablefish	7.5% of the TAC
King & Tanner crab	10% of the TAC
Halibut	20% of Area 4B, 50% of 4C, 30% of 4D, 100% of 4E

Table 1. CDQ Reserve Amounts

CDQ group responsibilities

50 CFR §679.30 Maintain the capability to communicate with all vessels harvesting its CDQ and PSQ at all times, monitor the catch of each CDQ or PSQ, submit a CDQ catch report, and ensure that no CDQ, halibut PSQ, or crab PSQ is exceeded.

The most important difference between CDQ fisheries and other BSAI fisheries is that once any CDQ or PSQ of a CDQ group is reached, the CDQ group has finished fishing for the year. CDQ groups may transfer CDQ and PSQ between groups to avoid an overage with a transfer request to NMFS.

When target quota is reached or PSCs close other fisheries, vessels have been able to augment their fishing with CDQ. Pollock CDQ is mostly fished on a haul-by-haul basis integrated with AFA pollock by AFA catcher/processors.

Some restrictions apply to both CDQ and non-CDQ fishing. CDQ allocations are divided into a directed fishing and incidental catch quotas, seasons, and areas the same as the non-CDQ fisheries. There is a January 1-20 “no trawl” period. Trawling for pollock or Pacific cod closes November 1. The sablefish and halibut season is the same as IFQ.

The mortality rate applied to the halibut catch depends on the target fishery and gear type, which then is accounted for as halibut Prohibited Species Quota (PSQ). If a longline vessel is retaining halibut, that catch is accounted for as halibut CDQ.

CDQ Catch Reporting

The individual allocations to CDQ groups are relatively small—six groups splitting up a small percentage of the various TACs. This is the primary reason for the increased equipment and observer coverage requirements in CDQ. On catcher/processors and motherships, observer data is the sole source of the catch monitoring and quota tracking.

CDQ groups are responsible for reporting their catch to NMFS by submitting CDQ Catch Reports to the Alaska Regional Office within seven days of harvest or landing. CDQ groups access the observer data from a secure NMFS web site, directly from the vessel operator, or through a private data reporting service. Observer data and CDQ Delivery Reports (from plants) are used to monitor catch by both the CDQ groups and NMFS.

The American Fisheries Act

The American Fisheries Act of 1998 (AFA) requires vessels fishing in the U.S. to be at least 75% owned by U.S. interests. It also changed the management regime for the Bering Sea pollock fishery by reducing the fleet size and allowing for the formation of fishing cooperatives.

History of the AFA

By the mid 1990's, the Bering Sea pollock fishery was considered to be overcapitalized. Another concern was foreign ownership of the vessels. Many of the larger pollock vessels were built and financed overseas, against the intent of the Commercial Fishing Industry Vessel Anti-reflagging Act of 1987.

After passage of the MSA in 1976, the fleet of U.S. owned vessels fishing off Alaska quickly grew. The intent of the Anti-reflagging Act was to allow only vessels built or rebuilt in U.S. shipyards to enter the growing fleet. The Coast Guard had difficulty interpreting what defines "U.S. built or rebuilt". Some large vessels which had major rebuilding in foreign ports were allowed to enter U.S. fisheries, especially the Alaska pollock fisheries. In some cases, 100 foot hulls with U.S. registrations were rebuilt into 300 foot factory trawlers at foreign shipyards.

The American Fisheries Act contains specific provisions for the North Pacific pollock fishery. The act provided for the buyout of nine catcher/processor vessels, a permanent inshore-offshore allocation, and exclusive rights to the BSAI pollock for a group of vessels. The vessel buyout was largely financed by a landing tax on the inshore fleet, who received a much larger pollock allocation. Through this Act, the offshore fleet was able to restructure their finances to meet the 75% U.S. ownership standard.

Bering Sea Quota Allocations

The AFA established a new allocation scheme for Bering Sea Pollock. The CDQ program receives 10% of the TAC. After a deduction for pollock bycatch in other target fisheries, the remaining quota is split 50% to inshore vessels, 40% to offshore vessels, and 10% to motherships.

The AFA authorized the voluntary formation of fishing cooperatives. Vessels in a cooperative agree to divide the offshore quota among its members. In effect, it is an individual fishing quota system that is not regulated by NMFS. NMFS monitors the overall sector or co-op quota, not specific vessel quotas.

Offshore pollock. Twenty eligible catcher/processors are named in the AFA, giving those "listed" vessels nearly exclusive rights to the Bering Sea offshore (non-CDQ) pollock quota. Other vessels may participate in offshore pollock fishing if they caught more than 200 metric tons of pollock in 1997. The same equipment and observer coverage requirements as other pollock processing vessels apply, but only while targeting pollock. The *Ocean Peace* is the only "unlisted" catcher/processor that has these rights.

Motherships. Three motherships are named in the AFA as eligible to receive catch from 20 named catcher vessels that have exclusive rights to BSAI pollock.

Inshore pollock. NMFS makes separate TAC allocations to the individual inshore catcher vessel co-ops that form around an AFA inshore processor. The allocations are based on the historical catch of the member vessels and the vessels must deliver at least 90% of their catch to the co-op. Currently, there are seven inshore cooperatives. If the total catch history of the co-op member catcher vessels does not sum 100% of the available catch history, the left over amount becomes available to all AFA eligible catcher vessels as "open access" pollock.

Sideboards.

Exclusive fishing rights give vessels the ability to fish for Bering Sea pollock when they choose (within certain seasonal limits). This enables them to fish in other fisheries and compete with vessels who are not beneficiaries of the AFA. To protect those non-AFA vessels, harvesting and processing restrictions (sideboards) are placed on those who have received exclusive privileges under the AFA. Sideboards prevent directed fishing for those species beyond their historical level of participation. All catch of species except BSAI Pacific cod (bycatch or directed fishing) is accrued against a sideboard limit. Limitations are also placed upon PSCs other than salmon and herring. AFA vessels are prohibited from some small directed fisheries in which they had no significant historical participation. In general, 1995-1997 are the years used to calculate historic participation for the sideboards. Some of the sideboards have exemptions for certain qualifying catcher vessels.

The monitoring of AFA sideboard allocations results in an increased scrutiny of observer data, since an AFA sector may be prevented from directed fishing for species when their sideboard quota has been reached. The catcher/processor sector has a sideboard limit, and the catcher vessel sideboard limits are considered in the aggregate, although it is a number of separate co-ops in three sectors. There are agreements within, or between, co-ops about individual sideboard limits.

The Bering Sea Pollock Fishery Today

The AFA reduced the “race for fish” in the Bering Sea pollock fishery. About 17 catcher/processors are currently active of the 20 vessels named in the AFA. Seven catcher vessels that formerly delivered to C/Ps have lease their share of the allocation directly to the C/Ps and no longer fish with them. One C/P vessel surrendered (sold) its catch rights and has left the directed pollock fishery. The inshore sector has seen the “retirement” of vessels, who now lease their catch rights to a co-op to be caught by the other vessels. In the mothership sector, several of the 20 catcher vessels have leased their harvest rights.

The 75% U.S. ownership standard (which applies to all fishing vessels in the U.S.) caused the restructuring of investments and consolidated the fishery into fewer vessels. CDQ Groups have become major investors in the catcher/processor fleet, which helped to meet the 75% U.S. owned criteria.

The fleet has conducted a slower paced and safer fishery for pollock than pre-AFA fisheries. They have shown a higher utilization of the pollock and increased product recovery rates. The AFA fishery is considered to be a successful example of limiting access to meet the goals of fishery management.

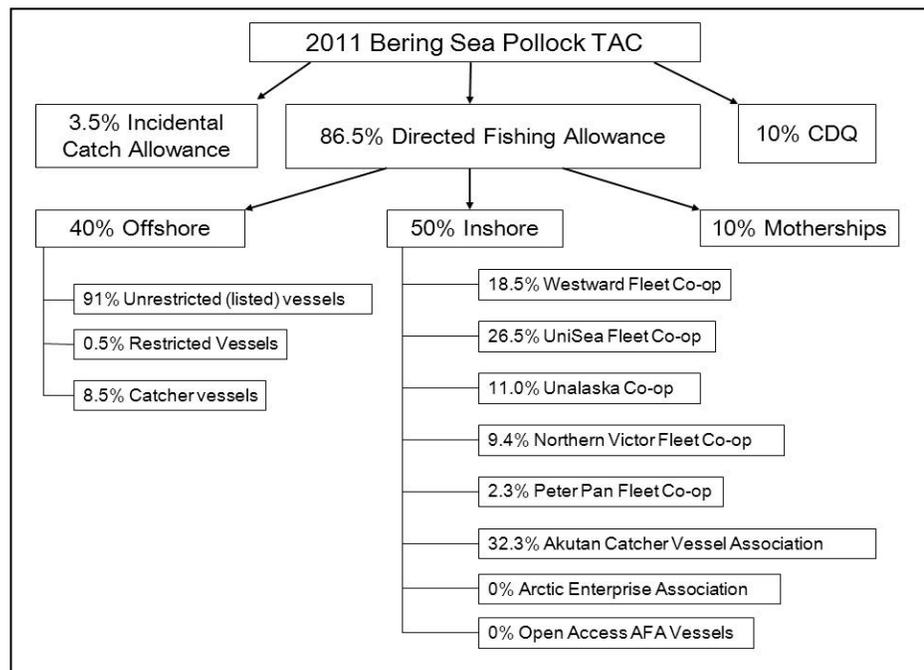


Figure 5. 2011 Bering Sea pollock allocations.

Amendment 80

Amendment 80 to the BSAI FMP was implemented in 2008. The program allocates several Bering Sea and Aleutian Islands (BSAI) non-pollock groundfish species among trawl fishery sectors, and allows the formation of harvesting cooperatives in the non-American Fisheries Act trawl catcher/processor sector.

Amendment 80 provides a limited access permit program (LAPP) for the non-AFA catcher/processor trawl fleet (often referred to as “the head and gut” trawl sector. The LAPP gives the fleet the benefits of limited access fisheries and was intended to reduce costs of compliance with the new Groundfish Retention Standard by allowing vessels to form cooperatives. The cooperatives, as a group, must meet the GRS on an annual basis. This program would also reduce bycatch and discard of groundfish by reducing the total amount of crab and halibut PSC historically used by sector participants.

Amendment 80 species include Aleutian Islands Pacific ocean perch, BSAI Atka mackerel, BSAI flathead sole, BSAI Pacific cod, BSAI rock sole, and BSAI yellowfin sole. These six species have historically been targeted by 28 trawl catcher/processors and these fisheries have high rates of discard.

Amendment 80 establishes two sectors of BSAI trawl fishery participants:

- The Amendment 80 sector is comprised of non-AFA trawl catcher/processors.
- The BSAI trawl limited access sector is comprised of AFA catcher/processors, AFA catcher vessels, and non-AFA catcher vessels.

Each year, NMFS allocates Amendment 80 species and crab and halibut PSC to the two sectors, after allocation to the CDQ Program and for incidental catch in other fisheries. Later in the year, if fish are projected to be unharvested by the BSAI trawl limited access sector, a provision that allows reallocation to Amendment 80 cooperatives

Amendment 80 assigns quota share (QS) for to the owners of vessels based on historic participation from 1998 through 2004. Allocations are based on the relative proportion of an Amendment 80 species harvested by a vessel compared with the proportion harvested by all other Amendment 80 vessels.

On an annual basis, QS holders may form cooperatives with other QS holders to receive an exclusive harvest privilege. The members can consolidate their harvest rights to fewer vessels and reduce costs. The cooperatives can trade harvest privileges with other Amendment 80 cooperatives.

Each cooperative receives a limit of crab and halibut PSC. It is proportional to the amount of Amendment 80 QS held by its members, not on the amount of crab or halibut PSC historically used by the members. A cooperative structure may allow vessels to better manage PSC rates than the operators who must “race for fish” before a PSC closes a fishery. A cooperative structure can allow participants to reduce catch of prohibited species and maximize catch of targeted groundfish species.

Amendment 80 cooperatives allow more flexibility to comply with the Groundfish Retention Standard. Amendment 80 vessels harvesting in the BSAI under an Amendment 80 cooperative must meet the GRS requirements on an aggregate basis for that cooperative, instead of on a vessel-specific basis. Gulf of Alaska Sideboards limit the Amendment 80 QS holders to their historic fishing effort.

Amendment 80 Limited Access Fishery

Amendment 80 QS holders that do not to join an Amendment 80 cooperative can participate in the Amendment 80 limited access fishery. The Amendment 80 limited access fishery is allocated the amount of Amendment 80 species TAC and halibut and crab PSC that remains after allocation to cooperatives.

Vessels in the Amendment 80 limited access fishery do not receive exclusive harvest privileges and compete for Amendment 80 species and PSC. They must meet the GRS annually on each vessel.

Central Gulf of Alaska Rockfish Program

The North Pacific Fishery management Council has been working toward a comprehensive management approach to rationalize the Gulf of Alaska groundfish fisheries since 2003. This rationalization program includes policies and management measures intended to improve conservation, reduce bycatch, and provide greater economic stability for harvesters, processors, and fishery-dependent communities. Rationalization of Gulf of Alaska fisheries should eliminate the current derby-style “race for fish” by allocating harvesting and processing privileges, thus providing economic incentives to consolidate operations, and control and reduce bycatch and gear conflicts.

Although a comprehensive Gulf of Alaska rationalization program has not yet been developed, immediate concerns related to rockfish fisheries in the Central GOA that have been addressed. Several processing plants in Kodiak have closed, there is less work available for Kodiak’s residential workers due to shorter seasons, and the community’s fish tax revenues are decreasing as fish prices and port landings decrease. Congress recognized these problems and directed the North Pacific Fishery Management Council to implement a Gulf of Alaska Rockfish Demonstration Program.

The Gulf of Alaska Rockfish Pilot Program began in 2007 as a five year program. Harvesters form voluntary cooperatives and receive exclusive harvesting and processing privileges to selected groundfish species in the Central GOA. The **primary rockfish** species are the Pacific Ocean perch, northern rockfish, and pelagic shelf rockfish (dusky, dark, yellowtail and widow rockfish). Additionally, there is an exclusive harvesting and processing allocation for the species incidentally harvested by vessels in these fisheries. These **secondary species** are Pacific cod, rougheye rockfish, shortraker rockfish, sablefish, and thornyhead rockfish. The Program also allocates a portion of the GOA halibut PSC to participants based on historic halibut mortality rates in the primary rockfish species fisheries.

Catch history is allocated as rockfish quota share (QS) based on vessels with landings of primary rockfish species. A cooperative receives an exclusive harvest privilege called cooperative quota (CQ) based on the sum of the rockfish QS of the vessels assigned to the cooperative by its members. There is a separate cooperative for catcher vessels (CV) and catcher/processors (C/P). Qualified catcher vessels can form cooperatives only in association with a specific group of eligible processors in Kodiak to whom they have delivered a majority of their catch.

Alternatively, vessels may choose to fish in a limited access fishery within that sector (C/P or CV). The limited access fishery comprises the annual catch amount for the Program that is left after C/P or CV cooperatives form. Rockfish, and other associated groundfish harvested under the catcher vessel limited access fishery must be delivered to the group of eligible processors in Kodiak.

Five percent (2.5 % to trawl gear, 2.5% to fixed gear) of the Central GOA rockfish TAC is allocated to an entry-level fishery for catcher vessels who do not qualify for QS in the Program. Processors that are not qualified to receive cooperative and limited access fish can receive entry-level rockfish.

Finally, C/P vessels otherwise qualified to participate in these fisheries can choose to “opt-out” of most of the aspects of the Program.

Sideboards prevent participants from expanding their harvests in other fisheries. Sideboards apply only in July, which is the month that historically has the most rockfish fishing. There are two broad categories of sideboards – those that establish catch limits, and those that prohibit directed fishing. Catch limits are divided further: (1) limits on harvests in other GOA rockfish fisheries; and (2) limits on the amount of halibut mortality PSC that can be used in GOA flatfish fisheries. Sideboards also apply in State waters.

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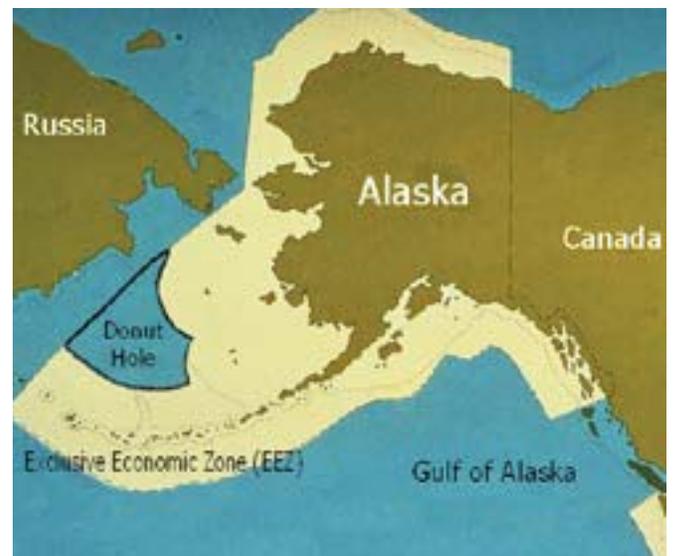
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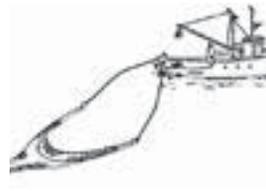
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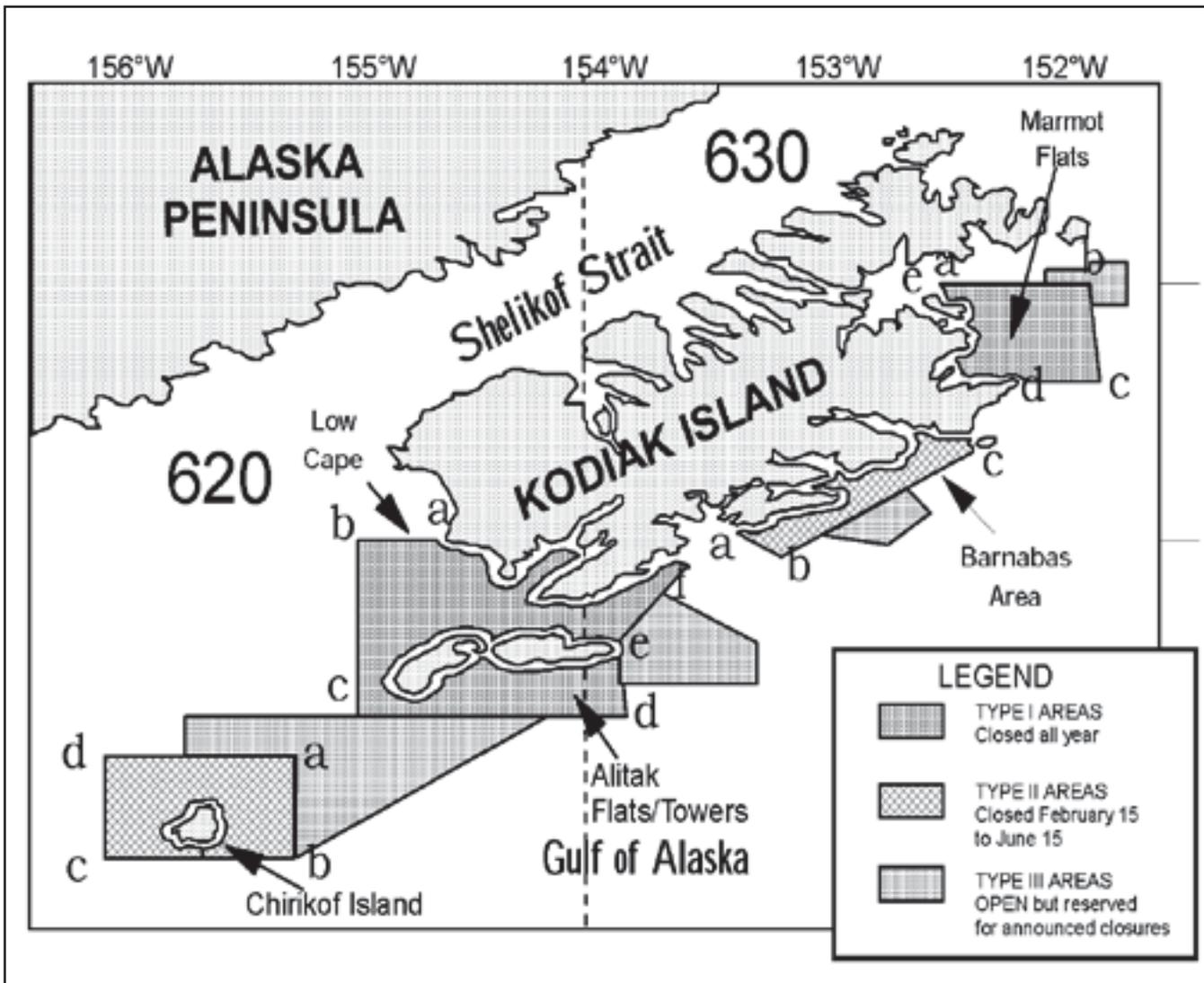
CFR 50 679: Fisheries of the EEZ off Alaska <http://www.fakr.noaa.gov/regs/default.htm>

North Pacific Fishery Management Council: <http://www.fakr.noaa.gov/npfmc/default.htm>

The CDQ Program in Alaska: <http://www.cdqdb.org/>

























Locality name Fishui, Impressible Voucher code A123
 Species common name Mystery fish #5
 Observer John Doe Date 8/20/00
 Height 10ft Tank length 40cm
 Specimen collected? Yes Date 8/20/00

FISHES:

How many dorsal fins does the fish have? 1 2 3
 Is it an osteichthyan? YES
 Spine type? Pterygian ray bone
 Spine fin position? abdominal thoracic pelvic

Describe the caudal peduncle, if present, and caudal fin shape.
Short caudal peduncle w/ medium sized fin
Caudal fin is truncate.

Describe the spine, and if present:
Several lateral lines present. (4 counted)

Draw the fish here



Label the major fins, if present, in accordance to the drawing.
Long dorsal fin with a slight notch posterior of
spectoral fin

Bag and Tag Specimen Collection Label					
Cruise	Permit	Haul No.	Offload No.	Sample No.	S-Sample No.
19982	7891	216		1	
<input type="radio"/> Lead <input type="radio"/> Second <input checked="" type="radio"/> Sole			Lead Cruise No. if Second Observer:		
Species Code: 94		Species Name: Big Skate			
Reason for Collection					
<input type="radio"/> Other <input checked="" type="radio"/> ID Verification <input type="radio"/> Out of Range <input type="radio"/> Training Specimen <input type="radio"/> Salmon Snout					
Comments: Vertebrae specimen collected.					Specimen No. 132
<small>Revised 10/2000</small>					



DAILY NOTES - INCLUDE DATES

VESSEL/PLANT NAME M/V Whistler continued...



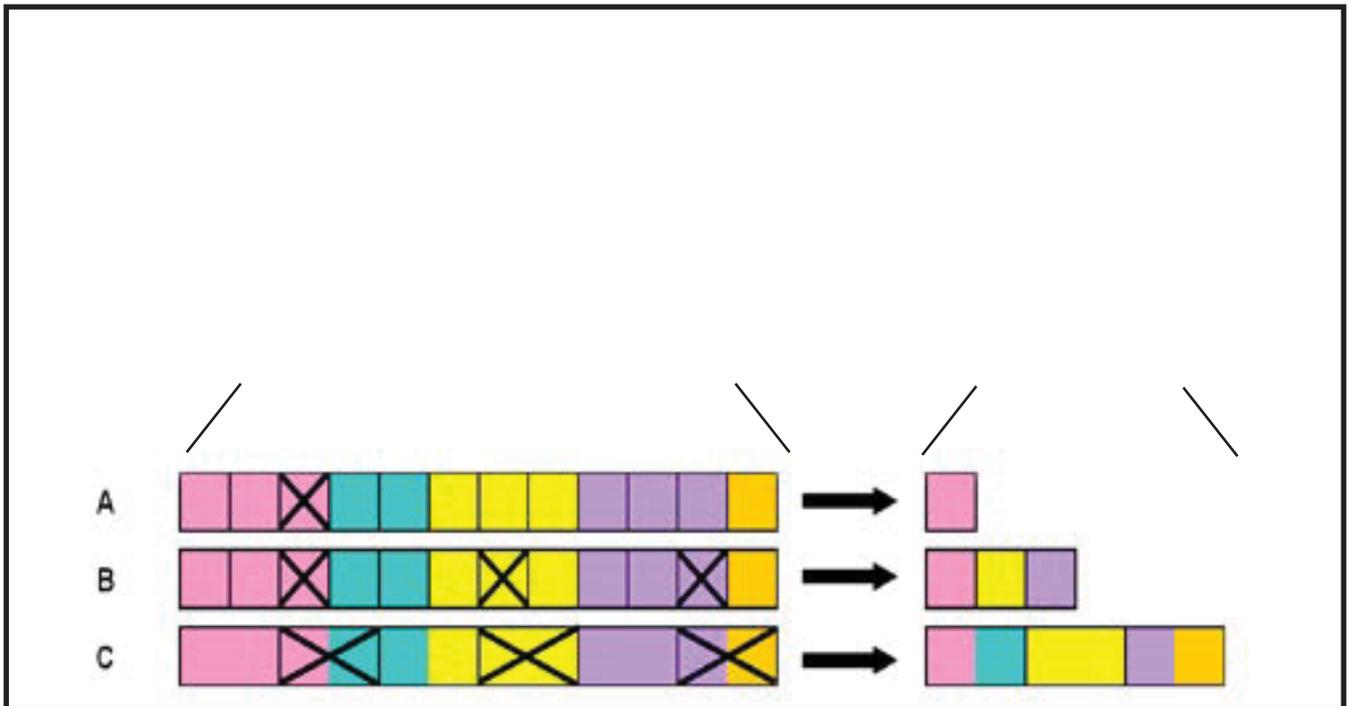
02/24 continued

So, I asked the factory foreman manager, John Baker, if this was always the case. He said that sorting the halibut like this was very usual unusual but that they did do this if the halibut catch was too large (lots of halibut in the haul) or if they had one or two very large halibut. I told him that I thought there were I didn't notice a lot more halibut than in previous hauls and explained to him that this was presorting and shouldn't happen if I was to





DATE	<u>01/16</u>	0000 0245
DATE	<u>01/17</u>	0100
DATE	<u>01/18</u>	0700
DATE	<u>01/19</u>	1300 1415
DATE	<u>01/20</u>	1600 1730
DATE	<u>01/21</u>	1200 1145
DATE	<u>01/22</u>	0400

















Alaska Fisheries Science Center
Resource Ecology and Fisheries
Management Division
7600 Sand Point Way NE
Seattle, WA 98115-0070

March 01, 2012
Boat Owner
Acme Fishing Inc.
1000 Port Way
Seattle, WA 98000

EXAMPLE

Dear Owner,
On February 29, 2012, staff from the National Marine Fisheries Service (NMFS) North Pacific Groundfish Observer Program visited the F/V Cutter Pump (AK9900000) to perform an observer sampling station inspection.

The observer sampling station on the F/V Cutter Pump was found to be in compliance with the regulations as set forth in 50 CFR §679.28 and is hereby certified for a period of 12 months from today. If the observer sampling station is moved or if the space or equipment available to the observer is reduced or removed, this inspection report is no longer valid. In this case the sample station would have to be reinspected and approved by NMFS prior to participating in Community Development Quota or American Fisheries Act fisheries.

This report and the enclosed diagram must be maintained on the vessel and made available to the observer, NMFS personnel, or to an authorized officer upon request. If you have any questions regarding your sample station inspection report you should contact John Doe Staffer at 907-555-1212.

Sincerely,

John D. Staffer

John Doe Staffer
Inspection Coordinator
North Pacific Groundfish
Observer Program

Enclosures: sample station diagram
vessel inspection checklist

cc: NMFS Alaska Regional Office





Cruise	Permit	Year	Trip Data Form										Page <u>1</u> of <u>1</u> for vessel																					
19999	5676	2017	Observer name <u>PAULA POLLOCK</u>																															
			Vessel name <u>BLUE HORIZONS</u>										Resubmission (Circle All Changes)																					
Trip No.	Crew Size	Fish in hold at start?	Port of Trip Start	Trip Start Position									Port of Trip End	Trip End Position									End Date	Time of Trip End	Did fishing occur? (Check gear only)	Bait Used?	Time Lost at Sea (Hours)							
				Latitude (N)			E or W	Longitude (100)			Start Date			Time of trip start	Latitude (N)			E or W	Longitude (100)			End Date					Time of Trip End	Mechanical problems	Weather related problems	Crew related issues	USCG / Enforcement related stoppage	Marine Mammal interaction/observation	Other (include notes)	
				Deg.	Min.	Sec.		Deg.	Min.	Sec.	Month	Day			Deg.	Min.	Sec.		Deg.	Min.	Sec.	Month												Day
1	56	N	3							06	27	1900	3							06	30	0200	Y	9										
2	56	Y	3							07	01	0100	3							07	02	1200	Y	9	2									
3	55	N	3							07	03	0200	3							07	12	1045	Y	9	15									
4	55	N	3							07	13	0900	3							07	23	1730	Y	9										
5	55	N	3							07	25	0100	17	53	50	12	W	66	10	24	07	27	0620	Y	9									
6	56	N	17	53	50	12	W	66	10	24	07	27	1500	3							07	27	1600	N	9									
Comments: Trip 1, partial offload. Trip 2. lost engine power twice, took 2 hours to fix, then headed to port Trip 3. Hid behind island during storm. Trip 5. Offloaded to trawler in Makushin Bay then ran to D.H.																																		
National Marine Fisheries Service / Fisheries Monitoring and Analysis Division												Page _____ of _____ for transmission										Rev. 08												

Figure 3-1: Trip Form Examples

TRIP INFORMATION: THE TRIP DATA FORM

Cruise 20670	Permit 2345	Year 2017	Trip Data Form										Page <u>1</u> of <u>1</u> for vessel																	
			Observer name <u>Halie Herring</u>										Resubmission (Circle All Changes)																	
			Vessel name <u>Irish Lord</u>																											
Trip No.	Crew Size	Fish in hold at start?	Port of Trip Start	Trip Start Position					Start Date		Time of trip start	Port of Trip End	Trip End Position					End Date		Time of Trip End	Did fishing occur?	Bait Used? <small>(fixed gear only)</small>	Time Lost at Sea (Hours)							
				Latitude (N)		E or W	Longitude (100)		Month	Day			Latitude (N)		E or W	Longitude (100)		Month	Day				Mechanical problems	Weather related problems	Crew related issues	USCG / Enforcement related stoppage	Marine Mammal interaction/predation	Other <small>(include notes)</small>		
				Deg.	Min.		Deg.	Min.					Deg.	Min.		Deg.	Min.													
1	5	N	3						07	12	0600	3						07	12	0630	N	9								
2	5	N	3						07	12	0800	14						07	15	1230	Y	9								
3	5	N	14						07	16	0417	14						07	19	1026	Y	9								
4	5	N	14						07	20	0120	14						07	20	0135	N	9								
5	5	N	14						07	20	0346	14						07	22	1410	Y	9								
Comments: Trip 1: To the fuel dock Trip 4: Done offloading & tied up to another boat																														
National Marine Fisheries Service / Fisheries Monitoring and Analysis Division																														
Page _____ of _____ for transmission Rev. 09																														

Cruise 19982	Permit 7891	Year 2017	Trip Data Form										Page <u>2</u> of <u>2</u> for vessel																	
			Observer name <u>David Gilmour</u>										Resubmission (Circle All Changes)																	
			Vessel name <u>High Hopes</u>																											
Trip No.	Crew Size	Fish in hold at start?	Port of Trip Start	Trip Start Position					Start Date		Time of trip start	Port of Trip End	Trip End Position					End Date		Time of Trip End	Did fishing occur?	Bait Used? <small>(fixed gear only)</small>	Time Lost at Sea (Hours)							
				Latitude (N)		E or W	Longitude (100)		Month	Day			Latitude (N)		E or W	Longitude (100)		Month	Day				Mechanical problems	Weather related problems	Crew related issues	USCG / Enforcement related stoppage	Marine Mammal interaction/predation	Other <small>(include notes)</small>		
				Deg.	Min.		Deg.	Min.					Deg.	Min.		Deg.	Min.													
11	8	N	10						04	04	2334	3						04	05	1812	Y	9								
12	9	N	3						04	06	2108	10						04	07	1350	Y	9								
13	9	N	10						04	08	0000	10						04	08	1132	Y	9								
Comments: Trip 11: Coast Guard boarding																														
National Marine Fisheries Service / Fisheries Monitoring and Analysis Division																														
Page _____ of _____ for transmission Rev. 09																														

Figure 3-1: Trip Form Examples





