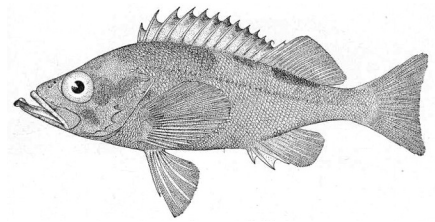


CATCH SHARES IN ACTION

**United States Central Gulf of Alaska
Rockfish Cooperative Program**



AUTHORS

Karly McIlwain and Jos Hill

Copyright © 2013 Environmental Defense Fund. All rights reserved.

McIlwain, K. and Hill, J. (2013). Catch Shares in Action: Central Gulf of Alaska Rockfish Cooperative Program. Environmental Defense Fund.



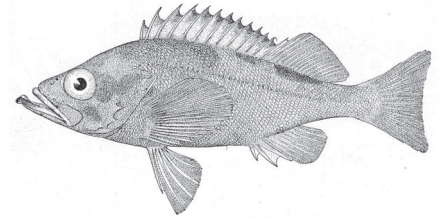
PHOTO: BETH DELONG

SEASALT

- Secure
- Exclusive
- All sources
- Scaled
- Accountable
- Limited
- Transferable

CATCH SHARES IN ACTION

United States Central Gulf of Alaska Rockfish Cooperative Program



SPECIAL DESIGN FEATURES



MULTI-SPECIES, GROUP-ALLOCATED,
QUOTA-BASED, TRANSFERABLE

The United States Central Gulf of Alaska Rockfish Cooperative Program was implemented to address economic instability in Kodiak, Alaska, caused by an intense race to fish, fleet overcapitalization, shrinking seasons and timing conflicts with other fisheries. The program is designed to protect historical fishing communities and jobs by extending secure fishing privileges to eligible Cooperatives in tandem with associated delivery restrictions to processors. Key design elements for this program include shareholder eligibility requirements, Cooperative formation, concentration caps, delivery restrictions, prohibition of discards, and sideboard limits, which are catch limits that keep rockfish participants from exceeding their historical levels of participation in other fisheries during the month of July.

In 2007, the North Pacific Fishery Management Council (NPFMC) implemented a pilot catch share program for the Central Gulf of Alaska (GOA) rockfish fisheries. This pilot program was initiated by the United States Congress to provide urgent economic relief to the Kodiak community. After five successful years, the catch share program was extended in 2012 for 10 more years with some key design changes to improve the program and to ensure alignment with the requirements of the reauthorized Magnuson-Stevens Fishery Conservation and Management Act (MSA) (Federal Register, 2011; NPFMC, 2011).

The fishery occurs in the federal waters off the Central Gulf of Alaska and is managed by the National Marine Fishery Service (NMFS) in consultation with the North Pacific Fishery Management Council (NPFMC). The fleet consists of mid-size trawlers including catcher vessels and catcher-processor vessels, and a small number of longline vessels (DiCosmo, 1998; NPFMC, 2006). Participants are allocated shares of the catch limits for: key target species, including Pacific Ocean perch (*Sebastes alutus*), northern rockfish (*Sebastes polyspinis*) and dusky rockfish (*Sebastes variabilis*); secondary species that represent bycatch; and halibut (*Hippoglossus stenolepis*), classified as Prohibited Species Catch (PSC). All vessels are required to form Cooperatives to receive and manage quota. In 2012, the GOA Rockfish Cooperative Program harvesters landed approximately 21,900 metric tons with an ex-vessel value of approximately U.S. \$12.9 million (NMFS and Alaska Fisheries Information Network, personal communication, 2012).

SYNOPSIS

Road to a Catch Share

Fishing is a central part of the Alaskan culture and economy, and Kodiak Island is the hub for fishery operations in the GOA. Kodiak residents participate in 28 separate fisheries, some of which date back to the 1800s. Consequently, the local economy of Kodiak is heavily dependent upon the fishing industry (Kodiak Chamber of Commerce, 2011). Harvesting of Alaska's groundfish began in the 1950s, and this fishery is now the nation's most important in terms of monetary value (Hiatt et al., 2010).

In the 1990s, increased participation in Alaskan fisheries spurred a number of management interventions to prevent overharvesting, including limited entry licensing in 2000 (NPFMC, 2011). However, competition continued and the result was overcapitalization, timing conflicts with other fisheries and a fishing season that shrank to a three-week fishing derby (NPFMC, 2009). During the rockfish season, vessel crews worked overtime, often during dangerous weather, to land as much of the catch limit as possible. Bycatch rates were high, as fishermen used less selective fishing gear and practices while racing to maximize their catch of target species. Fishery management was difficult under the rapid pace of the fishery (NOAA Fisheries Service, 2009a).

These challenges also impacted shore-based processors. While the race for fish had intensified, the processing season had significantly shrunk, reaching low levels between 2000 and 2002. In addition, the rockfish season overlapped with the salmon season, causing gluts of fish product to be landed at the same time. Frequent unloading delays and rushed conditions resulted in poor quality products (Federal Register, 2006; NPFMC, 2011). Combined, these factors contributed to widely varying employment rates in Kodiak throughout the year (Kodiak Chamber of Commerce, 2011), which had a destabilizing effect on the community.

In 2003, the United States Congress directed the NPFMC to examine management options for GOA rockfish fisheries with the goals of providing immediate economic relief to Kodiak (NOAA Fisheries Service, 2009a) and bridging the period between the anticipated implementation of a comprehensive GOA rationalization program (NPFMC, 2011). In response to this mandate, managers, processors and fishermen jointly developed the pilot catch share program.

Performance

The five-year pilot program successfully met its goals—including the key goal to provide economic relief to the Kodiak community—and in 2012, the program was extended for 10 years (NPFMC, 2011). The fishing season has become significantly longer, growing from three weeks to more than six months. This has enabled steadier employment of processing crews by reducing delivery conflicts with the salmon fishery and reducing the downtime at processing plants (NOAA Fisheries Service, 2009a; Fina, 2011). Processors are better able to estimate and prepare plant capacity requirements to service the rockfish fishery (NPFMC, 2008).

Halibut bycatch has been reduced, which was an important goal for the pilot program. Incidental halibut mortality per ton of rockfish has been halved (NPFMC, 2010). To avoid catching halibut, many fishermen have

switched from bottom trawl gear to semi-pelagic trawl gear, which also reduces habitat damage. Since the start of the program, fishermen have been able to stay within the catch limit for all target species. In general, fishermen report that Cooperative management has allowed them to adopt conservation-minded practices without sacrificing their overall opportunity in the fishery (NOAA Fisheries Service, 2009a).

STEP 1 IN ACTION

Define Program Goals

The pilot program was implemented under a Congressional mandate in response to economic instability caused by the race for fish and interactions with other fisheries. The key goal was to create a stable economic environment for trawl harvesters and processors by enabling equitable access to resources and ensuring the sustainability of the resource. The specific pilot program goals included (NPFMC, 2011):

- Provide greater safety, security and stability to harvesters and shore-based processors by lengthening the fishing season
- Avoid consolidation
- Recognize historical participants in the fishery that include harvesters and processors
- Increase the value of the catch
- Avoid creating a disadvantage to participants in adjacent fisheries
- Enhance resource conservation by reducing bycatch and minimizing habitat damage that results from use of trawl gear

When the program was extended in 2012, NPFMC retained many of the same goals. Since the program was extended under the reauthorized MSA, some goals were altered to ensure compliance. Specifically, the social goals were focused on promoting specific communities and sectors rather than individual processors, and the intended outcome was to encourage Cooperative formation based upon factors other than historical delivery habits. In addition, the program's design is obligated to meet legal requirements of the MSA regarding stock sustainability and additional ecological, economic and social goals. Biological goals are prescribed in the National Standards (NS) One, Three and Nine of the MSA (16 U.S.C. 1851):

NS1 - Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.

NS3 - 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.

NS9 - 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.

STEP 2 IN ACTION

Define and Quantify the Available Resource

The selection of fish species and stocks included in the program is driven by pre-existing management structures laid out by the GOA Fishery Management Plan under the NPFMC. Alaskan rockfish comprise a diverse group of more than 30 species, including northern and pelagic shelf rockfish (*Sebastes* spp. and *Sebastolobus* spp.) (Woodby et al., 2005). Fishermen regularly catch multiple species, and the catch share program design reflects this reality. The program is designed to holistically manage the entire complex and has unique design features to manage interactions with other species and fisheries.

The program is a multi-species catch share that includes eight species split into three key groups: primary rockfish species, secondary species and prohibited species (NOAA Fisheries Service, 2009a). Within these groups, participants receive eight primary and secondary species catch limit allocations and one prohibited species catch allocation. The primary rockfish species include Pacific Ocean perch (*Sebastes alutus*), northern rockfish (*Sebastes polyspinis*) and dusky rockfish (*Sebastes variabilis*). Secondary species include Pacific cod (*Gadus macrocephalus*), sablefish (*Anoplopoma fimbria*), thornyhead rockfish (*Sebastolobus alascancus*), shortraker rockfish (*S. borealis*) and roughey rockfish (*S. aleutianus*).¹ The third category is a fixed allocation of bycatch quota for halibut (*Hippoglossus stenolepis*) to cover incidental catch. The Northern Pacific Halibut Act of 1982 prohibits any fishery that is not authorized by the Act from keeping any of this species; therefore, all halibut caught in the rockfish fishery must be discarded (NPFMC, 2008).

As a conservation measure, primary and secondary rockfish species are subject to a full retention requirement to prevent discards (NPFMC, 2011). Many rockfish species possess a closed swim bladder that expands when the fish are brought to the surface, which makes bycatch mortality extremely high (Woodby et al., 2005).

Catch limits are allocated to specific management assemblages that are defined based upon habitat, behavior patterns and distribution. Each year, NMFS Alaska Fisheries Science Center and the Alaska Department of Fish and Game compile Stock Assessment and Fishery Evaluation (SAFE) reports to inform the development of annual catch limits for each species or species-group in the fishery (NPFMC, 2011).

STEP 3 IN ACTION

Define Eligible Participants

To reach the stated goals of the program, managers and fishermen decided that allocations to groups (namely, Cooperatives) would be the most appropriate action. Allocations to Cooperatives would allow for efficiency gains by the government, in terms of reduced allocation and transaction costs, and by fishermen, who could share information and maximize their harvests in a multi-species fishery environment. Cooperatives were to hold the shares, while eligible participant vessels would fish the shares. To reflect their investment in the fishery, 46 catcher vessels and 15 catcher-processor owners who held a Limited License Program (LLP) permit

¹ Secondary species were frequently caught as incidental catch within the rockfish fishery before the catch share was implemented.

with rockfish quota share endorsements were identified as initial eligible Cooperative participants to join the voluntary pilot program (NPFMC, 2006).

At the start of the pilot program, catcher vessels were required to form Cooperatives with other catcher vessels that historically delivered most of their catch to the same processor. This processor was required to be a member of the Cooperative to receive the majority of the Cooperative's catch. In this way, the benefits of secure privileges were extended to the processors. However, as the goals of the program shifted in 2012 and to meet requirements under the MSA reauthorization, catcher vessel Cooperatives were permitted to choose among shore-based processors. Cooperative members are no longer restricted to delivering the majority of their catch to a single processor, but they are required to deliver to Kodiak-based processors (Federal Register, 2011).

During the pilot program, 46 of the 47 eligible catcher vessels formed five Cooperatives that contained between six and 12 members (NOAA Fisheries Service, 2007a,b; 2008a,b; 2009b,c; 2010a,b; 2011a,b). Five of the 15 eligible catcher-processors formed two Cooperatives during the first three years of the program, and by the fifth year of the program, 12 of the 15 eligible catcher-processors had joined Cooperatives.

Catcher vessel license holders who did not join a Cooperative were required to compete in a separate limited access fishery. Only three catcher vessels joined the catcher vessel limited access fishery, and these vessels did not fish because they perceived their combined quota share to be too small with diminished economic benefit (J. Bonney, personal communication, 2011). Catcher-processor license holders who did not join a Cooperative were required to compete in a separate limited access fishery or the "opt-out" fishery. Under this fishery, participants relinquished the opportunity to fish rockfish primary species, but were allowed to fish a portion of the sideboard limits for rockfish. When the program was changed in 2012, the opt-out fishery was eliminated on the Council's recommendation because it disincentivized fishermen from joining Cooperatives.

The catch share program initially set concentration limits at both the individual level and the Cooperative level. Individual catcher vessels could not hold more than 5% of the shares and individual catcher-processors were restricted to 20%, unless license-holders were grandfathered into the program based upon historical participation. Catcher vessel Cooperative concentration limits were set at 30% and catcher-processor Cooperatives were set at 60% (Federal Register, 2006). Additionally, a processing cap limited a single processor to receive 30% or less of the total harvest of the rockfish fishery to avoid consolidation across the processing sector (NPFMC, 2006). In 2012, a new limit on fishing was introduced that allowed an individual catcher vessel to harvest no more than 8% of the total annual Cooperative Quota in a season. Managers believe this balance will also keep LLP licenses affordable to enable entry access for new fishery participants (Federal Register, 2011).

To facilitate participation of new entrants, the program sets aside 5% of the available rockfish catch limits for new entrants: 2.5% for trawl catcher vessels and 2.5% for vessels using other gear types, including hook-and-line, troll and handline. During the five-year pilot program, fishermen and managers recognized the limitations of the limited access entry-level trawl fishery. The fishery was difficult to manage because of the low allocation and the catch inefficiencies of trawl gear. When the program was renewed in 2012, the entry-level trawl fishery was eliminated and trawl entry-level participants who participated in 2007, 2008 or 2009 were awarded a catch history to make them eligible for quota under the extended program (Federal Register, 2011).

The longline fishery still operates and is allocated five metric tons (mt) of Pacific Ocean perch, five mt of northern rockfish and 30 mt of dusky rockfish, which is in alignment with historical participation. The program design allows for future increases in allocation to this sector if the fleet harvests at least 90% of the allocation.

STEP 4 IN ACTION

Define the Privilege

The GOA Rockfish Cooperative Program is a quota-based privilege that allocates a secure share of the total catch for eight groundfish species. Long-term quota share allocations were assigned to eligible LLP license holders based upon catch history prior to the start of the program. Annual allocation amounts are based upon an individual fisherman's quota shares, but can only be activated by joining a Cooperative where the quota is then pooled to form the Cooperative Quota (Federal Register, 2006). Quota share privileges were secure for the five-year pilot program duration and have been extended under the new 10-year program.

One of the primary responsibilities of the Cooperatives is to ensure compliance with their allocated shares. Each Cooperative is allowed to develop its own plan for member allocation and fishing coordination (Federal Register, 2006), and these are codified and enforced through membership agreements with contractual terms and conditions. These contractual obligations prevent vessels from purposefully fishing over their quota in an attempt to access additional quota. Most often, the Cooperatives chose to allocate the quota in a manner that reflects the amount of quota share each license-holder brought into the Cooperative. However, the Cooperative manager can adjust allocations during the season to stop a vessel from fishing if its bycatch is too high or Cooperative Quota levels are violated (J. Bonney, personal communication, 2011). To further discourage vessels from purposefully overfishing their quota, catcher vessel Cooperatives implemented penalty systems that withhold 100% of ex-vessel value of the overage to pay members who cover the overage with their quota (Alaska Groundfish Data Bank, 2010).

Both permanent and temporary transfers are permitted under the program, with some restrictions. Long-term shares (quota share endorsements on an LLP License) can be sold permanently as a package, but are not allowed to be divided or sold separately from the license. Annual allocations of Cooperative Quota can be transferred both between Cooperatives and within Cooperatives during the fishing season to provide flexibility.

Within the Cooperatives, members are able to freely transfer their allocations to maximize fishing efficiency and minimize halibut catch (FCA, 2010). Inter-Cooperative transfers can occur before and after the quota are fished to cover unintended overages. Cooperative formation is further incentivized as NMFS will reallocate portions of unused halibut bycatch quota to the separate flatfish fisheries in the fall. This system allows for reduced bycatch constraints for participants in the late fall flatfish fisheries, while enabling continued improvements in halibut mortality reduction by participants in the rockfish fishery (Fina, 2011).

To protect the shore-based processors and the community of Kodiak, a "one-way" transfer rule prohibits catcher-processor Cooperatives from receiving Cooperative Quota from catcher vessels. This was designed to increase the fish available for processing by Kodiak-based processors, which has strengthened local employment opportunities.

Finally, the program includes special "sideboard" provisions that dictate participation in other, adjacent fisheries. These are designed to prevent increased participation by Cooperative members that would disadvantage participants of adjacent non-catch share fisheries by restricting rockfish program members' participation in other fisheries. These provisions are only in operation during the month of July. There are two

types of sideboard restrictions: fishing closures of particular fishing grounds/for specific species and limitation of harvest in certain areas/for specific species (NOAA Fisheries Service, 2011c).

STEP 5 IN ACTION

Assign the Privilege

Quota share allocations were made by NPFMC and the Restricted Access Management (RAM) division of NMFS to eligible LLP licenses at the start of the program in 2006. Allocations for primary rockfish species were granted based upon catch history, specifically the best five years of historical landings of LLP license holders between 1996 and 2002 (Federal Register, 2011). When the program was extended for 10 years in 2012, the qualifying period for historical participants was changed to 2000-2006 to better represent fishing patterns.

As Cooperative Quota allocations are made annually, memberships in Cooperatives must be confirmed prior to the start of each year's fishing season and remain constant through the entire year. The Cooperative Quota amount varies each year depending upon the number of Cooperative members and annual changes in the total allowable catch assigned to each species in the fishery (Federal Register, 2006). Secondary rockfish species are allocated to the catcher vessel and catcher-processor sectors based upon a set percent of the catch limit, not upon catch history. The secondary species are then allocated to the Cooperatives in each sector based upon a proportion of the Cooperatives' primary rockfish species. Although catcher-processors in the pilot program did successfully stay within their Cooperative Quota limits for all species, there was general concern that the limits for certain secondary species, specifically shortraker rockfish, were too restrictive. In the new program, the shortraker rockfish allocation increased from 30% to 40% of the catch limit to encourage increased participation in Cooperatives (Federal Register, 2011).

An appeals process enabled LLP license holders to request a review of their initial allocations. Appeals processes are run through the Office of Administrative Appeals.

STEP 6 IN ACTION

Develop Administrative Systems

The GOA Rockfish Cooperative Program is a complex catch share program that harvests multiple species classified under distinct categories. Managers have implemented a robust administrative system to ensure successful operation of the program. The RAM division of NMFS administers the catch share program.

RAM determines the eligibility of participants, allocates initial quota shares to LLP Licenses and processes Cooperative applications and Cooperative Quota transfers.

Landings are monitored using on-board observers, managed by the Fisheries Monitoring and Analysis Division of the Alaska Fisheries Science Center. Catch accounting for this program uses 100% observer coverage for catcher vessels, which means one on-board observer is placed on each vessel for every fishing trip. Catcher-processors are required to have 200% observer coverage due to the strict incidental catch limits. Although

the on-board observer program costs participants \$400 per day, catcher-processor Cooperatives are able to minimize these costs by managing fishing trips to maximize efficiency (J. Bonney, personal communication, 2011). The catcher vessel sector collaborated with NMFS to explore the use of a video monitoring system (VMS) to reduce observer costs (NOAA Fisheries Service, 2009a), but the time lag for information transfer to the government and fishermen was considered a significant trade-off (NPFMC, 2009). The data that observers provide is used for catch accounting and significantly improves managers' ability to estimate and enforce halibut bycatch limits (Hiatt et al., 2010).

All retained catch is weighed and reported, and shore-based processors receiving catch are required to operate their facility under a NMFS-approved catch monitoring and control plan. All Alaskan fishermen use eLandings, an interagency electronic reporting system for all commercial fishery landings in Alaska, to debit quota from the pooled Cooperative Quota allocations. Electronic reports are favored as a more convenient, accurate and timely method that can provide continuous access to accounts (Federal Register, 2006).

For the first five years, a cost recovery program was not in place as the catch share program was established by a mandate from Congress and not through the reauthorized MSA (NOAA Fisheries Service, 2009a). However, the new GOA Rockfish Cooperative Program has been implemented under the MSA, and includes a cost recovery component with an annual fee cap of 3% on any license holder's ex-vessel value of rockfish (Federal Register, 2011). The new program requires Cooperatives to pay this fee to NMFS.

All Cooperatives are non-profit organizations that are highly self-sufficient. Members pay an annual fee to cover Cooperative expenses, and the Alaska Groundfish Data Bank provides some management oversight and assistance (J. Bonney, personal communication, 2011).

STEP 7 IN ACTION

Assess Performance and Innovate

The GOA Rockfish Cooperative Program has consistently met its goals, including resolving the urgent economic problems caused by the race to fish. After the first year, the pilot program showed progress in providing economic relief to the Kodiak region: the fishing season was significantly extended, and processors enjoyed steadier employment due to improved timing of the rockfish season in relation to the salmon fishing season (NOAA Fisheries Service, 2009a; Fina, 2011; NPFMC, 2011).

The pilot program also successfully met its goals of complying with catch limits on target species and minimizing bycatch of non-target species. Some of the unique design features of the program—including the cooperative nature of the program and opportunities to apply unused quota (i.e., halibut quota) to other fisheries—led to significant innovation among fishermen.

As a result of the catch share, participants began to direct their fishing to derive the greatest benefit from their quota allocations. More than half of the Pacific cod and sablefish were caught during trips that specifically target these species, and quota overages remained at a historic low. The ability to target these higher-value species brought additional value to the fishery and reduced bycatch (NPFMC, 2008). In general, the Pacific Ocean perch and northern rockfish catch limits were the key constraining factors to the fishery in the first few years of the catch share. The newfound ability to fish cooperatively, however, enabled fishermen to increase efficiency and

harvest a higher portion of their total quota. Over the course of the program fishermen increased their harvests from 80% to 90% of their total allocations (NOAA Fisheries Service, 2007c; 2008c; 2010c; 2011d).

In addition, many vessels employed gear innovations such as semi-pelagic or modified bottom trawl gear to minimize their catch of halibut. Because of this, NMFS can then reallocate unused halibut bycatch quota to flatfish fisheries whose seasons occur later in the year.

Upon the completion of the pilot program, managers, fishermen and processors advocated for an extension of an equitable catch share program. Using the five years of the pilot program as guidance, managers were able to modify the catch share program to ensure improvements upon the design to better serve the coastal community and fishermen. These modifications include the Cooperative member concentration cap, elimination of the limited entry trawl fishery and increased halibut mortality restrictions.

REFERENCES

- Alaska Groundfish Data Bank (2010). *CGOA Rockfish Pilot program 2010 annual cooperative reports*. Submitted to NMFS Alaska. Retrieved from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/2010CGOACoop.pdf
- DiCosimo, J. (1998). *Summary of the Gulf of Alaska Groundfish Fishery Management Plan*. North Pacific Fishery Management Council, Anchorage, Alaska. Retrieved from <http://www.fakr.noaa.gov/npfmc/PDFdocuments/fmp/GOA/GOASummary.pdf>
- FCA (2010). *Year end report of The Fishing Company of Alaska*. Offshore Rockfish Cooperative. Submitted to Regional Administrator NMFS Alaska. December 15. Retrieved from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/FCACoop2010.pdf
- Federal Register (2006). Rules and Regulations. Vol. 71, No. 223. November 20. Retrieved from <http://alaskafisheries.noaa.gov/frules/71fr67210.pdf>
- Federal Register (2011). *Fisheries of the exclusive economic zone Off Alaska; Central Gulf of Alaska Rockfish Program; Amendment 88*. Vol. 76, No. 145. July 28. Retrieved from <http://www.gpo.gov/fdsys/pkg/FR-2011-07-28/html/2011-19125.htm>
- Fina, M. (2011). Evolution of catch share management: lessons from catch share management in the North Pacific. *Fisheries*. Vol 36: 4 pp. 164. Retrieved from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Fina_CatchShare_411.pdf
- Hiatt, T., Dalton, M., Felthoven, R., Fissel, B., Garber-Yonts, B., Haynie, A., Kasperski, S., Lew, D., Package, C., Sepez, J. and Seung, C. (2010). *Stock assessment and fishery evaluation report for the groundfish fisheries of the Gulf of Alaska and Bering Sea/Aleutian Islands Area: economic status of the groundfish fisheries off Alaska*. NPFMC, December, 2009. Retrieved from <http://www.afsc.noaa.gov/REFM/docs/2010/economic.pdf>
- Kodiak Chamber of Commerce (2011). *Kodiak community profile and economic indicators*. 3rd Quarter, 2011. Kodiak Chamber of Commerce. Retrieved from http://www.kodiak.org/images/stories/3rd_qtr_2011_kodiak_community_profile_and_economic_indicators.pdf
- Magnuson-Stevens Fishery Conservation and Management Act. Title 16 U.S. Code, 1801 et seq.
- NOAA Fisheries Service (2007a). *2007 Central Gulf Rockfish Pilot Program: Limited Access, CP-Opt Out and Entry Level Participants*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2007b). *2007 Central Gulf Rockfish Pilot Program Cooperatives with associated LLP licenses and vessels*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2007c). *Catch Accounting: Central Gulf of Alaska Rockfish Pilot Program 2007*. National Marine Fisheries Service, Alaska Region, Sustainable Fisheries Catch Accounting. Retrieved from http://alaskafisheries.noaa.gov/2007/car198_rpp_catch.pdf

- NOAA Fisheries Service (2008a). *2008 Central Gulf Rockfish Pilot Program Limited Access, CP-Opt Out and Entry Level Participants*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2008b). *2011 Central Gulf Rockfish Pilot Program Cooperatives with associated LLP licenses and vessels*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2008c). *Catch accounting: Central Gulf of Alaska Rockfish Pilot Program 2008*. National Marine Fisheries Service, Alaska Region, Sustainable Fisheries Catch Accounting. Retrieved from http://alaskafisheries.noaa.gov/2008/car161_rpp_catch.pdf
- NOAA Fisheries Service (2009a). *Catch Share Spotlight No. 11: Central Gulf of Alaska Rockfish*. Retrieved from http://www.nmfs.noaa.gov/sfa/domes_fish/catchshare/docs/goa_rockfish.pdf
- NOAA Fisheries Service (2009b). *2009 Central Gulf Rockfish Pilot Program Limited Access, CP-Opt Out and Entry Level Participants*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2009c). *2009 Central Gulf Rockfish Pilot Program Cooperatives with associated LLP licenses and vessels*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2010a). *2010 Central Gulf Rockfish Pilot Program Limited Access, CP-Opt Out and Entry Level Participants*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2010b). *2010 Central Gulf Rockfish Pilot Program Cooperatives with associated LLP licenses and vessels*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2010c). *Catch accounting: Central Gulf of Alaska Rockfish Pilot Program 2010*. National Marine Fisheries Service, Alaska Region, Sustainable Fisheries Catch Accounting. Retrieved from http://alaskafisheries.noaa.gov/2010/car161_rpp_catch.pdf
- NOAA Fisheries Service (2011a). *2007 Central Gulf Rockfish Pilot Program Limited Access, CP-Opt Out and Entry Level Participants*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2011b). *2011 Central Gulf Rockfish Pilot Program Cooperatives with associated LLP licenses and vessels*. NOAA Fisheries Service, Alaska Region, Restricted Access Management. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/>
- NOAA Fisheries Service (2011c). *Central Gulf of Alaska Rockfish Program: information guide*. NOAA Fisheries, National Marine Fisheries Services, Alaska Regional Office. Retrieved from <http://alaskafisheries.noaa.gov/sustainablefisheries/rockfish/rockfishinfoguide.pdf>
- NOAA Fisheries Service (2011d). *Catch Accounting: Central Gulf of Alaska Rockfish Pilot program*. National Marine Fisheries Service, Alaska Region, Sustainable Fisheries Catch Accounting. Retrieved from http://alaskafisheries.noaa.gov/2011/car161_rpp_catch.pdf
- North Pacific Fishery Management Council (2005). *Central Gulf of Alaska Rockfish Demonstration Program: Regulatory Impact Review, Environmental Assessment, and Initial Regulatory Flexibility Analysis*. National Marine Fisheries Service, Juneau, Alaska. Retrieved from http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/catch_shares/Rockfish/Rockfish505.pdf
- North Pacific Fishery Management Council (2008). *Gulf of Alaska Rockfish Pilot Program Review*. First Year Review Central Gulf rockfish Pilot program. Retrieved from http://alaskafisheries.noaa.gov/npfmc/PDFdocuments/catch_shares/Rockfish/RPPreview508.pdf
- North Pacific Fishery Management Council (2009). *Description of alternatives Central Gulf of Alaska Rockfish program June 2009 Discussion Paper*. North Pacific Fishery Management Council, Anchorage, Alaska. Retrieved from http://www.fakr.noaa.gov/npfmc/PDFdocuments/catch_shares/Rockfish/RockfishProgram_discpaper_509.pdf
- North Pacific Fishery Management Council (2011). *Central Gulf of Alaska Rockfish Demonstration Program*. Chapter 3.7.2. in Fishery Management Plan for Groundfish of the Gulf of Alaska. North Pacific Fishery Management Council, Anchorage, Alaska.
- Woodby, D., Carlile, D., Siddeek, S., Funk, E., Clark, J. H. and Hulbert, L. (2005). *Commercial fisheries of Alaska*. Alaska Department of Fish and Game, Special Publication No. 05-09, Anchorage. Retrieved from <http://www.adfg.alaska.gov/FedAidPDFs/sp05-09.pdf>