

PUBLIC REVIEW DRAFT

Supplemental Initial Regulatory Flexibility Analysis
Supporting the Gulf of Alaska and the Bering Sea and Aleutian Islands Area
Groundfish Harvest Specifications

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Abstract: This Supplemental Initial Regulatory Flexibility Analysis (SIRFA) evaluates alternative regulatory actions that could be considered to establish total allowable catch amounts (TACs) for the species complexes formerly grouped in the “Other Species” category in the Fishery Management Plan for Groundfish in the Bering Sea and Aleutian Islands Management Area (BSAI) and the Fishery Management Plan for Groundfish of the Gulf of Alaska (GOA) (collectively “Groundfish FMPs”). Specifically, this SIRFA evaluates alternative regulatory actions that could be considered to establish TACs for sculpins, squid, octopus, and sharks in the GOA and for sculpins, octopus, sharks and skates in the BSAI (“the species complexes”). This SIRFA supplements the IRFA prepared in connection with the 2007 Alaska Groundfish Harvest Specification Final Environmental Impact Statement, which evaluated alternative regulatory actions with respect to establishing TACs during the course of several years for all species under the Groundfish FMPs.

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Introduction

This Supplemental Initial Regulatory Flexibility Analysis (SIRFA) evaluates alternative regulatory actions that could be considered to establish total allowable catch amounts (TACs) for the species complexes formerly grouped in the “Other Species” category in the Fishery Management Plan for Groundfish in the Bering Sea and Aleutian Islands Management Area (BSAI) and the Fishery Management Plan for Groundfish of the Gulf of Alaska (GOA) (collectively “Groundfish FMPs”). Specifically, this SIRFA evaluates alternative regulatory actions that could be considered to establish TACs for sculpins, squid, octopus, and sharks in the GOA and for sculpins, octopus, sharks and skates in the BSAI (“the species complexes”). This SIRFA supplements the IRFA prepared in connection with the 2007 Alaska Groundfish Harvest Specification Final Environmental Impact Statement, which evaluated alternative regulatory actions with respect to establishing TACs during the course of several years for all species under the Groundfish FMPs. However, when that IRFA was prepared, the groundfish FMPs and NMFS regulations required the agency to establish a single group TAC that encompassed catch of the species complexes as a whole in the GOA and another group TAC for the species complexes as a whole in the BSAI. This SIRFA examines the impacts of the proposed action on small fishing entities and addresses the statutory requirements of the Regulatory Flexibility Act (RFA) of 1980, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996. The IRFA requirements are given at 5 U.S.C. 603.

The purpose of an IRFA

The RFA was designed to place the burden on the government to review all regulations to ensure that, while accomplishing their intended purposes, they do not unduly inhibit the ability of small entities to compete. The RFA recognizes that the size of a business, unit of government, or nonprofit organization frequently has a bearing on its ability to comply with a Federal regulation. Major goals of the RFA are to (1) increase agency awareness and understanding of the impact of their regulations on small businesses, (2) require that agencies communicate and explain their findings to the public, and (3) encourage agencies to use flexibility and to provide regulatory relief to small entities. The RFA emphasizes predicting impacts on small entities as a group distinct from other entities and on the consideration of alternatives that may minimize the impacts while still achieving the stated objective of the action.

On March 29, 1996, President Clinton signed the Small Business Regulatory Enforcement Fairness Act. Among other things, the new law amended the RFA to allow judicial review of an agency’s compliance with the RFA. The 1996 amendments also updated the requirements for a final regulatory flexibility analysis, including a description of the steps an agency has taken to minimize significant economic impacts on small entities. Finally, the 1996 amendments expanded the authority of the Chief Counsel for Advocacy of the Small Business Administration (SBA) to file *amicus* briefs in court proceedings involving an agency’s alleged violation of the RFA.

In determining the scope, or “universe” of the entities to be considered in an IRFA, NMFS generally includes only those entities that can reasonably be expected to be directly regulated by the proposed

action. If the effects of the rule fall primarily on a distinct segment, or portion thereof, of the industry (e.g., user group, gear type, geographic area), that segment would be considered the universe for the purpose of this analysis. NMFS interprets the intent of the RFA to address negative economic impacts, not beneficial impacts, and thus such a focus exists in analyses that are designed to address RFA compliance.

What is Required in an IRFA?

Under sections 603(b) and (c) of the RFA, each IRFA is required to contain:

- A description of the reasons why action by the agency is being considered;
- A succinct statement of the objectives of, and the legal basis for, the proposed rule;
- A description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply;
- A description of the projected reporting, recordkeeping and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;
- An identification, to the extent practicable, of all relevant Federal rules that may duplicate, overlap or conflict with the proposed rule;
- Descriptions of any significant alternatives to the proposed rule which accomplish the stated objectives of the applicable statutes, and which minimize any significant economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives, such as the following:
 1. The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
 2. The clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
 3. The use of performance rather than design standards;
 4. An exemption from coverage of the rule, or any part thereof, for such small entities.

What is a small entity?

The RFA recognizes and defines three kinds of small entities: (1) small businesses, (2) small non-profit organizations, and (3) small government jurisdictions.

Small businesses. Section 601(3) of the RFA defines a ‘small business’ as having the same meaning as “small business concern” which is defined under Section 3 of the Small Business Act. A “small business” or “small business concern” includes any firm that is independently owned and operated and not dominant in its field of operation. The SBA has further defined a “small business concern” as one “organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor. . . A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the firm is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture.”

The SBA has established size criteria for all major industry sectors in the U.S., including fish harvesting and fish processing businesses. A business involved in fish harvesting is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual receipts not in excess of \$4.0 million for all its affiliated operations worldwide. A seafood processor is a small business if it is independently owned and operated, not dominant in its

field of operation, and employs 500 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business involved in both the harvesting and processing of seafood products is a small business if it meets the \$4.0 million criterion for fish harvesting operations. Finally, a wholesale business servicing the fishing industry is a small business if it employs 100 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

The SBA has established “principles of affiliation” to determine whether a business concern is “independently owned and operated.” In general, business concerns are affiliates of each other when one concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern’s size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities solely because of their common ownership.

Affiliation may be based on stock ownership under the following conditions: (1) If a person owns or controls, or has the power to control, 50 percent or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock, that person is considered an affiliate of the concern; or (2) If two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

Affiliation may be based on common management or joint venture arrangements. Affiliation arises where one or more officers, directors, or general partners controls the board of directors and/or the management of another concern. Parties to a joint venture also may be affiliates. A contractor or subcontractor is treated as a participant in a joint venture if the ostensible subcontractor will perform primary and vital requirements of a contract or if the prime contractor is unusually reliant upon the ostensible subcontractor. All requirements of the contract are considered in reviewing such a relationship, including contract management, technical responsibilities, and the percentage of subcontracted work.

Small organizations. The RFA defines “small organizations” as any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

Small governmental jurisdictions. The RFA defines small governmental jurisdictions as governments of cities, counties, towns, townships, villages, school districts, or special districts with populations of less than 50,000.

What is this action?

The action evaluated in this SIRFA is the proposed specification of separate overfishing limits (OFLs) and total allowable catch amounts (TACs) for skates in the BSAI, sharks, octopus, and sculpins in the BSAI and GOA, and squid in the GOA, consistent with the previously selected harvest strategy, the Tier system in the Groundfish FMPs, Amendments 87 (GOA), 95 and 96 (BSAI) to the Groundfish FMPs, the Magnuson-Stevens Act, and other applicable law. The information utilized for specifying TACs also includes determinations of acceptable biological catch (ABC) and overfishing level (OFL) amounts for these species and species complexes, and all other established target species.

The remainder of the action covered by the proposed harvest specifications, proposed specification of TACs for the remainder of the target species, have been previously evaluated in the IRFA prepared in connection with the Alaska Groundfish Harvest Specifications Final Environmental Impact Statement (2007). That IRFA analyzed the methodology for establishing the relevant TACs. As set forth in the methodology, TACs are set to a level that fall within the range of ABCs recommended by the Science and Statistical Committee (SSC); the sum of the TACs must achieve optimum yield specified in the FMP. While the specific numbers that the methodology may produce vary from year to year, the methodology itself remains constant. Accordingly, NMFS is using the IRFA prepared for the EIS in association with the proposed specification of the groundfish species not otherwise addressed in the SIRFA prepared in association with Amendments 87 (GOA), 95 and 96 (BSAI) to the Groundfish FMPs. Pursuant to the FMPs, the established methodology produces ABCs and TACs within specified ranges and the numbers in the harvest specifications proposed rules are within those ranges.

Reasons for considering the proposed action:

The purpose of this proposed action is to set the TAC, OFL, and acceptable biological catch amounts (ABC), which also represent annual catch limits (ACL), for the stocks in the fishery, which includes each of the species complexes, while meeting the requirements of the Magnuson-Stevens Act's National Standards for fisheries conservation and management. National Standard 1 states "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." 16 U.S.C. § 1851.

NMFS expects that setting separate TACs, OFLs, ABCs, and ACLs for each of the species complexes will prevent overfishing. Moreover, it complies with the Groundfish FMPs, as amended by Amendments 87, 95, and 96. The environmental assessment prepared in connection with Amendments 87 and 96 indicates that a purpose of the amendments is to ensure that all stocks (or stock complexes with similar life histories and vulnerability to the fishery) "in the groundfish fisheries" have annual catch limits that will prevent overfishing. The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 includes a provision that requires each FMP to "establish a mechanism for specifying annual catch limits in the plan (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability." 16 U.S.C. § 1853(a)(15).

This action is intended to provide for orderly and controlled commercial fishing for groundfish (including CDQ fishing) that will promote sustainable fisheries and communities, and equitable and efficient use of fishery resources, while preventing overfishing and meeting the other environmental objectives described in the Groundfish FMPs.

Objectives of, and legal basis for, the proposed action:

The objectives of the proposed action (publication of specifications) are to (1) allow commercial fishing for the groundfish stocks in the BSAI and GOA, (2) while protecting the long run health of the fish stocks, and the social and ecological values that those fish stocks provide.

Under the Magnuson-Stevens Act, the United States has exclusive fishery management authority over all living marine resources, except for marine mammals and birds, found within the exclusive economic zone (EEZ) between 3 and 200 nautical miles from the baseline used to measure the territorial sea. The management of these marine resources is vested in the Secretary of Commerce (Secretary) and in Regional Fishery Management Councils. In the Alaska region, the North Pacific Fishery Management Council (Council) has the responsibility to prepare fishery management plans (FMPs) for the marine resources it finds require conservation and management. The National Marine Fisheries Service (NMFS) is charged with carrying out the federal mandates of the Department of Commerce with regard to marine fish. The Alaska Regional Office of NMFS and Alaska Fisheries Science Center (AFSC), research, draft, and support the management actions recommended by the Council, upon approval by the Secretary.

The Magnuson-Stevens Act requires that the FMPs specify the optimum yield from each fishery to provide the greatest benefit to the Nation, and must state how much of that optimum yield may be harvested in U.S. waters. The FMPs must also specify the level of fishing that would constitute overfishing. Using the framework of the FMPs and current information about the marine ecosystem (stock status, natural mortality rates, and oceanographic conditions), the Council annually recommends to the Secretary, total allowable catch (TAC) specifications, prohibited species catch (PSC) limits, and/or fishery bycatch allowances, based on biological and economic information provided by NMFS. The information includes determinations of acceptable biological catch (ABC) and overfishing level (OFL) amounts for each of the FMP established target species or species groups.

Number and description of small entities directly regulated by the proposed action

Bering Sea and Aleutian Islands Management Area

The 2009 Economic SAFE identifies 215 small groundfish entities operating in the BSAI in 2008, with estimated average 2008 gross revenues from all sources of about \$1.53 million.¹ Most of these (204 of them) are catcher vessels, with estimated average gross revenues of \$1.49 million. About half of the catcher-vessels (103) are trawlers, with average gross revenues of about \$1.71 million, 46 are hook-and-line vessels, with average gross revenues of about \$580,000, and 62 are pot vessels, with average gross revenues of about \$1.70 million. The SAFE estimates that there were 11 small catcher-processors, a majority (7) of which were hook-and-line vessels, with average gross revenues of about \$2.65 million. The SAFE may overstate the number of small entities, because it considers individual vessel gross revenues, but does not capture affiliations among vessels. (Hiatt, et al. 2009, Tables 37 and 39). All of these small entities would be directly regulated by the proposed action and could potentially have their fishing activity limited. As described below, however, certain small entities may be more likely than others to be adversely affected by the proposed action.

Gulf of Alaska

The 2009 Economic SAFE identifies 702 small groundfish entities operating in the GOA, with average revenues from all sources of about \$600,000. Most of these (697), are catcher vessels. A majority of the catcher-vessels, 520, use hook-and-line gear and have average revenues of about \$490,000, 73 are trawlers with average revenues of about \$1.27 million, and 142 are pot vessels with average revenues of \$850,000. There were five catcher-processors, mostly hook-and-line vessels, with average gross revenues

¹ All small vessel counts and average gross revenues estimates in this section, and in subsequent sections, are estimates based on participation in 2008.

of about \$1.52 million. The SAFE may overstate the number of small entities, because it considers individual vessel gross revenues, but does not capture affiliations among vessels. (Hiatt, et al. 2009, Tables 37 and 39). All of these small entities would be directly regulated by the proposed action and could potentially have their fishing activity limited. As described below, however, certain small entities may be more likely than others to be adversely affected by the proposed action.

Impacts on directly regulated small entities

The following discussion describes the considerations and hypothetical methods that may be used to manage harvest of sharks, sculpins, and octopuses in the GOA and BSAI, skates in the BSAI, and squid in the GOA in an effort to limit catch to the TACs and in order to ensure that catch does not exceed the OFLs. The following analysis considers historical harvests, relative to the proposed OFLs and TACs for 2011 and 2012. NMFS cautions that this type of comparison does not provide precise, reliable numerical forecasting or projection of future harvests or of harvests in relation to proposed TACs and OFLs under this action, because the management regime for the “other species” category was fundamentally different in earlier periods than it will be under the proposed action. Prior to this proposed action, NMFS’ inseason managers managed a single TAC and OFL for all species within the “other species” complex (BSAI sharks, sculpins, skates and octopus and GOA sharks, sculpins, squid and octopus), rather than species-specific TACs and OFLs. Once individual species are managed under their own TACs and OFLs, NMFS will take active management steps earlier in the year, if necessary to control catches. Moreover, other management changes in the fisheries (such as observer coverage, cooperative arrangements among fishing firms, and NMFS experience with using VMS data), that affect inseason management, have been changing, or are expected to change, as well. With the establishment of species-specific TACs, fishery participants could potentially shift the timing or location of their fishing activity in an effort to avoid high rates of incidental catch, in an effort to avert the imposition of inseason management measures. Therefore, this SIRFA provides a qualitative description of the impacts on directly regulated small entities.

The OFLs and ABCs that the SSC recommended for sculpins in the BSAI and GOA in 2009 were relatively large compared to the recent historical catches of sculpins.² Since 2003, the catch of sculpins did not exceed the recommended 2009 ABC. The proposed TACs for sculpins in the BSAI and GOA are, likewise, relatively large compared to the recent historical catches of sculpins, which have not recently exceeded the proposed TAC. Similarly, the OFLs and ABCs that the SSC recommended for skates in the BSAI in 2009 were relatively large compared to the recent historical catches of skates.³ Since 2003, the historical catches of skates have not exceeded the ABCs or OFLs.⁴ Therefore, NMFS does not anticipate that the specification of TACs for sculpins or BSAI skates will have any additional economic impact on small entities beyond those impacts which were analyzed in the existing harvest specification IRFA. Subsequent sections in this SIRFA discuss the effects of proposed TACs for squid in the GOA, and octopus and sharks in the BSAI and GOA. This SIRFA does not provide further discussion addressing the effects of proposed TACs for sculpins or skates.

Bering Sea and Aleutian Islands Management Area

BSAI Sharks:

BSAI sharks are managed under Tier 6 of the BSAI Groundfish FMP, meaning that the OFL and ABC are based on average historical catch, unless the SSC recommends an alternative method for establishing these benchmarks. The use of the Tier 6 methodology as the basis for the OFL and TAC, coupled with

² Except where otherwise noted, the analysis that follows is based on information contained in section 1.5.2.1 of NMFS’s Environmental Assessment for Amendment 96 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area and Amendment 87 to the Fishery Management Plan for Groundfish of the Gulf of Alaska to Comply with Annual Catch Limit Requirements (September 2010) (“EA 96/87”), available at http://www.fakr.noaa.gov/sustainablefisheries/amds/95-96-87/final_ea_amd96-87_0910.pdf.

³ NMFS, Environmental Assessment for Amendment 95 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area to Manage Skates as a Target Species Category (September 2010) (“EA 95”), Figure 12, available at http://fakr.noaa.gov/sustainablefisheries/amds/95-96-87/final_amd95_final_ea_081310.pdf.

⁴ EA 95, Figure 12.

comparisons of historical catch to the ABC recommended by the SSC in 2010, suggests that incidental catch of sharks may occasionally reach and exceed the TAC, and have the potential to reach the OFL, absent in season management actions.⁵

Historically, the BSAI incidental shark catch has been highly concentrated in two fisheries. From 2003 through 2009, over half (58 percent) of the incidental shark catch took place in the pelagic trawl fishery for pollock (including both bottom and mid-water targets). A further 28 percent took place in the hook-and-line fishery for Pacific cod. Smaller amounts of sharks were taken in a variety of other hook-and-line, non-pelagic trawl, and pot gear fisheries.

The incidental shark catch came mostly from Areas 517, 519, and 521 from 2003 through 2009. NMFS has previously identified four areas that might be evaluated for hot spot closures, if future catch rates were found to be unacceptably high.⁶

Shark catches tend to be concentrated in time. Over the period 2003 through 2009, 63 percent came from July through October. The pelagic trawlers take 20 percent of their catch of sharks from January through March, and 82 percent from June through October (with a peak of 35 percent in September). Hook-and-line vessels targeting cod took about 26 percent of their shark catch in January, February, and March, but 64 percent from August through November.

Given that the cumulative catch of sharks has frequently approached or exceeded one or both of the management benchmarks, actions in the future to prevent overfishing and reduce the incidental catch of sharks could be anticipated. A prohibition on retention of shark incidental catch would be an ineffective management tool in this instance, since sharks are not usually targeted or retained. The pollock trawl and Pacific cod longline fisheries combine high observer and VMS⁷ coverage; therefore targeted spatial closures may be effective in reducing shark catch. The impact of closures would depend on timing and spatial coverage. The impact on the fleet could be limited by careful delineation of hot spots.

In order to prevent the TAC and OFL from being exceeded, some pollock trawlers and hook-and-line catcher/processors may choose to change the areas within which they operate, moving to less desirable fishing grounds. The impact of efforts undertaken by the fleet to avoid reaching the TAC, and the potential closures that may follow, are difficult to predict and would depend on the timing and location of incidental shark catches and the specific steps taken by the fleet to reduce the rate of incidental catch. Generally, however, the impact on these operations may be some combination of increased costs and/or decreased revenues, as further described below.

In response to targeted area closures, costs may increase and/or revenues may decline if operations choose to or must travel further to reach alternative fishing grounds, or if they must fish in areas with lower catch-per-unit of effort. Decreases in revenues may occur if shifts in fishing activity make it harder to deliver a quality product. This later consideration may affect catcher vessel fleet segments more than catcher/processor segments. . Specific cost and/or revenue impacts cannot be estimated due to the highly speculative nature of future events.

The pollock B season begins on June 1 and the Pacific cod season does not begin until September 1. This gives the pollock fleet the ability to complete much of their B season catch before regulations permit the hook-and-line fleet to begin fishing. The hook-and-line fleet's Pacific cod fishing opportunities are therefore relatively vulnerable to large shark catches by the pollock fleet. Inseason managers would take

⁵ For a more detailed discussion of this comparison, refer to EA 96/87, section 1.5.2.1, pp. 53-54 & Figure 23.

⁶ See EA 96/87, Figure 28.

⁷ A VMS combines a GPS and a transmitter. In fisheries where VMS is a requirement, inseason managers are able to monitor vessel location.

late season hook-and-line incidental catch needs into account while determining management measures to apply to the pollock fleet.

Any adverse impacts would be incurred by both large and small fishing entities in the BSAI. The key fleets⁸ impacted by the shark breakout are the pollock trawlers and the hook-and-line vessels fishing for Pacific cod. All of the pollock trawlers are believed to be large entities, either because the vessels themselves gross more than \$4 million or because they are members of American Fisheries Act cooperatives, the affiliated members of which, when taken in aggregate, gross far in excess of the threshold. The BSAI hook-and-line vessels targeting Pacific cod are predominately large vessels. Two are believed to be small.

BSAI Octopus

BSAI octopus is also managed under Tier 6. The use of the Tier 6 methodology as the basis for the OFL and TAC, coupled with comparisons of historical catch to the ABC recommended by the SSC in 2010, suggest that catch of octopus may occasionally reach and exceed the TAC and has the potential to reach the OFL, absent in season management actions.⁹

The pot fishery for Pacific cod took 59 percent of the catch of octopus from 2003 through 2009. The pot gear fishery targeting octopuses, and the hook-and-line fishery for Pacific cod each took another 11 percent. Non-pelagic trawlers targeting Pacific cod took another nine percent. Most of the remainder of the catch was made by non-pelagic trawlers targeting one of several species. Although directed fishing for octopus is closed in federal waters, directed fishing has occurred in state waters in the BSAI (Connors and Conrath, 2009a, page 1239). BSAI octopuses are used for bait in pot and hook-and-line fisheries; some octopuses are also reportedly sold for human consumption (Connors and Conrath, 2009a, page 1239).

Almost half (47 percent) of the BSAI octopus catch comes from Area 519, almost another quarter comes from Area 509, and 11 percent comes from Area 517. Even with limited observer data, a distinct octopus hot spot appears northeast of Dutch Harbor (Figure 30). Octopus catch rates in much of the Bering Sea are extremely low.

The pot fishery in the BSAI has an A season that opens on January 1 and runs through June 10, and a B season that begins on September 1 and runs through the end of the year (75 FR 11785; March 12, 2010). The fishing begins when the season opens, but is finished long before the season technically ends. About 32 percent of the catch from 2003 through 2009 came in January and February, and a further 42 percent came in September and October. After October, when the pot fleet is targeting crab, cumulative catches tend to level off.

Because octopus is retained for sale and bait, a prohibition on retention could be effective. Once the TAC was reached, inseason managers could prohibit retention. Because the fleet is observed and carries VMS, a hot spot closure could be a second step. As a last resort, if the catch approaches the OFL, then a potential closure of pot Pacific cod would prevent an OFL overage.

In 2006, 21 vessels were retaining octopus, which was selling for around 50 cents per pound that fall (NMFS catch accounting derived from eLandings). A prohibition of octopus retention sufficient to limit catches in 2006 to the TAC proposed for 2011 and 2012 would have reduced octopus catch by 140 metric

⁸ The key fleet estimates in this paragraph, and in the remaining sections, were prepared for this analysis by the AKR Sustainable Fisheries Division, and take account of some affiliations among vessels, unlike the SAFE estimates. Nevertheless, the network of affiliations among vessels is complex, and this estimate in all likelihood misses some affiliations and, thus, still overstates the number of small entities that are directly regulated by this action.

⁹ For a more detailed discussion of this comparison, refer to EA 96/87, section 1.5.2.1, p. 57 & Figure 24.

tons, or about 309,000 pounds, which would have caused a potential gross revenue loss of about \$155,000.

In order to prevent the TAC and OFL from being exceeded, some Pacific cod pot, hook-and-line, and trawl vessels may choose to change the areas within which they operate, moving to less desirable fishing grounds. The impact of efforts undertaken by the fleet to avoid reaching the TAC and the potential closures that may follow are difficult to predict and would depend on the timing and location of incidental octopus catches and the specific steps taken by the fleet to reduce the rate of incidental catch. Generally, however, the impact on these operations may be some combination of increased costs and/or decreased revenues as further described below.

If targeted area closures became necessary, some Pacific cod pot vessels (and potentially other types of operations) may have to change the areas within which they operate, moving to less desirable fishing grounds. The impact on these operations may be some combination of increased costs and/or decreased revenues. Increased costs may occur if operations have to travel further to reach alternative fishing grounds, or if they must fish in areas with lower catch-per-unit of effort.

Any adverse impacts would be incurred by both large and small fishing entities in the BSAI. The SAFE estimates of the numbers of small entities operating in the BSAI in 2008 were described in the section on BSAI sharks, above. Pot vessels targeting Pacific cod take a large proportion of the octopus catch. Most of the vessels in this fleet segment (which has an estimated 63 vessels) are small. Restrictions on this fleet may adversely impact 55 small vessels, with average gross revenues of about \$1.78 million. The hook-and-line fishery for Pacific cod, which was discussed under sharks, takes a smaller proportion of octopus; two entities may be small. The pot fishery targeting octopuses may include any of the 62 small pot vessels identified from the SAFE report in 2008. The non-pelagic trawl fishery for Pacific cod has 13 small entities with average gross revenues of about \$810,000.¹⁰

Gulf of Alaska

GOA Sharks.

GOA sharks are managed under Tier 6 of the GOA Groundfish FMP, meaning that the OFL and ABC are based on average historical catch, unless the SSC recommends an alternative method for establishing these benchmarks. The use of the Tier 6 methodology as the basis for the OFL and TAC, coupled with comparisons of historical catch to the ABC recommended by the SSC in 2010, suggest that incidental catch of sharks would be expected to attain the TAC or OFL, absent in season management actions.¹¹

In the GOA, sharks are incidentally caught in a large number of separate groundfish target fisheries. Just over half of the catch from 2003 through 2009 was made with hook-and-line gear. Almost a quarter of the total (about 24 percent) was made in fisheries targeting halibut. Sablefish hook-and-line accounted for 16 percent, and Pacific cod hook-and-line accounted for about 13 percent. Pelagic trawl targeting pollock (both mid-water and bottom) accounted for about 18 percent of the catch, non-pelagic gear targeting arrowtooth flounder accounted for about nine percent, and non-pelagic gear targeting shallow-water flatfish accounted for about seven percent. Smaller proportions were taken in other fisheries, particularly non-pelagic trawl fisheries.

¹⁰ Many vessels may participate in more than one of the fleets just described, thus the vessel counts and gross revenues in this paragraph are not additive across fleets.

¹¹ For a more detailed discussion of this comparison, refer to EA 96/87, section 1.5.2.1, p. 60 & Figure 25.

From 2003 to 2009, about 44 percent of shark catches came from Area 630, about 26 percent from Area 620, and eight to ten percent from each of Areas 610, 640, and 650. Over the period 1997 to 2009, about 30 percent of the shark catch came in March and April, and about 35 percent in September and October.

In order to prevent the TAC and OFL from being exceeded, some pollock trawlers may choose to change the areas within which they operate, moving to less desirable fishing grounds. The impact of efforts undertaken by the fleet to avoid reaching the TAC and the potential closures that may follow are difficult to predict and would depend on the timing and location of incidental shark catches and the specific steps taken by the fleet to reduce the rate of incidental catch. Generally, however, the impact on these operations may be some combination of increased costs and/or decreased gross revenues as further described below.

In response to targeted area closures, some GOA sablefish, Pacific cod, and pollock fishermen may have to change the areas within which they operate, moving to less desirable fishing grounds. The impact on these operations may be some combination of increased costs and/or decreased revenues. Increased costs may occur if operations have to travel further to reach alternative fishing grounds, or if they must fish in areas with lower catch-per-unit of effort (and thus incur increased costs of fishing effort to catch the same amount of fish). Decreased revenues may occur if increased travel or fishing time requirements makes it impossible to catch the same amount of fish in the time available. Decreased revenues may also occur if shifts in fishing activity also make it harder to deliver a quality product. Since sharks are not retained for market purposes, there should be no loss in revenues when retention is prohibited. Specific revenue impacts are not estimated due to the highly speculative nature of future events. Halibut IFQ operations would not be affected by inseason managers since regulations do not currently allow inseason management of the halibut fishery to control shark catches.

Any adverse impacts would be incurred by both large and small fishing entities in the GOA. There were an estimated 270 small sablefish hook-and-line vessels with an estimated average gross revenue from all sources of \$770,000, an estimated 128 Pacific cod hook-and-line vessels with an average gross of \$590,000, an estimated 21 small pelagic pollock trawlers with average gross revenues of about \$1.02 million, five non-pelagic trawlers targeting arrowtooth flounder with average gross revenues of about \$580,000, and five non-pelagic trawlers targeting shallow water flatfish with average gross revenues of about \$650,000.¹²

GOA Octopus:

GOA Octopus are also managed under Tier 6. The use of Tier 6 methodology as the basis for the OFL and TAC, coupled with comparisons of historic catch to the ABC recommended by the SSC in 2010 suggest that incidental catch of octopus may attain the TAC or OFL, absent in season management actions.¹³

Most of the GOA octopus catch from 2003 through 2009 (91 percent) was made in the pot fishery for Pacific cod. Aside from this fishery, only the hook-and-line fishery for Pacific cod took as much as two percent. Pacific cod pot catches are large at the start of the year; a smaller fishery takes place in September and October. About 65 percent (218 metric tons in 2008 and 213 metric tons in 2009) of the catch is sold for human consumption. About 15 percent (43 metric tons in 2008 and 37 metric tons in 2009) was retained for bait or sold for bait.

¹² Many vessels may participate in more than one of the fleets just described, thus the vessel counts and gross revenues in this paragraph are not additive across fleets.

¹³ For a more detailed discussion of this comparison, refer to EA 96/87, section 1.5.2.1, p. 62 & Figure 26.

Most of the catch (about 93 percent), from 2003 through 2009, is taken from Areas 610 and 630. Most of the remainder (about 7 percent) comes from Area 620. It is, however, difficult to identify specific hot spots within these large regions due to lack of observer data.

There are two cod fishing seasons in the Western and Central GOA regions. An A season, allocated 60 percent of the TAC, opens on January 1 and closes on June 10. Pot, longline, and jig fishermen compete for the A season allocation. Most of the harvest actually occurs in the first part of the season. A further 40 percent of the TAC is released to the same competitive fishery for a B season that starts on September 1 and runs through the end of the year. Again, most of the harvest occurs in the early part of the B season (NMFS 2010b; NMFS 2009). Over the period 2003 to 2009, about 27 percent of the harvest was made in January, 22 percent in February, 17 percent in September, and 11 percent in October.

Because of poor observer coverage and the spatial distribution of octopus in the GOA, it is difficult to implement hot spot closures. However, if the OFL was projected to be exceeded, a spatial closure for pot gear of several statistical areas, based on the spatial information collected on fish tickets where large amounts of octopuses were reported to be caught and retained, could have been implemented.

In order to prevent the TAC and OFL from being exceeded, some Pacific cod pot vessels may choose to change the areas within which they operate, moving to less desirable fishing grounds. The impact of efforts undertaken by the fleet to avoid reaching the TAC and the potential closures that may follow are difficult to predict and would depend on the timing and location of incidental octopus catches and the specific steps taken by the fleet to reduce the rate of incidental catch. Generally, however, the impact on these operations may be some combination of increased costs and/or decreased revenues as has been described above in connection with other species subject to this proposed action. As before, specific revenue impacts are not estimated, due to the highly speculative nature of future events.

Pacific cod fishermen may lose revenue from forgone sales of octopus, or from forgone use of octopus for bait fisheries. If the fisheries had been held to the ABC in both 2008 and 2009, octopus catch would have dropped by about 199 metric tons, or by about 439,000 pounds. At the estimated ex-vessel price of about \$0.50 per pound, used in the discussion of the BSAI octopus, this would have been an average of about \$110,000 per year during the period.

Any adverse impacts would be incurred by both large and small fishing entities in the GOA. The SAFE estimates of the numbers of small entities operating in the GOA in 2008 were described in the section on GOA sharks, above. Most of the catch of octopus came from the pot fishery for Pacific cod. There were an estimated 132 small vessels in this fishery in 2008, with estimated average gross revenues from all sources of about \$880,000.

GOA Squid:

GOA squid are managed as a Tier 6 stock, but the tier 6 approach has been applied somewhat differently to GOA squid than it is to other species. The 2009 GOA squid SAFE notes that “Tier 6 is problematic for squids because fishing pressure on squid appears to be low and average catch may not be a good indicator of productivity in a lightly fished population....” (NPFMC 2009b). In 2009, the SSC recommended an OFL equal, not to the average catch over a base period, but to the maximum catch over the years 1997 to 2007 (NPFMC 2009b). The use of this modified tier 6 methodology as the basis for the OFL and TAC, coupled with comparisons of historical catch to the ABC recommended by the SSC in 2010, suggest that incidental catch of squid may rarely attain the TAC or OFL, absent inseason management actions.¹⁴

¹⁴ For a more detailed discussion of this comparison, refer to EA 96/87, section 1.5.2.1, p. 64 & Figure 27.

Almost all squid is caught by trawl gear in the pollock targets (96 percent of the catch from 2003 to 2009). Annual GOA pollock TACs are apportioned among management areas 610, 620, and 630, and by season. Nearly the entire catch of squid occurs in Area 620. The key harvest areas are the west side of Kodiak Island and western Shelikof Strait. The harvest areas are, thus, relatively concentrated within the GOA. If an overfishing closure is warranted, that area would clearly be a candidate for closure while allowing pollock fishing to continue in other areas.

Four seasonal allocations are defined and limited rollovers of unused pollock TAC are permitted from one season to another. An A season runs from January 20 to March 10, and a B season runs from March 10 to May 31. Pollock is fished competitively by the industry and harvests tend to be concentrated toward the start of each season. In Area 620, the combination of seasonal allocation, and allocations across the three management areas, has the net effect of concentrating the Area 620 pollock allocations in the A and B seasons. In 2010, about 30 percent of the Area 620 TAC is available in the A season, and a further 35 percent is available in the B season. Most of the squid catch takes place during the pollock A season. Since the A season starts late in January, there is relatively little time for harvest in January. Most of the harvest takes place during the A season in February and March, and during the start of the B season in March.

The fishery only exceeded, or came close to exceeding, the squid 2010 ABC in 2006.¹⁵ Inseason management restrictions are, thus, likely to be rare in the fisheries catching GOA squid. If catch exceeds the ABC (and therefore exceeds the future TAC), as in 2006, inseason managers would focus on the pollock fishery in Area 620 to identify an area for potential closure. With the use of information from vessel operators, reported catch, VMS, and observer data, the high squid catch area can be identified. The area can either be closed by NMFS or closure can be avoided through cooperation among vessel operators. If vessel operators can cooperatively reduce incidental catch they can preserve more flexibility to their fishing operations than if NMFS closes the pollock fishery.

In order to prevent the TAC and OFL from being exceeded, some pollock trawlers may choose to change the areas within which they operate, moving to less desirable fishing grounds. The impact of efforts undertaken by the fleet to avoid reaching the TAC and the potential closures that may follow are difficult to predict and would depend on the timing and location of incidental squid catches and the specific steps taken by the fleet to reduce the rate of incidental catch. Generally, however, the impact on these operations may be some combination of increased costs and/or decreased revenues as treated repeatedly above with respect to the other species identified in this action.

The Shelikof Strait is very popular for high-value roe-bearing pollock and a closure could impact the value of the A season pollock fishery. In response to targeted area closures, some pollock trawlers may have to change the area within which they operate, moving to less desirable fishing grounds. The impact on these operations may be some combination of increased costs and/or decreased revenues. Increased costs may occur if operations have to travel further to reach alternative fishing grounds, or if they must fish in areas with lower catch-per-unit of effort. Decreased revenues may occur if increased travel or trawling time requirements makes it impossible to catch the same amount of fish in the time available. Decreased revenues may also occur if shifts in fishing activity also make it harder to deliver a quality pollock product. Specific revenue impacts are not estimated due to the highly speculative nature of future events.

Any adverse impacts would be incurred by both large and small fishing entities in the GOA. The SAFE estimates of the numbers of small entities operating in the GOA in 2008 were described in the section on

¹⁵ EA 96/87, Figure 27.

GOA sharks, above. Almost all of the GOA squid harvest is taken by pollock vessels. In 2008, there were 21 small pollock vessels with average gross revenues of about \$1.02 million.

Recordkeeping and reporting requirements

This proposed action does not impose new recordkeeping or reporting requirements on the regulated small entities.

Federal rules that may duplicate, overlap, or conflict with proposed action

This analysis did not reveal any Federal rules that duplicate, overlap or conflict with the proposed action.

Description of significant alternatives

NMFS considered several alternatives to the proposed action, as identified below. However, each of these alternatives has been eliminated from further consideration because it either does not minimize significant economic impacts on a substantial number of small entities or does not accomplish the stated objectives of, or is in conflict with the requirements of, applicable statutes.

The proposed action to establish separate area-wide TACs and OFLs for each of the four species complexes in the GOA and the BSAI is intended to fulfill the agency's mandate to establish catch limits that are based on the best available scientific information, and which will achieve optimum yield while preventing overfishing. The proposed action is the alternative that is both consistent with the agency's obligations under the Magnuson-Stevens Fishery Conservation and Management Act and the Groundfish FMPs and minimizes the likelihood that the specification of TACs and OFLs for these species complexes will adversely affect small entities.

NMFS considered dividing the TACs for each of the species complexes among different regulatory areas in the GOA and BSAI. Any such further division of the TACs would not change the total TACs for each species complex in the GOA as a whole and the BSAI as a whole. However, the incidental catch of fishing vessels that operate within each of the regulatory areas would be counted against a reduced TAC and OFL, which would increase the likelihood that the TAC or OFL would be reached and that one or more area closures may be triggered.

NMFS considered excusing small entities from compliance with the TACs for each of the species complexes evaluated in this SIRFA. However, the Magnuson-Stevens Act requires NMFS to implement conservation and management measures that prevent overfishing. Authorizing unlimited incidental catch of these species complexes by small entities would present an unacceptable risk of overfishing, and would not be consistent with the agency's obligations under Magnuson-Stevens Act, nor with the requirements of the Council's FMP.

In order to minimize the economic impacts of the proposed action, NMFS considered allocating relatively large portions of the TACs for each of the species complexes to potentially affected small entities. However, any such allocation, which would be motivated solely by economic considerations under the RFA, would not be consistent with National Standard 5, which states that "no [conservation and management measure] shall have economic allocation as its sole purpose." 16 U.S.C. § 1851(a)(5).

Finally, NMFS considered establishing a single group TAC for the all four of the species complexes in the GOA and a single group TAC for all four of the species complexes in the BSAI, which would substantially reduce the likelihood that incidental catch would reach or exceed the TAC or OFL and result in area closures of target fisheries. However, the establishment of a stock complex comprised of species with such disparate life histories would not be consistent with the statutory requirement to establish catch

limits that prevent overfishing for stocks in the fishery, nor with the Council's intent in enacting Amendments 87, 95 & 96.