

# North Pacific Fishery Management Council

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## ADVISORY PANEL MINUTES October 4-8, 2016 Anchorage, AK

The following members were present for all or part of the meetings (absent ~~stricken~~):

Shannon Carroll  
Ruth Christiansen  
Kurt Cochran  
~~John Crowley~~  
Jerry Downing  
Angel Drobnica  
Dan Donich

Jeff Favour  
John Gruver  
Jeff Kauffman  
Alexus Kwachka  
Craig Lowenberg  
Chuck McCallum  
Art Nelson (10/4 only)

Paddy O'Donnell  
Joel Peterson  
Jeff Stephan (Co-Vice Chair)  
Ben Stevens  
Matt Upton (Co-Vice Chair)  
Ernie Weiss (Chair)  
Sinclair Wilt

The AP recommends the Council adopt the AP Handbook. *Motion passed 20/0.*

### **C1 BSAI Crab Management**

The AP recommends the Council adopt the 2016 Crab SAFE Report and the 2016/2017 OFL and ABC specifications as recommended by both the Crab Plan Team and SSC.

*Motion passed 19/0*

The AP recommends the Council initiate a discussion paper on Tanner crab bycatch in the directed groundfish fisheries. This discussion paper should assemble all the relevant bycatch information including spatial maps overlaying the existing closure areas with bycatch by gear type and survey data, the size and sex of crabs caught as bycatch by gear type, as well as overall bycatch amounts by gear type. The AP recommends the Council place priority on this discussion paper as well as the Bristol Bay Red King Crab PSC discussion paper and the Initial Review of Snow Crab PSC Limits.

*Motion passed 14/6*

#### Rationale in Favor:

- The Tanner crab fishery is not overfished, overfishing is not occurring, nor is the stock approaching an overfished status. However, the directed commercial fishery is facing a closure for 2016-2017 season as well as a closure for the next few years.
- Bycatch in the directed groundfish fisheries will still be allowed and is based on crab abundance from the survey. PSC allowances for 2016 were 830,000 Tanner crab in Zone 1 and 2,520,000 Tanner crab in Zone 2. While abundance in the east decreased significantly, it is reasonable to

expect that bycatch numbers in the west will be similar given that survey abundance numbers were similar to last year. This clearly demonstrates a situation where the conservation burden rests solely on the directed fishery.

- This information would help inform the impact of groundfish bycatch on the overall stock as well as the efficacy of the current closure area for groundfish gear.
- Survey numbers for 2016 and their relationship to the State of Alaska harvest strategies emphasize the importance of developing a solution for all Bering Sea crab PSC. There is a need for management to be better able to answer the question as to whether current PSC measures are beneficial, to the greatest extent practicable, for protecting crab stocks while minimizing any potential disruptions to the groundfish fisheries.

Rationale in Opposition:

- Crab bycatch data is already readily available through annual co-op reports.
- The trawl sector has adopted gear modifications that reduce crab mortality.
- The State of Alaska sets the harvest policy and bycatch is only one consideration.
- The AP should not be directing the NMPFC what issues should be prioritized.

The AP recommends the Council request the following from the State of Alaska:

1. A description of each of the State's harvest strategies for Tanner crab, Snow crab, Bristol Bay red king crab, and St. Matthew's blue king crab, including an explanation for each of the various components of the individual strategies; a description on how each of the harvest strategies intersects with the Federal stock assessment process; and consideration of how each of the harvest strategies meets the requirements of the Federal Crab FMP.
2. Convene the Joint Protocol Committee to discuss and develop potential ways for which the cooperative Bering Sea crab management structure can be improved.

*A motion to delete item 2 above, failed 13/7.*

*Motion passed 14/6.*

Rationale in Favor:

- The Tanner crab fishery is not overfished, overfishing is not occurring, nor is stock approaching an overfished status. The mature male biomass = 100 million pounds; the OFL = 56 million pounds; and the ABC = 45 million pounds. However, based on the current State of Alaska harvest strategy, the directed commercial fishery is facing a closure for the 2016-2017 season as well as a closure for the next few years. Such a closure will have dramatic economic consequences, now and into the future, for directed harvesters, processors, and coastal communities.
- Every Federal FMP developed must be consistent with the National Standards under the MSA. While management is deferred to the State of Alaska under the FMP, such a cooperative structure assumes that the harvest strategies utilized by the State will be consistent with the National Standards; however, the current resource management situation does not align with National Standards 1, 2, and 8.
- The Federal FMP specifically establishes a cooperative State/Federal management structure, but the two bodies have been operating without much overlap or coordination for many years. The best way to ensure effective and efficient cooperative management is to make sure that the two bodies responsible for management understand one another through a clear and transparent

process and that they have the opportunity to discuss potential areas of improvement as appropriate.

- This action is envisioned as the first step towards the long-term improvement of the cooperative management structure under the Federal Crab FMP. It is intended to be deferential to the State with regards to staff time and other such considerations. It is not intended to take priority over current actions being explored to the address the commercial Tanner crab fishery for 2016-2017.

#### Rationale in Opposition:

- There is not consensus amongst the crab directed fishery stakeholders that this is the best approach to pursue resolution of the crab issues.
- Stakeholders believe the issues identified in the motion should be addressed through the existing inter-agency coordination process.

## **C2 Groundfish Harvest Specifications**

The AP recommends the Council adopt the proposed 2017 and 2018 Bering Sea/Aleutian Islands groundfish specifications for OFLs and ABCs as recommended by the SSC in C2 action memo under Item 2; rollover TACs adopted for 2017 ([Attachment 1](#)); Tables 14, 16 and 17 for PSCs in Item 3; and rollover the flatfish flexibility reserves for 2017 and 2018 (Table 13) ([Attachment 2](#)). *Motion passed 17-0*

The AP recommends the Council adopt the proposed 2017 and 2018 Gulf of Alaska groundfish specifications for OFLs and ABCs as recommended by the SSC and set TACs as shown in [Attachment 3](#), with all proposed specifications consisting of rollovers of final specifications from 2017. The TACs for both Gulf of Alaska Pacific cod and Pollock have been adjusted to account for the State water GHLL fisheries. The Gulf of Alaska Pacific cod adjustments are shown in the C2 action memo under Item 5.

The AP recommends that the Council set the 2017 and 2018 annual and seasonal Pacific halibut PSC limits and apportionments in the Gulf of Alaska as provided in Tables 9, 10, and 11 of Item 6 in the action memo. *Motion passed 19/0.*

## **C3 EM Integration**

The AP recommends the Council release the EM Integration Analysis for public review and final action as scheduled in February 2017 December 2016. We further recommend the Council identify Alternative 2 as a preliminary preferred alternative (PPA), including provisions that:

- Allow EM as a potential tool for compliance monitoring when fishing in multiple IFQ areas; and
- Initiate a trailing amendment to require full retention of rockfish species on all fixed gear CV's regardless of at sea monitoring strata.

The AP further recommends the Council task staff, the OAC, and the EM workgroup with the development of options and analytical tools to better evaluate the optimization of EM as an integrated component of the Annual Deployment Plan process. An initial framework for this optimization should be part of the October 2017 review of the 2018 ADP.

*Amended motion passed 19/0.*

### Rationale:

- The AP motion is consistent with the OAC and EM Workgroup recommendations.
- The PPA of Alternative 2 focus discussions on enforcement considerations, to guide future field work, and to initiate cost and data quality optimization work required prior to implementation.
- Full retention of rockfish will reduce waste, provide consistent regulations for all rockfish species and management areas, reduce operator uncertainty when trying to comply with MRA regulations, and provide an opportunity for heightened shore-based catch accounting measures in the future if rockfish species become binding. This already occurs for DSR in SE AK and works very well for both small and large vessels.

## **C4 2017 Observer Program ADP**

*The following was offered as a substitute motion and passed 16/3.*

The AP recommends the Council support the following recommendations for the draft 2017 Annual Deployment Plan:

1. Use the trip-selection method to assign observers to vessels in partial coverage in 2017.
2. Deploy observers in the trip-selection pool, with optimal allocation based on discarded catch. Resulting in the preliminary deployment rates for the trip-selection strata in 2017 as follows:

Hook-and-line (11%)  
Tender hook-and-line (27%)  
Pot (3%)  
Tender Pot (6%)  
Trawl (18%)  
Tender Trawl (14%)

3. The no selection pool would include catcher vessels 1) less than 40 ft and vessels fishing with jig gear 2) EM selection pool that have opted-in to the EM selection pool and will participate in the 2017 EM cooperative research pre-implementation plan.
4. No temporary exemptions from observer coverage are allowed due to insufficient life raft capacity, given the option for these vessels to be in the electronic monitoring pool in 2017.
5. Continue the policy (programming in ODDS) that prevents a 40 – 57.5-foot fixed gear vessel from being selected for a third consecutive observer trip.
6. Maintain the ability for vessels to log up to three trips in advance in ODDS.
7. Continue to encourage ODDS trip number to be entered voluntarily on groundfish landing reports to facilitate data analysis and provide a better link between ODDS and eLandings.
8. Maintain the current Chinook salmon sampling protocols to identify stock of origin.
9. Continue to conduct outreach in fall and winter 2016/2017 as appropriate. The AP recommends that the Council request more information about logging trips in a tender stratum be included in the final ADP.

The AP recommends that the Council begin to consider approaches to address low coverage rates for the 2018 ADP process that include the following: (1) **prioritize** ~~consider~~ ways to optimize coverage within the current program budget (PSC limited fisheries and efficiencies within the sampling design); (2) request Federal funding; and (3) **evaluating the present fee structure** ~~increase the fees.~~ **[Motion to change language passed 19/0]**

Incorporation of outcome metrics such as precision estimates (coefficients of variation or percent standard errors, CV's or PSE) on discards as part of the Annual ADP process. **[Motion to add item passed 19/0]**

*Final amended motion passed 19/0.*

Rationale:

- Staff reports noted core purpose of Observer program is to provide estimates of at-sea discards. Understanding how proposed deployment rates will affect the accuracy and precision (variance) of those estimates is critical to evaluating alternatives in the ADP.
- The Gap analysis currently included in ADP does not provide information on anticipated accuracy and precision of catch estimates resulting from ADP deployment options. Adding this metric will provide the Council with an additional tool to future ADP's will improve evaluation of alternate deployment options,
- AP recognizes that precision goals may be different for PSC vs. managed species or other species such as invertebrates. Incorporating precision estimates into the APD process will facilitate the development of priorities.
- Follows the 2017 annual deployment plan and captures the OAC report while keeping parts of the program that are important to keep in place, as we have a shortfall of money.

## **C5 Shortage of Fixed Gear Lead Level 2 Observers**

The AP recommends the Council move forward the discussion paper addressing the shortage of fixed gear Lead Level 2 (LL2) observers (agenda item C5) for analysis. The analysis should include consideration of options 1, 2, 4 and 6 as described in the discussion paper and in the October 2015 Council motion:

- Option 1: Allow deployment of a non-fixed gear LL2 observer on FLC vessels if the only alternative is that the vessel must stand down:
  - Deploy any non-LL2 observer
  - Deploy a trawl LL2 observer
- Option 2: Allow observer experience on fixed gear vessels in other regions to count towards LL2 certification.
- Option 4: Institute an at-sea training component to the Federal observer training program, whereby the agency would pay for fixed gear LL2 certification.

The analysis should also include Option 6 developed by the Observer Program, with the sub-option added by the Observer Advisory Committee (OAC) referenced below.

- Option 6: Allow freezer longline (FLL) vessels with flow scales to choose between a single LL2 observer or two level 2 observers
  - Sub-option 1: Allow FLL vessels with flow scales to choose between a single LL2 observer, *or a level 2 and level 1 observer.*

The AP also supports further exploration by the Observer Program of non-regulatory actions to support fixed gear LL2 observers, as proposed in Section 5.7 of the discussion paper.

*Motion passed 17/0.*

Rationale:

- This motion is consistent with the OAC recommendations on this discussion paper.
- Data detailed in the discussion paper indicate a continued shortage of LL2 observers available for deployment on the FLL fleet. Industry comments support this data.

- There continues to be a strong risk that FLL vessels miss fishing days due to a lack of fixed-gear, LL2 observers to place on the vessels.
- Interim action by FLL vessel owners to voluntarily pay for second observers to be deployed on their boats for training purposes have helped address critical shortage of fixed-gear LL2 observers, but at a high cost to the fleet.
- A long-term solution to the LL2 observer shortage remains needed.
- Concerns about a shortage of LL2 observers for the FLL fleet have been voiced since 2011.
- As highlighted in the discussion paper and in public comments, several FLL vessels have lost fishing days due to a shortage of LL2 observers to be deployed on the fleet.
- Council has considered action on this issue since 2014 and industry and agency representatives have engaged in efforts to develop solutions.
- Shortages of fixed-gear LL2 observers resulting from the 2012 Final Rule predicted by industry were realized in 2013 and 2014, with continued risk for additional shortages.
- Since 2014, FLL vessel owners have voluntarily paid for second observers to be deployed on their boats for training purposes.
- To date, FLL vessel owners have paid over \$370,000 to accommodate observer training.
- These costs will only increase until a long-term remedy is developed.

## C6 Review of Halibut/Sablefish IFQ Program

The AP appreciates the work staff has put into the draft review and recommends that the draft review be brought back for final review with the addition of a section that describes the benefits of consolidation limits and entry level provisions on the overall program success. **Further, the AP would like to look at the positive and negative sides of consolidation.** *[Motion to add language passed 20/0]*

*Amended motion passed 19/0.*

### Rationale:

- The draft review is comprehensive and will benefit from the addition of a section that consolidates the benefits of consolidation limits and entry level provisions to overall program success so that stakeholders can make informed decisions and bring them to Council through the IFQ committee.

The AP recommends that future NIOSH hazard assessment reports of the halibut sablefish IFQ program include a broader range of years (1984-1994) that better characterizes pre-implementation fishing.

*Motion passed 18/0.*

### Rationale:

- In order to measure safety trends in the IFQ fishery, future NIOSH hazard assessment reports on the IFQ program should capture a broader range of years of pre IFQ implementation fishing.

*The following amended motion failed 9/9:*

*The AP recommends that the Council request a discussion paper exploring how to increase entry level opportunities in the **halibut and sablefish** [amendment passed 12/6] IFQ fisheries through creation of community fishing associations (CFA) and/or regional fishery association entities (RFAE), **which would include CQEs.** [amendment passed 18/1]*

*The discussion paper should include the following information:*

- *Transfers of IFQ between initial recipients and new entrants in terms of scale and costs.*
- *Duration of ownership and costs associated in terms of loans, or other fixed costs.*
- *Extent of quota use agreements in terms of scale, rates, participants, and structure (how fuel and other trip costs are allocated).*
- *Measures that could fund quota for a CFA and/or RFAE from: (1) initial recipients; (2) existing quota holders; (3) transfers; and/or (4) quota use arrangements.*
- *Funding a CFA and/or RFAE through grants, partnerships with CDQ / Alaska Native Corporations, fundraising, or incentivized gift IFQ transfers*
- *Existing legal, regulatory, barriers or challenges to the success of CFA and/or RFAE.*
- *Amount of quota necessary for CFA and/or RFAE to be sustainable.*
- *Governance structures of CFA and/or RFAE.*

*Rationale in Favor of failed motion:*

- *Entry level opportunities to the IFQ programs appears to be impacted by the high cost of quota that can make it difficult for owner/operator participation, particularly in rural communities.*
- *Public testimony indicated in some years more than 50% of quota is leased via hired skippers, walk-ons, and other arrangements, typically at high rates (>60%). Leasing IFQ increases the burden on owner/operators trying to pay their crew, maintain vessels and gear, while also making a living.*
- *A major challenge to the success of existing Community Quota Entities, and any Regional Fishing Association Entity or Community Fishing Association that could form, is how to find adequate funding. These entities need to be better understood in order to make sure they don't make it more difficult for owner/operator participation or increase the cost of IFQ.*

*Rationale Against failed motion:*

- *Some AP members opposed the motion because it does not go far enough - should look at a discussion paper that applies to all rationalized fisheries.*
- *Other AP members are opposed to the CFA concept being applied to IFQ or any fisheries.*
- *Some AP felt that it was more appropriate to provide these suggestions to the IFQ Implementation Committee rather than to add alternatives at initial review.*

## **C7 Area 4 Halibut IFQ Leasing**

The AP recommends the Council move forward for an additional initial review of analysis on action that would allow CDQ groups to lease IFQ in years of low halibut abundance in Areas 4CDE and Area 4B, with the following alternative and options:

**Alternative 2:** Allow CDQ groups to lease halibut IFQ in Areas 4B, 4C and 4D in years of low halibut catch limits in regulatory Areas 4B and 4CDE. Any IFQ transferred to a CDQ group under this provision would be added to their available halibut CDQ, intended for use by residents with a halibut CDQ permit and a CDQ hired master permit. No vessel over 51 feet LOA would be eligible to harvest the leased IFQ and vessels would have to comply with IFQ use restrictions.

**Option 1:** Defining 'low catch limits' for the purpose of allowing leases. Designation of low catch limits is independently determined for Areas 4B and 4CDE. The threshold for designating a year of low halibut catch limit in each area is less than:

Sub-option 1: 1.5 million pounds for Area 4CDE

Sub-option 2: 1 million pounds for Area 4B

**Option 2:** IFQ class designations do not apply when IFQ is being leased by a CDQ group.

**Option 3:** Leased Area 4D IFQ may be fished in Area 4E.

**Option 4:** Any Area 4B, 4C, or 4D catcher vessel QS transferred after December 14, 2015 may not be leased as IFQ to CDQ groups under this action for a period of 5 years.

The AP also supports additional analysis of the following: placing a cap on the amount of quota leased to CDQ groups; limiting the number of years that an individual QS holder can lease out quota; limiting the pool of QS holders eligible to lease based on the amount of quota share held; and further investigating potential impacts on the pool of quota holders who are currently fishing on vessels they do not own in Areas 4B and/or 4CDE and on the walk-on businesses that support these quota holders.

*Motion passed 17/2.*

Rationale:

- This is to be considered only a mitigation action and intended to provide temporary relief should halibut fishers in Areas 4B and 4CDE be faced with quota levels that put them in desperation mode.
- The intent of this action is twofold: (1) to prevent halibut IFQ from being 'stranded' when costs of pursuing the IFQ fishery are greater than the potential revenues generated by the reduced halibut quotas; and (2) to provide additional amounts of halibut to fishermen in CDQ villages, many of which in recent years have not been able to pursue halibut due to low abundance.
- The additional issues requested for analysis are responsive to stakeholder concerns regarding: further consolidation; limiting new entrant opportunities; and, potential impacts on businesses reliant on walk on quota holders.

## **D1 BSAI Halibut Abundance-based Management PSC limits**

**The AP recommends the Council and Halibut PSC Workgroup develop performance metrics and quantitative tools to evaluate the tradeoffs between the competing objectives for this action including:** The AP recommends the Council prioritize the objectives for this action in the following way:

*[motion to revise introduction passed 17/1]*

Rationale: At this time, it is difficult for stakeholders to gauge the potential biological and economic impacts of any action taken under this agenda item. The development of specific performance metrics and quantitative tools (i.e., losses to both the directed halibut fishery and the groundfish trawl fishery; the impact of various control rules on halibut spawning stock biomass) will allow for a thorough and robust evaluation of the trade-offs between the multiple objectives identified in the discussion paper.

### **Objectives**

- 1) protect the halibut stock spawning biomass.
- 2) provide for the sustained participation of directed halibut fishermen and fishery dependent communities in the BSAI halibut fishery.
- 3) provide a responsive management approach at varying levels of halibut abundance.



- 4) avoid unnecessarily constraining the groundfish fisheries at times of high halibut abundance.
- 5) **Stability in inter-annual PSC limits.** [*motion to add item 5 passed 18/0*]

### **Development of control rule and index alternatives**

To meet the objectives above, the AP recommends identifying and analyzing alternatives for the index and the control rules concurrently.

#### **Index**

The AP recommends that the Council develop a suite of alternatives for an appropriate abundance index, and that the alternatives include the following:

Alternative 1: Index halibut removals to the IPHC halibut standardized stock assessment survey (SSA survey).

Suboption: Index halibut removals to the IPHC halibut SSA survey for Area 4

Alternative 2: Index fixed gear PSC limit to the halibut SSA survey  
Index trawl gear PSC limit to the AFSC EBS shelf bottom trawl survey

Suboption: Index fixed gear PSC limit to the halibut SSA survey for Area 4

Alternative 3: Index PSC limits to an integrated blend of indices as suggested by the working group, with a range of weighting options for the GOA trawl survey component.

#### **Control rule**

In moving this action forward, the AP recommends the Council develop a suite of control rule alternatives.

The AP recommends the Council include a control rule alternative that provides for the sustained participation of directed fisheries and communities in the BSAI halibut fishery by providing a base level allocation to the directed halibut fishery, as permitted by availability of the resource. Such an alternative could create a catch sharing plan consistent with the objectives above, in conjunction with the use of alternative 1 index.

Floor: The AP also recommends including a control rule alternative that curtails halibut mortality in all fisheries at low thresholds of abundance (defined either by thresholds in the IPHC stock assessment or some other cut-off for spawning biomass in the assessment).

Starting Point: The AP recommends that the control rule alternatives include:

Option 1: a starting point that reflects current bycatch levels and expected future improvements in halibut bycatch levels.

Option 2: a biologically-based starting point, according to the current levels of abundance.

*Final amended motion passed 13/6*

#### Rationale In Favor:

This motion is responsive to, or reflective of, a couple of things:

1. The workgroup directed that we prioritize objectives.

2. The impetus for and the intent behind this agenda item (i.e., this action started in June 2015, in response to historic low harvestable abundance in the Area 4CDE halibut fisheries, and after the Council acknowledged that static PSC limits were a blunt tool to manage halibut bycatch).
3. The Council's purpose and needs statement which notes that relative PSC removals increase when abundance is low, which further reduces the amount and proportion of halibut available for the directed halibut fisheries and that PSC could be unnecessarily constraining during high abundance.
4. The concern that the workgroup did not explicitly consider sustained directed halibut fishery opportunity in the index modeling or tools for proposed control rule.
5. The SSC report on the agenda item, which, among other things, suggested that:
  - a broader suite of options for candidate abundance indices and control rules be examined together in subsequent analyses, rather than restricting analyses to a single index like the ABM at this stage.
  - the integrated index would likely have been ineffective at constraining PSC during the recent period of decline in coastwide halibut biomass.
  - a rule similar to our standard harvest control rule for groundfish species should be considered that would reduce PSC to zero at very low halibut abundances.

Rationale in Opposition:

The NPFMC manages halibut bycatch, the IPHC manages the directed halibut fishery and must take into consideration bycatch when setting catch limits. A reasonable objective for an NPFMC action cannot be to have the IPHC set catch limits at some vague level that the NPFMC hopes will achieve "sustained participation." NPFMC objectives should be within the scope of the NPFMC's authority and control.

The objectives and control rule for abundance halibut PSC indices must balance the MSA's National Standards, for example achieving optimal yield and reducing bycatch to the extent practicable. The objectives and control rule proposed here explicitly prioritizes the directed halibut fishery over consideration of other fisheries that the NPFMC also manages.

The SSC identified significant problems within each of the indices being used on their own, or through an integrated model, for setting an abundance based approaches. Additional work needs to be done by the workgroup before the NPFMC recommends alternatives, including examining assumptions about halibut mortality, migration from the Bering Sea to other areas, and recent biological changes in their size at age. The consequences to all stakeholders of a failed approach to an abundance based halibut PSC limit would be devastating, we need to make sure we get this right.

***The following amendments to the motion above failed:***

*Revise item 2 under Objectives as follows, failed 3/15*

*2) provide for the sustained participation of directed halibut fishermen and fishery dependent communities in the BSAI halibut fishery, **with particular focus on St. Paul;***

*Revise item 4 under Objectives as follows, failed 9/9*

*4) avoid unnecessarily constraining the groundfish fisheries ~~at times of high halibut abundance.~~*

Add the following suboption under Alternative 2, failed 8/11.

**Suboption: index fixed gear PSC limit to the AFSC EBS shelf bottom trawl survey**

**The following substitute motion was offered prior to the amendments above. Motion failed 3/15.**

The AP recommends that Council direct the halibut abundance PSC work group to take into consideration the following in their subsequent analyses:

Consider a broader suite of options for candidate abundance indices and control rules be examined together in subsequent analyses, rather than restricting analyses to a single index like the ABM at this stage.

Equally weighting the two trawl-based indices may implicitly put more weight on a halibut in the GOA because the majority of smaller halibut occur in the EBS.

Maintaining flexibility and evaluating a suite of potential indices and control rules in the analyses before selecting the best index or combination of indices to meet the Council's objectives.

Different indices may need to be considered to meet different objectives, which could then be combined in a control rule or decision making framework that allows the Council to evaluate the tradeoffs between protecting spawning stock biomass, constraining PSC, and providing opportunities for a directed fishery.

Rationale in Support: The SSC comments provide appropriate guidance for the NPFMC for how to approach further analyses.

Rationale in Opposition: The NPFMC needs more direction than what was provided by the SSC, and the work group is requesting priorities be given to help them evaluate indices.

## **D2 Halibut DMRs**

The AP recommends the Council:

1. Endorse the new **process methodology** as outlined in the modifications to DMR calculation procedures.
2. Adopt the proposed DMRs for 2017 and 2018 as detailed in the Errata Appendix.
3. Encourage the Workgroup create a Technical Memo that outlines the calculations.

An amendment to replace "methodology" with "process" passed 20/0.

Amended motion passed 20/0.

Rationale: The AP appreciates the transparent process for setting DMRs.

The AP recommends the Council request the DMR working group consider incorporating additional data from the A80 fishery including quantifying how the length of time and volume of tows has changed in recent years, and is different across target fisheries, vessels, and areas (GOA/BSAI) which may impact mortality. The working group should also discuss different ways to ground truth viabilities calculations through tagging studies or other methods.

Also, to look at DMRs on a shorter timeframe than 10 years to increase incentive for the fleets to reduce bycatch. *This was added by amendment and passed 20/0.*

*Amended motion passed 20/0.*

Rationale:

- The old IPHC DMR numbers were averaged over 10 years. The new DMR process can set the average on a shorter time frame to give incentive for better handling of PSC.
- The size of tow needs to be taken into consideration which can vary by fishery and size of vessels. The existing DMRs are based on averages resulting in higher rates.

### **D3 EFH Descriptions**

The AP recommends the Council adopt the Ecosystem Committee's recommendations on updating EFH definitions and maps by species, life stage, and season.

*Motion passed 18/0.*

Rationale: The AP agrees with the Ecosystem Committee that, (1) the new maps present useful information that will be valuable in the conservation of habitat; and (2) combining different life stage and seasonal maps into one comprehensive map may prove problematic.

### **E Staff Tasking**

The AP approved the minutes from the April and June 2016 meetings.

**Attachment 1  
AP Minutes, October 2016**

**AP recommended TACs; SSC proposed OFL and ABC recommendations (metric tons) for 2017-2018**

Species	Area	2015			Catch	2016			Catch as of 9/3/16	2017 as specified			2018		
		OFL	ABC	TAC		OFL	ABC	TAC		OFL	ABC	TAC	OFL	ABC	TAC
Pollock	EBS	3,330,000	1,637,000	1,310,000	1,321,577	3,910,000	2,090,000	1,340,000	1,242,378	3,540,000	2,019,000	1,340,643	3,540,000	2,019,000	1,340,643
	AI	36,005	29,659	19,000	915	39,075	32,227	19,000	1,062	44,455	36,664	19,000	44,455	36,664	19,000
	Bogoslof	21,200	15,900	100	733	31,906	23,850	500	1,005	31,906	23,850	500	31,906	23,850	500
Pacific cod	BS	346,000	255,000	240,000	224,825	390,000	255,000	238,680	181,007	412,000	255,000	238,680	412,000	255,000	238,680
	AI	23,400	17,600	9,422	9,064	23,400	17,600	12,839	11,763	23,400	17,600	12,839	23,400	17,600	12,839
Sablefish	BS	1,575	1,333	1,333	210	1,304	1,151	1,151	352	1,241	1,052	1,052	1,241	1,052	1,052
	AI	2,128	1,802	1,802	430	1,766	1,557	1,557	242	1,681	1,423	1,423	1,681	1,423	1,423
Yellowfin sole	BSAI	266,400	248,800	149,000	126,937	228,100	211,700	144,000	89,711	219,200	203,500	144,000	219,200	203,500	144,000
Greenland turbot	BSAI	3,903	3,172	2,648	2,204	4,194	3,462	2,873	2,030	7,416	6,132	2,873	7,416	6,132	2,873
	BS	n/a	2,448	2,448	2,090	n/a	2,673	2,673	1,937	n/a	4,734	2,673	n/a	4,734	2,673
	AI	n/a	724	200	114	n/a	789	200	93	n/a	1,398	200	n/a	1,398	200
Arrowtooth flounder	BSAI	93,856	80,547	22,000	11,265	94,035	80,701	14,000	8,058	84,156	72,216	14,000	84,156	72,216	14,000
Kamchatka flounder	BSAI	10,500	9,000	6,500	4,994	11,100	9,500	5,000	4,289	11,700	10,000	5,000	11,700	10,000	5,000
Northern rock sole	BSAI	187,600	181,700	69,250	45,466	165,900	161,000	57,100	43,290	149,400	145,000	57,100	149,400	145,000	57,100
Flathead sole	BSAI	79,419	66,130	24,250	11,307	79,562	66,250	21,000	7,341	77,544	64,580	21,000	77,544	64,580	21,000
Alaska plaice	BSAI	54,000	44,900	18,500	14,614	49,000	41,000	14,500	10,147	46,800	39,100	14,500	46,800	39,100	14,500
Other flatfish	BSAI	17,700	13,250	3,620	2,415	17,414	13,061	2,500	2,726	17,414	13,061	2,500	17,414	13,061	2,500
Pacific Ocean perch	BSAI	42,558	34,988	32,021	31,425	40,529	33,320	31,900	23,306	38,589	31,724	31,490	38,589	31,724	31,490
	BS	n/a	8,771	8,021	7,918	n/a	8,353	8,000	3,381	n/a	7,953	7,953	n/a	7,953	7,953
	EAI	n/a	8,312	8,000	7,865	n/a	7,916	7,900	5,654	n/a	7,537	7,537	n/a	7,537	7,537
	CAI	n/a	7,723	7,000	6,834	n/a	7,355	7,000	6,330	n/a	7,002	7,000	n/a	7,002	7,000
	WAI	n/a	10,182	9,000	8,808	n/a	9,696	9,000	7,941	n/a	9,232	9,000	n/a	9,232	9,000
Northern rockfish	BSAI	15,337	12,488	3,250	7,197	14,689	11,960	4,500	3,984	14,085	11,468	4,500	14,085	11,468	4,500
Blackspotted/Rougheye rockfish	BSAI	560	453	349	180	693	561	300	139	855	694	300	855	694	300
	EBS/EAI	n/a	149	149	64	n/a	179	100	62	n/a	216	100	n/a	216	100
	CAI/WAI	n/a	304	200	117	n/a	382	200	77	n/a	478	200	n/a	478	200
Shortraker rockfish	BSAI	690	518	250	152	690	518	200	81	690	518	200	690	518	200
Other rockfish	BSAI	1,667	1,250	880	686	1,667	1,250	875	589	1,667	1,250	875	1,667	1,250	875
	BS	n/a	695	325	185	n/a	695	325	219	n/a	695	325	n/a	695	325
	AI	n/a	555	555	501	n/a	555	550	370	n/a	555	550	n/a	555	550
Atka mackerel	BSAI	125,297	106,000	54,500	53,269	104,749	90,340	55,000	41,363	99,490	85,840	55,000	99,490	85,840	55,000
	EAI/BS	n/a	38,492	27,000	26,344	n/a	30,832	28,500	17,796	n/a	29,296	28,500	n/a	29,296	28,500
	CAI	n/a	33,108	17,000	16,672	n/a	27,216	16,000	14,399	n/a	25,860	16,000	n/a	25,860	16,000
	WAI	n/a	34,400	10,500	10,253	n/a	32,292	10,500	9,168	n/a	30,684	10,500	n/a	30,684	10,500
Skates	BSAI	49,575	41,658	25,700	28,117	50,215	42,134	26,000	20,176	47,674	39,943	26,000	47,674	39,943	26,000
Sculpins	BSAI	52,365	39,725	4,700	4,979	52,365	39,725	4,500	3,752	52,365	39,725	4,500	52,365	39,725	4,500
Sharks	BSAI	1,363	1,022	125	107	1,363	1,022	125	105	1,363	1,022	125	1,363	1,022	125
Squids	BSAI	2,624	1,970	400	2,364	6,912	5,184	1,500	1,042	6,912	5,184	1,500	6,912	5,184	1,500
Octopuses	BSAI	3,452	2,589	400	446	3,452	2,589	400	231	3,452	2,589	400	3,452	2,589	400
<b>Total</b>	BSAI	4,769,174	2,848,454	2,000,000	1,905,879	5,324,080	3,236,662	2,000,000	1,700,169	4,935,455	3,128,135	2,000,000	4,935,455	3,128,135	2,000,000

Sources: 2015 OFLs, ABCs, and TACs and 2016 OFLs and ABCs are from harvest specifications adopted by the Council in December 2014 and December 2015, respectively; 2015 catches through December 31, 2015 and 2016 catches through September 3, 2016 from AKR Catch Accounting.

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TABLE 14-FINAL 2016 AND 2017 APPORTIONMENT OF PROHIBITED SPECIES CATCH ALLOWANCES TO NON-TRAWL GEAR, THE CDQ PROGRAM, AMENDMENT 80, AND THE BSAI TRAWL LIMITED ACCESS SECTORS

PSC species and area <sup>1</sup>	Non-trawl PSC	Total trawl PSC	Trawl PSC remaining after CDQ PSQ <sup>2</sup>	CDQ PSQ reserve <sup>2</sup>	Amendment 80 sector <sup>3</sup>	BSAI trawl limited access fishery
Halibut mortality (mt) BSAI	710	2,805	n/a	315	1,745	745
Herring (mt) BSAI	n/a	2,631	n/a	n/a	n/a	n/a
Red king crab (animals) Zone 1	n/a	97,000	86,621	10,379	43,293	26,489
C. <u>opilio</u> (animals) COBLZ	n/a	9,105,477	8,131,191	974,286		2,613,365
C. <u>bairdi</u> crab (animals) Zone 1	n/a	830,000	741,190	88,810	312,115	348,285
C. <u>bairdi</u> crab (animals) Zone 2	n/a	2,070,000	1,848,510	221,490	437,542	865,288

<sup>1</sup>Refer to § 679.2 for definitions of zones.

<sup>2</sup>The PSQ reserve for crab species is 10.7 percent of each crab PSC limit.

Note: Sector apportionments may not total precisely due to rounding.

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TABLE 16–FINAL 2016 AND 2017 PROHIBITED SPECIES BYCATCH ALLOWANCES FOR THE BSAI TRAWL LIMITED ACCESS SECTOR (changes from action memo tables in **bold**)

BSAI trawl limited access fisheries	Prohibited species and area <sup>1</sup>				
	Halibut mortality (mt) BSAI	Red king crab (animals) Zone 1	<u>C. opilio</u> (animals) COBLZ	<u>C. bairdi</u> (animals)	
				Zone 1	Zone 2
Yellowfin sole	150	23,338	2,463,587	293,234	826,258
Rock sole/flathead sole/other flatfish <sup>2</sup>	0	0	0	0	0
Greenland turbot/arrowtooth flounder/Kamchatka flounder/sablefish	0	0	0	0	0
Rockfish April 15 - December 31	4	0	4,069	0	697
Pacific cod	391	2,954	105,008	50,816	34,848
Pollock/Atka mackerel/other species <sup>3</sup>	200	197	40,701	4,235	3,485
Total BSAI trawl limited access PSC	745	26,489	2,613,365	348,285	865,288

<sup>1</sup> Refer to § 679.2 for definitions of areas.

<sup>2</sup> “Other flatfish” for PSC monitoring includes all flatfish species, except for halibut (a prohibited species), flathead sole, Greenland turbot, rock sole, yellowfin sole, Kamchatka flounder, and arrowtooth flounder.

<sup>3</sup> “Other species” for PSC monitoring includes skates, sculpins, sharks, squids, and octopuses.

Note: Seasonal or sector apportionments may not total precisely due to rounding.

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TABLE 17–FINAL 2016 AND 2017 HALIBUT PROHIBITED SPECIES BYCATCH ALLOWANCES FOR NON-TRAWL FISHERIES

Halibut mortality (mt) BSAI				
Non-trawl fisheries	Seasons	Catcher/processor	Catcher vessel	All Non-Trawl
Pacific cod	Annual Pacific cod	648	13	n/a
	January 1-June 10	388	9	n/a
	June 10-August 15	162	2	n/a
	August 15-December 31	98	2	n/a
Total	May 1-December 31	n/a	n/a	49
Groundfish pot and jig	n/a	n/a	n/a	Exempt
Sablefish hook-and-line	n/a	n/a	n/a	Exempt
Total for all non-trawl PSC	n/a	n/a	n/a	710

Note: Seasonal or sector apportionments may not total precisely due to rounding.



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TABLE 13. FINAL 2016 AND 2017 ABC SURPLUS, COMMUNITY DEVELOPMENT QUOTA (CDQ) ABC RESERVES, AND AMENDMENT 80 ABC RESERVES IN THE BSAI FOR FLATHEAD SOLE, ROCK SOLE, [Amounts are in metric tons]

Sector	2016 Flathead sole	2016 Rock sole	2016 Yellowfin sole	2017 Flathead sole	2017 Rock sole	2017 Yellowfin sole
ABC	66,250	161,100	211,700	64,580	145,000	203,500
TAC	21,000	57,100	144,000	21,000	57,100	144,000
ABC surplus	45,250	104,000	67,700	43,580	87,900	59,500
ABC reserve	45,250	104,000	67,700	43,580	87,900	59,500
CDQ ABC reserve	4,842	11,128	7,244	4,663	9,405	6,367
Amendment 80 ABC reserve	40,408	92,872	60,456	38,917	78,495	53,134
Alaska Groundfish Cooperative for 2016 <sup>1</sup>	4,145	22,974	24,019	n/a	n/a	n/a
Alaska Seafood Cooperative for 2016 <sup>1</sup>	36,263	69,898	36,437	n/a	n/a	n/a

<sup>1</sup> The 2017 allocations for Amendment 80 species between Amendment 80 cooperatives and the Amendment 80 limited access sector will not be known until eligible participants apply for participation in the program by November 1, 2016.

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**AP GOA Groundfish Proposed OFL, ABC and TAC Recommendations (metric tons) for 2017-2018 (Page 1)**

Species	Area	2016			Catch as of 9/3/16	2017			2018		
		OFL	ABC	TAC		OFL	ABC	TAC	OFL	ABC	TAC
Pollock	State GHL	n/a	6,358	-	-	n/a	6,264	-	n/a	6,264	-
	W (610)	n/a	56,494	56,494	14,662	n/a	55,657	55,657	n/a	55,657	55,657
	C (620)	n/a	124,927	124,927	33,539	n/a	123,078	123,078	n/a	123,078	123,078
	C (630)	n/a	57,183	57,183	32,391	n/a	56,336	56,336	n/a	56,336	56,336
	WYAK	n/a	9,348	9,348	132	n/a	9,209	9,209	n/a	9,209	9,209
	Subtotal		322,858	254,310	247,952	80,724	289,937	250,544	244,280	289,937	250,544
	EYAK/SEO	13,226	9,920	9,920	-	13,226	9,920	9,920	13,226	9,920	9,920
	Total	336,084	264,230	257,872	80,724	303,163	260,464	254,200	303,163	260,464	254,200
Pacific Cod	W	n/a	40,503	28,352	16,090	n/a	34,998	24,499	n/a	34,998	24,499
	C	n/a	49,312	36,984	18,412	n/a	42,610	31,958	n/a	42,610	31,958
	E	n/a	8,785	6,589	61	n/a	7,592	5,694	n/a	7,592	5,693
	Total	116,700	98,600	71,925	34,563	100,800	85,200	62,150	100,800	85,200	62,150
Sablefish	W	n/a	1,272	1,272	698	n/a	1,163	1,163	n/a	1,163	1,163
	C	n/a	4,023	4,023	3,295	n/a	3,678	3,678	n/a	3,678	3,678
	WYAK	n/a	1,475	1,475	1,540	n/a	1,348	1,348	n/a	1,348	1,348
	SEO	n/a	2,317	2,317	1,933	n/a	2,118	2,118	n/a	2,118	2,118
	Total	10,326	9,087	9,087	7,466	9,825	8,307	8,307	9,825	8,307	8,307
Shallow-Water Flatfish	W	n/a	20,851	13,250	138	n/a	19,159	13,250	n/a	19,159	13,250
	C	n/a	19,242	19,242	2,697	n/a	17,680	17,680	n/a	17,680	17,680
	WYAK	n/a	3,177	3,177	-	n/a	2,919	2,919	n/a	2,919	2,919
	EYAK/SEO	n/a	1,094	1,094	1	n/a	1,006	1,006	n/a	1,006	1,006
	Total	54,520	44,364	36,763	2,836	50,220	40,764	34,855	50,220	40,764	34,855
Deep-Water Flatfish	W	n/a	186	186	3	n/a	187	187	n/a	187	187
	C	n/a	3,495	3,495	133	n/a	3,516	3,516	n/a	3,516	3,516
	WYAK	n/a	2,997	2,997	9	n/a	3,015	3,015	n/a	3,015	3,015
	EYAK/SEO	n/a	2,548	2,548	4	n/a	2,563	2,563	n/a	2,563	2,563
	Total	11,102	9,226	9,226	149	11,168	9,281	9,281	11,168	9,281	9,281
Rex Sole	W	n/a	1,315	1,315	166	n/a	1,318	1,318	n/a	1,318	1,318
	C	n/a	4,445	4,445	1,219	n/a	4,453	4,453	n/a	4,453	4,453
	WYAK	n/a	766	766	1	n/a	767	767	n/a	767	767
	EYAK/SEO	n/a	967	967	-	n/a	969	969	n/a	969	969
	Total	9,791	7,493	7,493	1,386	9,810	7,507	7,507	9,810	7,507	7,507
Arrowtooth Flounder	W	n/a	28,183	14,500	843	n/a	28,659	14,500	n/a	28,659	14,500
	C	n/a	107,981	75,000	14,729	n/a	109,804	75,000	n/a	109,804	75,000
	WYAK	n/a	37,368	6,900	24	n/a	37,999	6,900	n/a	37,999	6,900
	EYAK/SEO	n/a	12,656	6,900	9	n/a	12,870	6,900	n/a	12,870	6,900
	Total	219,430	186,188	103,300	15,605	196,714	189,332	103,300	196,714	189,332	103,300
Flathead Sole	W	n/a	11,027	8,650	184	n/a	11,080	8,650	n/a	11,080	8,650
	C	n/a	20,211	15,400	1,605	n/a	20,307	15,400	n/a	20,307	15,400
	WYAK	n/a	2,930	2,930	-	n/a	2,944	2,944	n/a	2,944	2,944
	EYAK/SEO	n/a	852	852	-	n/a	856	856	n/a	856	856
Total	42,840	35,020	27,832	1,789	43,060	35,187	27,850	43,060	35,187	27,850	

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**AP GOA Groundfish Proposed OFL, ABC and TAC Recommendations (metric tons) for 2017-2018 (Page 2)**

Species	Area	OFL	2016 ABC	TAC	Catch as of 9/3/16	OFL	2017 ABC	TAC	OFL	2018 ABC	TAC
Pacific Ocean Perch	W	n/a	2,737	2,737	2,560	n/a	2,709	2,709	n/a	2,709	2,709
	C	n/a	17,033	17,033	15,641	n/a	16,860	16,860	n/a	16,860	16,860
	WYAK	n/a	2,847	2,847	2,826	n/a	2,818	2,818	n/a	2,818	2,818
	W/C/WYAK	26,313	22,617	22,617	21,027	26,045	22,387	22,387	26,045	22,387	22,387
	SEO	2,118	1,820	1,820	-	2,096	1,802	1,802	2,096	1,802	1,802
	<b>Total</b>	<b>28,431</b>	<b>24,437</b>	<b>24,437</b>	<b>21,027</b>	<b>28,141</b>	<b>24,189</b>	<b>24,189</b>	<b>28,141</b>	<b>24,189</b>	<b>24,189</b>
Northern Rockfish	W	n/a	457	457	108	n/a	430	430	n/a	430	430
	C	n/a	3,547	3,547	3,017	n/a	3,338	3,338	n/a	3,338	3,338
	E (see note)	n/a	4	-	-	n/a	4	-	n/a	4	-
	<b>Total</b>	<b>4,783</b>	<b>4,004</b>	<b>4,004</b>	<b>3,125</b>	<b>4,501</b>	<b>3,768</b>	<b>3,768</b>	<b>4,501</b>	<b>3,768</b>	<b>3,768</b>
Shortraker Rockfish	W	n/a	38	38	41	n/a	38	38	n/a	38	38
	C	n/a	301	301	219	n/a	301	301	n/a	301	301
	E	n/a	947	947	271	n/a	947	947	n/a	947	947
	<b>Total</b>	<b>1,715</b>	<b>1,286</b>	<b>1,286</b>	<b>531</b>	<b>1,715</b>	<b>1,286</b>	<b>1,286</b>	<b>1,715</b>	<b>1,286</b>	<b>1,286</b>
Dusky Rockfish	W	n/a	173	173	85	n/a	159	159	n/a	159	159
	C	n/a	4,147	4,147	3,076	n/a	3,791	3,791	n/a	3,791	3,791
	WYAK	n/a	275	275	6	n/a	251	251	n/a	251	251
	EYAK/SEO	n/a	91	91	8	n/a	83	83	n/a	83	83
	<b>Total</b>	<b>5,733</b>	<b>4,686</b>	<b>4,686</b>	<b>3,175</b>	<b>5,253</b>	<b>4,284</b>	<b>4,284</b>	<b>5,253</b>	<b>4,284</b>	<b>4,284</b>
Rougheye and Blackspotted Rockfish	W	n/a	105	105	38	n/a	105	105	n/a	105	105
	C	n/a	707	707	421	n/a	705	705	n/a	705	705
	E	n/a	516	516	98	n/a	515	515	n/a	515	515
	<b>Total</b>	<b>1,596</b>	<b>1,328</b>	<b>1,328</b>	<b>557</b>	<b>1,592</b>	<b>1,325</b>	<b>1,325</b>	<b>1,592</b>	<b>1,325</b>	<b>1,325</b>
Demersal shelf rockfish	<b>Total</b>	<b>364</b>	<b>231</b>	<b>231</b>	<b>103</b>	<b>364</b>	<b>231</b>	<b>231</b>	<b>364</b>	<b>231</b>	<b>231</b>
Thornyhead Rockfish	W	n/a	291	291	150	n/a	291	291	n/a	291	291
	C	n/a	988	988	572	n/a	988	988	n/a	988	988
	E	n/a	682	682	194	n/a	682	682	n/a	682	682
	<b>Total</b>	<b>2,615</b>	<b>1,961</b>	<b>1,961</b>	<b>916</b>	<b>2,615</b>	<b>1,961</b>	<b>1,961</b>	<b>2,615</b>	<b>1,961</b>	<b>1,961</b>
Other Rockfish	W/C	n/a	1,534	1,534	1,159	n/a	1,534	1,534	n/a	1,534	1,534
	WYAK	n/a	574	574	46	n/a	574	574	n/a	574	574
	EYAK/SEO	n/a	3,665	200	33	n/a	3,665	200	n/a	3,665	200
	<b>Total</b>	<b>7,424</b>	<b>5,773</b>	<b>2,308</b>	<b>1,238</b>	<b>7,424</b>	<b>5,773</b>	<b>2,308</b>	<b>7,424</b>	<b>5,773</b>	<b>2,308</b>
Atka mackerel	<b>Total</b>	<b>6,200</b>	<b>4,700</b>	<b>2,000</b>	<b>753</b>	<b>6,200</b>	<b>4,700</b>	<b>2,000</b>	<b>6,200</b>	<b>4,700</b>	<b>2,000</b>
Big Skate	W	n/a	908	908	111	n/a	908	908	n/a	908	908
	C	n/a	1,850	1,850	1,455	n/a	1,850	1,850	n/a	1,850	1,850
	E	n/a	1,056	1,056	40	n/a	1,056	1,056	n/a	1,056	1,056
	<b>Total</b>	<b>5,086</b>	<b>3,814</b>	<b>3,814</b>	<b>1,606</b>	<b>5,086</b>	<b>3,814</b>	<b>3,814</b>	<b>5,086</b>	<b>3,814</b>	<b>3,814</b>
Longnose Skate	W	n/a	61	61	92	n/a	61	61	n/a	61	61
	C	n/a	2,513	2,513	728	n/a	2,513	2,513	n/a	2,513	2,513
	E	n/a	632	632	316	n/a	632	632	n/a	632	632
	<b>Total</b>	<b>4,274</b>	<b>3,206</b>	<b>3,206</b>	<b>1,136</b>	<b>4,274</b>	<b>3,206</b>	<b>3,206</b>	<b>4,274</b>	<b>3,206</b>	<b>3,206</b>
Other Skates	GOA-wide	2,558	1,919	1,919	1,319	2,558	1,919	1,919	2,558	1,919	1,919
Sculpins	GOA-wide	7,338	5,591	5,591	1,164	7,338	5,591	5,591	7,338	5,591	5,591
Sharks	GOA-wide	6,020	4,514	4,514	1,234	6,020	4,514	4,514	6,020	4,514	4,514
Squids	GOA-wide	1,530	1,148	1,148	186	1,530	1,148	1,148	1,530	1,148	1,148
Octopuses	GOA-wide	6,504	4,878	4,878	282	6,504	4,878	4,878	6,504	4,878	4,878
<b>Total</b>		<b>892,964</b>	<b>727,684</b>	<b>590,809</b>	<b>182,870</b>	<b>815,875</b>	<b>708,629</b>	<b>573,872</b>	<b>815,875</b>	<b>708,629</b>	<b>573,872</b>

Note: For management purposes the 4 mt apportionment of northern rockfish ABC to the WYK District of the Eastern GOA has been included in the "other rockfish" species group.