North Pacific Fishery Management Council

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July 8, 2015

Ms. Eileen Sobeck
Administrator for Fisheries
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Dear Ms. Sobeck:

We are pleased to provide comments on issues related to NOAA's work on bycatch, as you requested. We focus our comments on the new NMFS Bycatch Webpage and the National Bycatch Report, and offer suggestions to move forward in addressing bycatch at a national level through development of a National Bycatch Policy and Implementation Plan. Following that, we outline some of the factors and characteristics of bycatch management that we think are important to consider in a national strategy, based on our experience in the North Pacific. This outline is not meant to be exhaustive but provides a starting point for further discussion.

Bycatch Webpage

In concept, a webpage dedicated to the issue of bycatch is an excellent idea as a starting point to inform the public about complex bycatch issues. However, as currently constructed, the bycatch page does not provide the public with a real understanding of bycatch, but rather creates additional confusion and misunderstanding. As we see it, the problems are as follows:

It is misleading to the public and seems designed to make the public think that bycatch is a critical environmental crisis. It has been said that a picture is worth a thousand words, so it is important to convey this information accurately. However, the three main pictures do not portray bycatch at all, and are probably alarming to the general public. First, there is a picture of a trawl deck with a mixed catch of sablefish, thornyhead rockfish, and Pacific Ocean perch -- all of which are highly valuable and likely not discarded – and thus not bycatch. The second picture is of a shark caught in a large mesh gillnet. Sharks can be retained in most US fisheries, and in fact, this picture appears to be of the directed Pacific shark and swordfish gillnet fishery. If the shark was retained, it is not bycatch. The third picture is of a Risso's (?) dolphin entangled in a fishing line near a fishing hook. Yet the incidental catch of marine mammals is not legally defined as "bycatch", and if caught in recreational fisheries, are not considered an incidental take under ESA.

It confuses the issue by lumping in the incidental take of marine mammals and seabirds with fish bycatch. The webpage should either use only the legal MSA definition of bycatch or separate these two different things right from the outset with separate columns for bycatch as defined by MSA, and the various types of incidental takes described under ESA and MMPA. Under MSA, "The term bycatch

means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program." Note that this definition does not include unobserved mortality of fish before they are harvested, or incidental catch of marine mammals and seabirds. Bycatch of fish (i.e., discarding), and the incidental catch of marine mammals and seabirds, need to be clearly distinguished as these are vastly different policy and conservation issues.

It greatly overemphasizes the issue of bycatch being a conservation problem. With implementation of annual catch limits which require that all catches accrue towards the ACL, the conservation and ecological issues about bycatch are essentially eliminated for MSA managed fish species. A fish retained and put on ice, and a fish discarded dead back in the ocean have the same population effect – a dead fish is a dead fish. In the North Pacific, bycatch is almost exclusively an allocative issue and not a conservation or ecological issue. Yet the new NMFS webpage on bycatch emphasizes potential ecological problems, rather than the real social issues of discarding and waste and the economic impacts of allocation.

It does not convey that all fisheries have bycatch and some amount of bycatch is acceptable. The general public has been misled to believe that bycatch is all the other creatures caught when targeting a single species, and that all bycatch in unacceptable. NMFS should educate the public that bycatch occurs in all fisheries —including recreational fisheries — and that bycatch occurs because 1) regulations require certain fish to be discarded, or 2) consumers are unwilling to pay for some types of fish and other aquatic resources that are caught in fisheries.

It fails to note that minimizing bycatch is an ongoing management issue. The Councils and NMFS are continuously working to reduce bycatch. The original FMPs developed in the North Pacific included measures to minimize bycatch, and our FMPs and regulations have been amended dozens of time over the years to minimize fish bycatch and reduce incidental takes of marine mammals and seabirds. There have been non-regulatory efforts by the fishing industry as well. These efforts have been successful in minimizing fish bycatch and incidental catch of seabirds.

National Bycatch Report

The National Bycatch Report attempts to consolidate a standardized methodology and results reporting for US fisheries. Yet the report is misleading in that it uses a unique definition of bycatch, omits important information, and contains information that is clearly inaccurate. Our specific concerns are as follows:

It doesn't include recreational fisheries. Under the recreational fishing policy, NMFS has agreed to address recreational fisheries with the same regulatory accountability — consistent with the purposes the MSA — as commercial fisheries. Yet the recreational fisheries have been given a pass when it comes to bycatch. Although the MSA excludes those fish released under a catch and release program from the definition of bycatch, recreational fisheries not in these programs likely have high bycatch rates. Many recreationally caught fish are discarded because they are an undesirable species or due to regulations limiting size, season, or retention.

It confuses the issue of bycatch and incidental catch. As previously stated, the incidental catch or injury of marine mammals and seabirds is not bycatch, and should not be included in the bycatch report. We also note that the report does not include unobserved mortality, which is incorporated in the definition of bycatch described on the NMFS bycatch webpage. We agree with not including this type of mortality in the report. Unobserved mortality due to gear interactions is not bycatch but rather incidental mortality,

similar to fish killed incidentally in the course of other human activities such as dredging, impingement at water intakes, or through power turbines at dams.

The data compiled from some fisheries are inaccurate, and the report continues to provide misleading information about the fisheries, despite guidance from our Council (see attached letter). For example, the report continues to separate the GOA mixed flatfish trawl fishery into separate directed fisheries based on the NMFS Alaska Region catch accounting system for TAC monitoring, which defines target based on the most abundant RETAINED species in the catch. So the net result is relatively high bycatch ratios for GOA rex sole and flathead sole fisheries, which are in fact trawl catches dominated by catches of DISCARDED arrowtooth flounder (a species with limited marketability, and hence were mostly discarded). Further, the report classifies fish that were processed into fish meal as discards (and thus bycatch), which doesn't comport with the MSA definition of bycatch because these fish were retained and processed. The data tables continue to be misleading, as important information is not reported (e.g., not showing retention amounts by species in each fishery; only discard amounts are listed). Further, bycatch isn't reported for some fisheries, including the directed halibut longline fishery. Lastly, the data for some fisheries are based on limited or no observer coverage, and reporting bycatch amounts or ratios for these fisheries is entirely misleading (e.g., the table shows that the GOA cod jig fishery with a bycatch ratio of zero, having discarded only a few pounds of arrowtooth flounder and octopus—and nothing else—which is an impossible scenario). The problem is that these data are presented as real numbers, and are used by the public to justify management action (or inaction when action may in fact be needed).

Some critical information is missing from the report. In addition to the bycatch from recreational fisheries, and information on retention amounts by species, the report should also break out how much of the discard of each species is due to economic discards versus regulatory discards. Regulatory discards are a serious policy issue—and caused by government regulations—yet no data are presented to show the magnitude of the problem. The public may blame the fishermen for discarding and wasting fish, but regulations developed by the councils or other agencies may be partially responsible. It would be helpful to show the data so we can work to solve the problem if one exists.

National Bycatch Policy and Implementation Plan

We understand NMFS may be developing a national policy and implementation plan similar to what was developed for recreational fisheries. Additional guidance and encouragement to address regional bycatch issues could be helpful if not overly prescriptive. We offer a few policy and implementation suggestions to start the discussion.

NMFS should focus on elimination of regulatory bycatch and waste. We are part of the problem. Regulations force fishermen to discard fish simply because the fish are undersized, the wrong species, the wrong sex, caught out of season, caught with a gear not authorized for that species, etcetera. This is wasteful and possibly poor public policy. Policies that create waste of fishery resources should be re-examined and adjusted to minimize regulatory discards to the extent practicable.

NMFS may wish to provide additional guidance relative to the two criteria of National Standard 9. National Standard 9 requires that "conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch." Should the councils be putting more effort into reducing bycatch, rather than minimizing mortality? It is not entirely clear if there is a priority in the implementation of these criteria. Should the councils focus on reducing the mortality of discards only after bycatch has been minimized to the extent practicable? Or can the councils take management actions to minimize mortality without minimizing bycatch to the extent practicable?

Bycatch Management Experience in the North Pacific

In recent years, the NPFMC has addressed bycatch management of Chinook salmon and halibut in the Gulf of Alaska (GOA) and Bering Sea/Aleutian Islands (BSAI) groundfish fisheries, through different FMP and regulatory amendments. These experiences provide contrasting examples that reveal important factors and characteristics about the fisheries and bycatch management that are relevant to NMFS' development of a national strategy. Further exploration of them as case studies could prove beneficial.

The Chinook salmon bycatch management program for the BSAI pollock trawl fishery stands out as a successful approach that continues to evolve as information is gathered about the status of Chinook salmon stocks, the effectiveness of the program, and fleet responses to reduce bycatch The approach combines an absolute limit on the amount of Chinook salmon that may be caught incidentally, with industry incentive plan agreements and a performance standard. The program was designed to minimize bycatch to the extent practicable in all years, and prevent bycatch from reaching the limit in most years, while providing the pollock fleet with the flexibility to harvest the total allowable catch of pollock.

A primary factor contributing to the success of the program is that the pollock trawl fishery operates as a catch share program, in which companies receive allocations through cooperative structures, and accountability at the vessel-level is possible. Provisions allowing the transfer of pollock quota and Chinook salmon Prohibited Species Catch (PSC) apportionments between vessels provide flexibility for achieving target harvests and minimizing PSC use. Each sector has a performance standard, whereby they can only reach the absolute limit twice within a rolling seven year period before it is permanently replaced with a lower absolute limit. The pollock cooperatives agree on how they will achieve PSC reductions through binding Incentive Plan Agreements (IPAs), which address specific parameters set by the Council, giving the pollock fleet internal authority over bycatch reduction practices. For example, the IPAs have fostered the development of real time, spatially-based bycatch reporting and the exchange of this data among vessels through SeaState (a third-party information service), which provides further tools for real time bycatch avoidance.

Another important feature of the BSAI Chinook salmon bycatch management is the monitoring and associated bycatch accounting and science to determine the effect of bycatch on Chinook salmon populations. Pollock trawl vessels each carry two observers, and a strict compliance monitoring program ensures that a census of Chinook salmon bycatch is taken on each haul. Sampling protocols are used to determine the genetic stock of origin of Chinook salmon taken as bycatch. Using an adult equivalent (AEQ) analysis, which estimates what proportion of the salmon taken as bycatch would otherwise have survived to return to their river of origin, results in a quantitative impact assessment of bycatch on regional Chinook salmon returns.

In addition to the partnership between the pollock fleet and the AFSC in the development of this complex bycatch monitoring and accounting program, the pollock fleet has also developed effective Chinook salmon excluders, in concert with NMFS' bycatch reduction engineering efforts. Use of these excluders is regulated through enforceable, cooperative agreements, rather than federal regulations, which means that specifications can be modified quickly and easily as new technologies and operational criteria are developed.

Finally, a strong and collaborative working relationship exists between NMFS and ADF&G to achieve common goals. Through the Council process, there has been opportunity to achieve a common understanding and agreement about the life history, biology and science of Western Alaska Chinook salmon among all stakeholders, including Chinook salmon harvesters, the pollock trawl fleet, and Federal and State managers.

Vessel accountability through catch share programs and incentive plan agreements, real time communication and gear modifications for bycatch avoidance, compliance monitoring, science to allow impact assessment, and a collaborative management and stakeholder process are some of the key features of the BSAI Chinook salmon bycatch management program and the fisheries that contribute to a successful and evolving program. In contrast, the Council's bycatch management efforts for Chinook salmon in the GOA, and halibut in both the BSAI and GOA, are different in some important respects. For example, the GOA groundfish trawl fleets are not managed under catch share or cooperative-based programs; instead entry is limited, but the fisheries operate more as 'derby-style' fisheries which severely limits the ability of the fleets to develop and maintain voluntary cooperative efforts to reduce bycatch. In the case of halibut bycatch management in both the BSAI and GOA, there is disagreement, misunderstanding and uncertainty among many stakeholders about key elements of halibut science, such as migration, halibut mortalities resulting both from bycatch in the groundfish fisheries as well as discards in the directed halibut fishery, and the effect of halibut bycatch in one area on the abundance of halibut available to the directed halibut fisheries in another area. These factors impact the ability of the Council and the fleets to effectively manage bycatch and balance the objectives of different halibut resource users.

In summary, the ability to successfully reduce bycatch is determined by a number of factors such as the science of the species in question, the management of the fisheries, and the collaboration among all stakeholders. We believe that further study of examples such as the ones briefly described here, as well as others across the country, will assist NMFS in the development of a national bycatch management strategy.

Thank you for the opportunity to provide comments. Please contact David Witherell at our office if you have additional questions.

Sincerely,

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Executive Director

North Pacific Fishery Management Council

Eric A. Olson, Chairman
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May 24, 2011

Mr. Eric Schwaab, Assistant Administrator
NOAA Fisheries
1315 East-West Highway
Silver Spring, MD 20910

Dear Mr. Schwaab:

Thank you for the opportunity to review select sections of the draft NOAA Fisheries National Bycatch Report. We appreciate that assembling information from the different regions into a standardized format is a huge undertaking, and we understand that NMFS is working to provide the public with the best available information about an issue of concern. We also understand that the agency wants to make this report available as soon as possible, hence your directions to the Council that "major changes to data and content cannot be made at this stage but minor edits or requests for clarification may be accommodated." However, given the high visibility this report will have, and the likely potential for it to be used or mis-used in the national debate over bycatch, we cannot support its release without significant revisions. **The report contains fundamental flaws in the data analysis, and serious omissions (as discussed below), which in turn lead to a series of misleading conclusions. Therefore, we cannot support its release at this time**, and recommend that the agency hold back this report until these problems are fixed and the concerns we raise are addressed.

Major Data Presentation Problems: There are several cases where the data as presented make no sense (many of which have to do with various GOA flatfish fisheries), suggesting there are serious flaws in the data organization and analysis. I will highlight a few of the most egregious examples:

- The data would indicate that the GOA sablefish trawl fishery is the cleanest trawl fishery in the U.S. by having the lowest bycatch rate (see executive summary Figure 4). The table shows that amazingly, the fishery caught 108,527 lbs with the only bycatch being 26 lbs of sculpins and 147 lbs of miscellaneous fish. In 2005, there was not a specific trawl fishery for sablefish – it was only caught incidentally in other fisheries. It would appear that the data presented for this 'fishery' are based on a couple of unobserved trips, due to the low catch amount and the absence of any bycatch of rockfish, halibut, or grenadiers. The data are thus very misleading, so the fishery should be removed or rolled up with other fisheries.

- The GOA deepwater flatfish fishery (mislabeled the GOA flatfish fishery in the Figure 4) is listed as the second lowest bycatch rates. The table shows that the fishery caught 1,059,172 lbs, (480 mt) of which only 7,488 lbs were discarded, consisting of deepwater flatfish, large sculpins, and seastars. Again, the data presented for this 'fishery' appears to represent a couple of unobserved trips, as the catch amounts were small, and there was not a single pound of halibut, rex sole, or flathead sole discarded. This fishery should be removed or rolled up with other fisheries.

- The report figure shows that the GOA flathead sole trawl fishery is ranked as the worst fishery in the nation for bycatch by having the highest bycatch rate (0.61). What the report fails to note is that this data as presented is due to the nature of the algorithm used to define a target in the mixed

flatfish trawl fishery, whereby the target is defined by the catch accounting system as the most abundant RETAINED species in the catch. So, what is defined as a flathead sole fishery actually catches mostly arrowtooth flounder, much of which were likely discarded due to its very limited edibility/marketability. Hence, while it appears that the flathead sole fishery has a high bycatch rate, it is simply a byproduct of the catch accounting system used for a different purpose – to track catch against TACs relative to fishery openings/closings.

To resolve the above mentioned data problems, we would suggest rolling up the data for the GOA flatfish targets (flathead sole, rex sole, arrowtooth flounder, shallow water flatfish, and deepwater flatfish) and presenting this information as a single GOA flatfish trawl fishery, in the same way the GOA rockfish trawl fishery is a rollup of data from several different target rockfish complexes. We would suggest that the data from the sablefish trawl fishery could be combined with the rockfish trawl fishery because most trawl caught sablefish occurs in the rockfish trawl fisheries.

Data from Tier 1: We would recommend removing fisheries estimated to be in Tier 1 from the bycatch estimation and calculations. As defined, data for Tier 1 fisheries are deemed UNRELIABLE. So why report the data throughout the report, and use it in the calculations of national discard ratio? This is a clear case of garbage in – garbage out. For example, the data in the report include the BSAI and GOA jig fisheries, but the data reported are clearly unreliable (vessels in the fleet didn't carry observers in 2005). According to the report, these jig fisheries have no bycatch of rockfish, pollock, halibut, or other fish except octopus. This is a function of what is landed by the vessels, not what is actually caught and discarded at sea.

Corals (Bryozoans) category: The incidental catch of deepsea corals in Alaska fisheries continues to get mis-represented by environmental advocacy groups, due to the fact that corals have been lumped together with bryozoans, hydroids, gersemia, and other invertebrates groups in the catch accounting system. Unless revised to reflect this fact, it should come as no surprise when some group has a news release stating "NMFS report finds Alaska bottom trawl fisheries destroy 119,259 pounds of corals!" Yet true corals may only represent $1/100^{th}$ of this category. The category should be renamed, and the components listed in a footnote.

Data Expansion to State Fisheries: Expanding the bycatch ratio to unobserved fisheries provides additional sources or error, and as such should not be included in the report. The data for observed fisheries included in the bycatch report generated a bycatch ratio for each region. These ratios were then applied to all unobserved fisheries in each region then summed to generate total bycatch estimate for US fisheries. This expansion makes a very imprecise estimate of bycatch within each region even worse by introducing new assumptions. In the case of Alaska fisheries for example, the overall bycatch ratio of 0.07 from the fisheries data in the report (groundfish fisheries) is applied to all other fisheries in the region, including state fisheries such as the herring fisheries and salmon fisheries – fisheries with virtually zero bycatch. This is totally unsupportable and unnecessary.

We question even the inclusion of salmon in this report in the first place, as it is a fishery managed by the State of Alaska, and virtually all of the harvest occurs inside State waters. This inclusion presents an additional, and significant, misleading aspect to the report – by including these fisheries, one of the 'Fast Facts' for the Alaska Region (likely to be widely quoted) is that "observer programs are currently in place for 27 of the 77 fisheries". Practically speaking this is a seriously misleading 'fact', because in fact, even in 2005, observer programs were in place for virtually every federally managed fishery off Alaska. **The fact that we have the most comprehensive observer program in the U.S. is obscured by this misleading statement, which implies that only a third of our federally managed fisheries are observed.**

Key Stocks: The concept of key stocks needs to be reconsidered, and the fish species listed for Alaska region must be revised. The Councils were not provided Section 3 of the report to review, so we cannot provide comments on methodology and logic. However, the fish species chosen for key stocks seem to be inappropriate given the three listed criteria mentioned: high bycatch levels, special importance to management, and stock status concerns. Based on these criteria, it makes absolutely no sense to include demersal shelf rockfish as key stocks. The bycatch is extremely low (160 lbs in 2005 equating to a 0.0004 bycatch/catch ratio), these stocks have no species management concern (2005 catch of 187 mt from a TAC of 410 mt), and the stocks are neither overfished or undergoing overfishing. The same points could be made for red king crab and golden king crab as key stocks. We recommend that demersal shelf rockfish, red king crab, and golden king crab be deleted from the list of key stocks.

Bycatch definition: Without the rest of the report to review, we can only assume that the definition of bycatch used in the report was what was provided at the Council Chairs Committee meeting. "Bycatch: discarded catch of any living marine resource plus unobserved mortality due to a direct encounter with fishing gear. Discards: Living marine resources returned *unprocessed* to sea or elsewhere, including those release alive." As you are well aware, this is not the definition contained in the Magnuson Act, and thus raises a number of issues regarding what is included as bycatch in the report. For example, in Alaska, trawl catcher vessels deliver unsorted codends to motherships or shoreside processors. Most of the larger processors have plants that take the unmarketable fish and process them as fish meal (which is a component of chicken, fish, and livestock feed). So the fish are not returned to the sea and are clearly processed, even if not for human consumption. Hence, these fish are not discarded due to the report definition, and should not be included in the report tables. This should drop the estimates of discard to close to zero for many groundfish fisheries.

Causes of Discarding: The Alaska section only briefly mentions the reasons why fish are discarded. Most of the discards are economic discards. For example, table after table shows millions of pounds of arrowtooth flounder discarded. But the report fails to mention: 1) that this species has been generally unmarketable for human consumption, 2) that arrowtooth stocks comprise a very high proportion of the groundfish biomass, 3) that arrowtooth biomass is estimated to be at 3-times the B_{msy} level, and 4) that the arrowtooth stocks continue to increase in abundance. Without that information, an uninformed person may be aghast at the apparent lack of conservation of edible resources. Please add some context to help people understand this issue, rather than providing just data tables that are ripe for misuse and misperception.

Species included as bycatch: We recommend that commercially important fish bycatch be reported separately from the completely non-marketable invertebrate bycatch such as jellyfish, polycheates, brittle stars, etc. The public has a very hard time distinguishing between bycatch, discard, and waste, and this report does not help in that regard.

Tables: To be useful, the tables need to show retention/landings of each species/stock in addition to discard amounts. Both parts of the equation need to be presented. Otherwise, the public gets misinformed about what is being discarded as bycatch and what is being retained for processing. We recommend revising the tables to include amounts of each species that are retained.

Executive Summary Alaska Section Edits:

- The 'Fast Facts' should be revised to say "species groups" instead of just species. There are substantially more than 91 species as listed. For example, the BSAI sculpin complex alone consists of 48 different sculpin species.

- The figure showing Alaska Region fish bycatch and landings by fishery needs revision as it includes a strange mix of fisheries that do not match the fisheries evaluated in section 4.3. What is the BSAI Flatfish Trawl Group fishery? Is it an aggregate of the various flatfish target fisheries, and if so, why would the fishery bycatch ratios be higher than all the component flatfish fisheries? Again, this is reflective of the major data problems and misaggregations contained in the report.

- Many of the 'Bycatch reduction success stories' reflect actions which have been taken since 2005. That should be clearly noted in the text tables.

- In the key fish and invertebrate stocks section, 'undertermined stock' and 'undetermined species' should be revised to say 'multiple stocks'. The species and stocks are clearly not undetermined.

In conclusion, the report contains inaccurate information, or information wholly out of context, and provides misleading conclusions about a very high visibility and contentious issue. The report requires substantial revision before it should be released to the public. We recommend that the Councils be given an additional opportunity to review the revised report in its entirety, rather than just the executive summary and regional sections.

We look forward to working with you to improve the bycatch report over time, and encourage the agency to publish more recent bycatch information. Also, should the agency release a revised report this year, the Council would be very interested in receiving a presentation on the report at an upcoming Council meeting.

Sincerely,

Chris Oliver
Executive Director

cc: Samantha Brooke
David Detlor
Ned Cyr
Bill Karp
Jim Balsiger
Regional Fishery Management Councils