

**NMFS Report**  
**Pacific Fishery Management Council Meeting**  
**November 13-21, 2016**  
**Agenda Item F.5 Trawl Gear Modification Exempted Fishing Permit**

NMFS is providing this report to assist the Council in its review and consideration of the trawl gear modification Exempted Fishing Permit (EFP) proposal. NMFS offers the following comments and recommendations on the proposal.

**A. Required Elements**

NMFS believes that the following elements must be included for the EFP to be in compliance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Endangered Species Act (ESA). The rationale for these measures is further described below.

1. Chinook salmon bycatch limit based on estimated likely impacts to Chinook, with a sub-limit for the Eureka Management Area.
2. No fishing in the Columbia River and Klamath River Salmon Conservation Zones while fishing in the EFP (may fish with selective flatfish trawl (SFFT) under existing regulations).
3. Observer coverage, not EM, to enable collection of haul-level catch, effort, and genetic information about salmon caught on EFP trips.
4. A limit on the number of participants OR a strong cooperative agreement for inseason self-management of participating vessels.

The application proposes to allow groundfish vessels an exemption from the current regulatory requirement to use a selective flatfish trawl (SFFT) inshore of the Rockfish Conservation Areas (RCAs) north of 40°10'N latitude and an exemption from the minimum mesh size for bottom trawl and non-whiting midwater trawl. These exemptions are intended to allow participating vessels to more effectively target pelagic rockfish species (widow rockfish, yellowtail rockfish, and chilipepper rockfish) and take advantage of the increasing sector allocations for these stocks in 2017. The EFP is also intended to provide information about bycatch under modified gear restrictions to inform how the fishery can be operated in the future.

The ACLs for widow and yellowtail rockfish stocks are increasing substantially in 2017 to levels that haven't been seen since the 1980s and 1990s. The levels of effort under these catch limits correlated with high levels of bycatch of Chinook salmon (including ESA-listed Evolutionarily Significant Units, ESUs), particularly by bottom trawl gear. Chinook bycatch by bottom trawl gear declined significantly in the mid 2000's with the imposition of measures to eliminate targeting of overfished pelagic rockfish species (i.e., RCAs, differential trip limits, SFFT). It is not clear exactly which of these measures drove the decline, but bottom trawl effort shifted to deeper waters where Chinook bycatch is much lower. Consequently, there is little information about likely bycatch rates by this fishery in recent years. Although far fewer vessels operate today than in the 1990s, this EFP would be expected to bring effort back inshore and, if unconstrained, increase bycatch of Chinook salmon and other ESA-listed species (eulachon and green sturgeon).

As the Council is aware, NMFS has reinitiated consultation on the groundfish FMP for Chinook salmon and eulachon. While these consultations are ongoing, Council actions, including EFPs, must ensure that catch of ESA-listed species will remain within existing Incidental Take Statements (ITSs) to move forward. This EFP must include measures to minimize the take of Chinook salmon, eulachon, and green sturgeon, where appropriate, to comply with the ESA; in addition, the EFP must include measures to minimize bycatch, to the extent practicable, to comply with MSA.

### *1. Chinook salmon bycatch limit.*

The ITS for the bottom trawl fishery estimates 9,000 or fewer Chinook salmon would be caught by bottom trawl gear (5,000-8,000 north of 40°10'N and 1,000 south of 40°10'N)<sup>1</sup>. However, due to the measures described above, bycatch by bottom trawl has been much lower in recent years (53-323 annually 2009-2013). While take of an ESA-listed species is illegal, a federal agency may authorize the limited take of ESA-listed species in an ITS, but effects on listed species must still be minimized. In the case of Chinook salmon bycatch in the groundfish fishery, NMFS has previously determined that a take of 9,000 Chinook would not jeopardize the continued existence of listed Chinook. However, the EFP proposes a substantial change to the assumptions that underlay this analysis – the times, areas, and gears fished in 1999 – which would affect our understanding of the impacts of the fishery on different populations of listed Chinook. Therefore, it is essential that Chinook bycatch from the EFP be minimized to ensure that impacts to listed Chinook salmon are within the existing ITS, particularly while consultation is ongoing. Similarly, it is essential to minimize Chinook bycatch to the extent practicable, consistent with the MSA.

The EFP proposal's limit of 4,500 Chinook does not appear to have a rational basis other than that it is half of 9,000. NMFS's initial calculations indicate that a bycatch limit of 2,500-3,000 Chinook is likely assuming that the full trawl allocations of yellowtail and widow rockfish are caught in 2017.<sup>2</sup> This limit is further intended to provide an incentive to reduce bycatch. However, **NMFS is interested in receiving a recommendation from the GMT on an appropriate bycatch limit based on recent bycatch data and expected effort.**

**NMFS is also recommending a sub-limit be set for Chinook caught in the Eureka Management Area.** The ITS in the 1999 biological opinion, and reaffirmed in the 2006 biological opinion, estimated that no more than 1,000 of the 6,000-9,000 Chinook taken in the bottom trawl fishery would be taken in the Eureka Management Area (Attachment A). Effects from the fishery were assessed separately for this area to reduce bycatch of particularly vulnerable Chinook California ESUs (Central California ESU and Sacramento River ESU) more

---

<sup>1</sup> Note that although that ITS referenced bottom trawl gear at the time, NMFS interprets this ITS to also apply to non-whiting midwater trawl gear. Non-whiting midwater trawl fishery was not differentiated from the whiting midwater trawl fishery in previous ITSs, because these fisheries were both prosecuted under the "whiting" declaration. However, NMFS implemented a regulatory change that created a definition and separate declaration for the non-whiting midwater trawl fishery, enabling its distinction and accurate accounting separate from the whiting fishery.

<sup>2</sup> Multiplying the bottom trawl fishery bycatch rates from 2011-2014 against the sum of the trawl allocations for yellowtail and widow rockfish results in a projected bycatch of 2,600 Chinook salmon. This is consistent with the level of effort described in the EFP proposal.

likely to be encountered in this area. For this reason, existing regulations limit the amount of whiting that may be taken in this area and the ITS specifically stipulated that consultation shall be reinitiated if there is increased catch in the Eureka or Monterey Areas. NMFS notes that bottom trawl vessels may have effects more similar to midwater trawl gear while targeting pelagic rockfish in the EFP and that the widow rockfish reallocation rulemaking would increase widow QS for QS permit holders in southern Oregon and northern California (see Table 3-10 in the Draft Widow Rockfish Reallocation Environmental Assessment). Therefore, NMFS is concerned about an increase in midwater trawl-like effort and bycatch in the Eureka Area resulting from the EFP. Therefore, NMFS is recommending that no more than 17% of the EFP bycatch limit be taken in this area<sup>3</sup>.

This measure would also be expected to reduce bycatch of the listed Southern Distinct Population Segment of green sturgeon that are more frequently encountered in this area (90% of sturgeon caught in the Eureka Management Area are Southern DPS (listed) sturgeon, as opposed to 55% in the Columbia Area).

## *2. Salmon Conservation Zones.*

There are known areas of Chinook salmon bycatch that have been prohibited to whiting fishing specifically to reduce salmon bycatch in that sector of the fishery. These conservation zones – Columbia River Conservation Zone and Klamath River Conservation Zone – are discrete areas of known salmon hotspots that could be incorporated into the EFP to reduce the risk of the Chinook cap being exceeded (Attachment B). The conservation zones would also reduce the risk of bycatch of listed ESUs originating from the Columbia River and California rivers. EFP vessels would be limited to using SFFT gear in these areas, consistent with existing gear requirements. This measure would also be expected to reduce bycatch of listed eulachon that are more frequently encountered in estuaries.

## *3. Observer Coverage (Not EM).*

NMFS needs detailed, haul-level information on gear configuration, location, and resulting catch rates to evaluate the measures proposed in the trawl gear modifications rule. EM does not collect this type of information, so it is essential that all EFP vessels carry observers. Observers would also be able to collect haul-level genetic samples that would enable NMFS to determine what Chinook ESUs are being caught in the EFP. The haul-level information would also be more useful to pinpoint bycatch hotspots for the fleet to avoid inseason.

## *4. Limit on participation OR a strong cooperative agreement.*

It is not clear how many vessels will definitely participate in the EFP – it is likely to be driven by many different factors such as market demand, processor delivery schedules, and participation in other fisheries. NMFS is concerned about its ability to effectively project and manage effort in the EFP and, consequently, resulting impacts to protected species without a clear understanding

---

<sup>3</sup> The ITS estimated that no more than 1,000 Chinook of 6,000-9,000 Chinook would be taken in the Eureka Management Area. 1,000 is 11% of 6,000 and 17% of 9,000. NMFS proposes using the larger of these two proportions to set a sub-limit for this area.

of the number of vessels and their planned effort. A larger fleet increases the risk of a derby-style fishery for Chinook, as participants race to catch their target species before the salmon limit is reached. Past experience shows that derby fisheries increase the risk of exceeding a catch limit and shorten seasons. NMFS does not have the resources at this time to actively manage a large EFP fleet inseason.

However, NMFS recognizes the success that the industry on the west coast has had self-managing shared catch limits. The industry can be more nimble in managing a fleet inseason and can better facilitate communication and cooperation among participants to maximize the value of the shared salmon limit. NMFS strongly believes such measures are necessary to avoid a derby-style fishery and to maximize the value of the EFP. Therefore, NMFS recommends one of the following options:

- a. A limit on the number of participants in the EFP, not to exceed 20,
- b. OR a strong cooperative agreement between EFP participants.

#### *Impacts to green sturgeon and eulachon*

In addition to Chinook salmon, the EFP must continue to comply with the existing ITSs for green sturgeon and eulachon. Green sturgeon bycatch in the trawl fishery has been well below the ITS in recent years (20.9 in 2011, 12.1 in 2012, and 5.5 in 2013 out of 86/year ITS).

However, the EFP would likely shift effort to inshore areas designated as critical habitat for green sturgeon (inshore of 60 fm), increasing the potential for bycatch. Many of the measures included to minimize bycatch of salmon would also likely minimize bycatch of sturgeon:

- a) Columbia River and Klamath River Conservation Zones – Southern DPS green sturgeon (listed) aggregate near the mouth of the Columbia River.
- b) Restrictions in Eureka Management Area – Southern DPS of green sturgeon make up the majority of green sturgeon bycatch in this area (90%).

In addition, as green sturgeon bycatch rates typically range from 1-3 individuals per tow, NMFS and the industry should have ample notice of any green sturgeon bycatch event and be able to act to avoid further bycatch. Therefore, NMFS believes the EFP has a low risk of increasing impacts to green sturgeon and no additional measures are needed.

Eulachon also have peak migration in January-April inshore of 100 fm where effort from the EFP is likely to increase. Increased effort inshore combined with reduced mesh sizes could increase bycatch of eulachon. Overall, bycatch of eulachon in the trawl fishery is typically low, with higher bycatch events during years of eulachon peak abundance (e.g., 2002, 2013). The overall low interaction rate could be driven by low encounter rates (few eulachon where trawlers are fishing) or low bycatch rates (eulachon are escaping the current minimum mesh sizes). Bycatch rates are much higher in the shrimp fishery where mesh sizes are much smaller (<2”). This suggests that reducing the minimum mesh size could result in increased retention of eulachon that are encountered. Applicants have stated verbally that they want the reduced mesh size to eliminate gilling of marketable fish. In addition, there is a strong incentive to use larger mesh sizes in order to minimize the amount of undersized, unmarketable fish that is debited from one’s QP. Thus, it seems unlikely that participants would reduce their mesh size much below 3”. In addition, the Salmon Conservation Zones would be expected to reduce bycatch of eulachon in the EFP. Therefore, EFP participants should avoid using mesh much below 3-4” in order to

avoid eulachon bycatch on the order of magnitude seen in the shrimp fishery, but NMFS does not think additional measures are necessary at this time.

### *Impacts to non-IFQ species*

The EFP also has the potential to change catch rates of non-IFQ species. These species are managed under trip limits and inseason projections based on past effort levels and current catch rates. If the EFP changes catch rates unexpectedly, it could undermine the GMT's ability to effectively project and control catch of these species. **NMFS is seeking the GMT's recommendations on what additional measures, if any, are needed in the EFP to monitor or limit catch of non-IFQ species.** Note that since non-IFQ species discards are not quantified by the EM program, observers would be needed to monitor discards of non-IFQ species on EFP trips.

### **B. Additional Recommendations**

Additional measures may be used to reduce bycatch or spread out the effort, and risk of bycatch, throughout the year to ensure that the EFP is not shut down early. NMFS provides the following additional recommendations for the Council's and industry's consideration.

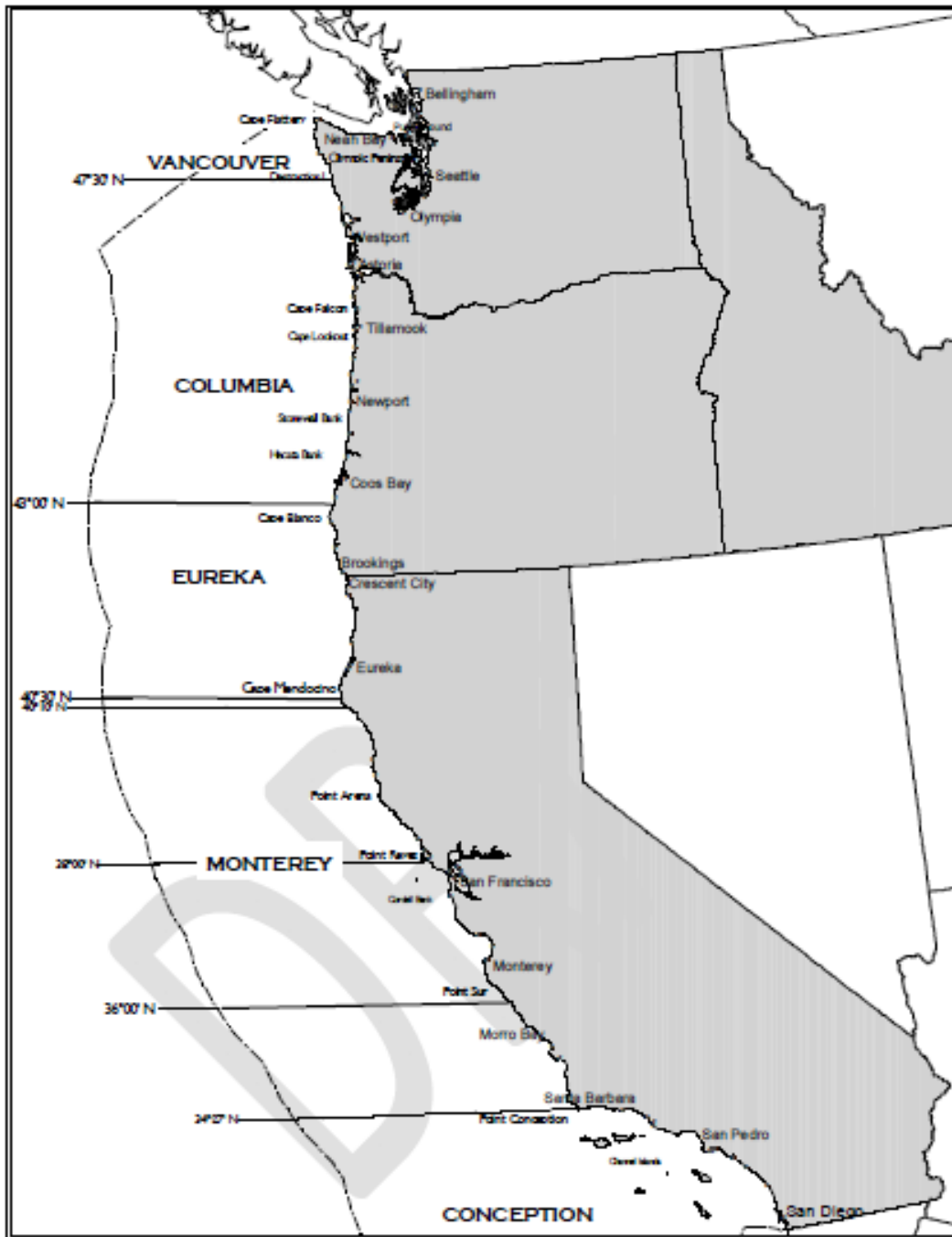
- a) A prohibition on night fishing has previously been used to reduce salmon bycatch in the widow fishery.
- b) Splitting the limit by month or among individual vessels could spread effort throughout the year and ensure the flow of data regarding bycatch throughout the year.
- c) Implementation of salmon bycatch reduction devices or other gear modifications, such as limiting the height of the headrope (NMFS understands that some bottom trawl vessels may use salmon BRDs in Alaska to reduce salmon bycatch).
- d) Test fishing when entering new fishing groundfish or returning after a period.
- e) An alternate minimum mesh size (>2.5" and < 4.5"), implemented throughout the EFP or inseason, to reduce bycatch of eulachon while addressing industry's needs.

### **C. Timeline**

This EFP will require development of an accompanying Environmental Assessment in order to fully analyze the potential impacts to non-target and protected species. While some information is readily available in the draft trawl gear modifications EIS and the draft consultations, this will still take some time to complete. We anticipate issuing the EFPs by February 1, at the latest, and will of course do so as soon as possible.

**NMFS recommends that the EFP not be automatically renewed for 2018.** Automatically renewing the EFP presupposes that it will not require modification and would require additional analysis in the EA, which will take more time. We agree that the EFP could be renewed for 2018, if appropriate, but we recommend that the Council instead schedule an agenda item for the September 2017 Council meeting to review the results of the EFP and consider whether to recommend renewal. This would provide sufficient time for NMFS to complete the paperwork in the fall to renew the EFP for January 1, 2018 without disrupting fishing.

**Attachment A: Excerpt from NMFS Report on Salmon Bycatch in the Pacific Coast Groundfish Fisheries from the June 2015 Briefing Book.**



**Figure 1.** The fishery management area, showing major coastal communities and groundfish management areas (PFMC 2015).

**Attachment B: Excerpt from NMFS Report on Salmon Bycatch in the Pacific Coast Groundfish Fisheries in the June 2015 Briefing Book.**

***“Closed areas specific to the Pacific whiting fisheries***

Vessels fishing in the Pacific whiting primary seasons for the Shorebased IFQ Program, Mothership Cooperative Program, or Catcher/Processor Cooperative Program are prohibited from target Pacific whiting in the following areas in order to reduce salmon bycatch:

**Klamath River Salmon Conservation Zone** - The targeting of Pacific whiting with midwater trawl is prohibited in the ocean area surrounding the Klamath River mouth bounded on the north by 41°38.80' N. lat. (approximately 6 nautical miles (nm) north of the Klamath River mouth), on the west by 124°23' W. long. (approximately 12 nm from shore), and on the south by 41°26.80' N. lat. (approximately 6 nm south of the Klamath River mouth). The Klamath River conservation zone was established in 1993 because of the concentrations of Chinook salmon in the area.

**Columbia River Salmon Conservation Zone** - The targeting of Pacific whiting with midwater trawl is prohibited in the ocean area surrounding the Columbia River mouth bounded by a line extending for 6 nm due west from North Head along 46°18' N. lat. to 124°13.30' W. long., then southerly along a line of 167 True to 46°11.10' N. lat. and 124°11' W. long. (Columbia River Buoy), then northeast along Red Buoy Line to the tip of the south jetty. The Columbia River conservation zone was established in 1993 because of the concentrations of Chinook salmon in the area.”