

GROUND FISH MANAGEMENT TEAM REPORT ON TRAWL GEAR MODIFICATION EXEMPTED FISHING PERMIT FINAL ACTION

The Groundfish Management Team (GMT) received a briefing from Ms. Lori Steele, West Coast Seafood Processors Association the exempted fishing permit (EFP) applicant, and Ms. Melissa Hooper, National Marine Fisheries Service (NMFS) West Coast Region (WCR) regarding the trawl gear modification EFP. The GMT reviewed the application with respect to Council Operating Procedure 19 (COP-19), and offer the following thoughts and considerations.

Overarching Thoughts

The EFP would allow some participants in the individual fishing quota (IFQ) fishery to be exempted from the selective flatfish trawl (SFFT) requirement for bottom trawl gear shoreward of the rockfish conservation area (RCA) north of 40°10' N. latitude as well as the minimum mesh size requirement. At the March and June meetings, the Council adopted the final gear modifications package which included the removal of the SFFT and the minimum mesh requirement. Due to a variety of factors, the regulations for that package are still under development. Additionally, due to the delay in the completion of the ongoing salmon Biological Opinion (BiOp) and a lack of available analysis on salmon, this EFP can provide information on the re-emerging midwater rockfish fishery and gear strategies while helping to inform the BiOp and development of the regulations for the gear modification package.

One of the purposes of EFPs is for the Council and NMFS to evaluate whether new fishery designs, strategies, and management measures have the potential for adoption into actual fisheries. Therefore, having the EFP closely align with what a fishery may look like when the new gear regulations are implemented may better inform future analysis. If additional requirements (e.g., stringent co-op style movement measures), which were not previously analyzed are required for this EFP, it may be difficult to gauge future impacts associated with adoption of the gear modifications package. As NMFS is undergoing consultation on the salmon BiOp, the GMT is cognizant of the Chinook salmon concerns as presented in the NMFS report pertaining to the EFP and presumably also for the gear regulations package.

As such, the GMT suggests the following recommendations. The GMT believes these recommendations will provide the Council and industry an opportunity to test the trawl midwater gear modifications and strategies for targeting midwater stocks while providing much needed information on the bycatch of Chinook salmon. Existing information regarding potential impacts in the EFP are very sparse (i.e., a directed rockfish fishery has not occurred for 15 years) and do not reflect changes to the fishery and the fleet that have occurred over time. Adoption of this EFP will greatly increase the Council's and NMFS' ability to understand future impacts associated with re-emergence of a directed rockfish fishery.

Compliance with Council Operating Procedure 19

The GMT reviewed the EFP application and believes it addresses the requirements of Council Operating Procedure 19 (COP-19) for groundfish EFPs. While the number of participating vessels has not been yet finalized (a requirement), the applicants provided information that 30-50 vessels would be expected to apply during the open enrollment period, based on recent levels of participation in the non-whiting IFQ fishery. **The GMT recommends the applicants continue to work with NMFS to further refine the number and timing of vessels participating in this EFP.**

Groundfish Impacts

For IFQ species, the GMT does not have conservation concerns regarding impacts since the EFP participants would still be required to adhere to their IFQ allocations. The GMT sees additional merit in this EFP, beyond providing information on the fishery, since it has the potential to provide the IFQ sector an opportunity to better attain their allocations of underutilized and healthy semi-pelagic rockfish (i.e., widow, yellowtail, and canary rockfishes).

Additionally, the GMT does not have conservation concerns regarding impacts to non-IFQ groundfish species, since species likely encountered by increased shelf trawling are currently managed via trip limits (i.e., big skate and spiny dogfish), which can be adjusted inseason if an issue arises.

Non-salmon Protected Species Impacts

Based on initial discussions, the GMT does not believe that there will be concerns regarding the incidental take statement (ITS) thresholds for eulachon or green sturgeon from the Southern Distinct Population Segment (DPS). The GMT has not had time to fully investigate these potential impacts, and therefore suggests that impacts be assessed during this EFP as BiOps are currently being done for both species. **Therefore, the GMT suggests that NMFS and participants work to develop a monitoring plan for both eulachon and green sturgeon, as well as a mitigation strategy if take of eulachon or green sturgeon is begins approaching the ITS. This would allow for the EFP to continue while limiting impacts on these stocks.**

For eulachon, industry has stated that they do not expect additional impacts via the proposed changes. The GMT notes that NMFS could presumably have to close the EFP if the ITS level is breached. The GMT recommends that the applicants work with NMFS, the West Coast Groundfish Observer Program (WCGOP), Pacific States Marine Fisheries Commission (PSMFC), and the state commercial sampling programs to determine the best course of action for monitoring eulachon impacts.

Although the EFP area contains critical habitat of the southern DPS of green sturgeon (i.e., < 60 fathoms from Monterey Bay, CA to Canada), the GMT believes, though we have not had time to fully investigate, that additional impacts will be low since the applicants will be targeting rockfish in the mid-water column, above the benthically associated green sturgeon. Furthermore, recent impacts have been well below the ITS of 86 (i.e., 20.9 in 2011, 12.1 in 2012, and 5.5 mt in 2013).

Overview of Chinook Salmon Protected Species Impacts

One of NMFS' primary concerns regarding changes to the SFFT requirement is potential impacts to Endangered Species Act (ESA) listed Chinook salmon ([Agenda Item F.5.a, Supplemental NMFS Report](#)). This EFP would not only allow for participants to access target midwater stocks, but also provide information for the ongoing salmon BiOp that was initiated in 2015. Current salmon thresholds were defined in the 1999 BiOp and reaffirmed in a supplemental BiOp in 2006. The current BiOp established a 6,000-9,000 Chinook salmon consultation threshold for the bottom trawl (and non-trawl) fishery, as well as sub-thresholds of 1,000 fish for the Eureka International North Pacific Fishery Conservation (INPFC) area, and 5,000-8,000 for the Columbia River and Vancouver INPFC areas.

EFP Participant Standards

The GMT supports the following participant standards: (1) PacFIN and the applicants develop a real-time reporting system; (2) collection of tissue sampling from all Chinook salmon bycatch for genetics to better understand impacts from each ESU stock; and (3) closure of the Klamath Conservation Zone.

Another requirement the GMT discussed was the ability for applicant's currently participating in the electronic monitoring (EM) EFP to simultaneously operate under the gear modification EFP, as opposed to the NMFS' recommendation for 100 percent observed coverage. EM is designed to "monitor compliance with retention requirements and to validate logbooks used to debit discards from individual fishing quotas (IFQ) and bycatch quotas (IBQ)." Under the current EM EFP, bottom trawl vessels are required to retain all salmon, undergo 100 percent video review, and submit discard logbooks. Additionally, the GMT understands from PSMFC that if salmon are sorted out on deck, the latitude and longitude of that haul can be noted. **Therefore, the GMT recommends the Council and NMFS consider if the EM EFP requirements along with a requirement to sort salmon on deck by haul on all hauls (to provide better stock composition data) may provide the desired information to inform the ongoing BiOp.**

In addition, there are a limited number of vessels participating in the EM EFP for bottom trawl out of the total number of participants proposed for this EFP, so a majority of the gear modification EFP vessels would still be 100 percent observed.

Total EFP threshold for Chinook salmon

The EFP applicants proposed a 4,500 Chinook salmon hard-cap for the EFP as the bottom trawl fishery has taken less than 500 Chinook per year since 2005, resulting in the sector staying within their BiOp specified caps of 6,000 to 9,000. NMFS recommended a lesser cap of 2,500 Chinook salmon given the goal to minimize bycatch and due to concerns regarding uncertainty in the stock composition of total bycatch (e.g., ESA listed stocks). Additionally, NMFS suggested that the Eureka area be managed under a 17 percent sub-cap to keep impacts within the 1,000 fish sub-threshold; 17 percent was derived by dividing the Eureka ITS (1,000) by the lower range (6,000) of the sub-consultation BiOp threshold for bottom trawl. Both NMFS and the EFP applicants requested the GMT provide alternative caps for Council consideration that may better reflect potential takes in the EFP.

NMFS recommended 2,500 fish hard-cap was developed by taking bycatch rates from the recent non-whiting midwater fishery (2011-2014) and multiplying that rate against the IFQ allocation for yellowtail and widow rockfish. While applicants are expected to fish legally defined bottom trawl gear with roller gear, they have stated it will be in the mid-water column. NMFS considered this a “back-of-the-envelope” projection due a lack of data and requested that the GMT utilize their expertise and access to greater datasets to provide information on possible alternative caps for Council consideration.

Similarly, the EFP applicants also requested GMT assistance with Chinook bycatch alternatives since they do not have access to the confidential haul-level observer data to inform what suitable bycatch thresholds could be. Below the GMT describes our approach to develop Chinook salmon bycatch cap alternatives while providing access to midwater rockfish target stocks.

Data Sources

The GMT used two data sources to inform potential bycatch caps: (1) West Coast Groundfish Observer Program (WCGOP) haul level data from 2011-2015 for mid-water trawls, and (2) observed haul level data from bottom trawls targeting rockfish prior to implementation of the SFFT requirement in 2005. The second data set was mainly from the mid-1990’s during the height of the rockfish fishery from an observer survey known as the Enhanced Data Collection Project (EDCP). The EDCP survey occurred before WCGOP (2002), included hauls in both Washington and Oregon, and is only available by request from the Oregon Department of Fish and Wildlife (ODFW).

Methods

Prior to applying the bycatch rates from EDCP and WCGOP to 2017 IFQ allocations of rockfish, the GMT deducted a conservative amount of rockfish that could potentially be needed as bycatch to access the full whiting allocations (i.e., the applicants would not want to catch their full IFQ rockfish allocations during this EFP and forgo whiting). Using the 2015 whiting allocation and rockfish removals as a proxy, Table 1 shows that while 2015 shoreside rockfish bycatch was 457 mt, they only took 46 percent of their whiting allocation. This 457 mt would expand to 993.5 mt if they were to catch their entire whiting allocation. This would leave 15,659 mt of residual for directed targeting, as desired with this EFP.

To meet the specifications for the EFP, the recent WCGOP mid-water and historical EDCP bottom trawl data sets were filtered for: (1) north of 40°10' N. latitude; (2) shoreward of the RCA; (3) less than 50 percent whiting (otherwise a whiting trip by definition); and (4) above 1,000 lbs. of combined rockfish to filter out a few peculiar mid-water trips that did not appear to target Pacific whiting or rockfish.

Projections of potential midwater rockfish landings for the EFP were estimated based on three scenarios: (1) NMFS proposed cap of 2,500 Chinook salmon, (2) the EFP proposed cap of 4,500 and (3) the GMT’s projection of how many Chinook salmon may be needed to access the full IFQ rockfish allocations minus bycatch needed for whiting. Projections were also separated by bycatch rates from recent mid-water filtered WCGOP data and the historical EDCP data. Both datasets provide different information for the Council’s consideration.

Recent WCGOP data that may better reflect current salmon abundances and future bycatch rates, but the gear may be dissimilar (e.g., no rollers), does not reflect activity prior to the May 15th start of the mid-water fishery, and is based on canary rockfish avoidance tactics that may not occur in the future. The EDCP is more reflective of the gear (bottom trawl used in mid-water) and season (year-round), but uses data that is ~20 years old and may not best reflect current salmon abundances and management (e.g., adoption of the IFQ program). Note that projections are uncertain since data is sparse (i.e., few total hauls) and both sources has flaws (as mentioned above).

Table 1. Deduction from IFQ rockfish allocations to account for the expanded quantity of rockfish bycatch that could be needed to fully obtain their whiting allocations.

2015 shoreside whiting sector removals				% whiting taken	Expanded rockfish w/ 100% whiting
Canary	Widow	Yellowtail	Total		
3.8	323.2	130.0	457.0	46%	993.5

Results

Table 2 shows that if recent historical EDCP bycatch rates are used based on how they historically targeted rockfish with elevated bottom trawls, then the GMT projects that 3,547 Chinook salmon may be needed to fully obtain the IFQ allocation of widow, canary, and yellowtail rockfish (minus bycatch for whiting).

Alternatively, if recent WCGOP bycatch rates are used, then 5,129 Chinook salmon may be needed. However, while the same general approach was used (i.e., recent WCGOP bycatch rates applied to IFQ allocations), the GMT and NMFS projections differ. NMFS predicts ~2,600 Chinook salmon for full IFQ take (but used 2,500 as a proposed cap) whereas the GMT projection of ~5,100 is higher. Given a limited number of tows, alternative filtering techniques for haul level data are probably the source of the discrepancy since they would affect the bycatch rate and thus also the projections. For instance, including low bycatch hauls in deeper water seaward of the RCA (and outside the scope of the EFP) would drive down the overall bycatch rate which in turn would lessen the projection. The GMT plans to check with the NMFS analyst to compare filtering techniques.

The GMT recommends the Council consider including a 3,500 total Chinook salmon hard-cap alternative for the EFP. This amount is based on the 3,547 Chinook salmon that the GMT projects could be needed for the IFQ fisheries to fully utilize their rockfish allocations when using historical EDCP bycatch rates, and reflect the same types of fishing activities that are expected to occur in the EFP. Although processors have indicated that is unlikely that they could fully attain rockfish quotas in the near future due to market constraints, 3,500 fish would give them greater flexibility to do so while staying well below Chinook salmon thresholds. If they only catch a portion of their rockfish allocations during the EFP, then the actual Chinook salmon impacts would be expected to be even lower. Therefore, 3,500 would provide potential for obtaining rockfish allocations, would be within BiOp bounds, and also be higher than probably necessary (due to market constraints).

Table 2. Potential IFQ rockfish landings per the NMFS salmon cap of 2,500 fish, the EFP cap of 4,500 fish, and the GMT analyzed cap to fully utilize their rockfish allocations (all minus the 993.5 mt expanded rockfish from Table 1 that could be needed to access shoreside whiting). Table 2 shows that if they resume their historical rockfish activity (EDCP), then a Chinook cap of 3,547 fish could better allow access to full allocations of rockfish (between NMFS and EFP). But if recent data were used (WCGOP), then may need 5,129 Chinook to catch full IFQ allocations (above both EFP and NMFS).

Source	# Tows	# Chinook	MT RF	Bycatch rate	Projected IFQ RF attainments		GMT salmon cap for full IFQ RF
					NMFS 2,500 cap	EFP 4,500 cap	
EDCP	247	62	274	0.226	11,038	19,868	3,547
WCGOP	316	922	2815	0.328	7,632	13,738	5,129
					<i>IFQ RF = 15,659 mt</i>		
					<i>(-993.5 mt for whiting bycatch)</i>		

The GMT also investigated whether there are seasonal effects in Chinook salmon bycatch rates in the EDCP data, since the bulk of EFP activity is expected to occur prior to the start of the mid-water fisheries on May 15. Differences in bycatch rates before and after May 15th were not detected. Had bycatch rates been higher before May 15th, it would have been more appropriate to use higher rates early in the year, rather than to aggregate as was done.

Eureka, Columbia, and Klamath sub-caps for the EFP

As discussed earlier, NMFS recommended a 17 percent sub-threshold for the Eureka INPFC area with the main goal of keeping impacts within the BiOp sub-threshold of 1,000 Chinook salmon for that area. Note that 17 percent applied to the total EFP caps would be 425 for the NMFS cap of 2,500, 595 for the GMT proposed cap of 3,500, and 765 for the EFP cap of 4,500. The GMT investigated the spatial distribution of Chinook salmon bycatches and determined that bycatch rates are generally low from Cape Mendocino to Cape Falcon, with occasional high bycatch tows that appear spatially random. As such, implementing a low EFP sub-cap for the Eureka area (e.g., 17 percent) could be useful in addressing bycatch concerns while at the same time not hindering EFP rockfish opportunity. This may also help alleviate equity concerns as in the area from Humboldt south Jetty to the Oregon/California border, which is in the southern portion of the Eureka management area where there is a restricted commercial salmon fishery that in 2016 was allotted only 1,000 fish. **Therefore, the Council could consider a sub-cap of 17 percent or less for the Eureka INPFC area.**

In addition, the EFP applicants requested no take within the Klamath River Conservation Zone located in the Eureka area, which is consistent with whiting closures and commercial salmon regulations in California. **The GMT recommends the Council consider prohibiting the EFP from occurring in the Klamath River Conservation Zone.**

NMFS is also recommending the Columbia River Conservation Zone (CRCZ) similarly be excluded from the EFP because it is also closed to whiting due to being a high Chinook salmon

bycatch area. The GMT investigated the spatial distribution of bycatches and determined that there are several “hot-spots” surrounding the CRCZ (particularly ~20-30 miles northwest of the mouth of Columbia River). While closing areas with patches of high bycatch could be helpful, there is limited data from both WCGOP and EDCP that could be missing other high bycatch areas. Therefore, the GMT recommends that the applicants work with NMFS salmon staff to determine if any closures are needed for ESU stocks, as we are not subject matter experts on salmon. Known areas of high Chinook bycatch are identified in WCGOP’s report on [observed and estimated total bycatch of salmon in the 2002-2013 U.S. west coast fisheries](#).

Thresholds for EFP participants

The EFP applicants requested input regarding individual bycatch thresholds that would require movement from an area, or would exclude vessels from the EFP, if they were consistently too high. The GMT has concerns that unless there is a co-op or some other form of central manager to track bycatch and movement, the responsibility would default to NMFS who do not have the needed resources. Therefore, the GMT believes it is up to participants to coordinate what standards and guidelines they want to institute.

Recommendations:

The GMT recommends:

- 1. the applicants continue to work with NMFS to further refine the number and timing of vessels participating in this EFP.**
- 2. the Council and NMFS consider if the EM EFP requirements along with a requirement to sort salmon on deck by haul may provide the desired information to inform the ongoing BiOp**
- 3. the Council consider including a 3,500 total Chinook salmon hard-cap alternative for the EFP**
- 4. the Council could consider a sub-cap of 17 percent, or less, for the Eureka INPFC area.**
- 5. the Council consider prohibiting the EFP from occurring in the Klamath River Conservation Zone**