

Observer issues associated with delivering to tender vessels

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This preliminary draft scoping paper is intended for the Observer Advisory Committee, and has been prepared by Council and NMFS staff.

In June 2017, the Council tasked staff with preparing a discussion paper identifying the specific data concerns with respect to vessels engaged in tendering, and to work with industry groups to develop both short-term and long-term solutions, including potential regulatory changes. This background paper is intended to help distinguish the different data concerns that have been raised with respect to vessels delivering to tenders, to identify different solutions that have been implemented, evaluated, or suggested, and to initiate a collaborative discussion among industry members about how best to address these data concerns.

This issue is on the agenda for the upcoming Observer Advisory Committee meeting in Seattle, on September 19-20, 2017. **The OAC welcomes input on how to address data concerns related to tendering, and is particularly interested in hearing from western GOA stakeholders who are dependent on tendering. Ideally, affected stakeholders will coordinate their input and bring that input to the OAC via an industry member of that group.** There will also be an opportunity for public testimony on this issue at the OAC and at the October Council meeting. The OAC will discuss and make recommendations to the Council on whether to proceed with any of the solutions outlined here, or with other suggestions that may come forward at the committee level.

For context, the Council recognizes that the use of tender vessels is longstanding in Alaska fisheries, and may improve efficiency by allowing fuel and time savings. Tender vessels are particularly important in the western GOA, where the location of pollock and Pacific cod fishing grounds are further from port, and the fleet is largely comprised of smaller trawl vessels (57 to 60 ft LOA). At the same time, a primary purpose of restructuring the observer program in 2013 was to remove potential sources of bias that could jeopardize the statistical reliability of catch and bycatch data from the groundfish and halibut fisheries. The approach to implement systematic random sampling taken in the 2013 restructuring did not fully account for the use of tenders by vessels between 40 and 60 ft LOA.

Summary of data concerns and proposed solutions

Issue	Potential Solutions	Current Status
<p>Salmon bycatch monitoring in the GOA pollock trawl fishery</p> <p><i>Are we obtaining a count of the number of salmon caught as bycatch in each observed pollock delivery?</i></p> <p><i>Are we obtaining genetic samples from these fish to determine stock of origin?</i></p>	<ol style="list-style-type: none"> 1. Monitor all offloads at the plant, including tender offloads, and require vessels delivering to tenders to have EM onboard to ensure that no salmon are discarded at sea. 2. Do not allow tenders to mix deliveries of observed and unobserved fish, and monitor tender offload dockside. <ol style="list-style-type: none"> a) Require observed tender vessels to deliver to a separate tender (and no unobserved vessels would deliver to this tender). b) Keep the catch from observed and unobserved vessels separated in different tanks on the tender. 3. Put observers on tenders (as tender observers) to monitor the offloads to the tender. 4. Develop an alternative program for gathering genetic samples 	<p><i>Proposed in 2016 Observer Annual Report.</i></p> <p><i>Stakeholder ideas raised during June 2017 Council meeting.</i></p> <p><i>Preliminary evaluation in 2015 concluded this option had considerable logistical and safety issues.</i></p> <p><i>Proposed in 2016 Observer Annual Report</i></p>
<p>Are we getting biased data from observed tender trips?</p> <p><i>Are observed tender trips identical to unobserved tender trips?</i></p> <p><i>Are vessels delivering to tenders in order to avoid carrying an observer?</i></p>	<ol style="list-style-type: none"> 1. Separate tender strata for each gear type (longline, pot, trawl) 2. Change the definition of a tender trip using one of the following: <ol style="list-style-type: none"> a) Each delivery to a tender starts a new trip b) Vessels may deliver no more than X number of deliveries during a tender trip without relogging into ODDS c) Add a proximity clause to the definition of a tender trip, so that if a vessel delivers within X distance of a port, the trip is considered to have ended 3. Changes to ODDS to reduce potential for gaming <ol style="list-style-type: none"> a) Only allow vessels that are delivering to tenders to log 1 trip in ODDS at a time (rather than 3). b) When an observed trip is cancelled the next trip <i>taken</i> is automatically observed, rather than the next trip <i>logged</i> 4. 100% observer coverage on trawl vessels delivering to tenders 	<p><i>In place in 2017</i></p> <p><i>Preliminary evaluation of 2(a) in 2015-2016 found considerable logistical and safety complexities. 2(b) and 2(c) are new variants that were suggested at the May 2017 OAC meeting.</i></p> <p><i>3(a) was proposed at May 2017 OAC. 3(b) will require programming changes in ODDS and although NMFS has prioritized this change, it may not go into effect until after 2018 (after EM is implemented).</i></p> <p><i>Proposed in 2016 Observer Annual Report.</i></p>

Salmon bycatch monitoring in the GOA pollock fishery

The data concern relating to the GOA pollock fishery is that catcher vessel observers follow different sampling protocols when vessels deliver to a tender as opposed to a shoreside processing plant. On observed trips where the vessel is targeting GOA pollock and delivers to a tender, the observer does not have an opportunity to census the offload to account for all the salmon bycatch that has been intercepted and take systematic genetic samples, as would be done if delivery were made at a shoreside plant. Since pollock deliveries to tenders represent a significant portion of pollock deliveries in some areas of the GOA, the inability to census salmon has the potential to create bias in total Chinook salmon bycatch estimates, as well as in the analysis of the genetic stock composition of GOA salmon bycatch and the understanding of the Chinook salmon bycatch stock of origin. In recent years, the Council has prioritized implementation of a robust sampling protocol for Chinook salmon in the GOA trawl pollock fisheries to better understand the stock composition of salmon taken as bycatch; however, stock of origin estimates have been stable over the past 5 years in the GOA so this may no longer be a pressing data concern.

A related concern for vessels is that the offload census of salmon bycatch, which an observer conducts shoreside, provides more precise data for managing the Chinook salmon PSC limit in the GOA pollock fishery. This option is not available for tender deliveries. When offload data are not available, NMFS estimates Chinook salmon PSC using at-sea samples and extrapolates samples to the delivery of groundfish. Observers strive to take multiple, equal-sized samples from throughout the haul to obtain the largest sample size possible. However, even with large sample sizes that reduce detectability issues, Chinook salmon is a relatively uncommon species and is characterized by many small and zero counts with occasional large counts. There is a relationship between the abundance of given species in a haul, sample size, and the level of precision in the resulting estimate of species catch from sampling. In general, managers can have very high precision in the catch estimate for common (target species) with very small samples of the haul. Conversely, even large samples of a haul provide relatively imprecise estimates of catch for very rare species, like Chinook salmon. Since Chinook salmon bycatch limits in the trawl fishery are fully utilized, imprecise estimates have the potential to shut down the fishery and cause fishermen to forgo pollock harvest opportunities.

There has not yet been a comprehensive evaluation of all possible solutions, but here we note some points to consider regarding the potential solutions that have been suggested to date.

1. Monitor all offloads at the plant, including tender offloads, and require vessels delivering to tenders to have electronic monitoring (EM) onboard to ensure that no salmon are discarded at sea.

- Stationing observers for dockside monitoring is an annual decision that is made through the ADP. Requiring vessels to carry EM requires a regulatory amendment.
- This option would improve the precision of accounting of salmon bycatch and sampling of genetic tissue across the GOA pollock fishery. It would also allocate more of the existing observer day budget to dockside monitoring, resulting in a comparable reduction in the selection rate for at-sea observers in other parts of the partial coverage fisheries.
- There would need to be an evaluation of all other data collected by observers on the vessels and whether or not there would continue to be some level of at-sea observer coverage.
- The regulatory analysis would have to determine whether vessel owners are required to purchase the EM equipment themselves to comply with the requirement, or whether the observer fee would be used to purchase the equipment. In either case, this option would result in additional cost.

2. **Do not allow tenders to mix deliveries of observed and unobserved fish, and monitor tender offloads dockside, by either:**
 - a. Requiring observed tender vessels to deliver to a separate tender (and no unobserved vessels would deliver to this tender); or
 - b. Keeping the catch from observed and unobserved vessels separated in different tanks on the tender.
 - Requiring tender vessels to segregate their fish, or requiring observed catcher vessels to deliver to a tender vessel that only accepts deliveries from observed catcher vessels would require a regulatory amendment to implement.
 - Under this option, observers could be stationed at the shoreside plants and complete offload sampling for salmon as the catch that is delivered from tenders that only accepted deliveries at sea from observed catcher vessels. This would mirror the accounting and offload sampling that is currently undertaken by observers on observed pollock trips when a vessel delivers to a shoreside plant.
 - Unlike non-tender trips, the vessel observers would not be available to complete the offload sampling so this option would require observers in the processing plant. One of the issues that would need to be resolved is funding for plant observer coverage. If the plant observers were funded through the observer fee, then it would have an impact on at-sea coverage rates. In some cases there are already full coverage observers in the processing plants that are monitoring BSAI offloads. But there could be logistical issues that would need to be resolved if these full-coverage observers were going to monitor GOA deliveries.
3. **Put observers on tenders (as tender observers) to monitor the offloads to the tender.**
 - This would require a regulatory amendment. Tender vessels are not currently required to comply with regulations governing observer activities, and these would need to be extended to tender vessels. These include prohibitions protecting observers, vessel operator responsibilities, and general vessel safety requirements. Tender vessels would be obligated to provide transportation and housing for an observer if requested, and to provide safe conditions, access, notification, communication equipment, and assistance.
 - Previous analyses in 2014 and 2016 have considered the feasibility of observers working on the tender to monitor the catch as it is transferred to the tender. Tender vessels vary greatly in their configurations, and the Observer Program, in initial scoping, identified some vessels that are currently engaged in tender activities on which it would not be feasible to station an observer. Another difficulty is the speed at which fish are transferred to the tender vessel. For the observer to be able to census the offload, as is done when the observer monitors offloads at a shoreplant, the rate of transfer would need to be slowed considerably. This could have efficiency and safety implications that would need to be evaluated.
4. **Develop an alternative program for collecting genetic samples**
 - An alternative program could be implemented by NMFS at the beginning of any fishing year through a change to observer sampling protocols.
 - In the 2016 Annual Report, NMFS suggested that the collection of Chinook salmon genetic samples may no longer be such a high Council priority, now that it has yielded 5 years of data. For example, an alternative protocol is currently used in the non-pollock trawl fisheries for salmon bycatch genetic samples.

Biased data from observed tender trips

This data concern was first raised in the preliminary 2013 report on the performance of the newly restructured Observer Program, which only reported on the first four months of 2013. Preliminary results reported that the trip length of observed catcher vessels (CVs) delivering to tender vessels was typically shorter than that of unobserved CVs, implying unrepresentative fishing behavior and potentially highlighting an incentive for CVs to stay at sea delivering to tenders when unobserved. Anecdotal reports have also affirmed that CV operators are purposefully taking longer trips (and making more deliveries) when unobserved and delivering to tenders in order to avoid ending the fishing trip and becoming eligible again to be selected for observer coverage through ODDS. Since that time, Annual Reports have repeatedly examined the question of representative data from observed versus unobserved vessels delivering to tenders. Those reports have extended the metrics used to make this comparison to include trip duration, the number of NMFS areas visited during a trip, landed catch weight, the number of different species in the landed catch, and the proportion of the landed catch that was comprised of the predominant species in the catch. There was no definitive evidence of bias in the data during 2013 and 2014, but reports noted that small sample sizes and the challenge of identifying all deliveries to tenders in the landings data may be limiting the data for analysis. In 2015 and 2016, however, an observer effect was clearly evident on tender trips. As a result of these findings, NMFS and the Council acted to improve data collection efforts on tender vessel deliveries through the implementation of tLandings. In 2017, the Observer Program implemented a tender strata for each gear type (trawl/pot/longline) for vessels delivering to tenders to ensure that a sufficient number of tender trips would be selected for coverage.

Although there has not yet been a comprehensive evaluation of all possible solutions, we note some points to consider with respect to those that have been suggested to date:

1. Separate tender strata for each gear type

- NMFS has the ability to determine through the Annual Deployment Plan (ADP) whether to have separate tender strata
- Comprehensive evaluation of the tender strata will be included in the 2017 Annual Report, presented in June 2018, and the Council has requested a preliminary evaluation of the 2017 tender strata in the 2018 Annual Deployment Plan, which will be available in early September

2. Change the definition of a tender trip, using one of the following options:

- a. Each delivery starts a new trip (i.e. trip ends at the tender)
 - b. Vessels may deliver no more than X number of deliveries during a tender trip without logging another trip in ODDS
 - c. Add a proximity clause to the definition of a tender trip, so that if a vessel delivers within X distance of a port, the trip is considered to have ended
- Any of the potential changes to the trip definition requires a regulatory amendment and accompanying analysis
 - 2(a) was evaluated in 2016. In order to avoid excessive cost to the vessel of returning to port to pick up an observer when required, the analysis evaluated whether observers could be stationed on the tender and randomly deployed directly from the fishing grounds. There are considerable logistical and safety complexities to such an approach, and it is likely to incur considerable cost either to the vessel or the program. The evaluation was tabled in favor of creating separate tender strata.
 - 2(b) would mitigate some of the costs to fishermen of returning to port to pick up an observer. The logistical and safety issues would remain if there was a desire to couple this with deploying observers from tender vessels.
 - 2(c) was suggested in response to anecdotal concerns expressed at the OAC meeting that vessels were delivering to tender vessels that were stationed in the town harbor

3. Changes to ODDS to reduce potential for gaming:

- a. Only allow vessels that are delivering to tenders to log 1 trip in ODDS at a time (rather than 3)
 - b. When an observed trip is cancelled the next trip *taken* is automatically observed, rather than the next trip *logged*
- Changes to ODDS do not require a regulatory amendment, and can be changed by NMFS in the ADP.
 - Option 3(b) will require programming changes in ODDS and although NMFS has prioritized this change, it may not go into effect until after 2018 (after the changes needed for EM are implemented).
 - Both of these changes could potentially reduce the ability of vessels to know in advance whether a future trip will be observed, and therefore reduce the potential for vessels to choose to stay out tendering to avoid the scheduled observed trip.

4. 100% observer coverage on trawl vessels delivering to tenders

- This option could be implemented either through a regulatory amendment, if the intent is to move vessels to full coverage and pay-as-you-go, or could potentially be achieved through the ADP if NMFS and the Council decide to allocate a 100% selection rate to this stratum.
- The cost of 100% coverage in full coverage would have a significant financial burden on these vessels. The cost of funding a 100% selection rate in partial coverage would have a significant impact on the ability to monitor other vessels in partial coverage. The OAC recommended that this option be explored as a last resort.