

Observer Declare and Deploy System (ODDS): How to maximize control of your trip

As a member of the 'partial coverage fleet,' you are required to log intended future fishing trips through the ODDS website (<http://odds.afsc.noaa.gov>) or by calling the ODDS call center at 1-855-747-6377.

You have a lot to keep track of before fishing, and logging a trip can easily get to the bottom of that list. However, it is to your advantage to get in the practice of quickly logging and maintaining your intended fishing trips in ODDS. Here are some tips to help avoid unwanted headaches.

1. **Log trips at least three (3) days or more in advance.** Avoid waiting until the last minute to log a trip. If you log a trip inside the three day window and the trip is selected for monitoring, the logistics company could delay your fishing trip to give them up to 72 hours to arrange for an observer. This flexibility allows the company to provide an observer to you but will delay your fishing plans.
2. **Log accurate information - this will reduce the number of problems you encounter.** Know where you are going, when you are leaving, what gears you will be using, if you will be fishing IFQ or CDQ, and if you plan on delivering to a tender vessel. Once the original fishing start date has passed, you will not be able to change trip information. This can cause problems for you later, so it's best to avoid the problem in the first place.
3. **Update your fishing plans in ODDS when they change, rather than cancel the trip.** Canceling selected trips causes future trips to be automatically selected for monitoring, and canceling *these* trips will reduce your ability to log trips. It's a loss of flexibility to be avoided. If your expected fishing dates have changed, update the trip start and end date. Change the end date first, because it can't come after the start date. ODDS allows you to update any aspect of your fishing trip up until the day the trip is supposed to start.
4. **Close past fishing trips.** Talk to your processor when you offload and get your eLanding number. Use the eLanding number to close your trip in ODDS or on the phone. It's so much easier than entering the date, port, and processor.
5. **Log only the trips you intend to take.** Logging extra trips means that there are more things to keep track of and more things to be forgotten or confused (e.g., multiple eLanding tickets, where and when deliveries were made, etc.). Any trips not closed at the end of the year are automatically canceled, so it is a waste of your time and energy to enter more trips than necessary.

Observer Declare and Deploy System (ODDS) Trip Cancellations and Inherits: Current Rules and Proposed Changes

Craig Faunce, Jennifer Ferdinand, Jason Jannot, Andy Kingham, and Geoff Mayhew

Fisheries Monitoring and Analysis Division

Alaska Fisheries Science Center

NOAA Fisheries, Seattle, WA

Background

The Annual Deployment Plan (ADP) for the North Pacific Observer Program describes how the National Marine Fisheries Service will collect fishery dependent information from federal fisheries off Alaska each year. The ADP defines which fishing operations require full coverage monitoring and which require partial coverage monitoring. Full coverage fishing trips are very straightforward: every fishing trip has at least one observer or an operational electronic monitoring (EM) system aboard. Most full coverage fishing trips are defined in federal regulations, and further details are rarely needed in the ADP.

The ADP describes partial coverage fishing trips and the rules for being selected for coverage by an observer or EM system. The ADP accomplishes this by defining the population to be sampled (all fishing trips not in full coverage); dividing this population into selection pools (referred to as stratification in the ADP); and distributing monitoring resources to these strata (referred to as allocation in the ADP). Selection rates for fisheries monitoring are then produced by combining information about the population, stratification, and allocation with anticipated fishing effort and the available budget for monitoring.

Most partial coverage vessels are required to notify NMFS and their fishery monitoring service provider with their intended fishing plans prior to departure. This is accomplished through phone or direct access to a web-application called the Observer Declare and Deploy System (ODDS). The ODDS was created and is maintained by the Fishery Monitoring and Analysis Division (FMA) of the Alaska Fisheries Science Center (AFSC)¹. The strata and associated selection rates are programmed into ODDS for each

¹ Details on the original build of ODDS are provided in Faunce, C., M. Moon, P. Packer, G. Campbell, M. Park, G. Lockhart, N. Butterworth. 2021. The Observer Declare and Deploy System of the Alaska Fisheries Science Center.

ADP prior to the start of the year. For each logged trip, ODDS selects a four digit random number. If the random number is equal to or below the stratum-specific selection rate, the trip is selected for monitoring, else the trip is not selected for monitoring. In this way, ODDS facilitates random selection of which trips will be monitored.

The ADP ensures that the monitoring of fisheries in Alaska will be both representative in time and space and cost effective. However, the goals of the ADP will only be met if all ODDS trips that are logged are fished, and all trips selected for monitoring are actually monitored. Obtaining data that is representative of the entire partial coverage fleet is especially important because data from monitored trips are used to extrapolate discarded catch to unmonitored partial coverage fishing trips. Non-random deployment of fishery monitoring could result in biased catch estimates, and have negative impacts on quota management and season closures. These factors add risk to the long-term sustainability of fishing as an industry by masking potential changes in the resource.

Goal of this Document

The goal of this document is to propose some improvements to the rules ODDS uses to ensure high-quality, representative, unbiased data and which will help reduce the risks of fishery mismanagement. To achieve this goal, we first discuss the current rules in ODDS and then demonstrate with real data the results of those rules. The analysis shows that the current ODDS rules which govern how and when monitored trips are canceled are not enough to ensure unbiased data. We propose three potential solutions that would help further mitigate against biased data. The solutions are technical fixes that would be programmed within the ODDS and could be implemented in 2025 or 2026, depending on NMFS IT capacity.

ODDS Rules

ODDS shares information among NMFS, fishermen, and observer and EM provider companies so that all participants who need knowledge of a fishing trip have the same information. Vessel owners or operators can use ODDS to log and modify fishing trips. Observer and EM providers can use ODDS to handle the logistics of monitoring selected trips. NMFS can issue waivers from monitoring if needed.

ODDS fishing trips can have only one of three different states: pending; closed; or canceled. Pending trips are trips that have not yet been taken. A trip selected for monitoring is pending until either an observer

has been assigned or the EM system has been activated and verified operational by the provider. Trips not selected for monitoring are pending until the vessel operator indicates the trip has been taken by recording the eLandings number (or date, landing port, and processor where the vessel offloaded) in ODDS.

Flexibility Within ODDS

Fishing plans can and do change – not all fishing plans are realized and not all trips selected for monitoring will be monitored. Changes to pending trips are normal and expected due to operational constraints such as weather or logistics. ODDS has several built-in features to accommodate changes in fishing plans. ODDS provides flexibility for vessel operators, monitoring service providers, and NMFS. Table 1 shows the flexibilities discussed in this paper and who can implement those flexibilities.

Table 1. Permissions available in ODDS to different users.

User	ODDS Process				
	Log Trips in advance	Change Pending Trip Information	Delay a trip	Waiver from monitoring requirement	Cancel a trip
Vessel operator or designated ODDS user	Required. Up to three. If a trip selected for monitoring is canceled, then limited to one.	Yes. If a trip is selected for monitoring, changes must be done by the monitoring provider.	Yes. If a trip is selected for monitoring, changes must be done by the monitoring provider.		Yes. If a trip selected for monitoring is canceled, then a future trip inherits the monitoring.
Observer or EM provider		Only for trips selected for monitoring at the request of vessel operator or designated ODDS user	Only at the request of vessel operator or to accommodate logistics (72 hours from trip logged to trip departure)	Must be requested through NMFS	Only if a selected trip is delayed by operator for > 48 hrs
NMFS				Grant (not required)	

For example, ODDS allows vessel operators to log up to three pending trips at any one time (Table 1, “Log Trips in advance”). This flexibility was built into ODDS to accommodate the rapid fishery dynamics of the Gulf of Alaska trawl fisheries, but is available for all participants. Also, ODDS allows

users to directly make changes to any logged trips which are not selected for monitoring. For example, changes to trip start and end dates or departure and landing ports can be made by vessel operators within ODDS for unmonitored trips (Table 1, “Change Pending Trip Information”).

ODDS also gives observer providers flexibility. For each trip selected for monitoring by an observer, observer providers are allowed 72 hours to complete the pre-trip logistics necessary to deploy an observer on the trip (Table 1 “Delay a Trip”). Trips selected for monitoring are under the control of the observer or EM provider. Any changes to monitored trips can only be done by the monitoring provider. The observer or EM provider contacts the vessel to work out the logistics of monitoring the trip.

Waivers provide flexibility to NMFS within ODDS. Waivers are a temporary exemption from monitoring during a single trip and are not the same as canceling a trip. Waivers are rare; only a few waivers are granted by NMFS each year. Waivers can only be requested by observer and EM providers, and are only granted by NMFS. Examples of why waivers may be issued include: a vessel selected for observer coverage is departing from a port which has no services; NMFS determines the cost of covering a trip selected for observer coverage is prohibitively expensive; or a vessel selected for EM coverage has problems which the EM provider is unable to correct in a timely manner. Although waivers could cause small deviations in selection rates provided in the ADP, they are arbitrary with respect to when and where they are applied and very few are provided each year. Therefore, the impact of waivers on ADP selection rates is quite small.

Cancellations are another form of flexibility offered to ODDS users (Table 1). Canceled trips are those that were logged but will never be taken. ODDS can handle most changes to trips without canceling the trip. In 2023, ODDS was updated to include a “trip replacement” option to allow more flexibility for the vessel operator. Trip replacement allows a vessel operator to make changes to pending trips which might result in moving the trip into a different ADP stratum without having to cancel the trip. ODDS will apply the correct selection rate associated with the new stratum. ODDS users are informed when a change to a pending trip might result in the new selection rate being applied.

For example, in 2024, a vessel operator logs a trip that is not using EM and plans to use fixed-gear in the Gulf of Alaska. ODDS applies a selection rate of 24 percent. Before the trip begins, the operator changes the trip to be in the Bering Sea. That change alters the ADP sampling stratum. ODDS gives the vessel operator a message that this change requires ODDS to “re-roll the dice,” and apply the updated selection rate. If the vessel operator agrees to this change, ODDS replaces the trip from the GOA stratum with a

trip in the BSAI stratum, applies the new selection rate of 72 percent, and the user is informed if the replaced trip was or was not selected for observer coverage.

The disproportionate cancellation of trips selected for monitoring compared to trips not selected for monitoring has a large negative impact on ADP selection rates. Disproportionately canceling trips selected for monitoring results in biased data. When the cancellation rate of selected trips is higher than the cancellation rate of unselected trips, the data from monitored trips is biased towards vessels or operators that are less likely to cancel an observed trip. An analysis of ODDS trips (2018-2024) indicates that the average yearly cancellation rate of selected trips is much greater than for non-selected trips, introducing bias (Table 2). An analysis of why trips were canceled is presented in Appendix A.

Another flexibility built into ODDS is called *inheriting*. Inheriting tries to mitigate the bias introduced when trips selected for monitoring are canceled. Inheriting is applied in ODDS to ensure NMFS meets the monitoring goals set out in the ADP. Inheriting causes the monitoring status of the canceled trip to be automatically moved to the next trip.

How the trip will be monitored (EM or observer) determines which trip inherits monitoring. For fixed-gear selected to be monitored by EM, the next *pending* trip in the sequence undergoes the inheritance (Figure 1). For trips selected to be monitored by observers, the next *newly logged* trip in that strata inherits the monitoring (Figure 2).

If a trip that has inherited monitoring is subsequently canceled, ODDS will limit the user to logging only one new trip at a time and every trip entered will inherit monitoring until the trip selected for monitoring has been completed. After the selected trip is completed with the appropriate monitoring, the ability to log up to three trips in advance is restored to the ODDS user.

Currently in ODDS, the inheritance process only serves to delay monitored fishing trips. Cancellation of selected trips does not remove the monitoring requirement – it only moves the monitoring to a future trip. As stated above, this biases selection rates and as such compromises both the data collection and cost efficiency goals of the ADP. The effects of logging too many trips and the inheritance process is illustrated for an anonymous vessel in Appendix A Figure A3.

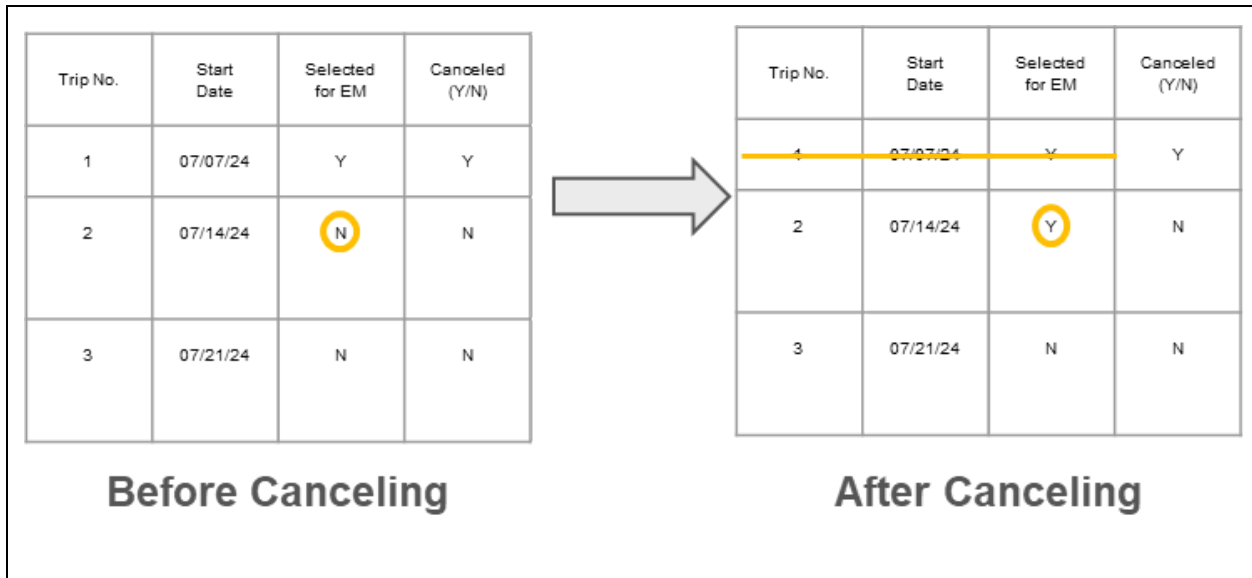


Figure 1. A hypothetical example that shows the cancellation and inheritance rules for a trip that was selected for EM coverage. In this example, the operator logged three trips. The first trip was selected for EM coverage, and the second and third trips were not (left side). The operator canceled the first trip, so the second trip inherited the EM coverage from the cancellation of trip number 1 (right side).

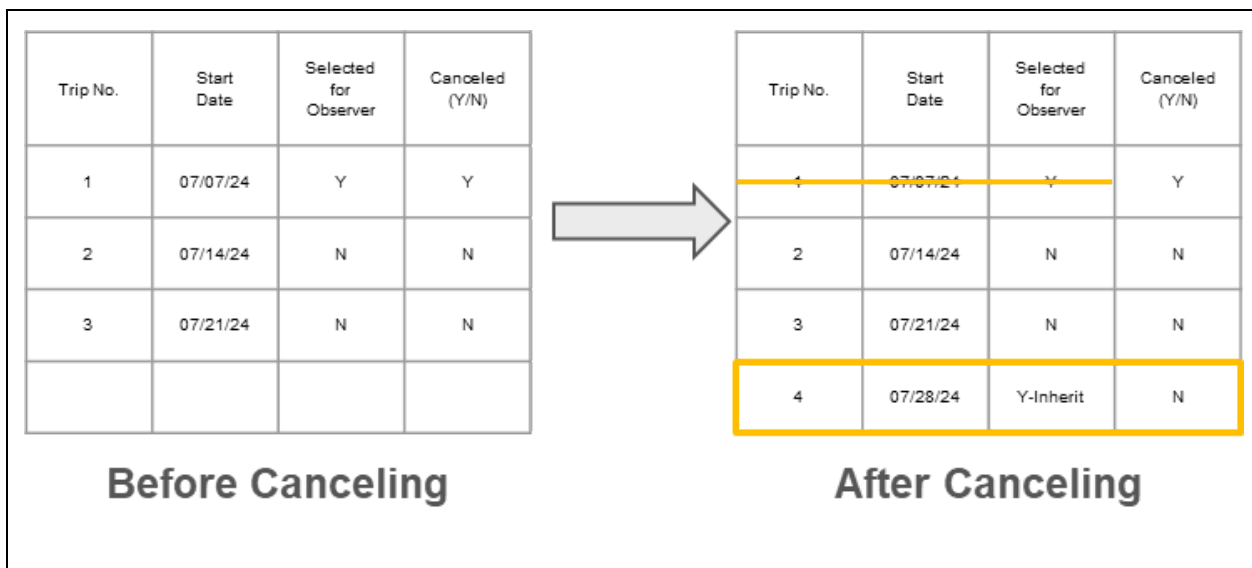


Figure 2. A hypothetical example that shows the cancellation and inheritance rules for a trip that was selected for an observer. In this example, the operator logged three trips (left side). The first trip was selected for observer coverage, and the second and third trips were not. The operator canceled the first trip (right side). When they logged a fourth trip, it inherited the observer coverage from the cancellation of trip number 1 (right side).

At the end of the year, trips not selected for monitoring and not started prior to 1 December are automatically canceled by ODDS and do not create inheritances. However, trips that have inherited monitoring, and have not been completed by the end of the calendar year, are carried over to the new year rather than canceled.

Current Flexibilities Are Not Enough

The current cancellation and inheritance rules in ODDS help prevent bias from cancellation of selected trips, but are not enough to ensure unbiased monitoring rates. Despite numerous programming measures put in place to control for cancellations of monitored trips (see above), **the current rules in ODDS are not adequate to ensure that randomized fisheries monitoring is occurring at rates specified in ADPs.** The cancellation and inheritance process as currently implemented in ODDS results in moving monitored trips forward in time relative to total fishing trips resulting in a bias toward sampling later in the year.

In 2022, the partial observer coverage stratum that primarily fished with hook and line gear (OB-HAL) and pot gear (OB-POT) canceled 41% and 29% of their pending trips selected for monitoring respectively. As a result, 35% and 28% of the respective trips that were monitored resulted from inheriting and not from random selection. Note that this was before 2023, when ODDS incorporated trip replacement, and the vast majority of cancellations were done by the vessel operator.

Even though more cancellations than inherits occurred in the OB-HAL and OB-POT strata in 2022, the opposite trend – more inherited trips than canceled trips– was apparent in both strata in 2023. This is because trips canceled in 2022 were inherited into 2023. The overall effect was that monitoring rates were less than expected in 2022 and greater than expected in 2023 in these two strata.

Furthermore, as mentioned above, a larger analysis of ODDS trips (2018-2024) indicates that the average yearly cancellation rate of selected trips is much greater than for non-selected trips, which suggests bias (Table 2).

Problem Statement

Without a good understanding of the relationship between the expected monitoring rate programmed into ODDS and the realized monitoring rate, accurately budgeting limited resources for future ADPs is compromised. The statistical robustness of the sampling design used to monitor the partial coverage fleet

in the groundfish and halibut fisheries of Alaska are predicated on random sampling which relies on a close and predictable relationship between expected and realized monitoring rates. **The cancellation and inherit rules must be modified to reduce bias in trip selection to the greatest extent possible so that ODDS can provide a random, unbiased selection of trips for monitoring.**

Table 2. The disparity (percent) between the average yearly cancellation rate of selected trips compared to non-selected trips from 2018 to 2024. Positive values indicate selected trips were canceled more frequently than non-selected trips.

Stratum	Percent greater the cancellation rate of selected trips is compared to the cancellation rate of non-selected trips
EM Hook and Line	41
EM Pot	31
Observer Hook and Line	576
Observer Pot	255
Observer Trawl	296

Purpose

At its June 2024 meeting, the North Pacific Fishery Management Council supported the NMFS recommendation that NMFS work with the Partial Coverage Fishery Monitoring Advisory Committee (PCFMAC) *to develop an ODDS trip cancellation policy for the 2025 ADP that will not significantly impede industry, affords the observer provider adequate time to deploy an observer, and reduces impacts to coverage rates and non-random monitoring.* The remainder of this document is dedicated towards this purpose.

Goal

Achieve a 10% cancellation rate for selected trips in observer strata. A 10% cancellation rate in the observer strata would be roughly twice the EM strata cancellation rates and represents a significant improvement over the current cancellation rates for observer strata.

Proposed Solutions

Option 1. Limit the number of pending trips to two. Currently, ODDS allows a maximum of three pending trips to be logged at one time. The original purpose of the three trip rule was to provide flexibility for trawl vessels that might complete multiple trips in a short time span. However, the implementation of the regulated trawl EM program greatly reduces the need for this flexibility. This proposed solution would reduce the time between when a trip selected for monitoring was canceled and when the subsequent trip was actually monitored and, thus, reduces bias. This also helps alleviate the problem of logging too many trips. This change would substantially decrease the level of confusion among all ODDS users about which trip is tied to what landing report, in what order the trips belong in, and whether or not they were to be monitored or not.

Option 2. Apply inheritance to the next pending trip in the observer strata. This is consistent with the inherit rule in the EM strata. The cancellation of a selected trip for monitoring would trigger an inheritance to the next pending trip in the ODDS system instead of the next *newly logged* trip. This proposed solution would reduce the time between when a trip selected for monitoring was canceled and when the subsequent trip was actually monitored and, thus, reduces bias.

Option 3. Prohibit cancellations by user. Canceling trips is typically unnecessary. Trip replacement in ODDS allows considerable flexibility for trips such that trip dates, landing ports, and relevant trip details can be changed. If changes to the trip dates, landing ports, or trip details result in a change in the selection rate, ODDS will apply the new selection rate with a warning to the user. Any pending trips at the end of the year will be automatically closed without triggering inheritances using current ODDS protocols. This solution would eliminate the canceling of trips but does not address the problem of too many trips logged. The inheritance process is eliminated for all trips with the exception of a delayed trip. In the case of a selected trip delay the observer provider would be able to cancel the delayed trip after 48 hours and resulting in the next trip inheriting the monitoring.

Appendix A

Why do operators cancel selected trips?

The reasons for vessel cancellation of selected pending trips have been recorded by the partial coverage observer provider during 2022-2023 and were examined for trends. Four reasons accounted for the majority of cancellations; trips that are canceled due to a vessel delay in departing (Delay), trips that are never be fished (Done fishing), trips that are logged on short notice (Short notice), and incorrectly logged trips (Figure A1).

Delayed trips are a cost inefficiency to the partial coverage observer program. In these cases, the costs of assigning and deploying an observer have been realized, but the vessel's fishing plans were uncertain and they delayed fishing for longer than 48 hours. After 48 hours from the original fishing start date the observer provider can cancel the originally assigned trip so that the observer can be reassigned to other vessels. Therefore, delayed trips pay the price of logistics without getting the benefit of either fishing or monitoring.

Vessel operators also canceled a high percentage of selected trips because they declared that they were done fishing for the year. Although in some cases, they may go fishing again on unselected trips in the same year, in most cases vessels are logging more trips than necessary. Therefore, the *done fishing* cancellation represents an operational inefficiency.

Short notice trips were those trips that were logged within 72 hours of sailing and selected to be monitored. In these cases, the observer provider can delay the vessel for up to 72 hours to accommodate the logistics of deploying an observer. In short notice cancellations, the vessel operator cancels the pending selected trip because they do not want to wait 72 hours for the provider to assign an observer, and therefore log another trip under the premise that it is not likely to also be selected for monitoring.

There are numerous reasons why trips may have been incorrectly logged, but none should be disproportionate between trips selected for monitoring and those that are not. Incorrectly logged could be due to wrong gear type, FMP Area, designation of retaining IFQ or CDQ on a trip, or incorrect designation of participation in an EM program. This category should become less common in 2024 because strata are defined by fixed gear (HAL + POT) and trawl and because the regulated Trawl EM program will not allow opt-in or out on a trip-by-trip basis.

Predominant cancellation reasons differed by gear type. For trips that used HAL, POT or both HAL and POT, the predominant cancellation reason was delay, while for trips that used TRW, the predominant cancellation reason was short notice (Figure A2).

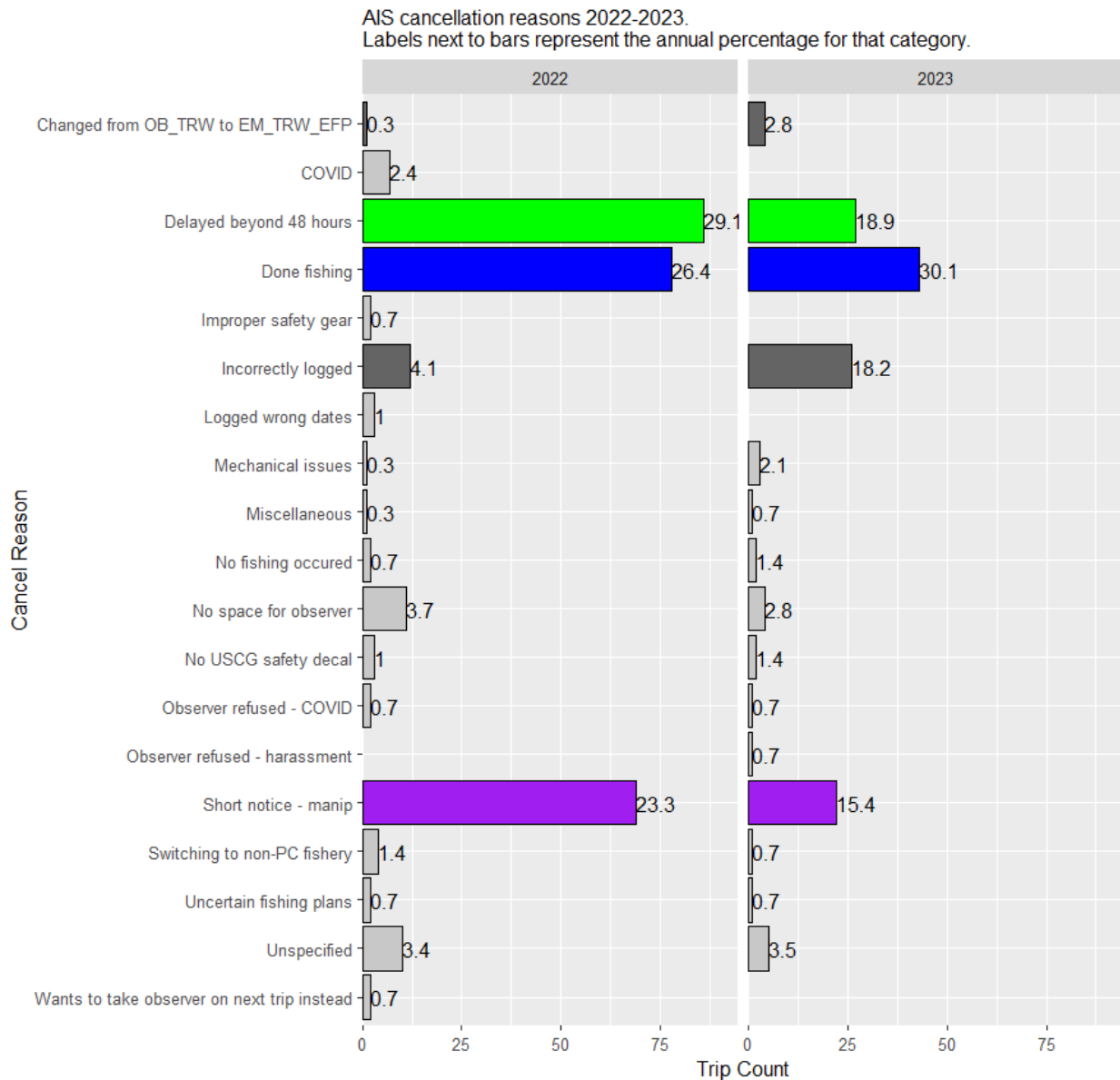


Figure A1. Reasons recorded for vessel operator cancellations of selected trips for observer monitoring across years. Largest categories are highlighted.

AIS cancellation reasons 2022-2023.
 Trips were categorized by which gear types the vessel used.
 Largest categories are highlighted.

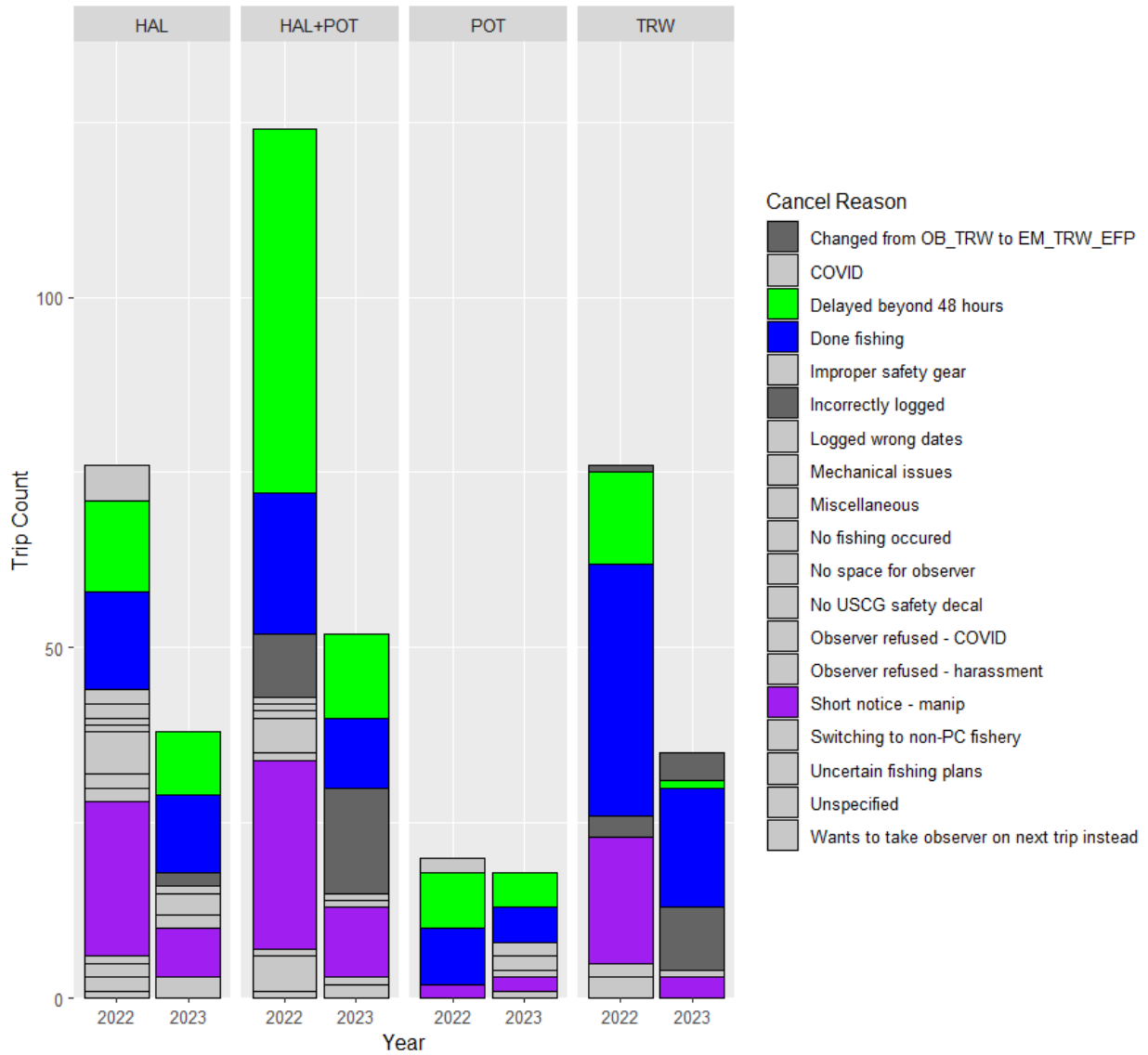


Figure A2. Reasons recorded for vessel operator cancellations of selected trips for observer monitoring across gears and years. The use of mixed HAL and POT gears is widespread and these trips have larger proportions of “delayed beyond 24 hours” than either trips using HAL or POT alone.

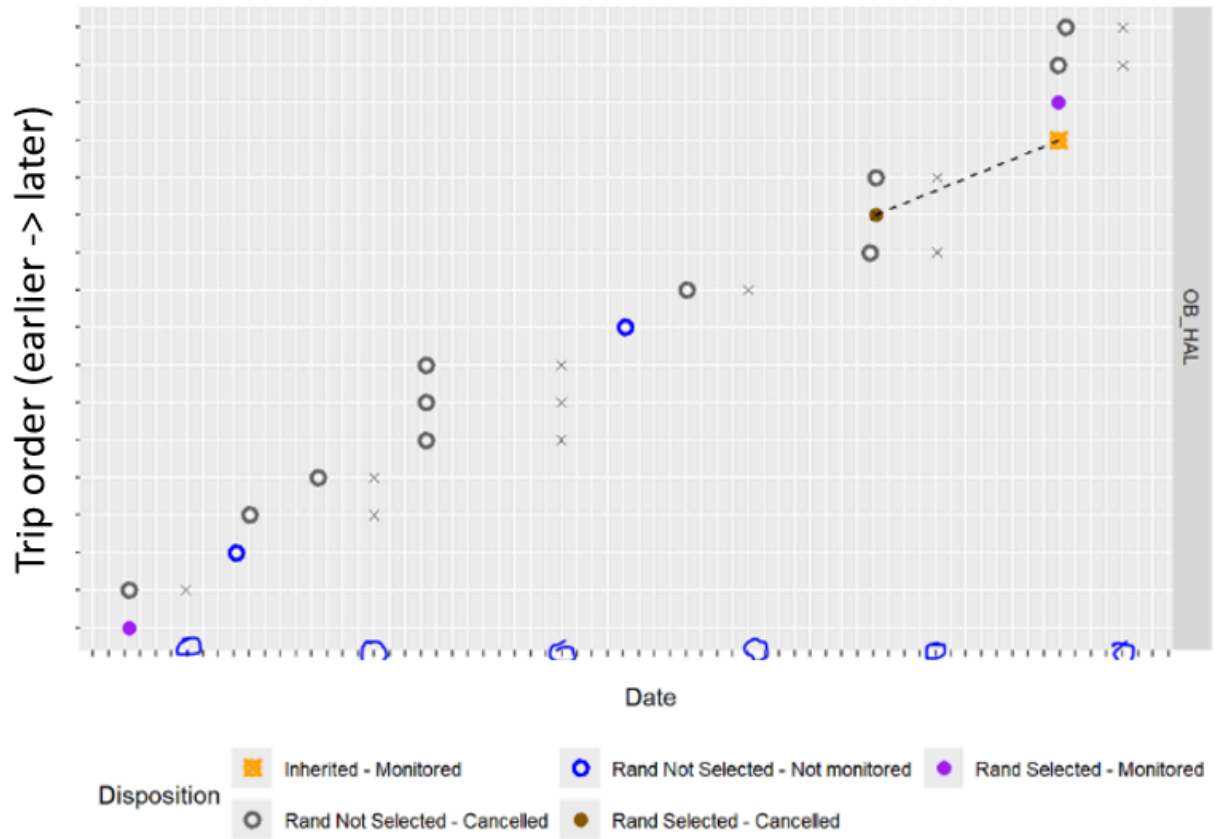


Figure A3. Trips logged by an anonymous vessel in ODDS during 2017-2024. Trips are in order from bottom left to top right. Each horizontal tick is a month and circled tick marks indicate each January. This vessel logged many more trips than necessary, and trip sequences show the effect of the inheritance process on the selected trip cancellation. Three trips were randomly selected for monitoring in this time period, two were monitored as selected (purple dots), one was canceled and subsequently inherited (brown dot with dashed line connecting to yellow square).