



## C5 Bering Sea snow crab bycatch data report

April 2019 Council Meeting

### Action Memo

Staff: Steve MacLean  
Action Required: 1. Data report – review

### BACKGROUND

In December 2018, the North Pacific Fishery Management Council (Council) reviewed the Initial Review Draft of an EA/RIR/IRFA of an action to modify snow crab prohibited species catch (PSC) calculations and limits in the Bering Sea groundfish fisheries. The initial review provided information about the history of the action and management of snow crab PSC in the BSAI groundfish fishery. After review, the Council requested additional information on the distribution of snow crab bycatch throughout the BSAI by gear and fishery, gaps in bycatch data, regulatory provisions that could hinder the ability to minimize bycatch to the extent practicable, and a qualitative description of potential impacts of avoiding snow crab bycatch on fishery participants. This report provides the additional information requested by the Council and is designed as a supplement to the Initial Review Draft. An addendum to the data report provides additional information in Table 1 and provides information about how to interpret Table 1 and Figures 1-3.

The data report shows that snow crab bycatch in the Federal groundfish fisheries is distributed throughout the BSAI. Snow crab bycatch in trawl fisheries tends to occur mostly within the *C. opilio* Bycatch Limitation Zone (COBLZ) while snow crab by catch in hook-and-line and pot fisheries tends to occur outside COBLZ. Snow crab bycatch in trawl fisheries is much higher than in hook-and-line and pot fisheries. Snow crab discards in the directed fishery also occurs both inside and outside COBLZ. Discard mortality of snow crab in the directed fishery between 2008 – 2018 was higher than the Federal groundfish snow crab bycatch.

Bycatch of snow crab in the Federal groundfish fishery is highly skewed toward male crab, but variable with regards to size. The minimum legal size for snow crab is 78 mm carapace width, but the snow crab market generally accepts animals bigger than 101 mm. In some years the groundfish fishery encounters crabs that are the same size as those targeted in the directed fishery, in other years the overlap is much less. Overall, recent data do not suggest that groundfish snow crab PSC would have a disproportionate impact on mature female crabs.

Snow crab bycatch and discard data are recorded by observers and reporting varies depending on observer coverage for the fishery in question. Observer coverage in Federal groundfish fisheries is generally high, but the only 1-2% of pots are observed in the directed snow crab fishery. This disparity makes comparisons between the directed fishery and Federal groundfish fisheries difficult.

Snow crab PSC in groundfish fisheries is managed by number of crabs, but most crab management measures use weight. Therefore, a mismatch exists in the units used to sample and estimate, and report crab PSC in Alaska groundfish fisheries.

Existing gear modifications to reduce nonpelagic trawl impact to benthic habitat and organisms have been effective. No additional gear modifications are contemplated at this time.

Cooperative management of groundfish fisheries has allowed operators and managers to consider PSC rates and hard caps for various species as they manage fleets within seasons. The challenges of simultaneously managing multiple hard caps, some of which are more constraining than others, may result in decisions that affect PSC rates for multiple species, depending on the managers' conclusions about which limits could result in detrimental consequences to their vessels' annual profitability.

As reported in the Initial Review Draft EA/RIR/IRFA, operators that could be affected by reduced snow crab PSC limits, or a COBLZ closure, would likely redeploy their fishing effort to adjacent areas where they may expect to make up catch and gross revenue. Previous redeployment analyses have shown that there are cases where dispersal of effort may result in increased operating costs.