



Yukon Salmon Sub-Committee

Your Voice in Salmon Management

What is the pollock fishery, bycatch, and how does that affect our salmon?

Pollock are part of the cod family and targeted in one of the world's largest commercial fisheries, the majority of which takes place in the Bering Sea (NOAA). Pollock is a main ingredient in fish sticks, fast food fish burgers, and imitation crab, shrimp and scallop (Portunus 2014) and is a billion-dollar industry (Criddle & Strong 2011).

While there are no commercially directed salmon fisheries in the Bering Sea or the Gulf of Alaska, salmon are caught unintentionally in the pollock fisheries (JTC 2019). Salmon and pollock intermingle in the same locations at the same time and are entangled in the same nets. Salmon caught in this way are considered to be "bycatch" (JTC 2019).

The body responsible for the management of the pollock fishery is the North Pacific Fishery Management Council (JTC 2019). Bycatch numbers are reported as part of the US National Marine Fisheries Service's catch accounting system (JTC 2019). The total number of salmon from all rivers caught as bycatch peaked in the mid 2000's with peak catch of Chinook (125,000) and chum (710,000) (JTC 2020). Since then, various regulatory measures have been implemented to reduce the bycatch of salmon and these measures remain in force to the present-day (JTC 2019). These measures include: classifying salmon as a prohibited species, salmon saving areas, voluntary rolling hotspot system, salmon excluder devices, and bycatch incentive plan agreements (JTC 2019). The bycatch is also reported to the Yukon River Panel twice a year and is documented in the annual Joint Technical Committee's Report.

Bycatch numbers of Yukon River Canadian salmon are not available for all years; however, scientists can estimate Canadian Chinook bycatch from samples for some years. The actual bycatch is more than would return to the river due to natural mortality in the ocean (JTC 2020). This can be estimated by determining the percent of the bycatch that is destined for Canada, then applying an adjustment for natural mortality (JTC 2020).

How many Canadian Yukon River Chinook are removed from the river due to bycatch?

Genetic analysis of 2011 to 2017 bycatch samples from the pollock fishery, showed the number of Canadian Yukon River Chinook was a very small component of the total Chinook bycatch (Guthrie et al 2019). **Scientists estimated that an average (1994 to 2017) of 892 Chinook adults would have returned to the Canadian portion of the river each year if they had not been caught (JTC 2020).** While this does not seem like much, it was approximately 12% of the Canadian harvest during this period (JTC 2020). Note that the Canadian harvest was restricted due to conservation concerns resulting in commercial and domestic fisheries closures, restricted recreational fishery, and voluntary reductions and closures in the First Nation fishery during this time period (JTC 2020).

How many Canadian Yukon River Chum are removed from the river due to bycatch?

Genetic analysis on the chum bycatch in the Bering Sea estimated the middle and upper Yukon chum bycatch as a small component of the total chum bycatch (Whittle et al 2015). Unfortunately, genetic analysis does not allow for a Canadian specific estimate at this time. **Scientists (NPFMC 2012) estimated that the bycatch, on average, removed 7,704 middle and upper Yukon fall chum per year from 1994 to 2011 returns.**



References:

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