PROPOSAL 156

5 AAC 27.160. Quotas and guideline harvest levels for Southeastern Alaska Area.

Modify harvest rate control rule for Sitka Sound sac roe herring fishery, as follows:

Our recommended solution is to implement the herring harvest control rule that is used in all areas of Southeast Alaska except Sitka Sound. The proposed action would provide consistency in the management and regulation of herring populations throughout Southeast Alaska.

5 AAC 27.160. Quotas and guideline harvest levels for Southeastern Alaska Area

(g) The guideline harvest level for the herring sac roe fishery in Sections 13-A and 13-B shall be established by the department and will be a harvest rate percentage that is not less than **10**[12] percent, not more than 20 percent, and within that range shall be determined by the following formula: Harvest Rate Percentage = **8 + 2** [2 + 8] (Spawning Biomass (in tons)/20,000). The fishery will not be conducted if spawning biomass of is less than 25,000 tons.

What is the issue you would like the board to address and why? The Sitka Tribe of Alaska proposes changing the harvest control rule (HCR) for Sitka Sound herring to the same HCR that is used for herring throughout Southeast Alaska (SEAK). The SEAK HCR begins with a 10% harvest rate when the population is forecasted to reach the harvest threshold (currently 25,000 tons in Sitka Sound), then harvest rate is allowed to gradually increase until reaching the maximum 20% harvest rate when the population is six times greater than the harvest threshold, i.e., 150,000 tons. In 2019, the herring biomass was approximately 131,000 tons, and in 2020 the forecast biomass is 212,000 tons, which is well above 6X the threshold. In contrast to the SEAK HCR, the Sitka Sound HCR is much more aggressive and does not support the needs of subsistence users and many marine species. The Sitka Sound HCR begins with a 12% harvest rate when the population is forecasted to reach the harvest threshold (25,000 tons), then the harvest rate increases rapidly until reaching 20% at only 45,000 tons. During the past 20 years, the guideline harvest rate in Sitka Sound is always at or very close to the 20% maximum. This high harvest rate guideline stems in part from reliance on an average unfished biomass value that was developed from data collected -28 to 50 years ago (Carlile 1998). Recent biomass data indicate this critical management value is too low and contributes to overharvest of a forage fish that is also needed for food by subsistence users and many socially and economically important marine species. Subsistence users and marine species require much higher abundances of herring than a commercial purse seine fleet in order to meet their needs. Furthermore, a 20% annual commercial harvest rate on herring that return to spawn over many years leads to a very high lifetime harvest rate on each herring year class in Sitka Sound.

What would happen if nothing is changed?

Continued use of the existing Sitka Sound HCR is inconsistent with management of herring in all other regions of SEAK, and it would continue to inhibit population growth of herring and inhibit Alaskan subsistence users from meeting their needs (Shelton et al. 2014). The status quo would also reduce the ability of Sitka Sound herring to support the marine ecosystem, including depressed Chinook salmon and Pacific cod, both of whom rely upon herring for food. Furthermore, only a small fraction of the commercially caught herring (sac roe in females) are consumed by humans (e.g., in Japan not Alaska); more than ~90% of the commercially-caught herring becomes fish meal that is used to support salmon farms that compete with Alaska salmon fishermen. The content

management approach (HCR) to maximize commercial harvests of Sitka Sound herring is counterproductive to the needs of the vast majority of Alaskans.

What are other solutions you considered? Why did you reject them?
This proposed action is less drastic than a moratorium of the commercial fishery or a significantly reduced maximum annual harvest rate (10%), which has been considered in British Columbia.

References
Carlile, D. W. 1998. Estimation and evaluation of a harvest threshold for management of the Sitka herring sac roe fishery based on a percentage of average unfished biomass. Alaska Department of Fish and Game, Division of Commercial Fisheries Regional Information Report 1198-18, Juneau.

Shelton, A.O., Samhouri, J.F., Stier, A.C. & Levin, P.S. 2014. Assessing trade-offs to inform ecosystem-based fisheries management of forage fish. Sci. Rep. 4, 711 O;
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