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I would like the current wording to be deleted and be replaced with the word "Repealed" with the date of the repeal.

What is the issue you would like the board to address and why? I would like to delete fishing district 11-A from the open area for herring sac roe fishing.

In the 1960's through 1982 there was a herring fishery in this area. The stocks were over fished or decreased for some other reason. The herring stocks in this area have not been commercially fished in the last 35 years and the stocks have not recovered.

In the years since the last commercial fishery there have been numerous changes in the area. The whale populations have increased and a very viable tourist industry has developed. There has been a large increase in the sport fishing effort, both sport and charter. Sightseeing, bird and animal watching, photograph and many other activities have developed around the herring stocks.

It is my belief that the herring stocks are fully utilized at this time by other animals, birds and fish. They are very susceptible to damage from the commercial fishery as seen in them not recovering in the last 35 years. Thus I believe the commercial fishery should be eliminated.

PROPOSED BY: Rollin Young (EF-F17-052)

PROPOSAL 97

5 AAC 27.110. Fishing seasons for Southeastern Alaska Area.

Open the Southeastern Alaska Area winter commercial food and bait herring fishery on December 1, as follows:

the herring bait fishery shall open on December 1st of every year.

What is the issue you would like the board to address and why? Return the bait fisheries to a December 1st opening date as is traditional, the earlier opening causes more fish to be sifted through and killed by this wanton waste fisheries which the department turns a blind eye to, sets are made and fish are shallower up which kills them then they are let go if they don't like the size or if it too big a set they pump what they can and let the rest go, which is wanton waste.

PROPOSED BY: Larry Demmert (EF-F17-075)

PROPOSAL 98

5 AAC 27.190. Herring Management Plan for Southeastern Alaska Area.

Reduce harvest rate for commercial herring fisheries in the Southeastern Alaska Area, as follows:

We propose the following language changes be made to the *Herring Management Plan*:

These changes allow for a more conservative approach to the commercial sac roe fishery while also providing for a sustainable commercial fishery.

5 AAC 27.190 Herring Management Plan Statistical Area A

- (1) shall identify stocks of herring on a spawning area basis;
- (2) shall establish minimum spawning biomass thresholds below which fishing will not be allowed;
- (3) shall assess the abundance of mature herring for each stock before allowing fishing to occur;
- (4) except as provided elsewhere, may allow a harvest of herring at an exploitation rate between ~~10 percent and 20 percent~~ 0 and 10 percent of the estimated spawning biomass when that biomass is above the minimum threshold level;
- (5) ~~may~~ must identify and consider sources of mortality in setting harvest guidelines or deduct an ecosystem allocation of at least 25% from the commercial fishery allocation;
- (6) by emergency order, may modify fishing periods to minimize incidental mortalities during commercial fisheries.

What is the issue you would like the board to address and why? We would like the Board to consider the rapidly changing ecosystem of the Eastern Gulf of Alaska and Sitka Sound and take management actions to help provide for a robust herring population and sustainable commercial fishery by lowering the harvest rate of the sac roe fishery in Sitka Sound either through a reduced sliding scale (0-10%) and/or through an ecosystem set aside taken off the commercial fishery quota.

Herring are an especially important species that needs the utmost consideration from the board of fish because of its cultural and subsistence significance, the importance of the commercial herring fishery and the importance of herring as a prey species for most all other commercial fish species, for its role as prey for important sport fish, and for its ecosystem role. It is clear that there are changes taking place in the Gulf of Alaska with ocean conditions that we have not seen before and the arrival of new species to the SE Alaska coast. At this time, with those changes, it is imperative that we take a more conservative approach to management to ensure the continuation of commercial, sport, and subsistence fishing stocks and for the maximum resilience of the ocean ecosystem.

Sitka Sound is the site of one of the largest remaining sac roe herring fishery on the west coast. According to Hebert (2016) “After a period of building since about the late 1990s, herring spawning biomass in Southeast Alaska is now in a period of decline, which has become apparent over the past few years. The total combined spawning biomass estimated in 2015 for all of Southeast Alaska is at a level similar to that of the late 1990s”. Although the Sitka Sound herring stock appears to be stable or increasing in recent years, spawn deposition has decreased (miles of spawn) for Sitka Sound (Hebert 2016). In 2017 spawn deposition along the road system is very light with only 1 or two layers of eggs. Sitka Sound has been experiencing rapid changes due to changing climate: this includes increased ocean acidification (OA), warming temperatures, the intrusion of new species (ie market squid), and a changing predator field with increasing populations of humpbacks whales spending more residence time in Sitka Sound, particularly in the winter and early spring. Implications of the 2-year residency of market squid are unknown but they likely consume larval herring, co-occurring in squid spawning habitats. The current fishery management plan was implemented in 1994, well before our current climate conditions and

although a 20% maximum harvest rate was the norm at the time, other commercial fisheries for herring on the west coast are currently using a 10% maximum harvest rate. Other fisheries managed by ADFG have very conservative harvest rates because they are potentially vulnerable. This includes sablefish in Chatham, lingcod in SE Alaska, and rockfish in SE Alaska. These precedents would support a more conservative approach towards the herring resource which is a species that supports most of the other commercial species in the region as its base food source. There is local concern that, in part, due to rapid changes in the environment, the Sitka Sound herring resource is vulnerable and given its irreplaceable role as the key prey species supporting healthy salmon, halibut, and rockfish fisheries and its integral role in our marine ecosystem as a forage for whales, pinnipeds, and seabirds it is imperative that any fishery removals be cautiously approached.

Current management states that management:

- (1) shall identify stocks of herring on a spawning area basis;
- (2) shall establish minimum spawning biomass thresholds below which fishing will not be allowed;
- (3) shall assess the abundance of mature herring for each stock before allowing fishing to occur;
- (4) except as provided elsewhere, may allow a harvest of herring at an exploitation rate between 10 percent and 20 percent of the estimated spawning biomass when that biomass is above the minimum threshold level;
- (5) may identify and consider sources of mortality in setting harvest guidelines;**
- (6) by emergency order, may modify fishing periods to minimize incidental mortalities during commercial fisheries.

It puts an unfair burden on ADFG to be able to seasonally adjust commercial fishery quotas as allowed by number (5) above as there is little precedent for that. However, this is an important management tool in a rapidly changing ecosystem. In 2017, it was clear that humpbacks were present in large numbers as the larger bodies of herring arrived into the Sound. This increased residency and feeding capacity (and increasing population size of humpbacks) is not factored into a fishery model natural mortality estimate but has a large impact on the resource. Estimates of whale consumption of herring can exceed 10,000 tons – similar in magnitude the Sitka Sound commercial fishery. Further, the herring larvae are likely to be prey for market squid, a new predator to our ecosystem and the impacts of that are also unknown. Finally, Ocean Acidification and warming conditions in the Gulf of Alaska have been shown to negatively impact Atlantic herring, with Ocean Acidification impacting adult herring's ability to successfully forage. Shelton et al (2014) and Levin (2016) have published recent work for informing ecosystem-based fishery management of forage fish. One approach is to develop a set aside for the ecosystem (“1/3 for the birds”) which would allow this to be taken off the top. Another approach would be to lower the exploitation rate to a place that is more conservative given the fact that the current model cannot account for changes in ocean conditions, increased predation, or the potential regime changes that we may be seeing in the Sitka Sound/Gulf of Alaska.

PROPOSED BY: Andrew Thoms

(HQ-F17-026)

PROPOSAL 99

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

Reduce maximum harvest rate used to establish the commercial sac roe herring fishery guideline harvest level in Sections 13-A and 13-B from 20% of the spawning biomass to 10% of the spawning biomass, as follows:

(g) The guideline harvest level for the herring sac roe fishery in Sections 13-A and 13-B **will** [SHALL] be established [BY THE DEPARTMENT AND WILL BE] **using a maximum** harvest rate **of 10 percent of the spawning biomass.** [PERCENTAGE THAT IS NOT LESS THAN 12 PERCENT, NOT MORE THAN 20 PERCENT, AND WITHIN THAT RANGE SHALL BE DETERMINED BY THE FOLLOWING FORMULA:

$$\text{HARVEST RATE PERCENTAGE} = 2 + 8 \text{ [SPAWNING BIOMASS (IN TONS)] /20,000}$$

The fishery will not be conducted if the spawning biomass is less than 25,000 tons.

What is the issue you would like the board to address and why? The current guideline harvest level (GHL) for the Sitka Sound sac roe fishery is exceeding market demand and is one of the variables affecting subsistence herring egg harvester’s ability to meet their needs or the amount necessary for subsistence.

ADF&G data suggest that the Sitka Sound herring biomass was on an upward trend starting 1995 and peaked in 2009. This reported increase in biomass combined with the Board approved maximum harvest rate of 20% has significantly increased the annual GHLs. The length, duration, and intensity of the fishery have increased substantially in an attempt to harvest these excessive GHLs. The Sitka Tribe of Alaska firmly believes that this increased fishing effort is disrupting the spawning patterns of herring in the Sound and is causing a high frequency of subsistence herring egg harvester needs not being met.

WHAT WOULD HAPPEN IF NOTHING IS DONE? There will continue to be a high frequency of subsistence herring egg harvester’s needs not being met.

OTHER SOLUTIONS CONSIDERED Closing the fishery.

PROPOSED BY: Sitka Tribe of Alaska (HQ-F17-070)

PROPOSAL 100

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

Amend formula used to calculate guideline harvest levels for the commercial herring sac roe fishery in Sections 11-A, 15-B, and 15-C, as follows:

I would like to have the following wording included in 5 AAC 27.160 –

The guideline harvest level for the herring sac roe fishery in Section 11-A, 15-B and 15-C shall be established by the department and will be a harvest rate percentage that is not less than 5 percent, not more than 10 percent, and within that range shall be determined by the following formula:

$$\text{Harvest Rate Percentage} = 2 + 8 (\text{Spawning Biomass (in tons)} / 20,000)$$

The fishery will not be conducted if the spawning biomass is less than 20,000 tons.

After ten consecutive years of conducting a successful fishery without harming the stocks, the harvest rate percentage can be increased to not less than 10 percent, not more than 20 percent, and within that range shall be determined by the following formula:

$$\text{Harvest Rate Percentage} = 2 + 8 (\text{Spawning Biomass (in tons)} / 20,000)$$

What is the issue you would like the board to address and why? The herring stocks in the Juneau area, 11-A, 15-B and 15-C, have not recovered since the last commercial fishery 35 years ago. I do not believe this fish stock can withstand a commercial fishery and have submitted a proposal to close this fishery.

Should the Board not agree with closing the fishery I would like to see the Board adopt a cautious approach to the fishery. The solution I propose is to adapted a regulation similar to the Sitka management regulation, which seems to be successful. It is my intent that if there is a fishery in the future that the harvest rate would be half of what the Sitka fishery allows for the first ten year. After that it could increase if the stocks are still doing good. I do not want to see this stock fail again.

PROPOSED BY: Rollin Young (EF-F17-073)

PROPOSAL 101

5 AAC 27.185. Management plan for herring spawn on kelp fisheries in Sections 3-B, 12-A, and 13-C, and District 7.

Reduce bait fishery harvest limit in the Section 3-B commercial herring spawn on kelp fishery, as follows:

the 3b bait share of the GHl shall be 30%.

What is the issue you would like the board to address and why? Reduce the herring bait fishery portion of the GHl to 30%. This fishery is a wanton waste fishery which for some reason the department turns a blind eye to and this needs to stop.

PROPOSED BY: Larry Demmert (EF-F17-074)

PROPOSAL 102

5 AAC 27.185. Management plan for herring spawn on kelp in pounds fisheries in Sections 3-B, 12-A, and 13-C, and District 7.

Reduce herring bait fishery harvest limit and increase spawn on kelp herring fishery harvest limit in Section 3-B, as follows:

(h) In Section 3-B, the harvest limit for the bait fisheries is 30 percent of the guideline harvest level for the Craig/Klawock herring stock, and the harvest limit for the spawn-on-kelp pound fishery is 70 percent of that harvest guidelines level. Any portion of the harvest limit not taken by the bait fisheries during a calendar year may be taken by the pound fishery during that year.

What is the issue you would like the board to address and why? We are respectfully requesting that the herring allocation between the bait fishery and the herring pound fishery, and that the bait fishery be reduced to 30% and the herring pound fishery be at 70%. There is over 200 permits for the herring pound fishery in Southern southeast Alaska, with approximately 120 utilized in the 2017 season. The herring spawn pound fishery has a 1 to 1.5 million dollar impact between the communities of Southeast Alaska, whereas the herring bait fishery had 3 boats that fished and has had little to no impact on the communities in Southeast Alaska. Based upon the 2016-2018 statewide Herring Fishing Regulations, the Southeastern Herring Pound fisheries is regulated to ensure that the herring biomass is not damaged, as we are a catch and release fishery, as well as a healthy herring stock is maintained. Which was documented again this year with over 25 miles of spawn in the Craig/Klawock area. Whereas with the bait fishery (5 AAC 27.179. 1,2,3,4,(b) 1,2,3,4) page 11 in the handbook, there are minimal regulations, controlling or securing the welfare of future herring stock, with a 100% mortality rate, there is no observation done by Fish and Game during this fishery.

PROPOSED BY: Archie and Roseann Demmert (HQ-F17-027)

PROPOSAL 103

5 AAC 27.185. Management plan for herring spawn on kelp in pounds in Sections 3-B, 12-A, and 13-C and District 7.

Reduce the Section 3-B winter bait herring fishery harvest limit and increase the Section 3-B spawn on kelp herring fishery harvest limit, as follows:

(h) In Section 3-B, the harvest limit for the bait fisheries is 35 (60) percent of the guideline harvest level for the Craig/Klawock herring stock, and the harvest limit for the spawn-on- kelp pound fishery is 65(40) percent of that guideline harvest level. Any portion of the harvest limit not taken by the bait fishery during a calendar year may be taken by the pound fishery during that year.

What is the issue you would like the board to address and why? I would like to change the allocation of guideline harvest limit for the bait fisheries, which is currently set at 60 percent of the GHIL for the Craig/Klawock herring stock, and the GHIL for the spawn-on- kelp pound fishery, which is currently set at 40 percent of that guideline harvest level for the Craig/Klawock herring stock.

The S.O.K. Fishery provides greater economic value for its average of 135 participants, than the bait herrings average of 3 participants. Average exvessel value for the 5 year period 2009-2013 (2013-2016 are confidential) was 1.6 million dollars. Average exvessel value for the bait fishery is undetermined due to confidentiality, but according to the last 5 years harvest data, average harvest was 2340 tons annually. Furthermore, in the SOK fishery the herring are released when