

**PROPOSAL 58 - 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Repeal the Southeastern Alaska Area Dungeness Crab Fisheries Management Plan, as follows:

My solution is to scrap 5 AAC 32.146 as a regulation, as it is not a necessity in a Dungeness management regime. I believe the language would be "repealed."

**What is the issue you would like the board to address and why?** 5 AAC 32.146, the Southeastern Alaska Dungeness Crab Management Plan, has not been accurate in predicting yearly harvests, and as a management tool, has only been implemented once, resulting in one week's reduction in the summer season in 2013.

Prior to this regulation, the season was as it is now, with no management considerations outside the "three S's", size, sex, and season.

California, Oregon, and Washington currently manage their Dungeness fishery with the three S's. They have a much longer seasons (up to nine months), a smaller minimum size limit (6.25" compared to our 6.5"), and a much higher limit on the legal amount of gear. These fisheries have been in existence for decades under this management and are healthy and vibrant.

In Southeast here, the areas that have the most effort, the most pot lifts, and the most pots, are year in and year out our biggest producers, showing that the three S's works, since it has been in effect in essence, since the season reduction has only been implemented once in the many years it has been on the books.

**PROPOSED BY:** Max Worhatch IV (EF-C14-170)  
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**PROPOSAL 59 - 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Repeal the Southeastern Alaska Area Dungeness Crab Fisheries Management Plan, as follows:

Delete 5 ACC 32.146

**What is the issue you would like the board to address and why?** The Dungeness Management Plan causes unnecessary uncertainty for participants in the fishery and does not contribute to the health and sustainability of the resource. The plan can cause irreparable harm to those who depend on this fishery.

**PROPOSED BY:** Peter Roddy (EF-C14-117)  
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**PROPOSAL 60 - 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Repeal the Southeastern Alaska Area Dungeness Crab Fisheries Management Plan, as follows:

Remove all reference to threshold harvest limits from the Southeast Alaska Dungeness Crab Management Plan.

**What is the issue you would like the board to address and why?** The issue is the use of threshold harvest guidelines to modify season length. The current plan assumes a level of participation to be consistent and makes no allowances for a poor turnout. The current plan deals with pressure during the first two weeks of the season to determine how long to allow the much slower pace of the last six weeks to continue. Fishing pressure always decreases as the season progresses, but especially after the first two weeks. In other words, the current plan closes the season after the "damage" would have been done. The current plan is to be conservative. Our currently short seasons are conservative enough, along with a large size limit, and sex restriction, (male only). Threshold harvest levels are redundant and unnecessary. For fishermen, not knowing the length of season effects planning for moving gear and prospecting more outlying areas, doubt about season length contributes to concentration of the fleet. A shortened season is worth less in dollars across the dock and is not the least of the problem.

**PROPOSED BY:** Stephen N. Farler (EF-C14-310)  
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**PROPOSAL 61 - 5 AAC 32.110. Fishing seasons for Registration Area A; and 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Manage commercial Dungeness crab fishery with open season dates and areas to avoid handling of soft shell crab, as follows:

Suggested language for 32.110 (4) "Closure due to soft-shell condition"

"The department shall establish an inseason management plan for Dungeness crab stocks in Registration Area A on a division basis which will set season opening dates and areas to be fished based on percentage of male crab found by survey to be in soft-shell state during the spring/summer molt cycle and the percentage of female crab found by survey to be in soft-shell state during a period one week prior to the June 15 summer and October 1 fall opening dates to establish the level of soft-shell prevalence in the population of each district. The season/area shall remain closed by emergency order when the above ratio exceeds 20% of the ratio found in nonmolting periods."

**What is the issue you would like the board to address and why?** Season opening dates both in summer and fall season are not managed to avoid female and sublegal male in soft-shell condition.

Explanation: Mortality due to handling during commercial harvest of sublegal males and females during molting (soft-shell life stage) has been reported to approach 50% in Dungeness crab. Since this molt period may vary from one year to another as well as differing from

Southern Southeast Alaska to Northern Southeast Alaska, the management plan must have flexibility to set season dates to avoid this unnecessary mortality. Current practices in the Dungeness fisheries of California, Oregon, Washington, and British Columbia monitor populations for soft-shell condition and prohibit commercial harvest activity during those periods. Failure to recognize this mortality effect on a population can contribute to catastrophic declines and failure of fisheries. The current 3S Management Plan has been reported to widely harvest from 85%–93% of available recruits in Southeast Alaska, Registration Area A making this additional mortality a significant impact on the remaining 7–15% of available year class recruits.

This mortality rate and concerns regarding negative impacts in Dungeness crab fisheries have been discussed in Alaska Department of Fish and Game reports and documents, and scientific papers (see Krause et al 1991 among others) with numerous recommendations that this failure in management practices must be corrected.

**PROPOSED BY:** John Norton (HQ-F14-039)

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**PROPOSAL 62 - 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Modify Southeastern Alaska Area Dungeness Crab Fisheries Management Plan with open seasons, areas, and harvest levels based on historic data, as follows:

Proposed action: Remove current language establishing projected harvest total and season dates for Registration Area A based on a 14-day harvest period which begins on June 15 each year. Strike from regulation all sections 5 AAC 32.146

Proposed language: “The Alaska Department of Fish and Game (department) shall establish an inseason management plan establishing opening dates, areas open to harvest, and specific harvest levels for each district in Southeast Alaska Registration Area A. Annual harvest amount levels will be established by the department for each individual district and section based on historic records of catch per unit effort (CPUE), crab harvested, number of pot lifts, population and harvest trends from the preceding 10-year period (where data is available), molt timing, population size and composition (age and sex ratios) needed to sustain that stock, and other effects that may influence mortality or health of the population. Age and sex ratios refers specifically to maintaining appropriate year class strength and sex ratios for reproductive success, as male size (age class) affects availability to females. A harvest area will be closed by emergency order when the established harvest level has been met. Dates of openings will be set to insure that commercial harvest will not occur in an area during periods of molting/soft-shell condition.”

An independent stock assessment program shall be initiated in the 2015–2016 harvest year that over a five year period it will become the basis by which seasons openings and harvest limits within Registration Area A will be determined. At least one major Dungeness crab habitat area within each district as well as other appropriate areas within specific sections with a significant history of Dungeness crab harvest levels will be sampled annually. Population levels in these high value habitat areas shall be used as guides to set harvest rates and openings for the districts

and its sections as a whole for that year. An example would be that population levels on the Katzehin River Delta, a high value Dungeness habitat area in District 115 Section 34 (115-34), could be used to set harvest levels throughout District 115-34 and would be used to help set harvest goals for all of District 115 and its remaining sections. Those sections of a district that do not have substantial harvest levels would not be sampled, but would be managed in accordance with goals determined through indicator sites in proximity. In the above example, District 115-35 would not be sampled as it has not had any significant harvest in the past decade. Its harvest level would be determined by goals set for the adjoining section, which in this example would be District 115-34.

As one researcher put it, the importance of minimum population size on a given stock cannot be underestimated. When they pass below a minimum threshold they collapse and may not reestablish themselves for extremely long periods of time, if at all.

**What is the issue you would like the board to address and why?** Overharvest of Dungeness crab in excess of sustainable levels in Registration Area A, Southeast Alaska.

There are numerous metrics that indicate that the Dungeness crab stocks of Southeast Alaska are declining, and in some cases area specific stocks may be below sustainable levels. Since the peak harvest level of 7,332,665 pounds in 2002–2003 the last three years harvests have hovered 2,550,000 pounds. This is a stunning metric. If one excludes the extraordinary 2002–2003 harvest and instead looks at the 5 subsequent years where annual harvests hovered around 4,500,000 pounds, there is still a stunning decline of 50% from those levels during each of the past three seasons. The data argue forcefully that the current management system is failing to meet its statutory responsibility to manage this resource at optimum levels. Anecdotal evidence support this conclusion, including CPUE estimates from subsistence, sport, and personal use fishers, as well as the avalanche of complaints from communities throughout Southeast Alaska regarding the disappearance of local crab stocks. There are a number of possible causes for this observed decline including overfishing, oceanic and climate effects and increased sea otter predation. While I acknowledge that sea otter predation has a significant effect, sea otters are not present in Upper Lynn Canal and cannot be responsible for the decline seen in this area. Oceanic and climate effects can certainly affect population levels; however the dramatic increase in commercial fishing effort in the Haines area precludes them from being seriously considered as primary causative agents for the decline currently being witnessed for local Dungeness crab populations.

Regardless of the cause of the decline it is incumbent for the department to insure adequate populations for sustainable harvests for all user classes. Region-wide regulations are inadequate to insure specific stock populations meet minimum population levels to insure propagation. Research has established that Dungeness crab move very little, so if you fish out an area there is little possibility for immigrants to repopulate that area. A serial depletion model has been proposed for Dungeness populations in Southeast Alaska which describes declines in harvest levels in a given season ten years ago ballooned to 18,000 pot lifts per season in 2011–2012. Local CPUE's for District 115 now sit where Yakutat's did in the late 1990's when its fishery collapsed. Interestingly and unfortunately Yakutat has remained closed to commercial harvest for the past 14 years and shows no signs of recovery.

While annual total harvest levels for Registration Area A of 2,600,000 pounds or less have occurred three times during the 20-year period of 1990–1991 to 2010–2011, the fact that the harvest for each of the least three seasons has been below 2,600,000 pounds or less shouts at us that a change in management strategy is required. The department must change its plan to one which reflects fishery effort, i.e. how many pot lifts occur, how many crabs were removed from population, and the baseline population levels needed for specific stocks in order to perpetuate that stock. Depletion of individual stocks below sustainable population levels has a long lasting effect. To correct the failure of the current management plan to protect local stocks from overharvest I have suggested an independent stock assessment program, that over a five year period will determine population levels in primary habitat areas in each district of Registration Area A that will help prevent overharvest from occurring. For a simplified view of how this would work, in one year the area between Haines and Amalga Harbor would have to be assessed, a distance of approximately 50 miles. There are discreet areas that are well known for their productivity and these would be the focus for assessing district population levels. I assume that local knowledge would be able to identify these high value areas in other districts such that in a five year period these areas would provide a metric by which to judge population strength and sustainable harvest levels area wide. While there is a fiscal cost to a survey project of this type it is worth noting that the value of the 2013–2014 season reported at \$6,435,971 and this argues that sustaining this fishery is very much an economic necessity for Southeast Alaska families. A research program with a fiscal note of \$250,000 would be an investment of 3.9% of gross value toward maintenance and improvement of the fishery. I am advocating that a more robust management program would promote higher sustainable harvest levels and therefore higher economic return to the communities of Southeast Alaska. That is exactly what existing policy statements and regulations require.

**PROPOSED BY:** John Norton (HQ-F14-041)  
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**PROPOSAL 63 - 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Modify threshold levels for opening and closing of summer and fall fishing seasons under the Southeastern Alaska Dungeness Crab Fisheries Management Plan, as follows:

In the absence of adequate stock assessment, the department shall manage the Dungeness crab fishery in Registration Area A (Southeastern Alaska) using a precautionary approach. When stocks are assessed to be low, the department shall, subject to the commissioner’s authority under 5 AAC 32.035, reduce the harvest of legal Dungeness crab and reduce the handling of non-legal, light, and soft-shell Dungeness crab by complying with the following:

- (1) no later than 14 days after the start of the summer Dungeness crab fishing season specified in 5 AAC 32.110, the department shall establish a projection of harvest thresholds for the season;
- (2) if the department projects that the entire season’s catch of legal Dungeness crab will be;
  - (A) 1.5 million pounds or less, the department will close the summer Dungeness crab fishing season no sooner than 21 days after the season opened, and the fall Dungeness crab fishing season specified in 5 AAC 32.110 will not open;

(B) more than 1.5 million pounds, but less than **1.75** [2.25] million pounds, the department will close the summer Dungeness crab fishing season no sooner than 28 days after the season opened, and the fall Dungeness crab fishing season will be open for 30 days;

**(C) more than 1.75 million pounds, but less than 2.25 million pounds, the department will close the summer Dungeness crab fishing season no sooner than 53 days after the season opened, and the fall Dungeness crab season will be open for 53 days;**

**(D)** [(C)] more than 2.25 million pounds, the summer and fall Dungeness crab fishing seasons will occur as specified in 5 AAC 32.110;

(3) if the department determines that harvest projections fail to meet the threshold for a season as described in (2)[(C)] **(D)** of this section due to soft-shelled crabs early in the summer Dungeness crab fishing season, the department may open the fall Dungeness crab fishing season as specified in 5 AAC 32.110.

**(4) if the department determines that harvest projections fail to meet the threshold for a season as described in (2)(D) of this section, the department may consider other factors such as loss of grounds utilized and/or amount of participation and adjust the above schedule accordingly.**

**What is the issue you would like the board to address and why?** The Dungeness crab season being closed under the SE AK Dungeness Crab management plan (5 AAC 32.146) due to less effort/participation due to consolidated grounds from sea otter predation. Sea otters are starting to be seen in some of the inside areas (Districts 6, 8, &11) that are some of the most productive crab grounds this past winter. Although the 2013/14 Dungeness crab season was predicted to be below the 2.25 million pound threshold and the summer season was shortened by seven days, in the end the final harvest for the season was over 2.25 million pounds (2,589,572) even with the shortened season.

Since 1982 and present there are four seasons that the total harvest was under 2.25 million pounds but over 1.75 million pounds. This was prior to the implementation of the management plan when the fishery was managed with size, sex and season. Those normal fluctuations should be within the range of allowing a normal season length.

**PROPOSED BY:** Southeast Alaska Fishermen's Alliance (EF-C14-157)  
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**PROPOSAL 64 - 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Repeal section of Southeastern Alaska Area Dungeness Crab Fisheries Management Plan regarding summer season soft-shell crab catch that may allow fall season to open, as follows:

Paragraph (3) of 32.146. repealed.

**What is the issue you would like the board to address and why?** Delete paragraph (3) of 32.146 which allows for the harvest threshold to be met when determining fall season openings when the number of soft-shell crab present reduce the early summer harvest level.

Rational: This paragraph does not make sense from a resource viewpoint. Despite the high presence of soft-shell crab in the first two weeks of the June 2013 harvest season, there was no reduction in harvest for the remaining season. Unfortunately, the early weeks of the fishery killed sublegal males at mortality rates that have been reported as high as 50%. The reduction of sublegal males in the remaining population due to this collateral mortality will reduce year class strength for as many as four subsequent year's classes, decreasing contributions to a sustainable population level and reproduction effort in those years. Those lost recruits must be immediately replaced by current season recruits to maintain appropriate sustainable population levels in subsequent years. In effect, the mortality seen in 2013–2014 June harvest must be seen as a debt that must be immediately paid to sustain subsequent years of harvest. California, Oregon, Washington, and British Columbia all understand the effect of soft-shell mortality and manage season openings to avoid those periods. To view this mortality as a null effect is incorrect.

**PROPOSED BY:** John Norton (HQ-F14-038)  
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**PROPOSAL 65 - 5 AAC 32.110. Fishing seasons for Registration Area A.** Extend regionwide commercial Dungeness crab season closure date from November 30 to February 28, as follows:

delete 5 AAC 32.110(1) and (2)

Amend 32.110(3) to read "**From 8:00 am June 15 through 11:59 pm August 15 and from 8:00 am October 1 through 11:59 February 28.**"

**What is the issue you would like the board to address and why?** The Dungeness crab season should be consistent across Southeast Alaska and should extend through February. There is no biological reason not to fish on Dungeness crab through that date. Crab prices are typically high

in January and February. Local and export markets would benefit. Some nonresident permit holders might be harmed by a reduction in summer yield.

All crab fisheries should open at 8:00 a.m.

**PROPOSED BY:** Peter Roddy (EF-C14-120)

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**PROPOSAL 66 - 5 AAC 32.146. Southeastern Alaska Area Dungeness Crab Fisheries Management Plan.** Manage Upper Lynn Canal commercial Dungeness crab fishery based on CPUE, as follows:

5 AAC 32.035. Closure of Dungeness crab registration areas and special procedures  
(2): catch per unit of effort and rate of harvest

Should be changed to read:

(2): **catch per unit of effort (CPUE) and rate of harvest.**  
**(A) CPUE for all waters of District 115 shall be assessed during commercial openings utilizing the ADFG fish ticket data. A CPUE result of 2 or lower shall trigger a closure of Dungeness harvest by commercial, sport, and personal use fishers. The fishery will remain closed until a CPUE of 2.1 or above is attained.**

No cost options considered by Upper Lynn Canal Advisory Committee (ULCAC) to assess CPUE following closures:

- Option 1: Close the fishery for 24 months following a CPUE of two or fewer crab per pot. After 24 months, the fishery would again open and be assessed based on the harvest CPUE. No additional cost to implement.
- Option 2: Following a closure due to a CPUE of two or fewer crab per pot, and prior to the next season, one or more commercial fishing vessels would test fish to assess CPUE. Costs would be covered by the sale of their harvested crab.

**What is the issue you would like the board to address and why?** The ADF&G currently utilizes a 3S (3S- size, sex, season) management system on a region wide scale for sustaining harvest levels of Dungeness crab in Region A. However the ADF&G has been unable to provide the ULCAD with meaningful interpretation of available data as it relates to 5 AAC 32.035 for the portion of the Region A that lies within the ULCAC's jurisdiction. As a result the AC recommends utilizing existing data, a CPUE, currently collected by the ADF&G to establish a threshold to ensure sustainability for all users groups.

In a 2012 report to the Board of Fish, ADF&G states the "classical 3-S management usually is not effective to manage intensive, highly-competitive fisheries". Due to declines in crab in other areas of Region A (2012 ADF&G report to BOF) and the development of new local markets since 2006, the Upper Lynn Canal has seen an increase in commercial harvest, followed by a significant decrease in crab harvest rate, indicative of population decline. Since 2007, CPUE of commercial crabs harvested in statistical areas 115-31-35 have decline from 7.8 in 2006/2007 to

2.8 in 2013, a statistically significant decline of 12.7% per year. Subsistence crabbers have reported to the local AC a significant decline in their catch rate as well. During this same time period (2006– 2013), the total number of commercial pot lifts, as recorded by the department from commercial harvest fish tickets, increased from 2,096 (2006) to 14,210 (2013) with a peak of 18,034 pot lifts in 2012. The ADF&G has reliable data on CPUE for commercial harvest in this area only back to the year 2000. From 2000–2007, CPUE increased at a rate of 12.3% per year, from 3.2 to 7.5, indicative of population increase. During this increase, commercial effort was low at 469–2,096 pot lifts per year. The coincident large increase in pressure and decline in the crab population suggests the current management plan is not adequate to sustain local crab populations. Given the observed 60% declines in CPUE since 2007, coupled with an approximate 600% increase in commercial effort, we believe this local area cannot support this rate of commercial, sport, and personal use harvest, as well as subsistence harvests. In a 2012 report to the BOF concerning Dungeness crab in Southeast Alaska, the ADF&G expressed concern that the current Region A harvest rate may be unsustainable, as “trends in recruit composition of the harvest indicate that the fishery is increasingly dependent on annual recruitment” such that a smaller portion of strong year classes are carried over to buffer the fishery against the effects of a poor year class”. A fishery dependent on annual recruitment suggests that, localized areas within the region, with limited markets and fisheries, could be in danger of overexploitation if pressure should dramatically increase as we have observed in our area. This suggests the current plan is failing to manage crab populations at the appropriate spatial scale to ensure viable populations and sustainable yield for multiple user groups near communities. We arbitrarily choose the management criteria of a minimum of two CPUE for harvest openings of legal size crab due to lack of guidance provided by the ADF&G and an assumed threshold of two crabs per pot being economically viable for the commercial fleet.

The regulation should be adopted in order to establish and maintain a sustainable Dungeness crab harvest for all users groups in the upper Lynn Canal and the waters of District 115. If the regulation is not changed and pressure remains high throughout the area, District 115 crab harvest rates could continue to decline leading to a full commercial closer and further reduced opportunity for subsistence use. We recommend the board take action now to reduce the rate of decline in CPUE as measured by the ADF&G and ensure a future harvest of Dungeness crab in Upper Lynn Canal. We believe the current management methods lack precautionary measures to prevent collapses of available harvest, as occurred in Yakutat and Prince William Sound. We considered many options including, partial closure to commercial only, limited by season, and area, with sunset clauses in hopes of ensuring a return of commercial harvest to the area if sustainable. We considered full closures to all user groups, limits on number of pots that could be fished, log books, and several other options; however our decisions continued to be limited by the lack of data available about Dungeness crab in our area. Therefore we recommend the department actively manage District15 for all users.

**PROPOSED BY:** Upper Lynn Canal Advisory Committee (EF-C14-098)  
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**PROPOSAL 67 - 5 AAC XX.XXX.** This proposal is a comment and does not seek regulatory change.

No changes to current regulations are necessary. The Upper Lynn Canal Advisory Committee recommendations to limit commercial crab fishing do not reflect the view of the majority of residents in Haines.

**What is the issue you would like the board to address and why?** Upper Lynn Canal Advisory Committee proposal to eliminate or limit commercial Dungeness crab fishing in the upper Lynn Canal. Current Alaska Department of Fish and Game regulations have successfully managed this fishery for decades.

**PROPOSED BY:** Jim Szymanski (EF-C14-73)  
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**PROPOSAL 68 - 5 AAC XX.XXX.** This proposal is a comment and does not seek regulatory change.

No changes to current regulations are necessary. The Upper Lynn Canal Advisory Committee recommendations to limit commercial crab fishing do not reflect the view of the majority of residents in Haines.

**What is the issue you would like the board to address and why?** Upper Lynn Canal Advisory Committee proposal to eliminate or limit commercial Dungeness crab fishing in the upper Lynn canal. Current fish and game regulations have successfully managed this fisheries for decades.

**PROPOSED BY:** Randa Szymanski (EF-C14-74)  
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