



February 15, 2022

Dear Board of Fish,

Passing Proposal 283 prioritizes a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Aaron Gerlovich  
55733



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February 18, 2022

Dear Board of Fish,

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Adam Galindo



March 07, 2022

Dear Board of Fish,

Currently ADF&G cannot reduce fishing restrictions until the OEG is achieved. If passed, Proposal 283 would allow projected escapements to be utilized rather than actual fish in the river. It's literally putting the cart before the horse; commercial fishing will be permitted before sufficient king salmon have actually made it into the river, based on the OEG.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Adelbert Dewees

Oak Hill  
32759



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February 26, 2022

Dear Board of Fish,

Hello. Alan Frerich here We live in central Minn just south of where Kenei Keith Holman is from . We don't fish enough but love doing it . Mostly pan fish is what we go for . Responsibility is up to EVERYONE meaning ADFG and everyone else so please make it fair so the fish can get back up and reproduce. Also some day we are going to get back up there to do some fishing and looking around again thank you

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Alan Frerich

Oak park  
56357



February 17, 2022

Dear Board of Fish,

I have been living in Alaska since 1992 and I am an avid fisherman. I feel this proposal 283 is bad for the state.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

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Alan Paulson

Anchorage  
99516



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March 11, 2022

Dear Board of Fish,

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Alden Chamberlain

Hotchkiss  
81419



Alaska Board of Fisheries  
Board Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

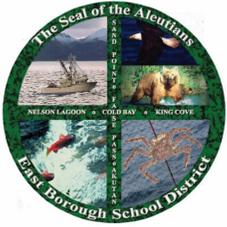
February 14, 2022

Dear Alaska Board of Fisheries,

Can you please let the fish come here to the rivers and creeks, because the rivers here in Chignik Lagoon don't have that many fish? It is good for you to let more fish go up the river because then we will get lots more fish. The fish are good for catching. So all of you guys are good at catching fish but you are not thinking right because you are letting other people catch all of our fish. The people would be broke because there would be no fish to catch.

Fishes are good to be fried. Last summer my sister and my brothers were trying to catch fish. Then my sister and I didn't catch anything and my brothers didn't catch any fish either. It was the best time I caught a fish because my mom told me to try and try again. Then I caught one and it was fun because it made me feel like we need more fish for everyone.

Sincerely,  
Alec Billadeau  
3rd grader in Chignik Lagoon



# Aleutians East Borough School District

P.O. Box 429, Sand Point, Alaska 99661

Ph. 907-383-5222 FAX 907-383-3496

Serving the children in the Alaskan communities of:  
Akutan, Cold Bay, False Pass, King Cove, and Sand Point  
[www.aebbsd.org](http://www.aebbsd.org)



PC008  
1 of 1

March 10, 2022

Alaska Board of Fisheries  
Marit Carlson-Van Dort, Chair  
Via email [dfg.bof.comments@alaska.gov](mailto:dfg.bof.comments@alaska.gov)  
**RE: Comments on Proposal 282**

Chairperson Carlson-Van Dort and Board Members:

My name is Patrick Mayer and I am the superintendent of the Aleutians East Borough School District (AEBSD). By nature, I am an optimistic person, but I am very concerned about the future of education and the viability of our communities in the Aleutians East Borough (AEB) should the proposed changes surrounding proposal 282 (Area M salmon fishery) be approved.

The Aleutians East Borough was established in 1987. The articles of formation consisted of two priorities: Fisheries and the formation and support of a borough wide school system.

The original communities served by the Aleutians East Borough School District included Sand Point, King Cove, Cold Bay, Nelson Lagoon, False Pass, and Akutan. All schools in any community tend to be a focal point. Concerts, book fairs, extracurricular events, bake sales, local meetings and even church services take place at schools. Schools provide, especially in rural Alaska, an intrinsic tie between young and old as multiple generations have often attended and graduated from the same institution. It is a huge part of who we are as a community.

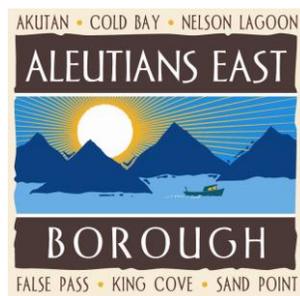
On the academic we provide a K-12 education for our students. We endeavor to prepare our students for life beyond high school by promoting the pursuing of a vocational education track or attendance at a four-year university. On the community side of the house, our students and families are very close. Families have been graduates of our AEBSD schools since they were opened. Banners adorn the walls of the gymnasiums and parents and community members fill the stands. Recently, I was able to be present to watch both King Cove School and Sand Point School depart for regional basketball. There was a spirit tunnel for the students to run through in King Cove and a pep assembly at Sand Point School. Both events were constructed to support the teams prior to their departure. Smiles were endemic and the excitement was contagious. *What would we do if the schools weren't there?*

I am concerned for the stability and even the very existence of our communities in the Aleutians East Borough. Staggering inflation on an already high cost of living threaten to push people out. The communities in the Aleutians East Borough have historically been susceptible to diminished fishing allocations and fishing stocks which have directly impacted the local economies. Fish Taxes for our communities matter. There is an old saying that "when the school goes away, so does the community". Nelson Lagoon was closed in 2011 and Cold Bay in 2014 due to declining enrollment. For the first time ever, the enrollment at Sand Point School has dropped below 100 students. Throughout the Aleutians East Borough, we have been experiencing declining enrollment since 1990. This is in large part due to the decline of our fisheries and the associated downsizing of fish processing facilities.

Fisheries are the economy out here and any further restrictions will decimate much of the AEB. With the proposed changes being considered through proposal 282, we can only assume that this pattern of school closures and community devastation would continue. Please do not let our Aleutians East Borough communities slide off of the economic and educational cliff. Please do not support proposal 282.

Sincerely,

Patrick Mayer,  
Superintendent



March 11, 2022

Alaska Board of Fisheries  
Chair Märit Carlson-Van Dort  
Via email [dfg.bof.comments@alaska.gov](mailto:dfg.bof.comments@alaska.gov)

RE: Aleutians East Borough Opposed to Proposal 282

The Aleutians East Borough encompasses the communities of Akutan, False Pass, Nelson Lagoon, Cold Bay, King Cove and Sand Point. The waters of the Borough also include the fishing areas outlined in 5 AAC 09.365 South Unimak and Shumagin Islands June Salmon Management Plan and in 5AAC 09.366 Post-June Salmon Management Plan for the South Alaska Peninsula. Our local fishermen, processors and communities would be severely negatively impacted by Proposal 282, that would needlessly further restrict salmon fishing in our region. The Aleutians East Borough urges the Board of Fisheries to reject this out-of-cycle, allocative proposal.

Proposal 282, as described by the Alaska Department of Fish & Game (ADFG) Staff Comments (RC 2), is allocative, and under Board policy should not have been elevated from an agenda change request to an out-of-cycle proposal, absent compelling new information. The reason for the proposed changes as stated in ACR 7, now Proposal 282, is to increase Chignik sockeye escapement. Chignik escapement has remained relatively consistent since 2018 and total Chignik escapement in 2021 increased compared to the previous 3-year average. There is a lack of new information for the basis of this out-of-cycle proposal.

As noted by ADFG Commissioner Vincent-Lang at the recent House Fisheries Committee, the Department will begin another round of genetics studies of the Area M fisheries, and take up a full review of escapement goals next year. It would be more appropriate for this proposal to be taken up in the normal cycle next year, when significantly more data will be available for the Board to make an informed decision. It would be a waste of Board time and resources to rush in making drastic changes to any management plan just to reevaluate the following year when more information is available, with possibly no benefit to Chignik stocks but at the cost of collapsing entire communities in Area M.

According to RC 2, Proposal 282 as written would reduce the three June salmon fishing openings in the Shumagin Section and Dolgoi Area beginning June 15, from 88 hours to just 40 hours each. In July, there would be a 49% reduction of fishing hours and all July openings would be just 18 hours. The restricted fishing times would be lifted only if the Department expects the mid-point of the Chignik early-run escapement to be met, which hasn't happened in 7 of the last 10 years.



It should be noted that the Dolgoi area and the Shumagin Islands Section are fishing areas just outside two of our largest fishing communities, Sand Point and King Cove. This proposal will directly impact local fishermen that normally fish in these areas and indirectly impact other Area M fishermen as fishers move to the other open areas. RC 2 states that Proposal 282 'would likely reduce the harvest of all species of salmon in the Alaska Peninsula Management Area' and 'likely result in increased gear conflicts between the purse seine and drift gillnet fleets'.

The new proposed salmon fishing restrictions would limit opportunity for local fishermen and processors to help harvest one of the largest forecast Bristol Bay salmon runs in history. This strain on the local and State economy would be without any significant boost to Chignik escapement. The WASSIP study shows that even in times of high abundance, harvest rates of Chignik-bound salmon in the Shumagins and Dolgoi are low, and insignificant in times of low abundance.

The current management plan is working. ADFG has emergency order authority and the Commissioner used this authority in 2018 and again in 2020 to curtail fishing in Dolgoi and the Shumagins when Chignik sockeye escapement was low. The Board amended the management plan in February 2016 establishing the Dolgoi Island Area and setting a sockeye harvest cap in the area. In February 2019 the Board closed the Dolgoi Area to seine vessels for all of June. Also in 2019, the Board realigned the set gillnet, drift gillnet and seine gear fishing schedules in June, resulting in 73% increased hours of closed 'windows' in June with no fishing nets in the water in the South Alaska Peninsula area. The Southeast District Mainland has remained closed to salmon fishing in June for the past 4 years. South Alaska Peninsula fishermen continually share in the burden of conservation for Chignik-bound salmon under the current management plan.

The Board of Fisheries should consider all submitted South Alaska Peninsula and Chignik proposals, including Proposal 282, during the regular upcoming 2022/2023 cycle. In the interim, the Alaska Department of Fish and Game has in-season emergency management authority and has used that authority appropriately as needed. Proposal 282 would needlessly restrict legitimate mixed-stock salmon fishing in the South Alaska Peninsula without benefit and outside the normal Board cycle process. The Aleutians East Borough urges the Board of Fisheries not to accept Proposal 282 at this time.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alvin D. Osterback'.

Alvin D. Osterback, Mayor  
[aosterback@aeboro.org](mailto:aosterback@aeboro.org)



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February 25, 2022

Dear Board of Fish,

I am a life long born and raised Alaskan. My hope is that my 2 year old son will see a better fishery than I have!

Currently ADF&G cannot reduce fishing restrictions until the OEG is achieved. If passed, Proposal 283 would allow projected escapements to be utilized rather than actual fish in the river. It's literally putting the cart before the horse; commercial fishing will be permitted before sufficient king salmon have actually made it into the river, based on the OEG.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

The standard should remain that meeting the conservation needs of the weakest stocks is more important than avoiding the upper limit of another species. Passing 283 would indicate that the Board has abandoned weak-stock management principles.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Alex Carey



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February 22, 2022

Dear Board of Fish,

Long time fisherman out of Anchorage. Fish from the MatSu to the Kenai and Russian River. My interest is improving fishing opportunities for the disabled community. The more fish in the rivers and streams, better the opportunity for disabled Alaskans like my 36-year old son to go fishing and catch the occasional fish.

Kenai River king salmon have not been meeting spawning objectives for years. Proposal 283 allows the commercial harvest of kings when we haven't met the lower escapement goals. This smacks of the old joke about being unable to meet your standards: When your standards are too high, and you can't meet them, what do you do? Lower your standards. Which is the absolutely wrong thing to do.

This proposal prioritizes commercial fisheries over rebuilding the Kenai king run to historic levels. Passing this means that you have completely given up on rebuilding the run to historic level. Defeat this proposal

Alex Gimarc

Anchorage  
99515



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February 18, 2022

Dear Board of Fish,

I make the long journey from the east coast every few years to fish for salmon and trout because, in general, AK has done a fairly good job of protecting its fish stocks. Believe me, between lodges, hotels, guides, rental cars and flights I have spent more money than I care to total up. To me, king salmon are the tops when it comes to AK salmon fishing. However, I don't have to tell your fisheries experts that the king returns throughout AK are shrinking. Even the famed 100,000 plus runs on the Nush don't seem to be as reliable as they once were. That is why I have stopped fishing the Kenai, home of record breaking fish, for Kings. They are just too valuable. That is why proposition 283 is such a terrible idea. The thought of losing any more of these magnificent fish so that a few commercial operations can make more profit is not worth the risk. How about the hurt that could be put on the lodges, hotels, guide services and the jobs that they provide if the king stocks are further depleted? That is why I am against this proposition.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

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Alfred Schwentke

Windsor  
06095



Alfredo Aboueid  
*F/V Alaskan Frontier*  
P.O Box 26  
Chignik Lagoon, Alaska 99565

Alaska Board of Fisheries  
Board Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

January 18, 2022

Subject: Proposal 282 (ACR 7) and Chignik Red Salmon Management

Dear Alaska Fisheries Board:

I strongly support Proposal 282 (ACR7).

A reduction in fishing time in the Shumagins and Dolgoi area is needed when the Chignik early-run is not meeting the mid-point of its escapement goal.

Beginning in 2018, early-run reds entering the Chignik Management Area have consistently been fewer than that required for escapement. The Chignik late-red run has also experienced less than adequate escapement in two of our last four season.

It is well known that Area M in the Shumagins and Dolgoi harvest red salmon headed to Chignik in June and July. Cutting back the intensity of these fisheries would allow more red salmon into Chignik waters. The time is right for this. Chignik depends on the two Chignik River red runs economically and culturally. Chignik needs the Board to intervene to prevent any further damage. Our runs have been compromised and need to be built back. A start is to make certain that escapements are achieved on both runs. Passing Proposal 282 is the minimum that should be done.

In addition to reducing interception impacts on Chignik red salmon in Area M, Chignik deserves the best science applied for inseason management and post season analysis. That is not occurring. Chignik commercial fishermen are paying for genetic sampling of Chignik's two runs, but the department is opposed to using the data for inseason management which I believe should be a high priority project. The Department does use the July genetic samples post season for assigning escapement numbers by run but not the August sample results which is unreasonable. Board oversight is needed along with improved collaboration between ADF&G and Chignik stakeholders and their representatives.

Thank you for considering my input.

I am, *Alfredo Aboueid*



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February 17, 2022

Dear Board of Fish,

I do not support lowering the king salmon escapement. King Salmon populations are already distressed!!!

Passing Proposal 283 prioritizes a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

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allen Walburn

Larsen Bay  
34102



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February 25, 2022

Dear Board of Fish,

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The standard should remain that meeting the conservation needs of the weakest stocks is more important than avoiding the upper limit of another species. Passing 283 would indicate that the Board has abandoned weak-stock management principles.

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Alley Stanley  
Haskell  
79521



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February 16, 2022

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Ally Yeats

Bluffdale  
84065



Alaska Board of Fisheries  
Board Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

March 10, 2022

Subject: Support Proposal 282

Dear Alaska Board of Fisheries,

I live in Chignik Bay and everyone in our community is dependent on salmon fishing. Our salmon runs are essential for subsistence and commercial fishing. The mainstay of our economy is our two sockeye runs, which have gone from historically strong to historically weak - especially the early run, which has not even reached the lower end of its escapement goal since 2017.

Proposal 282 is important to Chignik as it calls for Shumagins and Dolgoi fishing areas to assist in our early run reaching its escapement goal. I think it's reasonable because we have 55 years' worth of data that has consistently shown Chignik-bound sockeye are caught in those areas, our early run has not reached the lower end of escapement goals since 2017, and thus far the burden of conservation has been shouldered solely by Chignik while Chignik-bound sockeye continue to be harvested in Area M.

While Chignik communities have small representation, we need you to help protect our sockeye run. Please make conservation of our early sockeye run a priority by passing proposal 282.

Thank you,

*Aloys Kopun*



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March 02, 2022

Dear Board of Fish,

I was born, raised, and currently live in Anchorage. My dad owns a cabin in Sterling where he lives during the summer. We have fished up and down the Kenai River from the mouth dipnetting to Centennial Park, the Russian-River Ferry, and the middle-upper Kenai on various float trips. I make trips to the Kenai every single weekend during the runs, but I have been alive in this state for all 25 years of my life and never once caught a king salmon on the Kenai. Bi-catch from commercial vessels is unavoidable, and so we cannot all capitalism and increased commercial demands to dictate our state's vital resource management. A balanced, and responsible resource management plan for our fisheries is extremely important to me. To allow my family to continue to catch fish to feed us through will so we don't have to buy as much red meat, and so that I can pass on this way of healthy living from the gifts of the land to future generations.

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

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Amanda Allard

Anchorage  
99515



Submitted By  
Amy Foster/Jack Foster Jr  
Submitted On  
3/11/2022 11:49:03 PM  
Affiliation

Phone  
907-383-3633  
Email  
[amyfoster5@yahoo.com](mailto:amyfoster5@yahoo.com)  
Address  
P. O. Box 254  
Sand Point, Alaska 99661

Amy and Jack Foster Jr

P. O. Box 254

Sand Point, Alaska 99661

March 11, 2022

Alaska Board of Fisheries

Subject: Proposal 282. Opposition to Proposal 282

The implications of Proposal 282 and the dramatic consequences if the proposal is fruitful will be devastating to our livelihood and fishery. My husband and I are both Area M Set net permit holders, who in the past have been forced out of a local fishing area, the SEDM due to regulations set forth upon our fishery from another area, Area L, and now restricting us as written in the proposal, cutting our fishing time in the Shumagin Islands by more than 50%. Forcing us to work in unpredictable weather, strong currents and rough seas, with the majority of us working in open skiffs that are 18 to 21 feet in length with nets attached to the shoreward side of the rocky beach. Three forty hour openings in June will devastate the set net fishermen from making a sustainable living or being able to begin the start up of financing a fishery (insurance, fuel, boat and gear maintenance, groceries, etc) under the current language of the proposal. Last summer during the month of June 2021 my husband and I struggled to catch a salmon to deliver with 10,000 pounds of all species being delivered during the entire month of June. This trend also transpired with many other set net fishermen. For the proposed 18 hour periods in July, I truly wonder with all the unknown variables of weather, tides if we would be able to splash our nets in the water. It can take between 2 to 4 hours to set the nets during an opener and we usually begin taking the nets out of the water depending on the weather 6 hours but normally 4 hours before the close of the fishing period. That equates to 18 minus 10 to 6 hours equals 8 to 12 hours of our nets consistently fishing in the ocean waters. This is not feasible nor an adequate solution to our fishery.

My question is there any new evidence of information provided with escapement levels in the Chignik area in regards to escapement due to the fact that escapements have been relatively consistent the past five years. In the past, Board actions were addressed, through emergency order for conservation on the Chignik run which in turn hurt us as fishermen in our area. Given this authority in 2018 and 2020, there is no conservation need to alter Area M Management plans in an out of cycle meeting, knowing that the departments forecast for the Chignik runs will meet their escapement goals in 2022. This proposal 282 reads as an allocation proposal and not a conservation proposal, leading back to more than 40 years of Chignik fishermen advocating for restrictions on the Area M South Peninsula Fishery in order to increase fishing opportunities in Area L when many years there were absolutely no conservation issues or concerns within the fishery. This issue will be further talked about in the 2023 meeting of the board of fisheries.

Within the Chignik Watershed is there a decline in the smolt conditions associated with habitat degradation, is there an issue with nutrient input, anomalous ocean conditions, poor smolt conditions, unusual environmental conditions or production issues within the river system of outmigrating Chignik smolts? Restrictions in an out of area fishery such as the Shumagin Islands cannot remedy these problems or materially increase returns to Chignik.

By consistently pointing fingers and blaming our area is unwise by altering a management area in Area M that has severely eliminated and impacted one area of significance the South East District Mainland area, recently the Dolgoi area and now trying to take the Shumagin Island area all negatively affecting the livelihood of myself, my family, my communities, businesses and locally established fishermen by taking away more areas isn't the correct answer to the situation at hand.

A question I have to ask with Proposal 282 is this a conservation issue, an allocation issue or is it a discrimination issue of what has been transpiring throughout the years in regards to our fishery. Look at all the scientific data, our ecosystem, our current changes in environmental conditions. Our ocean is huge, spreading upon hundreds of thousands of miles and notably not all the fish travel up to one watershed, there are numerous salmon streams at every corner you turn within these islands and mainland.

We are fishermen our community is dependent upon fishing and any changes to reduce our fishing time or restrict us from fishing is detrimental to our livelihood. I am asking the BOF to reject or take no action Proposal 282 at this meeting.

Amy and Jack Foster Jr



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March 09, 2022

Dear Board of Fish,

Fishing for Kings on the Kenai is one of our families favorite memories. We did catch and release and did not harvest. Why let commercial fishermen ruin that?

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

The standard should remain that meeting the conservation needs of the weakest stocks is more important than avoiding the upper limit of another species. Passing 283 would indicate that the Board has abandoned weak-stock management principles.

Passing Proposal 283 prioritizes a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Amy Annanie

Nine Mile Falls  
99026



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March 08, 2022

Dear Board of Fish,

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

Passing Proposal 283 prioritizes a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andrea Nykamp

Anchorage  
99507



Submitted By  
Andrew chadwick  
Submitted On  
2/13/2022 7:27:30 PM  
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Address  
48313 rustic avenue  
Soldotna , Alaska 99669

The idea to give the east side set nets, known king killers time in the water when the kenai river is set for another year of under escapement is a travesty to one of the most important sport fisheries in the state. As an in river user sport fish guide who has voluntarily giving up harvesting wild kenai and kasilof river king salmon, I know from thousands of hours of on river experience that when the set nets go out the numbers of king salmon returning to the river falls drastically.  
if we want to save this fishery we should be further reducing set net hours, not increasing them! The indiscriminate east side set net fishery is no longer sustainable!

"PROPOSAL 283... AGAINST. At a time when late run Kenai chinook are at historic lows, this is simply the wrong proposal at the wrong time. Board members, ask yourselves... why even consider going down this path when the entire unfished run-size failed to scratch the lower bound SEG in the past three years? Bottom line, Kenai kings are in trouble. It is incumbent upon you to do EVERYTHING in your power to increase their numbers. If anything, you should be giving ADFG even MORE prescriptive guidance to achieve escapements spread within the full range of the OEG to help restore the iconic Kenai kings to historic abundance... NOT letting them fall through the escapement floor! In contrast, this ill-conceived proposal seeks yet again to LOWER the conservation bar for a horribly depleted stock... but wait, only for the "special" people. A double standard for conservation is the last thing the late run kings need. This foolish proposal only increases the risk that the conservation objective WILL NOT BE MET in 2022. If that should occur, four consecutive years of escapement failure is certain to place this population in a "stock of concern" status. Do you really want that blood on your hands? Please.... JUST SAY NO!



Submitted By  
Andrew  
Submitted On  
3/1/2022 9:44:07 AM  
Affiliation  
Professional sportfish guide & concerned citizen  
  
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Chadwick  
Email  
[Chad0050@gmail.com](mailto:Chad0050@gmail.com)  
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48313 rustic ave  
Soldotna , Alaska 99669

we need to do everything we can to save our kenai kings. Guides and sportfisherman are willing to give up fishing for them. Commercial fleet, who comparatively takes more kings than the sport should not be allowed to place indiscriminate king killing set nets when the run forecast is so low it dictates closing the river to sport fishing.

The 600 ft fishery is assumed to take proportionally fewer kings than sox.... that's the whole impetus to use it, right?

But does it?

The days when we fished the full fleet ESSN's (July 19) vs full fleet 600 ft (July 20) during the same stat week last year, there was no preferential chinook savings by going to 600 ft...

Proportionately ~500 sox per chinook were harvested with either strategy!

When the 600 ft rule was inserted into the management plan, it was assumed it would allow more sockeye harvest while dodging the majority of king salmon that were assumed to swim in deeper water as they approach the river mouths...

As it turns out, we were dead wrong.

Rather than saving kings salmon, the 600 ft rule is effectively just like giving extra full fleet ESSN hours beyond the weekly cap.



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February 22, 2022

Dear Board of Fish,

To even consider allowing extra commercial set net fishing hours at a time when the in river fishery for king salmon is closed is a travesty to the most important sport fishing river in the state of Alaska. The kenai river sport fishery and the tourism it brings in is the life blood of the kenai/Soldotna area. Not set netting.

In times of such low abundance to allow set nets in the water which indiscriminately kill many king salmon each opener will completely undo any savings that would be made in river by closing the sport fishery.

When the run is so bad that the state mandates closing sport fishing it is imperative to keep the #1 enemy of king salmon-set nets OUT of the water.

As an in river user I can tell from thousands of hours on the river that when the set nets go out the next 3 tide cycles are a near ghost town for fresh incoming king salmon. We need to be giving every single returning king salmon an opportunity to spawn, and that means keeping the set nets off the beach.

Also, we have seen it each even numbered year. The sonar counts will be high as a reflection of high pink salmon numbers. We must not allow this to be used as justification to allow extra netting. These next few years are extremely important as the entire future of the kenai river king salmon run is hanging on by a thread. We can not allow the loss of any additional king salmon, be it to sport harvest or nets.

We must save this fishery and do whatever we can to bring these fish back. If that means no nets and no sport harvest so be it! If we don't do something now- we will loose these fish forever.

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

Passing Proposal 283 prioritizes a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to



lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andrew Chadwick

Soldotna  
99669



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February 25, 2022

Dear Board of Fish,

Allowing the nets in will be the final nail in the coffin for Kenai River kings. On pink years the sockeye counter reflects the large numbers of pinks onto the sockeye count and over counts sockeye by a wide margin. The commercials will use this margin of error to allow the nets to go in.

1 or two set net opener will kill more kings than an entire open season of catch and release.

If there's not enough kings for the sport fleet to even catch and release there are not enough for the commercial!

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andrew Chadwick  
Soldotna  
99669



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March 07, 2022

Dear Board of Fish,

Just vote no! There is no amount of set net money that justifies decimating the last remaining king salmon we have on a year with a run so weak that justifies a complete closure of the in river fishery.

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery.

Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andrew chadwick  
Soldotna  
99669



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March 08, 2022

Dear Board of Fish,

The 2022 pre season forecast is for the lowest king run in recorded history. Why would managers want to allow indiscriminate king salmon killing set nets in the water when we should be doing everything possible to try and rebuild the run? Allowing a few more set net openings will make the setnetters a negligible amount of money but will cost the kenai river big time when it comes to its increasingly rare king salmon! Do not allow the nets in if the run is so low sportsfisherman can not fish!

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andrew chadwick  
Soldotna  
99669



Submitted By  
Andrew Manos  
Submitted On  
3/11/2022 8:55:29 PM  
Affiliation

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Madam Chair, member of the board

This is in regards to proposal 282. I don't not believe that the ACR that generated this proposal met the criteria to be taken up out of session at this meeting. Any issues of conservation can and has been addressed by in season emergency order. ADFG and is fully aware and attentive issues of conservation with Chignik's salmon runs. The department has acted twice in recent history to stop the area M salmon fishery when they had concern over the Black Lake sockeye salmon run. This is an allocative proposal that has no business in an out of cycle session.

By taking this up out of cycle the board has significantly decreased the opportunity for public engagement. As an out of cycle proposal the board is not able to engage all available tools to make a meaningful impact for the Chignik fishery. There are no alternatives available from which to choose the best path forward. As we heard from the department during deliberations, they were not planning and have not had time to compile all the data necessary to make an informed decision.

To speak directly to proposal 282, what is being proposed has no clear benefit for Chignik but has a hugely negative impact for area M fishermen. I agree the fishermen from Chignik that there is a problem, and I empathize with any fisherman that has to sit on the beach and watch a season go by. We have been shutting portions of area M down since 2015 and so far it has not seemed to help. This is not the time to throw another dart at the map and hope the problem goes away. This is the time to engage the scientific tools at the council's disposal and find a meaningful effective solution. In this situation I do not believe that hurting the communities of Sand Point, False Pass, King Cove, Cold Bay, and Nelson Lagoon will do anything to help the community of Chignik. If this board genuinely wants to help a community that needs help, they need to identify what is actually causing the harm.

Sincerely

Andrew Manos



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February 18, 2022

Dear Board of Fish,

I've fished the upper Kenai predominately for the last 25 years and I'm seeing some improvement in the numbers of King Salmon breeding in the creeks that feed into Kenai lake. I take that as a positive sign that things are trying to turn around. It may take 5-6 years before we are able to tell if the returns are better. To soon to reverse any constraints on the commercial fishing.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andrew R. Pulliam

Palmer  
99645



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February 16, 2022

Dear Board of Fish,

The problem is that the present mismanagement of the Kenai River king salmon is depleting the run as well and that's from data going back to the 90s. It just keeps getting worse and worse on the return numbers and is basically at the point now that you can't really catch a sport caught king salmon and keep it in the Kenai River. Obviously Prop 283 is bad and should have never even gotten to a proposal but big money keeps talking louder than the importance of huge Kenai River king salmon for us people. They need to fix the problem by stopping commercial fisheries from taking the last King salmon whether it's by stopping the high seas bycatch raping, pillaging and wasting by the huge trawlers and or to intercepting the kings in the east side set nets in the name of red salmon but certainly not returning to the present mismanagement system which is continually depleting the run as well! Talk about choosing between two losing solutions! Either way we lose! Wow! Thanks!

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andy Cizek  
Soldotna  
99669



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February 24, 2022

Dear Board of Fish,

My wife and I have a home on the Kenai River and have fished on the Kenai every year since 1989. The king salmon runs are way down in quantity and in size of fish. By allowing commercial fishing to further shrink the size of the king salmon run on the Kenai you will endanger the long-term health and viability of an important economic driver of the Kenai Peninsula.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Andy Tallman

Kenai  
99611



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March 08, 2022

Dear Board of Fish,

I am the owner-operator of a wilderness fishing lodge north of King Salmon. I now tell our clients it is unlikely they will catch a king, and even then, they will have to release it. No one should be killing any kings in Bristol Bay, we are on the brink of extinguishing them. Why would you even consider giving anyone the opportunity to kill a wild king salmon at the present time? The probable extinction of wild kings is happening on your watch.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Anthony Behm

Honolulu  
96825-1137



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March 11, 2022

Dear Board of Fish,

I live in Kenai, Alaska. Fishing is important to us as a way of life and substance for our families. To maintain the ecosystem balance we must keep our fish protected and keep a sustainable population of fish to continue year after year.

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

April Hall

April Hall

KENAI  
99611



Area M Seiners Association  
Comments on Proposal 282  
Commercial, Personal Use, Sport, and Subsistence Regulatory Proposals  
Committee of the Whole—Groups 1-3  
for the  
Statewide All Shellfish (Except Prince William Sound, Southeast, and Yakutat) and Prince  
William Sound Shrimp Only  
Alaska Board of Fisheries Meeting, Anchorage, Alaska  
March 26—April 2, 2022

The Area M Seiners Association submits these comments on Proposal 282 before the Alaska Board of Fisheries at its March 26-April 2, 2022, Anchorage Meeting. Proposal 282 is an out-of-cycle proposal to restrict Area M fisheries in the Dolgoi Island Area and Shumagin Islands Section. The rationale for Proposal 282 is that such restrictions are necessary to address a conservation concern regarding the early run of sockeye salmon in Chignik (also known as the Black Lake run). The restrictions would be imposed from June 15 to July 25 unless the Black Lake run is expected to meet the midpoint of its current Biological Escapement Goal or a commercial salmon fishery opens in Chignik.

The Board should reject Proposal 282 for the following reasons, among others:

- **Proposal 282 Is an Allocation Proposal.** As the Alaska Department of Fish and Game (Department) has recognized, Proposal 282 does not address a conservation concern and, to the contrary, is an allocative proposal.<sup>1</sup> When the Department granted Agenda Change Request (ACR) 7 and placed Proposal 282 on its agenda, the best available information indicated that the Black Lake run had not met its Biological Escapement Goal (BEG) for four years. However, updated data from the Department show that the run met its BEG in 2019. Moreover, while escapements in 2018, 2020 and 2021 were below the BEG range, additional analysis of historical escapement data shows that they were well above a Sustainable Escapement Threshold (SET), a level at which the run has consistently demonstrated an ability to sustain itself.<sup>2</sup> In addition, after the Board accepted ACR 7, the Department released its preliminary 2022 forecasts, in which it is projecting a return to Black Lake of 639,000 sockeye, allowing for escapement of 400,000 sockeye (the midpoint of the current BEG range) and a

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<sup>1</sup> RC 2, Alaska Department of Fish and Game, Staff Comments on Commercial, Personal Use, Sport, and Subsistence Regulatory Proposals, Committee of the Whole—Groups 1-3, for the Statewide All Shellfish (Except Prince William Sound, Southeast, and Yakutat) and Prince William Sound Shrimp Only Alaska Board of Fisheries Meeting, Anchorage, Alaska, March 26—April 2, 2022 at page 123 (Regional Information Report No. 5J22-01) (hereafter, RC 2).

<sup>2</sup> See Appendix A.



harvest in Chignik of 239,000 Black Lake sockeye.<sup>3</sup> This new information, which was not available to the Board when it accepted ACR 7, makes clear that there is no conservation concern for the Black Lake run under the Board's policy, set forth in regulation, for management of sustainable salmon fisheries (which defines a "conservation concern" as a chronic inability to meet a sustainable escapement threshold over a period of four to five years). Because it is now clear that Proposal 282 is a purely allocative proposal, it should not be used to re-write Area M management plans at an out-of-cycle meeting in contravention of Board policy and regulation.

- **Further Restrictions on the Dolgoi Island Area Fishery Will Not Result in Material Increases in the Black Lake Run.** Since the Western Alaska Salmon Stock Identification Program (WASSIP) study in the mid-2000s, the Board has reduced fishing time in both the Dolgoi Island Area and Shumagin Islands Section,<sup>4</sup> placed a cap on harvests in the Dolgoi Island Area,<sup>5</sup> and, in 2019, altered the June fishing schedule and excluded purse seine vessels from the Dolgoi Island Area (as a result of which most fishing in that Area is now by set netters).<sup>6</sup> In addition, in 2018 and 2020, in response to low Chignik returns, the Department used its Emergency Order (EO) authority to further restrict fishing hours in both the Dolgoi

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<sup>3</sup> Preliminary 2022 Westward Region Salmon Forecasts, ADF&G Advisory Announcement for Immediate Release: 12/14/2021, Table 2.

<sup>4</sup> The June management plan that was in effect when the WASSIP study was conducted was adopted by the Board of Fisheries in February 2004. That plan established a fishing schedule that began at 6:00 AM on June 7 and ended at 10:00 PM on June 29. Fishing periods were 88 hours in duration interspersed by 32-hour closures, except for the final fishing period of 64 hours. This schedule provided 416 hours of concurrent opportunity for all gear types (set gillnet, purse seine, and drift gillnet). E. Fox *et al.*, South Alaska Peninsula Salmon Annual Management Report, 2020, *etc.* at 4 (ADF&G Regional Information Report No. 4K21-01 (Nov. 2021)) (hereafter, 2020 South Peninsula Mgmt. Rpt.). In 2013, the Board modified the June schedule for purse seine and drift gillnet gear by delaying the start date to June 10, which reduced fishing time by 64 hours. *Id.*

<sup>5</sup> In 2016, the Board established a harvest trigger for the Dolgoi Island Area, as defined in WASSIP, for the period from June 1 through July 25. Once 191,000 sockeye are harvested in that area, based on fish ticket information, the portion of the West Pavlof Bay Section south of Black Point (statistical area 283-26) and waters of the Volcano Bay Section (statistical areas 284-37 through 284-39) are closed to commercial salmon fishing through July 25, although portions of the West Pavlof Bay Section south of Black Point (statistical area 283-26) may reopen to commercial salmon fishing on July 17. *Id.*

<sup>6</sup> In 2019, the Board modified the June management plan so that the first commercial fishing period would begin on June 6 at 6:00 AM and close at 10:00 PM on June 8, a 64-hour fishing period for set gillnet gear only. Beginning at 6:00 AM June 10, all gear types are allowed to fish for an 88-hour fishing period that ends at 10:00 PM on June 13. That fishing period is followed by a 32-hour closure for all gear types. The commercial salmon fishery then reopens for three more 88-hour fishing periods, followed by closures of 32 hours each. The final commercial fishing period in June ends at 10:00 PM on June 28. *Id.* at 4-5. In addition to modifying the fishing schedule, the modified the management plan to close the waters of the Volcano Bay Section of the Southwestern District (statistical areas 284-37 through 284-39), the Belkovsky Bay Section of the Southwestern District (statistical area 284-42), excluding those waters inside of a line between Voaponni Point and Bold Cape, and the South Central District (statistical areas 283-15 through 283-26) to purse seine gear. Except for the excluded waters within the Belkovsky Bay Section, this closure corresponds to the Dolgoi Island Area as defined in WASSIP; that is, the purse seine fleet has been excluded from essentially all of the WASSIP Dolgoi Island Area. *Id.* at 5.



Island Area and Shumagin Islands Section.<sup>7</sup> The Department retains that authority and can exercise it if necessary in 2022.

As a result of these measures, recent harvests in the Dolgoi Island Area have been low, especially in June when, according to WASSIP, the Black Lake run is more likely to contribute to the harvest:

Dolgoi Island Area Sockeye Harvests <sup>8</sup>		
Year	June	July
2018	11,941	42,698
2019	30,993	132,835
2020	2,521	65,765
2021	10,830	152,496
<i>Average</i>	<i>14,071</i>	<i>98,449</i>

Further reductions on these already low harvest levels, which will fall most heavily on the set net fleet, will not result in material increases in the Black Lake run. Moreover, the Department has stated that it is not yet able to evaluate the effect of the modified fishing schedule and the exclusion of the seine fleet from the Dolgoi Island Area that the Board adopted in 2019. The Board should not impose additional restrictions on the small Dolgoi Island Area fishery when it is not yet able to evaluate the effect of these management measures, especially the exclusion of the seine fleet from that area in 2019.

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<sup>7</sup> In 2018, the Department reduced the last two openings in June from 88 to 40 hours for a total reduction of 96 hours for all gear types. In addition, the Department did not open portions of the Dolgoi Island Area during the July 14, 18 or 22 openings due to the poor early run in Chignik. This reduced fishing in those portions of the Dolgoi Island Area by 108 hours. *Id.* at 47-48 (App. A16); *see also* Memorandum from Dawn Wiburn to Nick Sagalkin re 2018 Chignik Salmon Season Summary at 4 (ADF&G Oct. 2, 2018) (“In response to the poor 2018 Chignik river sockeye salmon early run, unprecedented management actions were taken by the department in the Area M South Unimak and Shumagin Islands fishery. The department again took action in the post-June fishery (Mid-July) by leaving a portion of the Dolgoi Island Area closed during scheduled fishing periods.”). The area that remained closed comprised the waters of the Volcano Bay Section of the Southwestern District south and east of a line from Arch Point to a point on the Belkofski Peninsula and the portion of the West Pavlof Bay Section of the South Central District south of Black Point. *See E. Fox et al.*, South Alaska Peninsula Salmon Annual Management Report, 2018, *etc.* at 47-48 (App. A16) (ADF&G Regional Information Report No. 4K19-01 (Jan. 2019)) (hereafter, 2018 South Peninsula Mgmt. Rpt.).

In 2020, although the 191,000-fish trigger was not reached in the Dolgoi Island Area, the Department closed the area to all remaining openings on June 13 and reduced the last two openings in the June Shumagin Islands fishery to 40 hours each. This reduced fishing hours in the Dolgoi Island Area by 264 hours and reduced fishing hours in the Shumagin Islands by 96 hours. The Department took these actions because, on June 13, the Chignik River sockeye escapement was the second lowest recorded escapement in the history of the Chignik River weir operation.<sup>7</sup> Due to continued low escapement of sockeye to the Chignik River, the Department kept the Dolgoi Island Area closed through July, or a reduction of 249 fishing hours in that area. 2020 Alaska Peninsula and Aleutian Islands Salmon Season Summary at 5 (ADF&G Advisory Announcement Dec. 2, 2020).

<sup>8</sup> RC 2 at 132.



- **Further Restrictions on the Shumagin Islands Section Fishery Will Not Result in Material Increases in the Black Lake Run.** According to the WASSIP study, the harvest rate on the Black Lake run in the Shumagin Islands Section is in the single digits.

Harvest Rates on Black Lake Subregional Reporting Group in the June and Post-June Fisheries by Area Strata as Reported in WASSIP <sup>9</sup>						
Area Stratum	2006		2007		2008	
	June	Post-June	June	Post-June	June	Post-June
Shumagin Islands	5.4%	1.6%	2.3%	1.4%	3.7%	1.0%
Dolgoi Island	12.6%	1.6%	2.3%	2.4%	1.6%	0.4%

It is important to note that, as reported in WASSIP, these rates were biased high.<sup>10</sup> However, even with that bias, the harvest rates on the Black Lake run in the Shumagin Islands Section are similar to those that the Board has previously determined do not present conservation or allocation concerns. For example, in Finding 2004-229-FB, the Board found that similar harvest rates of perhaps 4 to 7 percent “would mean that roughly 95% of each run was subsequently available to commercial, sport, and subsistence harvests in more terminal locations.” (*Id.* at 4.) The Board “agree[d] with prior boards” that found that the impact of such harvest rates “is negligible” and “would not produce detectable results or measurable benefits” in terminal areas. (*Id.*)

The same is true here: given the low harvest rates on the Black Lake run, the impact of the Shumagin Islands fishery on the Black Lake run is negligible and reducing the sockeye harvest in that fishery would not produce detectable results or measurable benefits to the Black Lake run. This is especially true in years of record-breaking Bristol Bay sockeye runs and low returns to Black Lake, such as 2021. According to the WASSIP study, Bristol Bay runs are the dominant contributors to the June fishery in the Shumagin Islands in most years and time strata:

<sup>9</sup> C. Habicht et al., Harvest and Harvest Rates of Sockeye Salmon Stocks in Fisheries of the Western Alaska Salmon Stock Identification Program (WASSIP), 2006-2008 at 731-33 (Appendices F64-F66) (ADF&G, Special Publication No. 12-24 (Nov. 2012)) (hereafter, WASSIP, SP 12-24).

<sup>10</sup> According to WASSIP, “when considering harvest rates, it is important to recognize that they are likely overestimates of true harvest rates. This is because our estimates of stock-specific escapement are almost certainly biased low (see Eggers et al. 2012) and we are also unable to account for harvest of WASSIP stocks outside of the WASSIP area. Each of these contributes to estimates of stock-specific total runs (denominator in harvest rate calculations) that are biased low, which results in harvest rate estimates which are biased high.” *Id.* at 35.



Mean Percentage Contributions of Black Lake and Bristol Bay Sockeye to Harvests in the June Shumagin Islands Fishery as Reported in WASSIP <sup>11</sup>			
Year	Temporal Strata	Black Lake Percentage Contribution	Bristol Bay (All Subregional Groups Combined) Percentage Contribution
2006	Stratum I (6/7-6/13); H=105,366	7.1%	46.0%
	Stratum II (6/14-6/20) H=176,663	28.8%	49.1%
	Stratum III (6/22-6/29) H=159,219	9.2%	61.4%
2007	Stratum I (6/7-6/13); H=118,519	1.0%	80.2%
	Stratum II (6/14-6/20) H=310,690	0.2%	89.3%
	Stratum III (6/22-6/29) H=422,989	3.3%	89.4%
2008	Stratum I (6/7-6/13); H=0 <sup>12</sup>		
	Stratum II (6/14-6/20) H=309,801	3.5%	85.5%
	Stratum III (6/22-6/29) H=339,204	4.7%	73.9%

As these data indicate, the contributions from the Bristol Bay runs far outweigh the contributions from the Black Lake run. The dominant contributions from the Bristol Bay runs were especially evident in 2007, when they contributed from 80% to 90% of the harvests

<sup>11</sup> T. Dann *et al.*, Stock Composition of Sockeye Salmon Harvests in Fisheries of the Western Alaska Salmon Stock Identification Program (WASSIP), 2006-2008 at 184-86 (App. D1-D3) (ADF&G, Special Publication No. 12-22 (Nov. 2012)) (hereafter, WASSIP, SP 12-22). “H” is the total number of sockeye reported to have been harvested in the Shumagin Islands fishery each temporal strata. *See id.*

<sup>12</sup> There was no fishing effort during this time stratum. *See id.* at 12.



compared to contributions ranging from 0.2% to 3.3% from Black Lake. A similar, although slightly less lopsided pattern was observed in 2008.

In recent years, there have been record-breaking Bristol Bay runs and low returns to Black Lake. Under these circumstances, it is reasonable to expect that the contributions of the Bristol Bay runs to the Shumagin Islands harvest would be even higher and the contributions of the Black Lake run would be even lower. This is borne out by the observation of Shumagin Islands fishermen, who have confirmed that the harvest was dominated by smaller Bristol Bay fish migrating to the west, with no evidence of larger Chignik fish migrating to the east.

In a mixed-stock fishery, the presence of multiple stocks buffers impacts on any one stock, especially a weak stock.<sup>13</sup> Given the dominance of Bristol Bay runs in the Shumagin Islands fishery, the low harvest rates on the Black Lake run documented in the WASSIP study, and the recent record-breaking Bristol Bay runs, further restrictions on the Shumagin Islands fishery are not necessary to protect the Black Lake run, especially since the Department retains its EO authority in the event of unusually low sockeye returns to Chignik.

Further support for this conclusion is found in the fact that the restrictions imposed on mixed-stock fisheries in areas east and west of Chignik have not helped the Chignik runs. There is no evidence that the restrictions imposed on fisheries in Cape Igvak, the Southeast District Mainland, the Dolgoi Island Area and the Shumagin Islands District in recent years have resulted in material increases in returns to Chignik. Department managers report that, when the Department has used its EO authority to reduce Area M fisheries in recent years, they have not detected any increase in Chignik returns.

- **The Recent Low Returns of the Black Lake Run Are Not Due to Area M Fisheries; They Are Most Likely the Result of Environmental Factors that Cannot Be Cured by Restricting Area M Fisheries.** The Area M Seiners Association contracted ICF, an international consulting firm with substantial expertise in fisheries science and management (including expertise in Alaska salmon fisheries) to examine the causes of recent low returns of the Black Lake run. ICF's report, which it is submitting to the Board in response to Proposal 282, finds no evidence that Area M fisheries have caused recent low returns for the Black Lake run. Rather, ICF concludes that the most likely causes of relatively low returns in recent years are some combination of changes in freshwater habitat and/or anomalously warm ocean temperatures. Although there are some mixed signals regarding freshwater habitat, on balance the evidence indicates that the freshwater habitat remains productive. It is therefore reasonable to expect that run sizes will rebound as warm ocean temperatures abate. Indeed, as noted above, the Department's 2022 forecast is for a Black Lake return of 639,000 fish to Chignik, which would allow for escapement of 400,000 fish (at the midpoint of the BEG range) *and* a harvest of 239,000 Black Lake sockeye in Chignik. Because restrictions on Area M fisheries cannot in any event address the environmental causes of the recent low returns of the Black

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<sup>13</sup> See Appendix B (D. Lloyd, Relative Effects of Mixed Stock Fisheries on Specific Stocks of Concern: A Simplified Model and Brief Case Study (Reprinted from the Alaska Fishery Research Bulletin, Vol. 3 No.1 Summer 1996)).



Lake run, there is no need to impose further out-of-cycle restrictions on Area M fisheries under these circumstances.

- **Proposal 282 Reflects Hostility to Mixed-Stock Fisheries that Is Inconsistent with Alaska Law and Policy.** Proposal 282 is the latest in a long line of proposals from Chignik to reduce mixed-stock fisheries in Areas K and M. These proposals have targeted mixed-stock fisheries in areas to the east and west of Chignik in a misguided effort to increase fishing opportunities in Chignik, even in years when there were no claimed conservation concerns. The Chignik Regional Aquaculture Association, which has made or supported many of these proposals, states in its Mission Statement that it “strongly opposes all interception fisheries that target directly or indirectly on Chignik bound salmon,” regardless of the presence of a conservation concern.<sup>14</sup> This extreme and absolute position is all about allocation and not conservation and is contrary to the fisheries management philosophy of the Board and Department. If it were adopted by the Board, it would close multiple fisheries throughout the State, including the Western and Perryville fisheries in Chignik,<sup>15</sup> and completely undermine the State’s position in Pacific Salmon Treaty negotiations. Indeed, when Canadian reports recently took aim at Southeastern Alaska salmon fisheries for intercepting British Columbia-bound salmon stocks, Department Commissioner Vincent-Lang called the reports an “unfair and biased attack on Alaska salmon fisheries” and a “special interest hit piece.”<sup>16</sup> As similar attacks, such as Proposal 282, are leveled against Area M fisheries, it is important to remember that mixed-stock fisheries are far more common in Alaska than single-stock terminal fisheries. Alaska has always recognized that mixed-stock marine fisheries have as much right to harvest salmon as fisheries opened in streams where salmon originate. Salmon are common property that belong to everyone, and there is no priority allocation for stakeholders closer to the stream of origin.
- **Proposal 282 Has a Cost-Benefit Ratio on the Order of 15 to 1.** In addition to examining the causes of recent low returns to Chignik, ICF analyzed the costs and benefits of Proposal 282. ICF used a retrospective analysis that looked at the costs to Area M fisheries and the benefits to Black Lake escapement if Proposal 282 had been in effect over the past ten years. According to ICF’s analysis, the cost-benefit ratio of the proposed restrictions on the Dolgoi Island Area and Shumagin Islands District fisheries is on the order of 15 to 1. That is, the proposed restrictions would reduce harvests in the Dolgoi Island Area and Shumagin Islands District fisheries by **15 times** the increased escapement in Chignik. This cost-benefit ratio would be even higher in years such as 2021, when there is a large Bristol Bay run migrating through the Shumagin Islands District. Because there is no conservation concern justifying

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<sup>14</sup> Available at [Mission Statement | Chignik Regional Aquaculture Association](#) (last visited March 8, 2022).

<sup>15</sup> According to WASSIP data, the Western and Perryville District fisheries harvested sockeye that originated outside of Chignik, with Bristol Bay, North Peninsula, South Peninsula, and East of WASSIP origin sockeye making contributions to the harvests in those Districts. See WASSIP, SP-22 at 41-43 (Tables 15-17).

<sup>16</sup> ADF&G Press Release (Jan. 13, 2022), available at [https://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr&release=2022\\_01\\_13](https://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr&release=2022_01_13) (last visited March 7, 2022).



the proposed restrictions, the Board should not adopt restrictions that would impose such a heavily lopsided cost on Area M harvests in an out-of-cycle meeting in which allocation issues cannot be fully explored.

- **The Board Should Defer Consideration of Proposal 282 until the 2022-2023 Meeting Cycle When Other Responses to Low Returns of the Black Lake Run Can Be Considered.** Area M Seiners Association contracted with Steve Martell to examine the productivity of the Chignik sockeye runs. According to Dr. Martell's paper, an alternative harvest policy based on a fixed harvest rate would have a much higher utility during periods of low abundance, where fisheries would not be subjected to an absolute closure, but could operate within restrictions or limits (e.g., time-area closures) that would prevent exploitation rates from exceeding harvest rate objectives. This is an issue that can be explored in the 2022-2023 meeting cycle, at a meeting addressing the Chignik (as well as the Area M) fisheries. It cannot be explored in an out-of-cycle meeting addressing only Area M. The Board should resist the temptation to "do something" when there is no conservation concern, the Department retains its EO authority in the event of a conservation concern, there is no reason to believe the proposed action will have any detectable benefit in Chignik, the action would impose heavily lopsided costs on Area M, and other more promising actions cannot be considered until an in-cycle meeting.



## Appendix A

### **Proposal 282 Is an *Allocative* Proposal Not a *Conservation* Proposal. The Board Should Not Attempt to Re-Write Area M Management Plans in an Out-of-Cycle Meeting for Allocative Purposes.**

In its comments on Proposal 282, the Department states that it is neutral “on this allocative proposal.”<sup>17</sup> The Department’s characterization of Proposal 282 as an allocative proposal, not a conservation proposal, is correct. The Board should not attempt to re-write the Area M Management Plans in an out-of-cycle meeting based on allocative proposal.

The Board’s policy for management of sustainable salmon fisheries defines a “conservation concern” as a “concern arising from a chronic inability, despite the use of specific management measures, to maintain escapements for a stock above a sustained escapement threshold (SET).” 5 AAC 39.222(f)(6). “[C]hronic inability” is “the continuing or anticipated inability to meet escapement thresholds over a four to five year period, which is approximately the generation time of most salmon species.” 5 AAC 39.222(f)(5).

A “sustained escapement threshold” or “SET” is “a threshold level of escapement, below which the ability of the salmon stock to sustain itself is jeopardized” and “can be estimated based on lower ranges of historical escapement levels, for which the salmon stock has consistently demonstrated the ability to sustain itself.” 5 AAC 39.222(f)(39). “[T]he SET is *lower* than the lower bound of the [biological escapement goal (BEG)] and *lower* than the lower bound of the [sustainable escapement goal (SEG)].” *Id.* (emphasis added).

Although the Department has not set a sustainable escapement threshold for the Black Lake run, the brood table for the run shows that, **historically, the run has been able to sustain itself when escapements were well below 350,000 fish.** The following table shows brood years in which, according to the Department’s data, parent escapements were less than 350,000 fish and the total return for those brood years. Between 1922 and 2017, there were 33 years with escapements less than 350,000 fish, and 15 years with escapements less than 179,000 fish. In 31 of these years the total return exceeded the parent year escapement; that is, **it has consistently demonstrated the ability to sustain itself at these escapement levels.**

Black Lake: Total Returns for Brood Years with Parent Escapements < 350,000 <sup>18</sup>		
Brood Year	Parent Escapement	Total Return
1922	86,421	963,814
1923	4,642	380,359

<sup>17</sup> RC 2, Alaska Department of Fish and Game, Staff Comments on Commercial, Personal Use, Sport, and Subsistence Regulatory Proposals, Committee of the Whole—Groups 1-3, for the Statewide All Shellfish (Except Prince William Sound, Southeast, and Yakutat) and Prince William Sound Shrimp Only Alaska Board of Fisheries Meeting, Anchorage, Alaska, March 26—April 2, 2022 at page 123 (Regional Information Report No. 5J22-01).

<sup>18</sup> K. Schaberg et al., Review of Salmon Escapement Goals in the Chignik Management Area, 2018, at pages 30-32 (Appendix B3) (ADF&G, Fishery Manuscript Series No. 19-02, Feb. 2019).



1926	289,099	530,194
1930	92,955	377,485
1931	96,201	1,128,231
1933	223,913	621,400
1935	194,636	419,709
1937	205,613	809,550
1938	175,972	1,025,570
1940	176,307	505,379
1944	291,844	334,093
1945	217,882	245,534
1949	213,269	308,534
1950	125,126	625,689
1951	125,126	625,689
1952	34,155	230,820
1953	168,375	357,607
1954	184,953	142,421
1955	256,757	554,495
1956	289,096	208,168
1957	192,479	350,512
1958	120,862	242,370
1959	112,226	340,946
1960	251,567	774,756
1961	140,714	571,645
1962	167,602	693,473
1963	332,536	698,703
1964	137,073	755,726
1965	307,192	1,948,144
1967	328,000	240,667
1968	342,343	1,210,286
1972	326,320	912,950
1975	326,563	361,227

Given this data, despite low returns in recent years, the Black Lake run has not demonstrated a “chronic inability, despite the use of specific management measures, to maintain escapements ... above a sustained escapement threshold.” Although the Department previously reported that the run had not met its *biological escapement goal* (BEG) goal for the past four years, updated data show that the run met its BEG in 2012, 2013, 2015, 2016, 2017, **and 2019** and is projected to do so again in 2022. And, although the run did not meet the lower end of the BEG in 2014, 2018, 2020 and 2021, in each of those years the escapements were well above historic levels from which the run has consistently demonstrated the ability to sustain itself. Accordingly, there is no evidence that the run has been, or is anticipated to be, below its *sustainable escapement threshold* for a period of four to five years.



The following table provides the Department’s most recent estimates of escapements for the Black Lake run since 2012 (*i.e.* for the past ten years) and the projected escapement for 2022, and indicates whether the escapement met (or is projected to meet) the Department’s BEG of 350,000 to 450,000 fish and whether the escapement was (or is projected to be) above 179,000. As noted, since 1922, escapements were below 350,000 in 33 years and below 179,000 in 15 years, and yet the run consistently has been able to sustain itself.

Black Lake Escapement Estimates <sup>19</sup>			
Year	Escapement	Met BEG?	More Than 179,000?
2012	356,513	Yes	Yes
2013	401,052	Yes	Yes
2014	342,404	No	Yes
2015	426,817	Yes	Yes
2016	410,922	Yes	Yes
2017	428,350	Yes	Yes
2018	182,991	No	Yes
2019	379,444	Yes	Yes
2020	179,200	No	Yes
2021	296,033	No	Yes
2022 (Projected)	400,000	Yes	Yes

In sum, the available data supports the Department’s view that Proposal 282 is an allocation proposal, not a conservation proposal. The Board should not attempt to re-write the Area M management plans in an out-of-cycle meeting to address allocation concerns.

Under 5 AAC 39.999(a)(1), the Board will, in its discretion, change its schedule for consideration of a proposed regulatory change in response to an agenda change request only for a fishery conservation purpose or reason, to correct an error in a regulation, or to correct an effect on a fishery that was unforeseen when a regulation was adopted. ***The Board will not accept an ACR that is predominantly allocative in nature in the absence of new information found by the Board to be compelling.*** 5 AAC 39.999(a)(2). These limitations on ACRs reflect “the importance of public participation in developing management regulations” and the Board’s recognition that “public reliance on the predictability of the normal board process is a critical element in regulatory changes.” 5 AAC 96.625(e). Because new information now demonstrates that Proposal 282 is an allocation—not a conservation—proposal, the Board should decline to make changes to the Area M management plans based on that proposal in an out-of-cycle meeting.

<sup>19</sup> The Department’s most recent escapement estimates were provided to Mike Tillotson of ICF by K. Schaberg. The Department’s projected escapement for 2022 is in Preliminary 2022 Westward Region Salmon Forecasts, ADF&G Advisory Announcement for Immediate Release: 12/14/2021, Table 2.



## Appendix B

**D. Lloyd, Relative Effects of Mixed Stock Fisheries on Specific Stocks of Concern: A Simplified Model and Brief Case Study (Reprinted from the Alaska Fishery Research Bulletin, Vol. 3 No.1 Summer 1996)**



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**Relative Effects of Mixed Stock Fisheries  
on Specific Stocks of Concern:  
A Simplified Model and Brief Case Study**

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**Denby S. Lloyd**

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## Relative Effects of Mixed Stock Fisheries on Specific Stocks of Concern: A Simplified Model and Brief Case Study

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Denby S. Lloyd

**ABSTRACT:** An algebraic model is presented that allows comparison of changes in total catch, stock-specific catch, and stock-specific harvest rate for various fisheries harvesting the same stock of concern under conditions of change in the stock's abundance. The model operates without detailed estimates of each fishery's complete stock composition and without ongoing assessment of each component stock's biomass or population size. Rather, observations or assumptions of the proportional contribution ( $\rho_x$ ) of the stock of concern to each fishery's total catch, combined with presumptions of change in that stock's abundance ( $\theta_x$ ), are sufficient to illustrate proportional changes in catch and harvest rate under management prescriptions for constant harvest rate and for constant total catch. Results indicate that mixed stock fisheries, especially those with low  $\rho_x$  from a particular stock, are only slightly affected by and exert very small influence upon changes in abundance of that stock, even if total harvests remain constant. In contrast, single stock fisheries with high  $\rho_x$  are more directly affected by and exert more substantial influence upon changes in the stock's abundance. Because the presence of other stocks in a mixed stock fishery dilutes its relationship to any stock in particular, such a fishery may not need to be managed nearly so precisely as another fishery for which a common stock supports the bulk of the harvest.

### INTRODUCTION

The harvest of specific stocks of fish in mixed stock fisheries often generates questions of both biological and social concern. This is especially true when 1 or more of the stocks taken in an otherwise robust fishery is in decline. Conflicts exacerbate when the stock has other potential users, disputes focusing on appropriate sharing of management restrictions to help reverse the stock's decline. The attendant technical debate generally centers around the accuracy and precision of estimates of the stock's contribution to the fisheries and the effect of the harvests on the stock in question. Social debate can often range much further.

Obtaining accurate information on relative stock contribution to most mixed stock fisheries and evaluating a fishery's impacts on the component stocks are not easy tasks. At a minimum the origin of contributing stocks taken (e.g., determined by tagging experiments, scale-pattern analysis, or genetic stock identification) and their respective catches must be known. To evaluate the impact of the fishery on each stock, however, requires even more — that is, detailed knowledge of each component stock's respective total annual biomass or population size. And if stock identifica-

tion is not available each year, then to estimate catches and impacts over time, some indication of each stock's ongoing relative vulnerability to the fishery is required.

Rarely is all this information available, largely because this type of comprehensive data gathering is very expensive. Facing these constraints, managers and research biologists often need to fashion and defend some enterprising assumptions about stock composition, relative vulnerability, and annual stock size in order to estimate harvest or harvest rate, or to set prescriptions for harvest controls on component stocks. In a regulatory context such tacit uncertainty can lead to public perception that technical guidance is lacking at a time when decisions must be made.

This paper presents an alternative model, not nearly so data-intensive, with which to anticipate the relative potential impacts of various fisheries on a stock facing population decline. Specifically, this algebraic model factors out the need for most of the data inputs normally associated with estimating stock composition and calculating stock-specific harvest rates. To illustrate use of this model, a case study is presented of 2 Pacific herring *Clupea pallasii* fisheries in Alaska that purportedly harvest fish from the same stock: the Dutch Harbor food/bait fishery and the Nelson Island

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sac roe fishery in relation to spawning biomass of the Nelson Island stock.

There have been a number of attempts to characterize the relation of a mixed stock fishery to its various component stocks (Ricker 1958; Paulik et al. 1967; Hilborn 1976, 1985), but these have focused primarily upon calculation of optimum or maximum exploitation rates and rely upon some detailed estimates of individual stock-recruitment parameters. As a practical matter, such data often are not available (Healey 1982). For many management questions, more simplified approaches may well be sufficient.

## METHODS

The model relies upon estimates or assumptions of (1) the proportion of the fishery's total catch ( $\rho_x$ ) composed of fish from the stock of particular interest,  $x$ , and (2) the change in population size ( $\theta_x$ ) exhibited by that stock between one period or year to the next. Model outputs describe (1) yearly percentage changes in total catch ( $\theta_c$ ) and in stock-specific catch ( $\theta_{c,x}$ ) if fishing intensity were to remain constant, and (2) yearly percentage changes in harvest rate ( $\theta_{\mu,x}^*$ ) on the stock and its catch ( $\theta_{c,x}^*$ ) if the fishery's total catch were to remain constant. In the face of a particular stock's anticipated, presumed, or observed decline, values for  $\theta_c$ ,  $\theta_{c,x}$ ,  $\theta_{\mu,x}^*$ , and  $\theta_{c,x}^*$  give readily understandable measures of the stock's importance to the mixed stock fishery, the potential impact of the fishery on that stock, and the relative impacts on affected fisheries. Such comparisons can be useful in evaluating management and regulatory decisions necessary to address stock declines, especially in the face of uncertain or frequently unavailable data. This process might also placate legitimate concerns over fairness among multiple users.

### Parameters and Definitions

The only inputs required are measurements or assumptions of  $\rho_x$  and  $\theta_x$ . Other parameters, such as total and stock-specific catches and total biomass or population size for the stock in question, can be input, but they are not necessary to derive rates of change in total catch, harvest rate, and stock-specific catch.

Let  $C_x$  be a fishery's catch of stock  $x$  and  $C_y$  be a fishery's catch of all other stocks combined, so that total catch is  $C = C_x + C_y$ . Let  $N_x$  be the abundance of stock  $x$ , so that harvest rate is  $\mu_x = C_x \cdot N_x^{-1}$ . The proportion of stock  $x$  in the total catch is  $\rho_x = C_x \cdot C^{-1}$ .

The catch of a single stock in a mixed stock fishery in year 1 is

$$C_{x,1} = C_1 \rho_{x,1} \quad (1)$$

The harvest rate in year 1 is

$$\mu_{x,1} = \frac{C_{x,1}}{N_{x,1}} \quad (2)$$

The proportional change in stock abundance between years 1 and 2 is

$$\theta_x = \frac{N_{x,2} - N_{x,1}}{N_{x,1}} \quad \text{or} \quad N_{x,2} = (\theta_x + 1) N_{x,1} \quad (3)$$

where  $N_{x,2}$  is the stock size in year 2 and  $N_{x,1}$  is the stock size in year 1.

For simplicity and to focus attention, the model assumes that between years 1 and 2 stock  $x$  is the only stock to change biomass or population size. The model also assumes that other aspects of vulnerability (e.g., migratory pathways and timing, gear efficiency, etc.) for all stocks in the fishery remain constant.

### Constant Harvest Rate

If in year 2 the fishery's overall intensity were to remain the same as in year 1, then respective harvest rates on all stocks, including  $x$ , would remain the same,  $\mu_{x,1} = \mu_{x,2} = \mu_x$ . The catch of stock  $x$  would thus decline by the same factor as the stock's size declined. Using equation (3),

$$C_{x,2} = \mu_x N_{x,2} = C_{x,1} (\theta_x + 1) \quad (4)$$

Given that abundance, harvest rates, and thus catches from other stocks remain constant, the total fishery catch of all stocks would decline by the numerical amount that catch of stock  $x$  declined:

$$C_2 = C_1 - (C_{x,1} - C_{x,2}) \quad (5)$$

Model output, in terms of the rate of change in stock-specific catch and under conditions of constant harvest rate, is simply equivalent to the proportional change in stock size, as derived from equation (4):

$$\theta_{c,x} = \frac{C_{x,2} - C_{x,1}}{C_{x,1}} = \theta_x \cdot \quad (6)$$

The rate of change in total catch under constant harvest rate is

$$\theta_c = \frac{C_2 - C_1}{C_1} \cdot \quad (7)$$

This equation can be simplified using relationships in equations (5), (4), and (1), such that

$$\theta_c = \rho_{x,1} \theta_x \cdot \quad (8)$$

This percentage change in total fishery catch ( $\theta_c$ ) under constant harvest rate or fishing intensity results from the change in 1 component stock's abundance and the fishery's consequent change in catch effected by that stock alone.

Whereas individual stock harvest rates remain constant, changes in total catch and stock- $x$  catch change the proportion of stock  $x$  in the total catch. Thus, in year 2

$$\rho_{x,2} = \frac{C_{x,2}}{C_2} \cdot \quad (9)$$

### Constant Total Catch

If in year 2 the fishery were to increase in intensity to make up for the lower availability of fish from stock  $x$ , thus keeping total catch in year 2 the same as in year 1, then respective harvest rates on all stocks would increase. The increased harvest rate on stock  $x$  is of particular concern.

The increase in total fishery catch from  $C_2$  to make  $C_2^* = C_1$  would equal the number of stock- $x$  fish not caught under constant harvest rate (see equation (5)):

$$C_2^* - C_2 = C_{x,1} - C_{x,2} = C_1 - C_2 \cdot \quad (10)$$

However, the stock composition of this incremental increase in total catch would not be solely from stock  $x$ . In fact, the increment ( $C_2^* - C_2$  or  $C_1 - C_2$ ) would display the same stock composition as the rest of the catch in year 2. Consequently, the total number of fish taken from the stock of concern would be the original amount calculated under constant intensity plus the

product of  $\rho_{x,2}$  times the increment in total catch needed to make up for the shortfall, or

$$C_{x,2}^* = C_{x,2} + [(C_1 - C_2) \rho_{x,2}] \cdot \quad (11)$$

The new harvest rate on stock  $x$  would then be

$$\mu_{x,2}^* = \frac{C_{x,2}^*}{N_{x,2}} \cdot \quad (12)$$

Model output, in terms of change in harvest rate on stock  $x$  with total fishery catch remaining constant between years 1 and 2, is

$$\theta_{\mu,x}^* = \frac{\mu_{x,2}^* - \mu_{x,1}}{\mu_{x,1}} \cdot \quad (13)$$

This output equation can be simplified to relate change in harvest rate directly to  $\rho_x$  and  $\theta_x$  by first defining  $\mu_{x,2}^*$  from equation (12), then using relationships outlined in equations (11), (9), (4), and (3):

$$\mu_{x,2}^* = \frac{C_{x,1} C_1}{N_{x,1} C_2} \cdot \quad (14)$$

Therefore,  $\theta_{\mu,x}^*$  from equation (13) can be derived from equations (14) and (2):

$$\theta_{\mu,x}^* = \left( \frac{C_1}{C_2} \right) - 1 \cdot \quad (15)$$

Equation (15) can then be expressed in terms of  $\rho_{x,1}$  and  $\theta_x$  by substituting values from equations (5), (1), and (4):

$$\theta_{\mu,x}^* = \frac{-(\rho_{x,1} \theta_x)}{1 + (\rho_{x,1} \theta_x)} \cdot \quad (16)$$

This percentage change in harvest rate under constant total catch results from decline in abundance of stock  $x$  and subsequent intensification of the fishery on the entire mixture of stocks to maintain the same year 1 total catch level in year 2.

Corresponding change in catch of stock  $x$  if total catch remained constant is

$$\theta_{c,x}^* = \frac{C_{x,2}^* - C_{x,1}}{C_{x,1}}. \quad (17)$$

This can be simplified similarly to the derivation of equation (14).  $C_{x,2}^*$  from equation (11) can be rewritten as

$$C_{x,2}^* = \frac{[C_{x,1}(\theta_x + 1)C_1]}{C_{x,2}}. \quad (18)$$

Therefore, using equation (16)

$$\theta_{c,x}^* = \frac{\theta_x - (\rho_{x,1} \theta_x)}{1 + (\rho_{x,1} \theta_x)}. \quad (19)$$

The change in stock- $x$  catch under conditions of constant total catch, in the face of population decline, results from intensification of the fishery on the entire mixture of stocks modified directly by a reduced abundance of stock  $x$ .

## RESULTS

The model derives 4 equations based solely upon an estimate of the proportion of total catch contributed by a stock of concern and an estimate of percentage change in that stock's abundance.

Assuming constant fishing intensity, thus constant harvest rates, the rates of change in stock- $x$  catch and total fishery catch are modeled by

$$\theta_{c,x} = \theta_x \text{ and } \theta_c = \rho_{x,1} \theta_x.$$

Under a different management prescription to keep total fishery catch the same from year 1 to year 2 (denoted with symbol  $*$ ), proportional changes in stock- $x$  harvest rate and catch are modeled as

$$\theta_{\mu,x}^* = \frac{-(\rho_{x,1} \theta_x)}{1 + (\rho_{x,1} \theta_x)} \text{ and } \theta_{c,x}^* = \frac{\theta_x - (\rho_{x,1} \theta_x)}{1 + (\rho_{x,1} \theta_x)}.$$

Although these equations are valid for both increases and decreases in stock size, results here are described primarily with regard to stock decline. Figures 1 and 2 depict the relationships of  $\theta_c$  and  $\theta_{\mu,x}^*$  to proportion

of catch ( $\rho_x$ ) at various levels of decline in stock  $x$  ( $\theta_x$ ).

Results are fairly intuitive for fisheries in which stock  $x$  composes the entire catch ( $\rho_x = 1.0$ ). When fishing intensity is constant from year to year (Figure 1), total catch will decline by the same proportion as the stock size reduction ( $\theta_c = \theta_x$ ). Changes in harvest rate resulting from keeping total catch constant (Figure 2) are also straightforward. If the stock declines by half, then the harvest rate on that stock would double ( $\theta_x = -0.50$ ;  $\theta_{\mu,x}^* = 1.0$ ). If the stock were to decline by only 25%, then the resulting harvest rate would have to increase by 33% ( $\theta_x = -0.25$ ;  $\theta_{\mu,x}^* = 0.33$ ) in order to maintain the same total catch.

Not so intuitive are the effects on total catch and harvest rate when the stock does not compose all of the fishery catch ( $\rho_x \neq 1.0$ ). Simply because a component stock declines by a certain proportion does not mean that impacts on or effects of a mixed stock fishery and a single stock fishery are the same. For example, if a prescribed management objective were to prevent any increase in harvest rates (i.e., maintain constant fishing intensity; Figure 1) of various fisheries on a stock that declined 50% ( $\theta_x = -0.50$ ), reductions in total catch in a fishery for which  $\rho_x = 1.0$  would be by half ( $\theta_c = -0.50$ ). However, total catch for a fishery with  $\rho_x = 0.1$  would only be reduced by 5% ( $\theta_c = -0.05$ ). This latter result occurs because a 50% decline in stock  $x$  affects only the original 10% that stock previously contributed to the fishery; abundance of other contributing stocks remains unchanged.

Similarly, that same mixed stock fishery with low  $\rho_x$  would not exert much additional pressure on the declining stock, even if fishing intensity increased to keep total fishery catch constant (Figure 2). Increase in harvest rate for a fishery with  $\rho_x = 1.0$ , in the face of  $\theta_x = -0.50$ , would be 100% ( $\theta_{\mu,x}^* = 1.0$ ), whereas  $\theta_{\mu,x}^*$  for a mixed stock fishery with  $\rho_x = 0.1$  in the face of the same stock decline would only be about 5% ( $\theta_{\mu,x}^* = 0.053$ ). In other words, the harvest rate of the single stock fishery would double, whereas the harvest rate of the mixed stock fishery would increase only a few per-cent. The latter result is derived from the fact that any incremental increase in harvest intensity, required to keep total catch constant and make up for the shortfall in availability of the declining stock, would be exerted against the entire mixture of stocks present, not just on the specific stock of concern.

Percentage change in stock-specific catch under conditions of constant harvest rate are simply equivalent to changes in population size ( $\theta_{c,x} = \theta_x$ ) and are not dependent upon the contribution of the stock to total fishery catch. Under conditions of constant total

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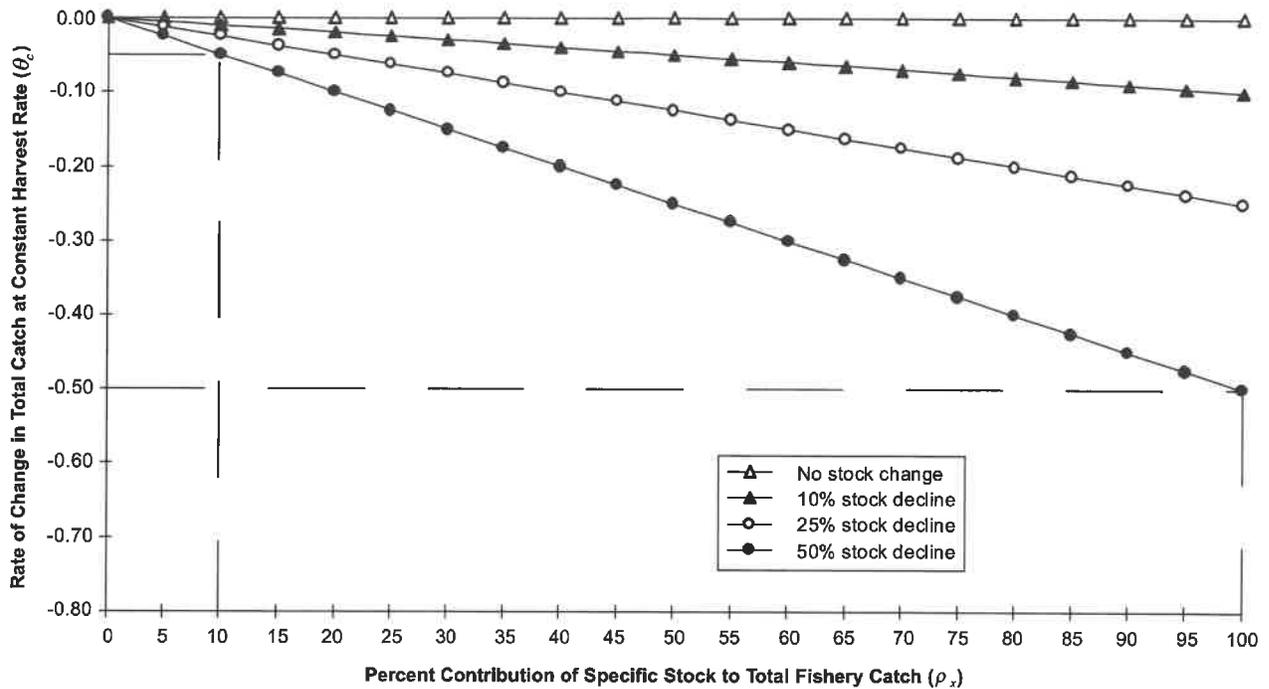


Figure 1. Change in total catch needed to keep harvest rate on a declining stock constant, as related to the stock's previous contribution to the fishery. Dashed-line examples shown are for  $\rho_x$  of 0.1 and 1.0, with  $\theta_x = -0.50$ .

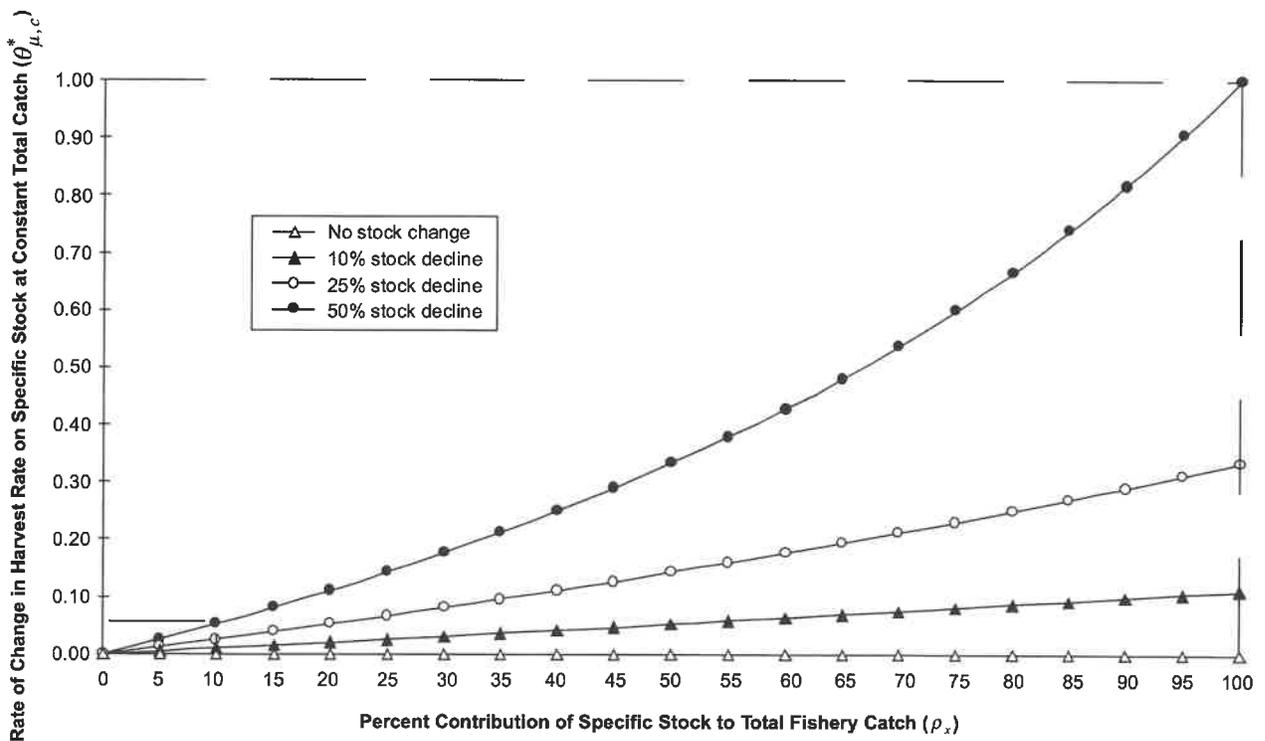


Figure 2. Change in harvest rate on a declining stock, given total fishery catch remains constant, as related to the stock's previous contribution to the fishery. Dashed-line examples shown are for  $\rho_x$  of 0.1 and 1.0, with  $\theta_x = -0.50$ .

catch, however, changes in stock-specific catch are directly influenced by  $\rho_x$ . Figure 3 depicts  $\theta_{c,x}^*$  showing much greater accommodation to reduced population size by fisheries with low  $\rho_x$ ; there is almost no accommodation by those fisheries in which stock  $x$  is the major contributor.

Although attempting to maintain constant harvest rates is a common fishery management objective, it is actually total catch that is adjusted to accomplish this objective. Figure 4 depicts the difference in changes to stock-specific catch under imaginary conditions of reducing total catch to keep harvest rate constant and under more static conditions of maintaining a constant total catch for various fisheries of differing  $\rho_x$ . This figure illustrates a large difference in effect on stock  $x$  for those fisheries with high  $\rho_x$ , indicating that some management control of total catch may be necessary. But for mixed stock fisheries in which the stock contributes only a small proportion of the total catch, there is little difference in effect between allowing the fishery to continue previous total catch levels and attempting to fine-tune that fishery's total catch so that an individual harvest rate and stock-specific catch exactly match changes in the contributing stock size.

### CASE STUDY

In Alaska annual catch quotas for single stock herring fisheries are generally established under a constant harvest rate strategy (Funk and Harris 1992) based upon annual estimates of spawning biomass. In western Alaska about 6 apparently discrete spawning stocks support distinct sac roe fisheries, from the Alaska Peninsula and Togiak through the Yukon-Kuskokwim delta and further north to Norton Sound. A herring food/bait fishery near Dutch Harbor, in the Aleutian Islands, presumably takes a mixture of the western Alaska spawning stocks and is managed under a total catch quota calculated each year based upon pre-season estimates of the large Togiak spawning biomass in Bristol Bay.

In the late 1980s and early 1990s, several of the western Alaska stocks were in decline, notably those spawning at Nelson Island. Funk et al. (1991) describe the limited information available on stock composition of the Dutch Harbor food/bait fishery. Based upon presumed migratory routes, timing of fisheries, some scale-pattern analyses, and respective biomasses of western Alaska stocks, they estimated that the Nelson Island stock may contribute approximately 2–3% of

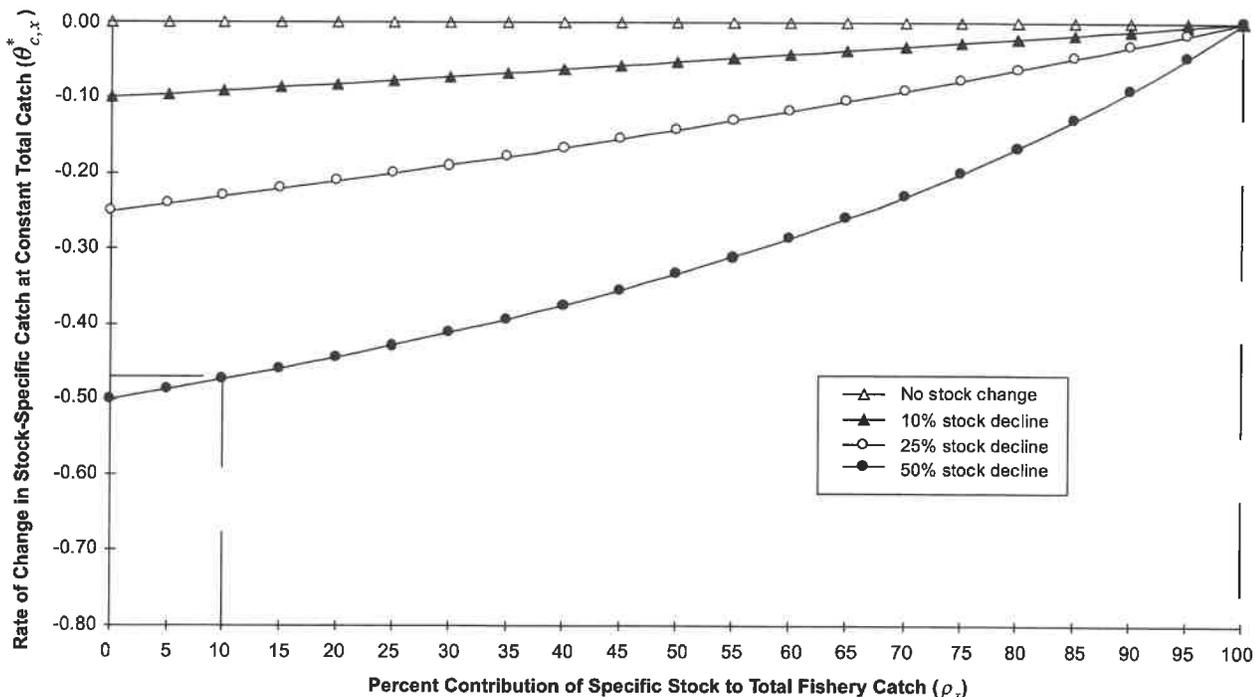


Figure 3. Change in stock-specific catch on a declining stock, given total fishery catch remains constant, as related to the stock's previous contribution to the fishery. Dashed-line examples shown are for  $\rho_x$  of 0.1 and 1.0, with  $\theta_x = -0.50$ .

the Dutch Harbor harvest. Funk (1991) and Funk and Harris (1992) report spawning biomass estimates for the Nelson Island stock of 2,705 tons in 1990 and 2,385 tons in 1991, a Dutch Harbor harvest of 820 tons in 1990, and a Nelson Island allowable harvest of 205 tons in 1990 (actually, no commercial harvests were taken at Nelson Island due to lack of a market). Although the model requires only values for  $\rho_x$  and  $\theta_x$ , all of these estimates are used (Table 1) to more clearly illustrate hypothetical changes in this case study.

Though the stock decline was not very substantial (11.83%, for a  $\theta_x$  rounded to -0.12), the differences in  $\rho_x$  for the Dutch Harbor and Nelson Island fisheries (0.03 and 1.0, respectively) result in some definite differences in their potential responses in catch and harvest rate. If, under assumptions of this model, the Dutch Harbor fishery were to have maintained the same harvest rate in 1991 as in 1990, then its total catch (820 tons) would need to have been reduced by only 3 tons, for a  $\theta_c$  basically indistinguishable from zero (i.e., no change). For the Nelson Island fishery to have maintained a constant harvest rate, its total catch (205 tons) would need to have been reduced by 12% (24 tons), for a  $\theta_c = -0.12$ , which is readily distinguishable from zero.

If both fisheries were to have been allowed to maintain their total catch for 1991 the same as for 1990, then harvest rate of the Dutch Harbor fishery on the Nelson Island stock would not have noticeably increased, by about 0.3%, for a  $\theta_{\mu,x}^*$  indistinguishable from zero, whereas the Nelson Island harvest rate would have increased by about 13%, for a  $\theta_{\mu,x}^*$  of 0.13.

Regarding changes in stock-specific catch, letting the Dutch Harbor fishery maintain a constant catch level between years ( $\theta_{c,x}^* = -0.12$ ) was pragmatically equivalent to attempting to adjust total catch to keep harvest rate absolutely constant ( $\theta_{c,x} = -0.12$ ). In either case the Dutch Harbor catch of Nelson Island herring would similarly adjust to reduced abundance of the stock.

However, for the Nelson Island fishery, under constant total catch,  $\theta_{c,x}^*$  is zero whereas attempting to achieve a consistent harvest rate would require a substantial correction ( $\theta_{c,x} = -0.12$ ). Thus, to achieve the same objective, in this case constant harvest rate, the total Nelson Island catch must be reduced about 12%, but there would be no practical reason to alter the total mixed stock Dutch Harbor fishery catch.

For Dutch Harbor at low  $\rho_x$  there is little difference between strategies of constant harvest rate and

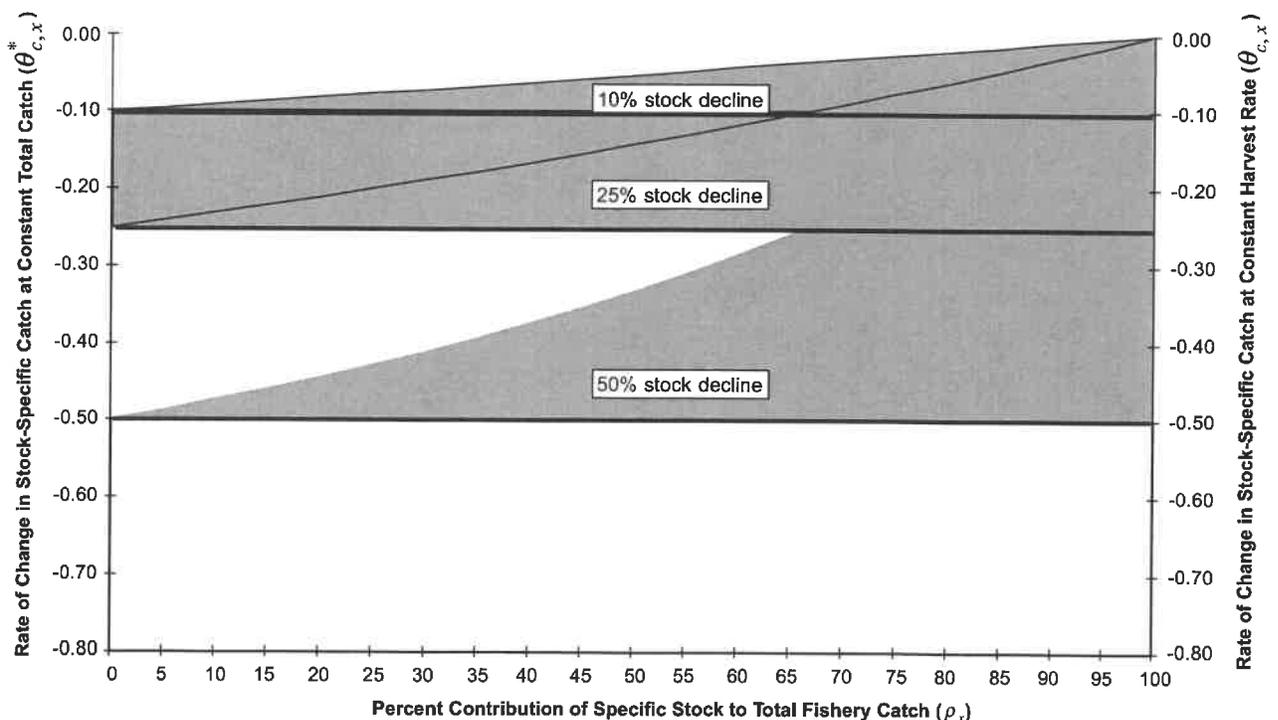


Figure 4. Difference between changes in stock-specific catch (filled areas), given total fishery catch remains constant (upper sweeping boundaries), compared to constant harvest rate (dark, lower horizontal lines), at various rates of stock decline.



Table 1. Model worksheet and illustration for Dutch Harbor food/bait fishery and Nelson Island sac roe fishery on the Nelson Island herring stock, 1990 and 1991.

	Model Parameters	Dutch Harbor Fishery		Nelson Island Fishery	
		Tons of Fish	Rates and Percents	Tons of Fish	Rates and Percents
<b>Inputs</b>					
<i>Initial conditions:</i>					
1990 stock size (tons)		2,705		2,705	
1990 total fishery herring catch		820		205	
Initial proportion of fishery catch composed of stock in question	$\rho_x$		0.03		1.00
Resulting tons of fish from stock harvested in fishery		25		205	
Resulting fishery harvest rate on stock of concern			0.91%		7.58%
Proportional change in stock size, from 1990 to 1991	$\theta_x$		-0.12		-0.12
<b>Illustration</b>					
<i>For constant fishing intensity (harvest rate) in 1991:</i>					
Stock size in 1991		2,385		2,385	
Tons of fish to be taken from stock in 1991, at same fishing intensity		22		181	
Decline in total fishery catch		-3		-24	
Resulting total fishery catch		817		181	
1991 proportion of stock in the fishery catch			2.65%		100.00%
Proportional change in total catch			-0.35%		-11.83%
Proportional change in stock-specific catch			-11.83%		-11.83%
<i>On to constant harvest level (total catch) in 1991:</i>					
Increase in harvest to make up deficit		3		24	
Resulting total fishery catch		820		205	
1991 proportion of stock in the fishery catch			2.65%		100.00%
Additional fishery harvest of stock of concern		0		24	
Total 1991 harvest of stock of concern		22		205	
Resulting harvest rate on stock of concern			0.91%		8.60%
Proportional change in harvest rate			0.36%		13.42%
Proportional change in stock-specific catch			-11.52%		0.00%
<b>Output (calculated solely from <math>\rho_x</math> and <math>\theta_x</math>)</b>					
<i>Constant harvest rate between 1990 and 1991:</i>					
Proportional change in total catch	$\theta_c$		0.00		-0.12
Proportional change in stock-specific catch	$\theta_{c,x}$		-0.12		-0.12
<i>Constant total catch between 1990 and 1991:</i>					
Proportional change in harvest rate	$\theta_{\mu,x}^*$		0.00		0.13
Proportional change in stock-specific catch	$\theta_{c,x}^*$		-0.12		0.00

Table 2. Effect of raising  $\rho_x$  for the Dutch Harbor food/bait fishery and intensifying  $\theta_x$  for the Nelson Island herring stock.

	Parameter	Dutch Harbor Fishery	Nelson Island Fishery
<b>Inputs</b>			
Initial proportion of fishery catch composed of stock $x$	$\rho_x$	0.06	1.00
Proportional change in stock size	$\theta_x$	-0.50	-0.50
<b>Output</b>			
<i>Given constant harvest rate:</i>			
Proportional change in total catch	$\theta_c$	-0.03	-0.50
Proportional change in stock-specific catch, given constant harvest rate	$\theta_{c,x}$	-0.50	-0.50
<i>Given constant total catch:</i>			
Proportional change in harvest rate	$\theta_{\mu,x}^*$	0.03	1.00
Proportional change in stock-specific catch	$\theta_{c,x}^*$	-0.48	0.00

constant catch, but for Nelson Island at high  $\rho_x$  there is a substantial difference. The proportion of the Dutch Harbor fishery composed of Nelson Island spawning stock is so low that a moderate stock decline has little or no bearing on the mixed stock fishery (or the fishery on the stock), yet impacts to and response required of the local Nelson Island fishery are much more substantial.

The model can be used to examine more extreme situations as well. The Nelson Island stock can potentially fluctuate widely between years (Hamner and Kerkvliet 1994), more than the 12% decline noted between 1990 and 1991. Moreover, the contribution of Nelson Island herring to the Dutch Harbor catch might conceivably be higher than estimated by Funk et al. (1991). By changing population decline to  $\theta_x = -0.50$  and doubling the proportional contribution of Nelson Island herring to the Dutch Harbor fishery ( $\rho_x = 0.06$ ), then model outputs can be recalculated to compare more extreme effects of the Dutch Harbor fishery on the Nelson Island herring stock (Table 2). Even assuming more impact to this stock by mixed stock catches at Dutch Harbor, it is the local Nelson Island fishery that must be adjusted in response to the stock's decline; adjusting catch in the Dutch Harbor fishery would still be inconsequential (Figure 5).

Although managers may be more immediately concerned with declining stocks, this model can also be used to examine relative benefits to various fisheries gained through increases in abundance. Using inputs from the example above, but rather than declining in half, assume the Nelson Island stock doubled ( $\theta_x =$

1.0) as it did between 1991 and 1992 (Hamner and Kerkvliet 1994), then  $\theta_c$  for Dutch Harbor would be 0.06 compared to a  $\theta_c$  for Nelson Island of 1.00;  $\theta_{\mu,x}^*$  for Dutch Harbor would be -0.06; and  $\theta_{c,x}^*$  for Nelson Island would be -0.50. Figure 5 illustrates these conditions as well: little difference in stock-specific catch between strategies of constant harvest rate and constant catch for Dutch Harbor but substantial gains for the Nelson Island fishery under constant harvest rate rather than constant catch. Consequently, doubling of the Nelson Island stock biomass would hardly be felt in the Dutch Harbor fishery, while total catch at Nelson Island could double without increasing its harvest rate. Thus the benefits and costs of single stock fluctuations apply much more directly to single than to mixed stock fisheries.

Finally, although not derived entirely from the model's simplified equations, the model can illustrate the effect of applying strict proportional reductions on total mixed stock catch in fisheries of low  $\rho_x$  in the face of a single stock decline. In the case of a 50% reduction in biomass ( $\theta_x = -0.50$ ), in year 2 there would be no discernible difference in harvest rate ( $\mu_{x,2} = 0.91\%$  to  $\mu_{x,2}^* = 0.92\%$ ) or stock-specific catch ( $C_{x,2} = 12.30$  tons to  $C_{x,2}^* = 12.49$  tons) for the Dutch Harbor fishery (at  $\rho_x = 0.03$ ) under either harvest strategy. Yet, loss to the fishery as a whole ( $C_2^* - C_2$ ) would be 1.5% of total catch (>12 tons) if total catch were reduced to keep harvest rate absolutely constant.

If the quota was reduced by half under a mistaken impression that a 50% reduction, rather than a 1.5% reduction, in total catch at Dutch Harbor must be im-

posed to match a 50% decline in the Nelson Island stock, then the costs would even further exceed the benefits. Applying consequent  $\rho_{x,2} = 1.52\%$  to the reduced quota (410 tons) would give a stock-specific catch savings of <6 tons of Nelson Island herring out of the reduced population size of 1,353 tons (i.e., a 0.4% “savings”) at a cost of 410 tons (50%) of total catch to the Dutch Harbor fishery. In this case, almost 70 tons of catch at Dutch Harbor would be forfeited for each of the 6 tons of Nelson Island stock saved. Yet, these savings would be an insignificant contribution to the Nelson Island stock’s total biomass.

### DISCUSSION

Ricker (1958), in an early evaluation of a mixed stock fishery and its several component stocks, noted:

*Most of the conclusions arrived at from the analyses above could, I believe, be reached*

*by “intuition” or common-sense reasoning, without actual computation... The value of these calculations and others similar is mainly to provide objective models which can be cited in justification of a particular regulation. What is common sense to one man may seem ridiculous to another. The calculation of benefits and losses under prescribed conditions is the only way to resolve such arguments.*

Sometimes regulatory questions must address comparison of 2 or more fisheries upon a shared stock of fish, rather than a single fishery upon 2 or more stocks. Just such a debate surrounded management of the Dutch Harbor and Nelson Island herring fisheries and occupied the Alaska Board of Fisheries from the mid 1980s through the early 1990s. In the face of decline in the Nelson Island stock, the board wished to share the management burden across both fisheries in some comparable manner but found little technical information available to assist them.

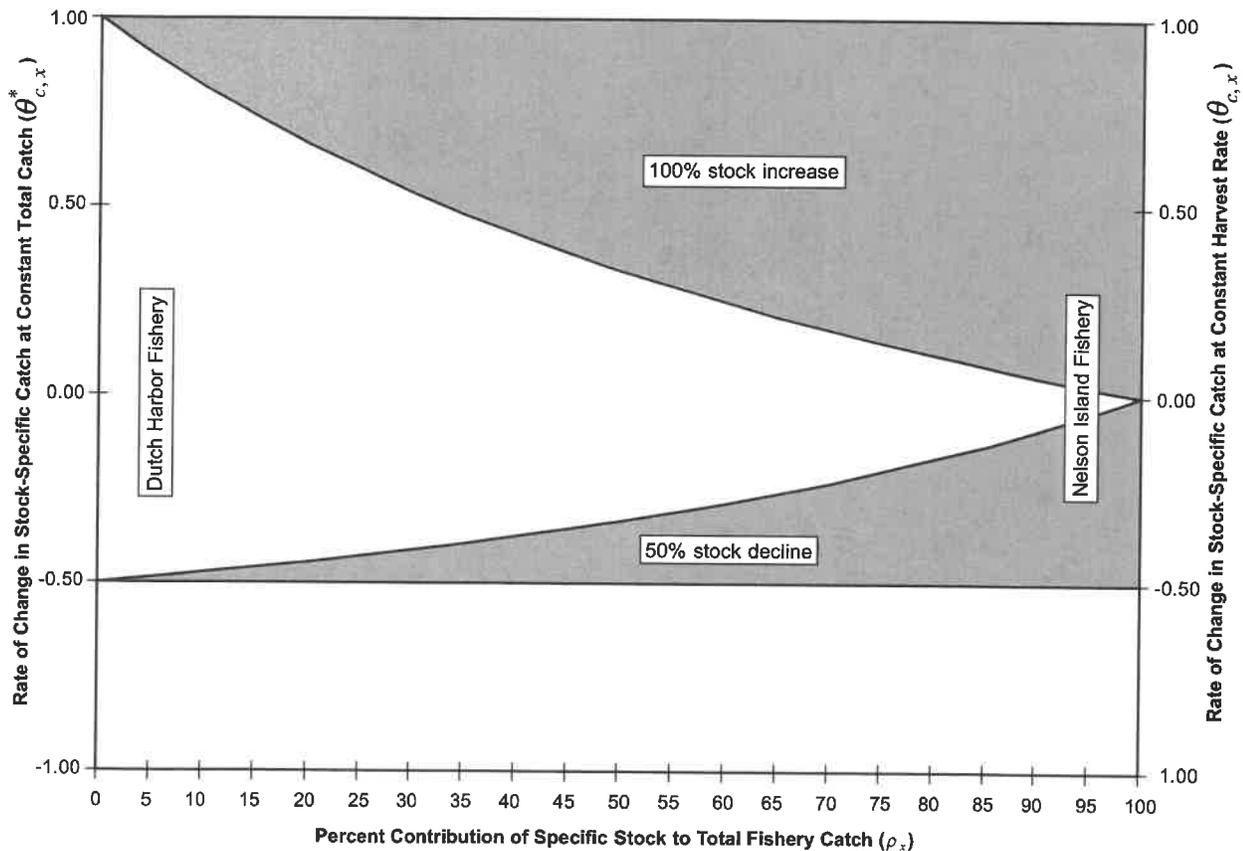


Figure 5. Comparison of potential changes in catch of Nelson Island herring in Dutch Harbor and Nelson Island fisheries, given total fishery catch remains constant compared to constant harvest rate;  $\theta_x = -0.5$  and  $+1.0$ .

This paper presents a simple method to compare the relative effects of different fisheries on a common stock of concern. Results indicate that a mixed stock fishery, for which a specific stock contributes only a small portion of the total harvest, may have little relative effect on the stock, even if it is in substantial decline and total harvest of the fishery remains unchanged. Catch reductions or changes in harvest rates need not be the same among fisheries sharing a stock of concern in order to effect similar responses by the fisheries or to exert similar influence upon the stock. For example, not all fishery catches would need to be cut in half to maintain a consistent harvest rate on a stock that declines by 50%. The algebraic model and brief case study developed here illustrate that, in the face of changes in abundance ( $\theta_x$ ), the proportional contribution ( $\rho_x$ ) of a stock to a fishery's harvest dramatically influences that fishery's total and stock-specific catch and the effects of that fishery (e.g., harvest rate) on the stock.

Various scenarios within the case study illustrate the robustness of the model. Initial assumptions need not be especially accurate, so long as there is a substantial difference in the  $\rho_x$  of fisheries being compared, which is usually the case between mixed stock fisheries and more stock-specific ones. Of course, this model presumes that only the single stock of concern fluctuates in abundance from year to year. While this is seldom strictly true in the real world, such an assumption can be valid as long as there is not substantial covariance in the abundance of contributing stocks. It would be possible to expand this model to allow for an increase or decrease in aggregate abundance of

stocks other than  $x$ . Generally, if such  $\theta_y$  were to be positive while stock  $x$  declined, then the differences between fisheries of low and high  $\rho_x$  would be even more pronounced than described here. Conversely, if  $\theta_x$  and  $\theta_y$  were both negative, then the differences between fisheries would be less distinct.

Many times the data needed to conduct a detailed examination of various fisheries' relationships to fluctuating stock abundance are simply not available, yet management concerns must still be addressed. This model illustrates a rather apparent, but sometimes overlooked, notion that the proportion of total catch contributed by a particular stock affects the responses of fisheries to the stock's decline.

Specifically, fisheries that rely heavily upon the stock of concern have a much more direct relationship to any fluctuations in the stock, whereas such influences and effects are diluted by the presence of other stocks in a mixed stock fishery. If the proportion ( $\rho_x$ ) is quite small, then the effects on stock  $x$  of a constant catch or a constant harvest rate policy would be nearly identical, but the difference between such policies on total catch of the mixed stock fishery could be substantial.

This model can be used for a number of fishery types, whether they are quota-based or exploitation rate-based, such as those for herring, groundfish, and shellfish. Extension of this model to escapement-based salmon fisheries is discussed separately (see Lloyd 1996 in this issue) because salmon fisheries are generally managed upon fixed annual escapements, with allowable catch and harvest rates both fluctuating greatly depending upon harvestable surpluses.

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Alaska Board of Fisheries  
Board Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

March 10, 2022

Subject: Support Proposal 282

Dear Alaska Board of Fisheries,

I live in Chignik Bay and everyone in our community is dependent on salmon fishing. Our salmon runs are essential for subsistence and commercial fishing. The mainstay of our economy is our two sockeye runs, which have gone from historically strong to historically weak - especially the early run, which has not even reached the lower end of its escapement goal since 2017.

Proposal 282 is important to Chignik as it calls for Shumagins and Dolgoi fishing areas to assist in our early run reaching its escapement goal. I think it's reasonable because we have 55 years' worth of data that has consistently shown Chignik-bound sockeye are caught in those areas, our early run has not reached the lower end of escapement goals since 2017, and thus far the burden of conservation has been shouldered solely by Chignik while Chignik-bound sockeye continue to be harvested in Area M.

While Chignik communities have small representation, we need you to help protect our sockeye run. Please make conservation of our early sockeye run a priority by passing proposal 282.

Thank you,

*Arlene Kopsu*



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February 26, 2022

Dear Board of Fish,

my family loves to fish. We grew up doing it from generations before us. We come to Alaska to enjoy the nature and fishing and beauty it has to offer. Fishing should not be limited to the average household because commercial fisheries would only benefit and the average joe would lose. I love salmon, but if it meant boycotting eating salmon for the rest of my life if this gets passed, I will. Because nothing tastes better and more rewarding then a fish you caught yourself or from your family. Keep us human!

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Ashlie Johnson



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March 05, 2022

Dear Board of Fish,

As a relatively new resident to Soldotna, moving here in August 2020, it was easy to see how much salmon fishing means to this community and this state. It was just as easy to realize salmon fishing, particularly king fishing, is not what it used to be years ago. Hearing stories about the days past makes me wish I was born a few decades earlier to be able to partake in truly giant king salmon fishing. I cannot grasp the idea of allowing more by-catch for commercial fishing before king salmon escapement goals are met. If sportfishers are asked to modify their tactics and retention of kings each year because return numbers are not meeting the goal, why should commercial fishing be allowed to start pulling from the already small returns before kings even make it into the river?

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Austin Brandes

Soldotna  
99669



Submitted By  
Ava Suzanne Metcalfe  
Submitted On  
3/11/2022 8:30:14 PM  
Affiliation

I really enjoy fresh Prince William Sound shrimp from my favorite fisherman and am an Alaskan that wouldn't have access to the best shrimp in the world shrimp without the commercial fishery. Please continue to allow it. Thank you.



Alaska Board of Fisheries  
Board Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

March 10, 2022

Subject: Support Proposal 282

Dear Alaska Board of Fisheries,

I am from Chignik Bay and have fished with my Dad since I was a little kid. I have dreams of owning my own boat someday and fishing in Chignik like my Great-Grandpa, Grandpa, and Dad have done. I am working hard to achieve that dream but these past few seasons have made that very difficult. I'm also trying to make money to help pay for my college education. I'm not the only one trying to do all these things. Everyone in Chignik is dependent on salmon fishing. Our salmon runs are essential for subsistence and commercial fishing. Our economy is built on our two sockeye runs, which have gone from historically strong to historically weak - especially the early run, which has not even reached the lower end of its escapement goal since 2017.

Proposal 282 is important to Chignik as it calls for the Shumagins and Dolgoi fishing areas to assist in our early run reaching its escapement goal. I think it's reasonable because we have 55 years' worth of data that has consistently shown Chignik-bound sockeye are caught in those areas, our early run has not reached the lower end of escapement goals since 2017, and thus far the burden of conservation has been shouldered solely by Chignik while Chignik-bound sockeye continue to be harvested in Area M.

While Chignik communities have small representation, we need you to help protect our sockeye run. Please make conservation of our early sockeye run a priority by passing proposal 282.

Thank you,

*Axel A Kopun*



Alaska Board of Fisheries  
Board Support Section  
P.O. Box 115526  
Juneau, Alaska 99811-5526

March 10, 2022

Subject: Support Proposal 282

Dear Alaska Board of Fisheries,

I am from Chignik Bay and have fished there for over 40 years. Everyone in our community is dependent on salmon fishing. Our salmon runs are essential for subsistence and commercial fishing. The mainstay of our economy is our two sockeye runs, which have gone from historically strong to historically weak - especially the early run, which has not even reached the lower end of its escapement goal since 2017.

Proposal 282 is important to Chignik as it calls for Shumagins and Dolgoi fishing areas to assist in our early run reaching its escapement goal. I think it's reasonable because we have 55 years' worth of data that has consistently shown Chignik-bound sockeye are caught in those areas, our early run has not reached the lower end of escapement goals since 2017, and thus far the burden of conservation has been shouldered solely by Chignik while Chignik-bound sockeye continue to be harvested in Area M.

While Chignik communities have small representation, we need you to help protect our sockeye run. Please make conservation of our early sockeye run a priority by passing proposal 282.

Thank you,

*Axel S. Kopun*



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March 08, 2022

Dear Board of Fish,

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

Currently ADF&G cannot reduce fishing restrictions until the OEG is achieved. If passed, Proposal 283 would allow projected escapements to be utilized rather than actual fish in the river. It's literally putting the cart before the horse; commercial fishing will be permitted before sufficient king salmon have actually made it into the river, based on the OEG.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

barbara bogart



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February 25, 2022

Dear Board of Fish,

I've been fishing since I was old enough to walk, My dad always made sure to take me even when his friends strongly objected. My husband's family has had property on the Kenai since the early 80's and built themselves a nice house recently where we stay all fishing season. Since my husband was a kid he has fished the Kenai, and every year we go we see the dwindling escapement numbers of both sockeye and chinook. Our family practices a subsistence lifestyle as best we can. Sourcing our food from nature and gardening is incredibly important to us. It's frightening to me to think that in just a few years my son will not be able to fish for kings, that the giant salmon will be wiped out by commercial fisheries, who waste this precious resource with far greater reach than ours. Please consider all of us small Alaskan families who feed our children with wild resources. Thank you.

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Bayley Barton  
99502



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March 09, 2022

Dear Board of Fish,

My name is Ben Collier. I have lived in Alaska on the Kenai Peninsula for over 45 years. I am a retired Bering Sea commercial fisherman, having spent over 25 years as a deckhand/captain on all ocean waters in Alaska and beyond. After retiring in commercial arena, I have become a full time sport fishing guide on the Kenai Peninsula (over 15 seasons). I believe in sustainable commercial fishing and sustainable fishing practice all around. I feel that our management practices are using a reverse method, by this, I mean it is well known that the majority of King salmon premature mortality happens in the Bering sea and around Kodiak by the trawl fleet, and marine mammal predation. It is sad that these fisheries have been able to pay their way past regulations to limit King salmon mortality and by catch limits. If these limits were more strict, we would not be arguing about how to manage the meager amount of Kings returning to Peninsula and Alaskan rivers. The Marine Mammal Protection Act is out dated and does not encourage resource sustainability. Putting one user group in front of the other is not the answer.

1. Do the research
2. Identify where the majority of kings are being lost
3. Stem the loss

It seems simple, but it is very complex. Lowering the acceptable King salmon escapement # on the Kenai River to allow more commercial fishing is deplorable at a time when we are on the precipice of decimating the species. Also proposing this at a meeting when sports fishermen are under represented is disturbing. This decision will bring about more loss of confidence in the Fisheries Council.

ADF&G has used the Kenai river sonar as a weapon to encourage overfishing, by counting fish traveling upstream on the tides, then extrapolating the # to make it seem like there are many more fish than there really are. I have personally seen the counting of hundreds of thousands of pink salmon and labeling them sockeye. This is deplorable, these decisions undermine public confidence and put the agency we fund and count on in poor light.

While I have digressed into the weeds a bit, this is to illustrate the solution to resource recovery, is not as easy as limiting commercial or sport fishermen in the vicinity of the Kenai river. We have put restrictions on both user groups for over 2 King salmon life cycles with no acceptable recovery. Unfortunately some think that proposing to lower escapement #'s on the Kenai River will somehow help the fishery recover or sustain. This is the proposal of an uneducated person, I would recommend getting all persons up to speed on the complex issue at hand, best resource management practices.

I do not have the solution, that is what the board of fish is for, to use best information/science to make effective decisions to protect the resource. With a desperate proposal like 283, you are proving that there is no accountability and that loss of public confidence is justified.

As long as we manage with the "revenue over resource" type mentality, all fishermen and generations to come, will have to find a way to enjoy fishing for pink salmon, because soon that will be all that returns.



Protect all wild fish populations in Alaska and the revenue will follow.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Ben Collier

Sterling  
99672



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March 12, 2022

Dear Board of Fish,

Thank you for taking the time to review comments from the public on these matters. Your time as Board members is precious, and the current stack of days due to COVID and unnecessary revisiting of actions taken in 2020 make your time and attention even more critical.

I would like to begin by stating my opposition to Proposal 283.

I believe re-opening the Late Run King Salmon Management plan is a short sighted response to a challenging - but not unexpected - situation. Reopening the plan will disenfranchise stakeholders and will exacerbate tensions in the small communities on the Kenai Peninsula. Further, de-linking the work of conservation among different user groups ignores over three decades of hard work by stakeholders and professional staff to find some sense of equity in king salmon fishery restrictions. I believe the course of action that would do that least harm to the fishery, and to the integrity of the Board of Fisheries public process, would be for the Board to withdraw support for considering Proposal 283, and dispose of this proposal by taking no action. Second to that, if the Board feels it must hear this issue out (just two years after passing it), then I hope you will respect the voices of hundreds of Alaskans and vote no to 283.

Finally, I'll note that this issue does not appear to have any biological need. Despite exceeding the sockeye goal in the Kenai for several years, the doom and gloom of "overescapement" has not come to pass. Please do not sacrifice the extremely limited number of Kenai River King Salmon for the even more limited benefits of a few more sockeye in commercial nets. I urge the board to maintain its commitment to conservation of the fishery.

I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Ben Mohr

Soldotna  
99669



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February 16, 2022

Dear Board of Fish,

My name is Ben Sweeney and I have been a Kenai Peninsula resident for 20 years, previously in Cooper Landing and currently in Sterling. I have fished the Kenai river top to bottom on average 50+ days a year in that time period for all species. What I haven't done since 2013 is fish for our beloved Kenai King. Why? Because every single fish matters in these repeatedly dismal returns and I took it upon myself from a moral standpoint almost a decade ago to not be the cause to lose another that could be avoided. This proposal is the definition of "moving the goalposts" to support and agenda of a small user group. Escapement not high enough? Just lower the escapement then. A ridiculous and detrimental proposition. I hereby state my strong opposition to this proposal. This and every fish and game population should be managed on scientific facts, not political wants.

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Ben Sweeney

STERLING  
99672



Chairwoman Carlson-Van Dort, members of the Board,

My name is Benjamin Allan, Chignik AC Vice Chair, Chignik City council member and Fisherman;

I am in support of proposal 282.

I would like to thank the board for taking up action on proposal 282 out of cycle as area L is in a dire emergency with a need of corrective action outside our area for conservation. proposal 282 should have requested that the entire Southeastern district and South Central District Do you shut down until mid range escapement has been obtained in Chignik; It was thought that, that need was outside the ask of an out of cycle proposal. That being said this proposal will help to bring back more fish to help in conservation and I believe it is only a small fix on what needs to be a more holistic approach to repair terminal systems in Alaska.

Actions of the board, to area M That took effect starting in 2004 season, of removing the allocation that focused fishing on Bristol Bay stocks was removed, created a shift in effort to the east. This has resulted in the potential loss of the previous escapement as well as reduced yield and fishing time in Chignik, SEDM and has affected their own local stocks as well which have been masked buy the fish and game by reducing minimum escapement goals. You have the opportunity to help redirect fish back to the river system that your predecessors have allocated away from that system.

South Peninsula fishery needs to be internally re-allocated to focus catching in the Western districts and on the plentiful stocks that are Strengthening every year; but this is something that will have to be taken care of during a regular cycle and that is not what this proposal is here to do. This proposal is helping the river system get some of his fish back so that it can make escapement and rebuild the Chignik run to the Extraordinary System it once was and restore opportunity to subsistence users and maybe one day a commercial fishery again.

Interception fisheries are parasitical by nature and there is nothing wrong with the catch of surplus to a reasonable degree, but as with any parasite if it is allowed to overwhelm the host both the host and parasite or inevitably destroyed. Due to the location of the Shumigan islands a large amount of mixed stocks go through it. Just because one of the mixed stocks in an area of interception is doing well, does not exclude need for protections that can be given to an area that is suffering. Fishing effort can be moved westward giving shareholders in the South



Peninsula fishery opportunity without destruction of eastbound stocks. If Bristol Bay runs began to collapse the entire South Peninsula cape fisheries would be shut down without question as it was in 1974; and by not taking action you are showing preferential treatment to not only an interception fishery but also between two terminal runs which should never be the case.

The ADF&G has reduced our areas fishing to its maximum restrictions and reduced fishing in a minor way in some known interception areas at times, making an inconsequential effect, but they do not feel comfortable reaching any further without Board directive. So we ask that you accept the proposal 282 giving them full backing of the state to make that decision, as they now feel that achieving escapement could be allocative and they feel that the best way to achieve the escapement is to lower the bar which effectively reduces yield in future years, which is not the right direction to go. ADF&G has explained that it has no other tools in it's management toolbox to help rectify this situation and any other correction would be stepping out of management and into allocation. Chignik had some amazing fishing season in the past and because of this portions of our stocks became allocated to other groups that were not doing as well. I would think that the board could at least allocate enough fish to get escapement back to the preferred MSY mid range as the state constitution directs.

Thank you for your consideration and I appreciate the difficulty and responsibility of the decision you must make.

Sincerely,

A handwritten signature in black ink, appearing to read "Benjamin Allen".

Benjamin Allen



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February 15, 2022

Dear Board of Fish,

The Optimal Escapement Goal (OEG) is a higher threshold intended to not only halt salmon decline but also allow the fishery to recover. The Sustainable Escapement Goal (SEG) is the absolute bare minimum number of fish needed for the species to survive and does nothing to improve the fishery. Ultimately, if Proposal 283 is passed, survival of the king salmon fishery in the Kenai River is further threatened.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous “over escapement” issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Benjamin Birch

Anchorage  
99515-3646



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February 15, 2022

Dear Board of Fish,

I am a 67 year resident of Alaska and have been Sportfishing since I was 8 years old and also commercial fished for 15 years. I am very concerned about the health of the King salmon runs statewide, and particularly in the Kenai River. I was very pleased with the actions taken by the Board in 2020 to help rebuild the Kenai River run, but now have great concerns that those actions may be diluted by Proposal 283 that will be considered at your March meeting.

Passing Proposal 283 would prioritize a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Bill Eckhardt

Sterling  
99672



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February 20, 2022

Dear Board of Fish,

I live in Minnesota and have seen first hand the damage caused by over fishing in some of our lakes. I would not wish this on any other body of water. I enjoy sport fishing and hope to have to opportunity to fish for kings salmon in years to come on my visits to the Kenai.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Bill Walls

Lakeville  
55024



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February 19, 2022

Dear Board of Fish,

I've been fishing the Kenai river since 1980 I love this river....I fish the Kenai May thru October, I do occasionally fish the salt out of Deep Creek and Homer once or twice a year. I live just off the river in the Riverwood subd. Please save this awesome fishery so my five children and grandkids can enjoy for years to come  
Thxs Bob

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

The standard should remain that meeting the conservation needs of the weakest stocks is more important than avoiding the upper limit of another species. Passing 283 would indicate that the Board has abandoned weak-stock management principles.

Passing Proposal 283 prioritizes a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Bob Peters

Kenai  
99611



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February 15, 2022

Dear Board of Fish,

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Brad Kirr  
Palmer  
99645



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February 17, 2022

Dear Board of Fish,

Passing Proposal 283 prioritizes a small group of commercial fishing as one third of the set netters would qualify under the proposal. A vote in support of 283 gives a small group fishing preference, further risking the king salmon run in the Kenai River.

The OEG is the OEG for a reason. The escapement threshold was set because that is the minimum number of salmon that need to enter the river so that the fishery can rebuild. I am not willing to give up on the Kenai River king salmon. Please vote no on Proposal 283.

The standard should remain that meeting the conservation needs of the weakest stocks is more important than avoiding the upper limit of another species. Passing 283 would indicate that the Board has abandoned weak-stock management principles.

The economy of the Kenai Peninsula relies on its salmon fisheries. However, the economics point to the sport-caught fisheries being the economic powerhouse, NOT the commercial fishery. Regardless, we need to rebuild the king salmon runs to support both economic engines. Are you willing to risk an entire species' survival to pull a few sockeye out of the water? Where is the logic in that?

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Brad Mitchell

Eugene  
97402



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March 07, 2022

Dear Board of Fish,

I have been spending my summers in Alaska for over 30 years. First coming to the Kenai peninsula when I was just 15 to visit my uncle who was stationed in Anchorage. Each summer after that I increased the amount of time I spent on the peninsula fishing the Kenai. I now am on a mission to bring my 6 kids to share my love of the Kenai. We spend our vacation time each summer solely on the Kenai. Over the last 30 years I have slowly seen the fishery suffer at the hands of commercial needs. If the state keeps prioritizing commercial betters and trawlers over their sports and recreational fisherman and conservationists we you stand to lose a great more than just a species of fish in the Kenai. You stand to lose your tourism dollars.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Bradley Wood

Silver City  
88061



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February 16, 2022

Dear Board of Fish,

I have been fishing the Kenai for 30 years and it is a disgrace what it has turned into. Stop letting the kings die.

Kenai River king salmon have not been meeting spawning objectives for years, and Proposal 283 potentially allows the commercial harvest of kings when we haven't clearly met the lower escapement goals.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Brandon Kaiser

Anchorage  
99515



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February 25, 2022

Dear Board of Fish,

Why risk such a special resource? The last of its kind. I'd sure like for my son to be able catch and release some of these special giants one day. Please protect them.

Most sportfishers know what needs to be done to protect the Kenai River king salmon. When the escapement numbers are not being achieved, there is zero scientifically valid reason to risk a single king salmon's opportunity to spawn.

I thank the Board for the historic actions taken in 2020 to protect the Late Run Kenai River king salmon. Modifications like 283 threaten those protections and is the first step in a slippery slope to lighten the burden of conservation for some users, while maintaining restrictions on others. It disregards the principles of weak stock management and overemphasizes tenuous "over escapement" issues. Finally, this proposal promotes the financial interests of a few entities over the clear need to conserve a species. I oppose Proposal 283 and ask the Board of Fisheries to vote No on this proposal. Stay the course and protect the kings.

Brandon Pasley