
PROPOSAL 116 – 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan.

Review the optimum escapement goal (OEG) and inriver goals for Kenai River late-run sockeye salmon, as follows:

5 AAC 21.360 states:

(b) The Kenai River late-run sockeye salmon commercial, sport, and personal use fisheries shall be managed to

(1) meet an optimum escapement goal (OEG) range of 700,000 – 1,400,000 late-run sockeye salmon;

(2) achieve inriver goals as established by the board and measured at the Kenai River sonar counter located at river mile 19; and

(3) distribute the escapement of sockeye salmon evenly within the OEG range, in proportion to the size of the run.

(c) Based on preseason forecasts and inseason evaluations of the total Kenai River late-run sockeye salmon return during the fishing season, the run will be managed as follows:

(1) at run strengths of less than 2,300,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 900,000 – 1,100,000 sockeye salmon past the sonar counter at river mile 19; and

...

(2) at run strengths of 2,300,000 – 4,600,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 1,000,000 – 1,200,000 sockeye salmon past the sonar counter at river mile 19;

...

(3) at run strengths greater than 4,600,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 1,100,000 – 1,350,000 sockeye salmon past the sonar counter at river mile 19;

...

What is the issue you would like the board to address and why? The department submitted this proposal to provide the board an opportunity to review the current management goals for Kenai River late-run sockeye salmon and consider changes to align and simplify them. The OEG and inriver goals are currently out of alignment. The upper tier of the inriver goal (upper bound of 1,350,000) does not provide enough fish on the upper end to adequately distribute escapements throughout the OEG range and inriver goals. Managing for the current multiple goals (inriver goal and OEG) can be unnecessarily complicated inseason and confusing to user groups when one goal is met and the other is not.

If the inriver goals are aligned with the OEG, the board may also wish to consider simplifying the management plan by removing the OEG from regulation. The department currently manages for both OEG and inriver goals, and, if aligned, the two goals seem to be redundant.

PROPOSED BY: Alaska Department of Fish and Game (HQ-F16-150)

(Proposal 117 was submitted by two proposers. The proposal and justification for each proposer is listed below.)

PROPOSAL 117 – 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan. Amend the *Kenai River Late-Run Sockeye Salmon Management Plan* to remove the optimum escapement goal for Kenai River late-run sockeye salmon, as follows:

5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan. (a) The department shall manage the Kenai River late-run sockeye salmon stocks primarily for commercial uses based on abundance. The department shall also manage the commercial fisheries to minimize the harvest of Northern District coho, late-run Kenai River king, and Kenai River coho salmon stocks in order to provide personal use, sport, and guided sport fishermen with a reasonable opportunity to harvest salmon resources.

(b) The Kenai River late-run sockeye salmon commercial, sport, and personal use fisheries shall be managed to

[(1) MEET AN OPTIMUM ESCAPEMENT GOAL (OEG) RANGE OF 700,000 – 1,400,000 LATE-RUN SOCKEYE SALMON;]

(1) [(2)] achieve inriver goals as established by the board and measured at the Kenai River sonar counter located at river mile 19; and

[(3) DISTRIBUTE THE ESCAPEMENT OF SOCKEYE SALMON EVENLY WITHIN THE OEG RANGE, IN PROPORTION TO THE SIZE OF THE RUN.]

What is the issue you would like the board to address and why? Repeal the Kenai River late-run sockeye Optimum Escapement Goal (OEG).

The purpose of a salmon escapement goal is to both ensure sustainability and maximize the yield or harvest. State policy requires that escapement goals must be scientifically defensible.

Escapement goals should be established utilizing the best biological information and empirical data relating to production capacity and carrying capacity. Escapement goals should be periodically reviewed and adjusted to compensate for changing ecological factors. When escapement goals are exceeded or escapement goals are set too high, salmon populations are put at risk by exceeding the carrying capacity of the habitat. *“Over-escapement, in general, is not sustainable...”* ADF&G (SP No. 07-17).

Increasing goals based on annual variations in run size is not scientifically defensible. Repeated escapements over the top end of a goal are not sustainable. Escapements that are too large will produce oscillating returns, low return per spawner rates and other density-dependent effects. The extreme variability of returns on large escapements puts at risk both the sustainability of future runs and the economies that are built around the harvest of these salmon stocks.

The Kenai River is the only river in the state to have five different sockeye salmon goals. These goals are confusing to the public and fishery managers. The goals are often conflicting during the season due to misinterpretations and the uncertainties and often daily variations in the estimates of run timing, run strength and harvest rates. A result of this confusion, about which goal is appropriate, has contributed to sockeye escapements in the Kenai River being over the top end of the inriver goal for 5 of the last 5 years.

Kenai River Goals

| | |
|---|--|
| Biological Escapement Goal (BEG) | 600,000 - 900,000 |
| Sustainable Escapement Goal (SEG) | 700,000 - 1,200,000 |
| 3 - Inriver Goals based on run size from <2.3 million to > 4.6 million. | < 2.3 mil: 900 - 1,100,000 2.3 - 4.6 mil: 1,000,000 - 1,200,000 > 4.6 mil: 1,100,000 - 1,350,000 |
| Optimum Escapement Goal (OEG) | 700,000 - 1,400,000 |
| * The Inriver Goals include an allocation range of 200 – 650 thousand sockeye for inriver users based on the magnitude of the sockeye run to the Kenai River. | |

The “biological escapement goal,” or “BEG,” is the gold standard. This describes the escapement level that provides the greatest potential for “maximum sustained yield,” or “MSY”, which means the greatest average annual yield (harvest) from a salmon stock. However, a BEG can be difficult to achieve and manage for, particularly in mixed stock fisheries, so as an alternative for the Kenai River, the department instead uses a “sustainable escapement goal” or “SEG”.

The most recent ADF&G escapement goal review (FMS 13-13) for Cook Inlet states *“The committee recommended that the Kenai River late-run sockeye salmon SEG be kept at 700,000–1,200,000 spawners. This range approximately represents the escapement that, on average, will produce 90–100% of MSY. We prefer using the 90–100% range for an SEG because it results in a broader interval with the highest predicted yield near its center. Maintaining this goal is*

the estimates of run timing, run strength and harvest rates. A result of this confusion, about which goal is appropriate, has contributed to sockeye escapements in the Kenai River being over the top end of the inriver goal for 5 of the last 5 years.

Kenai River Goals

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|---|--------------------------------------|
| Biological Escapement (BEG) | 600,000 – 900,000 |
| Sustainable Escapement Goal (SEG) | 700,000 – 1,200,000 |
| 3 – Inriver Goals based on run size from <2.3 million to >4.6 million. | <2.3 mil: 900 – 1,100,000 |
| | 2.3 – 4.6 mil: 1,000,000 – 1,200,000 |
| | >4.6 mil: 1,100,000 – 1,350,000 |
| Optimum Escapement Goal (OEG) | 700,000 – 1,400,000 |
| *The Inriver goals include an allocation range of 200 – 650 thousand sockeye for inriver user based on the magnitude of the sockeye run to the Kenai River. | |

The "biological escapement goal," or "BEG," is the gold standard. This describes the escapement level that provides the greatest potential for "maximum sustained yield," or "MSY", which means the greatest average annual yield (harvest) from a salmon stock. However, a BEG can be difficult to achieve and manage for, particularly in mixed stock fisheries, so as an alternative for the Kenai River, the department instead uses a "sustainable escapement goal" or "SEG".

The most recent ADF&G escapement goal review (FMS 13-13) for Cook Inlet states *"The committee recommended that the Kenai River late-run sockeye salmon SEG be kept at 700,000-1,200,000 spawners. This range approximately represents the escapement that, on average, will produce 90-100% of MSY. We prefer using the 90-100% range for an SEG because it results in a broader interval with the highest predicted yield near its center. Maintaining this goal is supported by a plot of yield versus escapement, showing that escapements in this range generally produce the highest yields, and that escapements above this range can produce highly variable yields."*

Another recent ADF&G review (FMS 14-06) of a method commonly used (140 of 300 goals) throughout Alaska to establish an SEG determined that the upper end of many escapement goal ranges were in fact, unsustainable. The report stated that *"SEGs based on the current Percentile Approach, especially the upper bounds, may actually be unsustainable in that they may specify a spawning escapement that is close to or exceeds the carrying capacity of the stock where there is the expectation of no sustainable yields."* The SEG for the Kenai River was not established by using the Percentile Approach but the report documents the risks in exceeding that level of escapement.

The "Optimum Escapement Goal," or "OEG," for Kenai River late run sockeye exceeds the SEG. The misnamed OEG is also inappropriate to use for inseason management as the sport

harvest must be counted prior to determining if the goal was met or missed but the sport harvest isn't known until 18 months after the season ends. The Kenai River OEG is incompatible with the findings of both of the latest ADF&G escapement goal reviews; it is confusing, redundant, conflicting and should be repealed.

PROPOSED BY: Peter Melenchek

(HQ-F16-114)

PROPOSAL 118 – 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan.

Remove the optimum escapement goal for Kenai River late-run sockeye salmon and add the guided sport fishery to the list of fisheries managed under the plan, as follows:

5AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan. (a) The department shall manage the Kenai River late-run sockeye salmon stocks primarily for commercial uses based on abundance. The department shall also manage the commercial fisheries to minimize the harvest of Northern District coho, late-run Kenai River king, and Kenai River coho salmon stocks in order to provide personal use, sport, and guided sport fishermen with a reasonable opportunity to harvest salmon resources.

(b) The Kenai River late-run sockeye salmon commercial, sport, **guided sport fishermen** and personal use fisheries shall be managed to

[(1) MEET AN OPTIMUM ESCAPEMENT GOAL (OEG) RANGE OF 700,000 – 1,400,000 LATE-RUN SOCKEYE SALMON;]

(1)[(2)] achieve inriver goals as established by the board and measured at the Kenai River sonar counter located at river mile 19; and

What is the issue you would like the board to address and why? Repeal the Kenai River late-run sockeye Optimum Escapement Goal OEG

The Kenai River is the only river in the state to have five different sockeye salmon goals. These OEGs are not scientifically defensible and annually puts escapement into the Kenai River that is more than double the biological escapement goal. The OEG is extreme and is being used as a method to restrict commercial fishing and allocate more sockeye into the river, that will not be utilized by any one and will jeopardized future returns. There are numerous studies that document over escapement as not beneficial to the resource, habitat or users. World renowned sockeye salmon expert University of British Columbia professor emeritus Carl Walters states that severely restricting salmon fishing to put more spawners on the grounds did not produce more fish and only cost fishermen money. Walters points out that adding more spawners above an intermediate level does not create more fish. Adding extra spawners are not producing any more salmon and adding more spawners isn't adding more value to anybody. He states that consistently putting too many spawners into a system is bad for the fish. This is exactly what the OEG is doing to the Kenai River. The OEG is contrary to Alaska's Constitution, Alaska's laws, statutory conservation mandates, the Magnuson Stevens Act (MSA) and the Sustainable Salmon fisheries policy 5AAC 39.222 especially (a)(2) formulate fishery management plans designed to achieve maximum or optimum salmon production, and (c)(2)(B) salmon escapement goals should be established in a manner consistent with sustained yield: unless otherwise directed, the department will manage Alaska's salmon fisheries, to the extent possible, for maximum sustained yield; and (c)(3)(P).the

best available scientific information on the status of salmon populations and the condition of the salmon's habitats should be routinely updated and subjected to peer review. The OEG must be repealed!

The guided sport fishermen should also be added with the other users who shall be managed to in 5AAC 21.360 (a)(b)

PROPOSED BY: Central Peninsula Fish and Game Advisory Committee (EF-F16-151)

PROPOSAL 119 – 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan.

Amend management plan to achieve inriver goal range of 850,000–1,050,000 late-run sockeye salmon at run strengths less than 2.3 million sockeye salmon and 950,000–1,150,000 late-run sockeye salmon at run strengths greater than 2.3 million sockeye salmon, as follows:

Reformat the provisions to express two management inriver goal ranges and delete third tier in management.

Amend to achieve an inriver goal range of 850,000 – 1,050,000 late-run sockeye salmon on runs under 2.3 million. Runs greater than 2.3 million an inriver goal range of 950,000 – 1,150,000.

What is the issue you would like the board to address and why? Consecutive and repeated spawning escapement that exceed the upper SEG ranges on runs above 2.3 million while not maintaining or evenly distributing sockeye salmon escapements within the range.

In addition, the three tier inriver goal ranges are misrepresented in current regulations in a number of ways. For example, the first tier table (ADF&G, RC 213) Bendix to DIDSON was correctly stated as 850,00 (700,000 plus 150,000)–1,050,000 as inriver allocation was set as 150,000 on runs less than 2.3 million while the second and third tier was incorrectly formatted upwards from the inriver allocations considered by the BOF. Compounding the issue is the SEG range of 700,000 – 1,200,000 in DIDSON units was rounded up at the upper range in 100,000 units instead of 50,000 increments, i.e. the upper SEG range should be closer expressed at 1,100,000 spawners instead.

The Kenai late-run sockeye salmon goal was managed for decades under one inriver goal range which clearly presented the missions and duties to the department to manage to within the BEG/SEG escapement goal range. The risk on Yield, the Sustained Yields within the SEG range are expressed biologically and scientifically to maintain recruitments of 4 to 5 recruits per spawner. Instead, risk increased to diminished Yields (2 recruits per spawner) when exceeding the upper range which has occurred regularly under the tiers.

The third tier has only caused the department to exceed the upper end of the SEG range and further caused a complete inability to manage to within the range or mid-point of the SEG range. Furthermore the inriver sport allocation on runs above 4.6 million is not affected with the third tier removed, in fact by doing so places spawning escapements within the established SEG range.

The board needs to address habitat loss for appropriate modification of the Kenai River late-run sockeye salmon inriver goal.

PROPOSED BY: Mark Ducker and Jeff Beaudoin (HQ-F16-094)

PROPOSAL 120 – 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan.
Decrease the inriver goal ranges for late-run Kenai River sockeye salmon by 100,000 fish and limit the bag and possession of sockeye salmon to three per day and three in possession in the Kenai River sport fishery, as follows:

- (c) (1) at run strengths of less than 2,300,000 sockeye salmon,
 - (A) the department shall manage for an inriver goal range of **800,000 - 1,000,000** sockeye salmon past the sonar counter at river mile 19; and
- (2) at run strengths of 2,300,000- 4,600,000 sockeye salmon,
 - (A) the department shall manage for an inriver goal range of **900,000 – 1,000,000** sockeye
- (3) at run strengths greater than 4,600,000 sockeye salmon,
 - (A) the department shall manage for an inriver goal range of **1,000,000 - 1,200,000** sockeye salmon past the sonar counter at river mile 19;

- (h)
 - (1) fishing will occur seven days per week, 24 hours per day;
 - (2) the bag and possession limit for sockeye salmon is three per day, with three [SIX] in possession, in the sport fishery, [UNLESS THE DEPARTMENT DETERMINES THAT THE ABUNDANCE OF LATE-RUN SOCKEYE SALMON EXCEEDS 2,300,000 FISH, AT WHICH TIME THE COMMISSIONER MAY, BY EMERGENCY ORDER, INCREASE THE BAG AND POSSESSION LIMIT AS THE COMMISSIONER DETERMINES TO BE APPROPRIATE; AND]

What is the issue you would like the board to address and why? In 2000 and 2001 the department conducted a habitat study on the Kenai River to determine habitat damage from the recreational fishery. That report was withheld from the public and the Board. Instead of punishing whomever was responsible for this egregious act, the ADF&G Commissioner stated "the department used the results", 5 AAC 21.363 (d) is quite clear;

(d) The sonar count levels established in this section may be lowered by the board if noncommercial fishing, after consideration of mitigation efforts, results in a net loss of riparian habitat on the Kenai River. The department will, to the extent practicable, conduct habitat assessments on a schedule that conforms to the Board of Fisheries (board) triennial meeting cycle. If the assessments demonstrate a net loss of riparian habitat caused by noncommercial fishermen, the department is requested to report those findings to the board and submit proposals to the board for appropriate modification of the Kenai River late-run sockeye salmon inriver goal

This provision was put in the plan in 1999, in the ensuing 16 years the department has not reported anything to the Board or submitted any habitat proposals. I think it would be

appropriate to lower each inriver range by 100,000 fish and limit the daily bag limit to three and three in possession.

PROPOSED BY: Suzanne Ducker (HQ-F16-113)

PROPOSAL 121 – 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan.
Repeal and readopt management plan to remove the optimum escapement goal, mandatory restrictions and closed fishing periods or “windows”, and specify that management will be based on the abundance of late-run Kenai River sockeye salmon, as follows:

(Repeal and readopt)

5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan

(a) The department shall manage the Kenai River late-run sockeye salmon stocks to achieve one of the three in-river run goals listed below based on the abundance of Kenai River sockeye salmon. The department will manage the commercial fisheries targeting this stock with regular weekly fishing periods, as specified in 5 AAC 21.320 and adjust this schedule by emergency order to achieve the desired inriver sockeye goal. Additional fishing time in the commercial fisheries will not be allowed to target Susitna River coho, late-run Kenai River king, or Kenai River coho salmon stocks.

(b) The Kenai River late-run sockeye salmon commercial, sport, and personal use fisheries shall be managed to

(1) achieve inriver goals as established by the board and measured at the Kenai River sonar counter located at river mile 19; and

(3) Distribute the escapement of sockeye salmon evenly within the SEG range, in proportion to the size of the run.

(c) Based on preseason forecasts and inseason evaluations of the total Kenai River late-run sockeye salmon return during the fishing season, the run will be managed as follows:

(1) at run strengths of less than 2,300,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 900,000 - 1,100,000 sockeye salmon past the sonar counter at river mile 19; and

(B) subject to the provisions of other management plans, the Upper Subdistrict set gillnet fishery will fish regular weekly fishing periods, as specified in 5 AAC 21.320, through July 20, unless the department determines that the minimum inriver goal will not be met, at which time the fishery shall be closed or restricted as necessary;

(2) at run strengths of 2,300,000 - 4,600,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 1,000,000 - 1,200,000 sockeye salmon past the sonar counter at river mile 19;

(B) subject to the provisions of other management plans, the Upper Subdistrict set gillnet fishery will fish regular weekly fishing periods, as specified in 5 AAC 21.320, through July 20, or until the department makes a determination of run strength, whichever occurs first; if the department determines that the minimum inriver goal will not be met, the fishery shall be closed or restricted as necessary;

(3) at run strengths greater than 4,600,000 sockeye salmon,

(A) the department shall manage for an inriver goal range of 1,100,000 - 1,350,000 sockeye salmon past the sonar counter at river mile 19;

(B) subject to the provisions of other management plans, the Upper Subdistrict set gillnet fishery will fish regular weekly fishing periods, as specified in 5 AAC 21.320, through July 20, or until the department makes a determination of run strength, whichever occurs first; if the department determines that the minimum inriver goal will not be met, the fishery shall be closed or restricted as necessary

(d) The sonar count levels established in this section may be lowered by the board if noncommercial fishing, after consideration of mitigation efforts, results in a net loss of riparian habitat on the Kenai River. The department will, to the extent practicable, conduct habitat assessments on a schedule that conforms to the Board of Fisheries (board) triennial meeting cycle. If the assessments demonstrate a net loss of riparian habitat caused by noncommercial fishermen, the department is requested to report those findings to the board and submit proposals to the board for appropriate modification of the Kenai River late-run sockeye salmon inriver goal.

(e) Repealed 6/11/2005.

(f) Repealed 6/11/2005.

(g) Subject to the requirement of achieving the lower end of the sustainable escapement goal, the department shall provide for a personal use dip net fishery in the lower Kenai River as specified in 5 AAC 77.540.

(h) Subject to the requirement of achieving the lower end of the sustainable escapement goal, the department shall manage the sport fishery on the Kenai River, except that portion of the Kenai River from its confluence with the Russian River to an ADF&G regulatory marker located 1,800 yards downstream, as follows:

(1) fishing will occur seven days per week, 24 hours per day;

(2) the bag and possession limit for sockeye salmon is three per day, with six in possession, in the sport fishery, unless the department determines that the abundance of late-run sockeye salmon exceeds 2,300,000 fish, at which time the commissioner may, by emergency order, increase the bag and possession limit as the commissioner determines to be appropriate; and

(3) if the projected inriver run of sockeye salmon above the Kenai River sonar counter located at river mile 19 is less than 900,000 fish and the inriver sport fishery harvest is projected to result in an escapement below the lower end of the sustainable escapement goal, the commissioner may, by emergency order, close or restrict the sport fishery as necessary;

j) The commissioner may depart from the provisions of the management plan under this section as provided in 5 AAC 21.363(e).

What is the issue you would like the board to address and why?

This plan is far too complex and has many unnecessary restrictions and conflicting objectives. Since managing for the escapement goal is all that is necessary and puts the health of the fish above all else, the remainder of the language is arbitrary and unnecessary and preventing the department from achieving the proper escapement level. The optimal escapement goal is unnecessary as the allocations are provided for in the inriver goals. The hourly limitations in the set gillnet fishery are unnecessary since the department is going to manage for the same escapement goal regardless, which is what 5 AAC 21.363 (e) directs them to do anyway. Additionally the Supreme Court just ruled that once the season starts the department should ignore the plans and manage for the

escapement goals for all stocks. Windows or mandatory closed periods are not only unnecessary, they lead to huge over escapements which are likely unconstitutional and contrary to the Boards mandate to conserve and develop. This plan will work much better if you allow the department to do their job with minimal guidelines.

PROPOSED BY: Chris Garcia (HQ-F16-108)

PROPOSAL 122 – 5 AAC 21.360. Kenai River Late-Run Sockeye Salmon Management Plan and 5 AAC 21.365. Kasilof River Salmon Management Plan. Remove mandatory closed fishing periods or "windows" from the Upper Subdistrict commercial set gillnet fishery, as follows:

Eliminate windows. The reason windows has not put more fish in the river. The affect of windows has been only to hamstring our talented fishery managers. When fish are present the fishery should be open.

What is the issue you would like the board to address and why? Windows – a failed allocation.

PROPOSED BY: John McCombs (HQ-F16-085)
