

Information on roles and responsibilities specific to stocks of concern are largely described in the SSFP (5 AAC 39.222), primarily in subsections (d)(1)(D)(ii), (d)(1)(D)(iii), (d)(3), (d)(4) and (d)(5). These subsections describe three levels of stock of concern: yield, management and conservation concern. Definitions of stock of concern and the different levels of concern are contained in 5 AAC 39.222(f):

(35) "stock of concern" means a stock of salmon for which there is a yield, management, or conservation concern;

(42) "yield concern" means a concern arising from a chronic inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above a stock's escapement needs; a yield concern is less severe than a management concern, which is less severe than a conservation concern;

(21) "management concern" means a concern arising from a chronic inability, despite use of specific management measures, to maintain escapements for a salmon stock within the bounds of the SEG, BEG, OEG, or other specified management objectives for the fishery; a management concern is not as severe as a conservation concern;

(6) "conservation concern" means 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); a conservation concern is more severe than a management concern.

Associated terms used in these definitions are defined in 5 AAC 39.222(f) and Appendix A.

The department manages salmon fisheries to attain escapement goals. Escapement goals are based on analyses of historical escapement, and in many cases incorporate information on production (the total number of fish that return from a given escapement or brood year). The department does not monitor escapement on all salmon stocks in the state, so not all salmon stocks have defined escapement goals. Escapement goals are developed to sustain abundance of salmon stocks at levels that provide both escapement for future production and a surplus of salmon that is available for harvest. Thus, escapement goals, which guide fisheries management, are based on a time series of historical data and represent "average" production over a number of years.

Average production implies variability in annual productivity exists but situations arise when stock production declines for a series of years. Because the department's first priority is to achieve escapement goals, these situations may lead to restrictions to fisheries – reducing fishing opportunity in space and/or time, and sometimes through gear. In some cases, escapement goals are not met despite fishery restrictions and closures. Given the variability in annual production, this is expected to happen periodically, but when it happens consistently over a period of years, it may lead the department to recommend the board consider a stock be designated a stock of concern. Upon board designation as a stock of concern, actions are taken to reduce harvest of the stock, improve stock assessment to get better data on escapement if not total production, and/or rehabilitate freshwater habitats.

The board and department work together in a defined process to determine if a salmon stock meets criteria as a stock of concern. As part of the escapement goal review that occurs for a regulatory area during a board meeting cycle, the department reviews escapements, annual harvests and other data relative to stock of concern designation. The department presents a

memo at the board Work Session to inform the board of any stocks within the regulatory area that appear to meet criteria for stock of concern designation, with a recommendation the board discuss this designation at their regulatory meeting. For example, at the October 2017 Work Session the department will present information on stocks of concern for the Prince William Sound and Southeast Alaska regulatory areas. Upon request from the board, the department will draft an Action Plan for the board to consider at their regulatory meeting. An action plan generally describes stock status, trends in escapement and harvest, and other factors that potentially impact stock production and/or harvest levels (e.g., changes to fish habitat, expanding and/or new fisheries). The plan also outlines options the board may wish to discuss to implement regulatory action – or action the department intends to take – that will affect management of fisheries, and options the department could or will undertake to improve stock assessment and/or habitat. After a stock is designated a stock of concern and actions are implemented, the department reviews the status of the stocks of concern during their triennial review. If actions proved successful and a stock no longer meets the criteria for a stock of concern designation, the department will recommend delisting of that particular stock; otherwise, the department will recommend continued listing or change in level of concern.

What Has Happened

Since 2001 there have been 30 stock of concern designations: 17 management concern and 13 yield concern designations (Table 1). No stocks of conservation concern have been designated. Most stock of concern designations occurred in the first three board cycles after the policies were adopted (13 of 30; 43%) and in 2011 (7 of 30; 23%). Among regional areas, Cook Inlet (12 of 30; 40%) and Arctic-Yukon-Kuskokwim (11 of 30; 37%) areas have had the most stock of concern designations. No stocks in Prince William Sound/Upper Copper and Upper Susitna Rivers area have been designated a stock of concern. Across the species, King salmon have had the most stock of concern designations (13 of 30; 43%) followed by chum salmon (9 of 30; 30%) and sockeye salmon (8 of 30; 27%). No pink salmon or coho salmon stocks have been designated a stock of concern.

There are currently 9 stocks of management concern and 5 stocks of yield concern. All current stocks of management concern have been listed for 7 years or less. Of the 5 stocks currently on the list as yield concern, 4 have been listed for more than 10 years, 2 of which have been listed since the inception of the policy in 2000 (Norton Sound Subdistrict 2/3 chum salmon and Yukon River King salmon). King salmon stocks comprise the majority of stocks (11 of 14; 79%) currently designated a stock of concern. Seven of these, including 6 from Cook Inlet, were designated a stock of concern in 2010, when runs of King salmon stocks decreased statewide.

Nearly all stocks that have been removed from stock of concern status were determined to have recovered in the first 6 years or 2 board cycles (10 of 11; 91%). In a few cases, stocks have had their stock of concern designation revised from one level of concern to another. Two stocks, Kvichak River sockeye salmon (2000) and Goose Creek King salmon (2011), were initially designated stocks of yield concern and subsequently re-designated as stocks of management concern (2003 and 2014, respectively). Kvichak River sockeye salmon were later re-designated again as a stock of yield concern in 2009 and, after a total of 12 years, removed from the list as a stock of concern in 2012. Norton Sound Subdistrict 1 chum salmon were initially listed as a stock of management concern in 2000, subsequently designated a yield concern (2006) and, after a total of 15 years, delisted from stock of concern status in 2016.

What Was Learned

The criterion for designating a stock of management concern has been relatively straightforward: chronic inability to meet the escapement goal over a recent period of years (Table 2). Chronic inability has been interpreted by the department as not meeting the goal for all, or nearly all, years during a recent 5-6 year series of escapement assessments. The exact specifications of the criteria were tailored to the circumstances surrounding each individual stock. Subsequent decision for a stock to remain or be delisted as a management concern has also been straightforward – the stock was meeting the escapement goal or continued to not meet the goal.

Designating a stock of yield concern and subsequent decisions to either retain or remove the stock as a yield concern has been more subjective. The development of escapement goals includes consideration of production with the intent to provide harvestable surplus in most years. However the department manages salmon to attain escapement goals, not to maintain a particular level of yield. Yield may also be more difficult to assess or estimate accurately than escapement. Stocks designated a yield concern have experienced a recent decline in harvest, however often the reduced harvest is a function of restrictions imposed on fisheries to achieve the escapement goal. Ultimately, declines in yield may be a function of natural fluctuations in stock production. Designation, and subsequent removal, of yield concern status can thus be subject to factors beyond the control of the department and the board.

Despite the subjectivity, the department has improved the justification and documentation provided when recommending designation and/or delisting of a stock as a yield concern. For example, Fish Creek sockeye salmon was the first stock removed from the yield concern list. The stated reason for this action was the observed escapements “...over the past five years were either above, below or within the SEG range.” This implies, but does not plainly state, that harvestable surplus was available at least in years when the goal was exceeded. Conversely, justification to remove stocks from yield concern since 2010, such as Kvichak River sockeye salmon and Norton Sound Subdistrict 1 chum salmon, were explicitly documented by greater harvest and/or increased fishing time. For example, the recommendation to remove Kvichak sockeye salmon as a stock of concern included reasons based on 8 consecutive years of meeting escapement goals and increases in run size, productivity, and harvest opportunity.

Recommendations

Based on this review we suggest the following recommendations.

First, future Action Plans for stocks under consideration as a stock of concern should include documentation of the conditions considered sufficient to recommend removing stock of concern status that are clear, measureable, and achievable. Action Plans usually include recommendations by the department for goals and objectives, but are often written in general terms of meeting escapement goals or increasing harvest. Goal statements in recent Action Plans for stocks designated a management concern were “rebuild runs back to levels that achieve the SEG” and for those designated a yield concern were “to meet spawning escapement goals and to reestablish historic range of harvest levels by users.” These goals are straightforward given the definitions in the SSFP but are not very clear with respect to how success will be measured. Articulating the Action Plan goal and the conditions the stock should meet to recommend removal of stock of concern designation in clear and measureable terms improves transparency and provides explicit measures to determine whether actions adopted from the plan attained the desired result.

Second, we recommend actions taken to reduce harvest, either in regulation or fisheries management, and/or improve stock assessment and freshwater habitats be clearly documented. Action Plans provide recommendations and options for potential actions, but do not include final documentation of the action(s) adopted. Providing a document that summarizes the actions and board's intent with respect to stocks of concern during each meeting cycle improves transparency and provides a single reference that can be consulted in the future. An example of such documentation is the written findings that identified regulatory actions taken to address salmon stocks of concern adopted by the board in 2011 (Board of Fisheries Finding 2011-266-FB; <http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/findings/2011-266-fb.pdf>). While the actions themselves are not clear cause and effect in recovery of a stock, it will further our understanding of what actions were actually taken as a result of the stock of concern designation and adopted from the Action Plan.

Finally, we recommend that goals and objectives to retain or delist a stock of concern identified in Action Plans be re-assessed periodically and updated if necessary. This would be especially helpful for stocks difficult to assess such as Swanson River sockeye salmon where it is difficult to survey escapement due to poor water and/or survey conditions. It would also be helpful for situations when there is a significant change in assessment methods or fisheries, such as Susitna River sockeye salmon where there are questions about accuracy of historical estimates of escapement and harvest, and assessment of both has changed. Since listing, the sonar project on the Yentna River was discontinued (2009) and replaced with weir-based SEGs for 3 lakes (Judd, Chelatna, and Larson). Stock-specific commercial harvest was formerly estimated with an age composition allocation model but now estimated using genetic stock identification techniques. It is important to acknowledge that goals and objectives to recommend delisting of a stock may need to be revised as stock assessment methods change and improve, new information is obtained for a particular stock, or fisheries change in response to regulations and management. Therefore, periodically revisiting conditions for stock of concern designation – as the department does with stock status and escapement goals – provides the department and board the flexibility to respond to these changes and ensure that objectives remain relevant and achievable.

Appendix A. Additional terms defined in the SSFP [5 AAC 39.223(f)] related to stock of concern definitions.

(5) "chronic inability" means 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;

(41) "yield" means the number or weight of salmon harvested in a particular year or season from a stock;

(12) "expected yields" mean levels at or near the lower range of recent historic harvests if they are deemed sustainable;

(15) "harvestable surplus" means the number of salmon from a stock's annual run that is surplus to escapement needs and can reasonably be made available for harvest;

(10) "escapement" means the annual estimated size of the spawning salmon stock; quality of the escapement may be determined not only by numbers of spawners, but also by factors such as sex ratio, age composition, temporal entry into the system, and spatial distribution within the salmon spawning habitat;

(36) "sustainable escapement goal" or "(SEG)" means a level of escapement, indicated by an index or an escapement estimate, that is known to provide for sustained yield over a 5 to 10 year period, used in situations where a BEG cannot be estimated due to the absence of a stock specific catch estimate; the SEG is the primary management objective for the escapement, unless an optimal escapement or inriver run goal has been adopted by the board, and will be developed from the best available biological information; the SEG will be determined by the department and will be stated as a range that takes into account data uncertainty; the department will seek to maintain escapements within the bounds of the SEG;

(3) "biological escapement goal" or "(BEG)" means the escapement that provides the greatest potential for maximum sustained yield; BEG will be the primary management objective for the escapement unless an optimal escapement or inriver run goal has been adopted; BEG will be developed from the best available biological information, and should be scientifically defensible on the basis of available biological information; BEG will be determined by the department and will be expressed as a range based on factors such as salmon stock productivity and data uncertainty; the department will seek to maintain evenly distributed salmon escapements within the bounds of a BEG;

(25) "optimal escapement goal" or "(OEG)" means a specific management objective for salmon escapement that considers biological and allocative factors and may differ from the SEG or BEG; an OEG will be sustainable and may be expressed as a range with the lower bound above the level of SET, and will be adopted as a regulation by the board; the department will seek to maintain evenly distributed escapements within the bounds of the OEG;

(19) "inriver run goal" means a specific management objective for salmon stocks that are subject to harvest upstream of the point where escapement is estimated; the inriver run goal will be set in regulation by the board and is comprised of the SEG, BEG, or OEG, plus specific allocations to inriver fisheries;

(39) "sustained escapement threshold" or "(SET)" means a threshold level of escapement, below which the ability of the salmon stock to sustain itself is jeopardized; in practice, SET can be estimated based on lower ranges of historical escapement levels, for which the salmon stock has consistently demonstrated the ability to sustain itself; the SET is lower than the lower bound of the BEG and lower than the lower bound of the SEG; the SET is established by the department in consultation with the board, as needed, for salmon stocks of management or conservation concern;

(7) "depleted salmon stock" means a salmon stock for which there is a conservation concern;

(14) "habitat concern" means the degradation of salmon habitat that results in, or can be anticipated to result in, impacts leading to yield, management, or conservation concerns;

(29) "rehabilitation" means efforts applied to a salmon stock to restore it to an otherwise natural level of productivity; "rehabilitation" does not include an enhancement, which is intended to augment production above otherwise natural levels.

Table 1. Summary of all salmon stocks in Alaska designated a stock of concern since adoption of the Sustainable Salmon Fisheries Policy.

Stock	Species	Area	Year		Duration
			Initiated	Removed	
Management Concern					
Norton Sound SD 1	chum	Norton Sound	2000	2007	6
Toklat River	fall chum	Yukon	2000	2004	3
Fishing Branch	fall chum	Yukon	2000	2004	3
Yukon River	summer chum	Yukon	2000	2007	6
Anchor River	King	Cook Inlet	2001	2004	3
Hugh Smith Lake	sockeye	Southeast	2003	2006	3
Kvichak River	sockeye	Bristol Bay	2003	2009	6
McDonald Lake	sockeye	Southeast	2009	2012	3
Karluk River	King	Kodiak	2011	ongoing	7
Alexander River	King	Cook Inlet	2011	ongoing	7
Theodore River	King	Cook Inlet	2011	ongoing	7
Lewis River	King	Cook Inlet	2011	ongoing	7
Chuitna River	King	Cook Inlet	2011	ongoing	7
Swanson Lagoon	sockeye	Alaska Peninsula	2013	ongoing	5
Sheep Creek	King	Cook Inlet	2014	ongoing	4
Goose Creek	King	Cook Inlet	2014	ongoing	4
McNeil River	chum	Cook Inlet	2016	ongoing	1
Yield Concern					
Kuskokwim River	chum	Kuskokwim	2000	2007	6
Kuskokwim River	King	Kuskokwim	2000	2007	6
Yukon River	fall chum	Yukon	2000	2007	6
Yukon River	King	Yukon	2000	ongoing	17
Norton Sound SD 2/3	chum	Norton Sound	2000	ongoing	17
Kvichak River	sockeye	Bristol Bay	2000 & 2009	2003 & 2012	3 & 3
Fish Creek	sockeye	Cook Inlet	2002	2005	3
Norton Sound SD 5/6	King	Norton Sound	2004	ongoing	14
Norton Sound SD 1	chum	Norton Sound	2007	2016	9
Susitna River	sockeye	Cook Inlet	2008	ongoing	10
Willow Creek	King	Cook Inlet	2011	ongoing	7
Goose Creek	King	Cook Inlet	2011	2014	3

Table 2. Reason to designate, and reason to either remove or keep designation, of Alaska salmon as stock of concern.

Stock	Designated as Stock of Concern			Removed/Remains Stock of Concern		
	Species	Area	Year Reason	Year	Reason	Reason
Management Concern						
Norton Sound SD 1	chum	Norton Sound	2000	Low escapements since 1998 and anticipated low level in 2001. Escapement assessments tend to vary annually depending on location, but overall Nome Subdistrict chum salmon escapement goals have generally not been achieved the past ten years despite use of specific management measures.	2007	Majority of chum salmon escapement goals met for 5 years (2002-2006). Reclassed to yield concern because yield remained well below historical levels in the 1980s despite use of specific management measures.
Toklat River	fall chum	Yukon	2000	Chronic inability to meet goal since 1997. Escapement goal not met 5 consecutive years (1996-2000).	2004	Escapement goal met in 2002 and 2003.
Fishing Branch	fall chum	Yukon	2000	Chronic inability to meet goal since 1997. Escapement goal not met 4 of 5 years (met 1996; not met 1997-2000).	2004	River located entirely within Canada. Joint Technical Committee (JTC) and Yukon River Panel will address escapement targets and management strategies annually.
Yukon River	summer chum	Yukon	2000	Escapement goals not met 3 consecutive years (1998-2000) and anticipate not meeting goals in 2001.	2007	Large escapements of Yukon River summer chum salmon 2004-2006. OEG exceeded annually since 2001, tributary escapement goal met at Anvik River 2002 and 2004-2006, and East Fork Andreafsky River in 2006 (within 2% meeting goal in 2004). Not yield concern because lack of markets largely impacting low harvests.
Anchor River	King	Cook Inlet	2001	Declining trend in aerial survey escapement indices. From 1996-2000 the indices were less than or barely attained the escapement goal.	2004	New weir/sonar assessment project found escapements were much greater and exploitation much lower than originally thought.
Hugh Smith Lake	sockeye	Southeast	2003	Did not meet escapement goal since 1993 (nor 2003 revised goal since 1998).	2006	Escapements above OEG for 3 consecutive years.
Kvichak River	sockeye	Bristol Bay	2003	Escapement goal not met 4 of 5 years (1999-2003, met only in 1999).	2009	Escapement goal met 5 consecutive years (2005-2009). Reclassed to yield concern.
McDonald Lake	sockeye	Southeast	2009	Escapement goal not met 4 of 6 years (2001-2007).	2012	Escapement goal nearly met in 2009 and met in 2010 and 2011. Fry population estimates in 2009 twice recent average indicating future runs should meet escapement and provide yield.

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Stock	Species	Area	Designated as Stock of Concern		Removed/Remains Stock of Concern	
			Year	Reason	Year	Reason
Karluk River	King	Kodiak	2011	Escapement goal not met 3 consecutive years (2007-2010).	ongoing	Escapement goal not met 7 of 10 years (2007-2016).
Alexander River	King	Cook Inlet	2011	Declining/low trend in aerial survey escapement indices and escapement goal not met 4 consecutive years (2006-2010). Closed sport fishery 2008.	ongoing	Escapement goal not met 11 consecutive years (2006-2016).
Theodore River	King	Cook Inlet	2011	Escapement goal not met 4 consecutive years (2007-2010). Decade of non-retention in sport fishery and years with restrictions/closures in commercial set gillnet fishery.	ongoing	Escapement goal not met 10 consecutive years (2007-2016).
Lewis River	King	Cook Inlet	2011	Escapement goal not met 4 consecutive years (2007-2010). Decade of non-retention in sport fishery and years with restrictions/closures in commercial set gillnet fishery.	ongoing	Escapement goal not met 10 consecutive years (2007-2016).
Chuitna River	King	Cook Inlet	2011	Escapement goal not met 4 consecutive years (2007-2010). Decade of non-retention in sport fishery and years with restrictions/closures in commercial set gillnet fishery.	ongoing	Escapement goal not met 6 of 10 years (2007-2016), with 2 years barely meeting goal.
Swanson Lagoon	sockeye	Alaska Peninsula	2013	Escapement goal not met 4 of 5 years (2005-2009) and continued to not meet goal.	ongoing	Escapement goal not met 8 consecutive years (2008-2014).
Sheep Creek	King	Cook Inlet	2014	Escapement goal not met 8 consecutive years (2006-2013); shares channel with Goose Creek.	ongoing	Escapement goal not met 6 of 10 years (2007-2016). No index count the other 4 years due to poor survey conditions.
Goose Creek	King	Cook Inlet	2014	Escapement goal not met 9 consecutive years (2005-2013); shares channel with Sheep Creek.	ongoing	Escapement goal not met 8 of 10 years (2007-2016). No index count the other 2 years due to poor survey conditions.
McNeil River	chum	Cook Inlet	2016	Escapement goal not met 7 of 10 years (2007-2016), no commercial fishery since 1993.	ongoing	NA

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Stock	Designated as Stock of Concern			Removed/Remains Stock of Concern		
	Species	Area	Year Reason	Year	Reason	
Yield Concern						
Kuskokwim River	chum	Kuskokwim	2000	Low harvest levels since 1997 and anticipated low harvest in 2001.	2007	Runs improved and available yield estimated near historical range. Subsistence harvest only slightly below historical levels but within amounts necessary for subsistence. Commercial harvest low because of lack of markets (2002-2006).
Kuskokwim River	King	Kuskokwim	2000	Low commercial harvest levels since 1996 and anticipated low harvest in 2001.	2007	Since 2001 runs improved and amount necessary for subsistence met (2002-2006). Subsistence harvest below historical average but yield available most years since 2001. Lack of directed chum salmon commercial fishery precluded incidental harvest of King salmon.
Yukon River	fall chum	Yukon	2000	Low harvest levels since 1997 and anticipated low harvest in 2001. 1994 and 1995 brood years produced <1.0 return-per-spawner (vs. average of 2.5).	2007	Drainage-wide OEG met 5 consecutive years (2002-2006) and all escapement goals exceeded in 2005. Subsistence and commercial harvests still below previous averages but run size improved greatly since 2002 with large available surplus in 2003, 2005 and 2006 near the historical yield.
Yukon River	King	Yukon	2000	Low harvest levels and general decline in production since 1998, and anticipated low harvest in 2001.	ongoing	There are indications of improved productivity including increased run abundances and yields, increased juvenile abundance in Bering Sea surveys, increased harvest of immatures in Bering Sea fisheries, and higher than average age-4 returns. Remain SOC until improved productivity is substantiated.
Norton Sound SD 2/3	chum	Norton Sound	2000	Low harvest levels since 1995 and anticipated low harvest in 2001. Escapement assessments vary annually depending on location, but Kwiniuk River tower escapement goal met since 1994 except 1999 and 2000.	ongoing	Yield remains variable during the last 5 years (2011-2015) despite the use of specific management measures; however, in 4 of 6 years (2010-2015) the yield in Subdistrict 3 was near historical average in the 1980s.

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Stock	Designated as Stock of Concern			Removed/Remains Stock of Concern		
	Species	Area	Year Reason	Year	Reason	
Kvichak River	sockeye	Bristol Bay	2000	Yields 1996-2000 were 34-94% below historical median yield (1956-1995) and not meet escapement goal 3 of 5 years.	2003	Reclassified to management concern. Escapement goal not met 4 consecutive years (2000-2003, goal met in 1999).
			2009	Reclassified from management concern. Escapement goals met 5 consecutive years (2005-2009), but still concerned about low harvest and expected low yields.	2012	Escapement goal met 8 consecutive years (2005-2012), increased yields, returns-per-spawner steadily increase from <0.5 to >5.0 over 5 brood years, total runs increased by more than 50%.
Fish Creek	sockeye	Cook Inlet	2002	Personal use dipnet and Northern District commercial set gillnet fisheries closed in 5 of past 6 years to meet escapement goal but little or no surplus yield available for harvest.	2005	Using the new escapement goal, escapements over five years (2000-2004) were either above, below or within the SEG range.
			2004	Increased restrictions on fishing to meet escapement goals resulted in an average annual commercial harvest of 865 fish during 1999-2002, 90% below previous 10-year (1989-1998) average annual harvest of 7,131 fish.	ongoing	There are indications of improved productivity including increased run abundance and yields, increased juvenile abundance in Bering Sea surveys, increased harvest of immatures in Bering Sea fisheries, and higher than average age-4 returns. Remain SOC until improved productivity is substantiated.
Norton Sound SD 1	chum	Norton Sound	2007	Reclassified from management concern. Majority of escapement goals met for last 5 years (2002-2006), but yield remains well below historical levels in the 1980s despite use of specific management measures.	2016	Exceed Subdistrict BEG and Eldorado River OEG consecutive years 2011-2015, and exceed OEG 4 of 5 years in Nome and Snake rivers. Subsistence fishing and sport fishing allowed since 2013.
			2008	Lower harvest in Central District drift gillnet fishery with recent 5-year average (2003-2007) 59% of the previous 10-year average (1993-2002) and 49% of the previous 20-year average (1983-2002), and Northern District set gillnet fishery with recent 5-year average 31% of the previous 10-year average and 22% of the previous 20-year average.	ongoing	Generally achieve escapement goals between 2009-2016: Chelatna Lake (7 of 8 years), Larson Lake (5 of 8 years) and Judd Lake (3 of 7 years; not assessed in 2016), but annual harvests (2008-2013) less than long-term average.

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Stock	Designated as Stock of Concern			Removed/Remains Stock of Concern			
	Species	Area	Year	Year	Reason	Reason	
Willow Creek	King	Cook Inlet	2011		Escapement goal not met 4 consecutive years (2007-2010); sport fishery restricted reducing harvest.	ongoing	Escapement goal met in 2013, 2015 and 2016 but no surplus yield. Sport fishery restriction needed to meet goal in 2013 and 2016, if not all 3 years.
Goose Creek	King	Cook Inlet	2011	2014	Escapement goal not met 4 consecutive years (2007-2010), but beaver dams blocked fish passage 2009 and 2010; sport fishery restricted reducing harvest.	2014	Reclassified to management concern. Escapement goal not met 8 consecutive years (2007-2014) and no index counts 2015 and 2016 due to poor survey conditions.