

## Fishing rules should be science-based

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*(02/19/10 22:48:07)*

The Alaska Department of Fish and Game is predicting a dismal sockeye salmon return this summer for the Kenai River. According to Jenny Neyman, writing in the Redoubt Reporter, this summer's 40-percent-below-average return looks so grim that the United Cook Inlet Drift Association is preparing to seek federal disaster relief should the biological predictions come true. The City of Kenai is also worried about a shutdown after making a considerable investment in personal-use fishery infrastructure at the river mouth, as are businesses that rely on salmon dollars. And the thousands who rely on fish for food may need to consider their options.

If the problem had been high-seas trawling, the Kasilof and other rivers should show a similar projected decline; they don't. Almost certainly the predicted weak Kenai River return is a product of over-escapement in 2004, 2005 and 2006 that produced this year's returning salmon. 2003 was also an over-escapement year contributing to last year's low run. While not an exact science, salmon run forecasts have reached an increasingly sophisticated level based on William Ricker's 1954 algebraic formulas modified by Kenneth Tarbox, B.E. King and David Waltemyer in 1983. More recently, others have incorporated brood-year interaction factors for the Kenai drainage.

With more than 30 years of research, fisheries biologists can say with a high degree of confidence that 500,000 to 800,000 fish are the optimal escapement for Kenai River sockeye. Lower than that (under-escapement) and higher than that (over-escapement) produce a lower return of salmon three to five years later. The escapement for 2003-06 was not just a little over but almost double what biologists said there should have been -- double.

The problem isn't that management mechanisms do not exist. One of the reasons for limited entry for commercial salmon fishing in Cook Inlet is to manage escapement. Because of limited entry, the number of permitted set and drift net fishers are known, and ADF&G is authorized to limit or expand fishing days and locations, and impose gear restrictions. In theory, commercial fishers harvest enough fish, minus sport, personal use and subsistence takes, to closely hit the target escapement predicted by scientific models.

So why didn't ADF&G commissioners during the last three years of the Murkowski administration and first year of the Palin administration take their biologists' advice and exercise their authority to extend commercial fishing days to minimize what became massive over-escapement resulting in this year's probable depressed salmon run?

Two possibilities exist. Both involve politics.

First, the effect of over-escapement is to limit commercial fishing three to five years later. If over-escapement happens over a number of years, as it did for the 2003-6 period, the subsequently restricted commercial harvest would put more king salmon, essentially a commercial by-catch, into the Kenai River. Kings are the fish of choice for trophy fishers who form a small but zealous lobby and ADF&G decision makers may have bowed to that pressure. I, however, cannot believe that even the most ardent Alaska trophy fisher would advocate jeopardizing one of the world's greatest wild red salmon runs for a chance at a photo or a wall mount.

More likely the over-escapement was a product of a formal and informal lobby by sport and personal use fishers to put more fish in the Kenai. There are three factors here.

First, starting with Gov. Tony Knowles, most politicians have understood that there are far more votes among Cook Inlet sport and personal use fishers than commercial fishers.

Second, sport licenses largely fund ADF&G, creating a conflict of interest for managers who know that keeping non-commercial fishers happy enhances their funding.

Third, based on the questions they do and don't ask at meetings, some Board of Fish positions apparently are occupied by individuals who lack understanding of the complex biological algebraic models used to manage fish runs. These factors predispose them to overlook science and respond to popular demand.

A few years of bad management endangers the fishery but does not destroy it. Escapement for the years 2007-9 has been within the target zone and things should return to normal. But there are lessons to be learned.

The Ricker-modified algebraic models do not include a "P factor" for politics. The only way to keep salmon populations strong and stable is through a biologically managed fishery and control, to the extent possible, of ocean trawling. It's time to restructure a bureaucracy capable of overriding and devaluing science, understand the algebra and remove politics from the equation.

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