

Apr. 25, 2017

To: House Resources Committees

Hon. Geran Tarr
Hon. Andy Josephson
Hon. Dean Westlake
Hon. Justin Parrish Johnson
Hon. Harriet Drummond
Hon. Chris Birch
Hon. DeLena Johnson
Hon. George Rauscher
Hon. David Talerico

From: Milo D. Adkison, Ph.D.

Re: HB107

I'm a professor of fisheries with a long history of research on and involvement in Alaska's fisheries. I'm writing to oppose the draft of House Bill 107 "An Act relating to fish; and establishing a fisheries rehabilitation permit", which is a revision of the HB220 introduced in the previous legislative session. While I understand the desire of Alaskans to do something to help fish stocks on which they depend recover more quickly, this approach is misguided. In my professional opinion, the small-scale fish enhancement efforts motivating this bill will do more harm than good. They are not a sensible strategy for responding to current weak productivity in some of our salmon stocks.

When enhancement works, the enhanced stock can sustain higher harvest rates. Unfortunately, when the enhanced fish are mixed with other stocks on the fishing grounds, harvesting at this higher rate will overharvest the other fish, driving their populations lower. This is a serious problem in gauntlet fisheries such as we have on the Yukon and Kuskokwim rivers, where mixed stocks of salmon are subject to several fisheries in different parts of the rivers. The problems resulting from mixing enhanced fish with wild fish is why Alaska's salmon hatcheries are required to release fish in areas away from wild stocks.

Genetic problems also arise when enhancement works. Domestication can happen rapidly, and reduce survival in the wild. Enhancement increases the number of offspring of the broodstock used, so that the population ends up with a high number of closely related individuals. Successive generations of enhancement results in the majority of the population being highly related; this inbreeding can manifest genetic defects, and the loss of genetic diversity makes the population less able to adapt to environmental changes. To prevent these problems, ADF&G has strict breeding protocols requiring large broodstock numbers for hatchery facilities. Small-scale projects are unlikely to be able to follow these protocols.

Finally, there are obvious problems if enhancement fails; fish taken for broodstock or incidentally disturbed during egg takes reduce the natural reproductive potential of the population.

In addition to these general problems, I'll highlight several specifics of this bill:

The language "...place the incubated and fertilized eggs or hatched fish in the same waters" is a significant improvement over the bill from the previous session that would have allowed transplanting fish among watersheds, which is for good reason prohibited in Alaska's fisheries genetics policies.

The language "local stakeholders have identified a decline in the number of the species of fish" is unchanged from the previous bill, and seems to set a very low bar to justifying an enhancement project. However, other conditions necessary for the commissioner to issue a project, such as only permitting a project when "subsistence and escapement goals have not been met" and requiring that a project "will not harm indigenous wild fish stocks" are reassuring.

The requirement that a complete application be judged within 90 days, although better than the 60 days in the previous bill, still does not ensure a thorough review of the potential benefits and risks.

Despite these significant improvements in language, I do not support this legislation. The best response to lows in the cycles of fish productivity is to reduce fishing pressure and maintain the integrity of the habitat. This strategy has proven successful in the past, and entails little risk to our fish stocks. Should significant conservation concerns arise where supplementation efforts would be useful, ADF&G has the expertise and internal oversight capabilities to best accomplish this. I urge you not to proceed with well-intentioned but misguided private enhancement efforts.