Jan. 28, 2016

To: House Special Committee on Fisheries
Hon. Louise Stutes
Hon. Neal Foster
Hon. Bob Herron
Hon. Craig Johnson
Hon. Charisse Millett
Hon. Jonathan Kreiss-Tomkins
Hon. Dan Ortiz
From: Milo D. Adkison, Ph.D.
Re: HB220

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 220 "An Act relating to fish; and establishing a fisheries enhancement permit", and to oppose the concept of small-scale fish enhancement efforts motivating this bill. In my professional opinion, these efforts 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, specifics of this bill are worrisome:

The language "...place the incubated and fertilized eggs or hatched fish in the same or other state waters" seems to allow 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” and “...the population of the species of fish is limited or the species is absent because of an identified factor...” seems to set a very low bar to justifying an enhancement project.

The requirement that a complete application be judged within 60 days does not permit a thorough review of the potential benefits and risks.

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. I urge you not to proceed with well-intentioned but misguided enhancement efforts.