

To: Alaska Salmon Research Task Force

From: John Wood

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I submit these activities as worthy of research that would be utilized by regulatory bodies at both the state and national level. From my years on the Alaska Board Of Fisheries, I have participated in cycles through all of Alaska regulated fish and crab stocks throughout the entire state.

- 1) Your task force is tasked with identifying research needs for the entire state but seems totally focused at the moment on western Alaska. There is no doubt that western Alaska does deserve in-depth research to answer some troubling trends, but then again, so do many other regions. Please consider implementing an aggressive comprehensive statewide genetic stock identification program that identifies all known stocks of salmon, including but not limited to, those already catalogued in the state's databank. Start by identifying the mainstem of all of the major rivers and then work up to the tributaries feeding those mainstem fish.

Couple this with acquiring several portable testing facilities such as used on the Line above Port Moller so that the department can effectively and reliably do in-season management while creating a database on the numbers and place of origin of the fish. These units are capable of doing 24 hour turnarounds on identifications.

- 2) Provide funding to conduct limnology studies on major sockeye rearing lakes to establish a baseline and then followup into the future periodically such as every other year.
- 3) Develop cost estimates and scope of program to, through telemetry or other tracking program, follow selected representative fish from each salmon species as they are in their oceanic stage of their life history. Done comprehensively, this can provide not only telling us where the salmon are traveling but also where and possible when mortality is occurring in the marine waters.
- 4) Expand the WASSIP study as per RC 131 (copy attached) that was initiated by the Kodiak Working Group and was also subsequently approved by the Matanuska-Susitna Borough by unanimous Assembly approval. This would provide reliable data for entire Cook Inlet as well as the Kodiak area.
- 5) Provide funding to bring, on an ongoing basis, consulting experts to present most current salmon research to the Board Of Fisheries in a setting that encourages a thorough discussion of new ideas and practices. These would be acknowledged experts outside of the Department since the BOF already has access to the Department's position. Some suggestions would be Jim Lichatowich, Nick Gayeski, David Welch, Tom Thornton but there are many more that could add valuable new information to the regulatory body.
- 6) On the Yukon River, we are experiencing a huge loss in the numbers of salmon entering the river compared to those that are counted upstream. Provide funding to determine where and why those mortalities are occurring throughout the system and whether it is addressable by human intervention.

- 7) We have a robust system of hatcheries in the state and yet, we have no data that reflects what, if any, impact releasing these artificially propagated fish into the natural environment has on wild stocks. Provide funding to fund a comprehensive data-driven study that addresses this gap in data. Emphasis should be placed initially on Pinks since that is, by far, the dominant in numbers released.
- 8) If possible, explore whether a study can be conducted that would provide the state with the numbers and health of smolt as they outmigrate to the ocean. I believe that with modern technology, this can and should be done. As a member of a regulatory body, I am continuously asked to provide management directives not knowing how many smolt successfully survived their spawning/rearing stage of their life history. If only 1,000 smolt leave freshwater, it is not logical to believe that 20,000 should be expected to return.
- 9) Funding that would identify causes of mortality and mortality rate ranges for the different stages of the salmon's life history (spawning freshwater; rearing freshwater; outmigration to the sea; Oceanic stage; Migration back up to natal spawning area). If this data was available, it would greatly simplify the calculation of how many spawners would be necessary to reach select goals in restoration.

Thank you for your efforts as it is crystal clear that more research is essential to any effort to restore our declining stocks with the goal of possibly returning to former states of productivity. I would welcome an opportunity to discuss further if it is desired and will make myself available.