STATE OF ALASKA

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Mr. Don Kowal, Executive Secretary
Pacific Salmon Commission
600 – 1155 Robson Street
Vancouver, B.C. V6E 1B5

Dear Mr. Kowal:

The Alaska Department of Fish and Game welcomes the "Report of the Expert Panel on the Future of the Coded Wire Tag Recovery Program for Pacific Salmon." We find it a comprehensive document with many important findings and recommendations that address management and policy issues key to maintaining effective abundance-based conservation and harvest sharing. We agree with the report's statement that "For three decades, the coded wire tag (CWT) system has provided a practical and efficient means for stock- and fishery-specific assessment." We strongly agree that until such time as viable alternatives may be developed and implemented "the CWT system should remain the primary stock assessment tool. . .."

The CWT system has provided the means for an effective abundance-based management approach that provides for conservation while also allowing shared use of the resource. However, the implementation of mass marking of Chinook salmon released from hatcheries and mark-selective fisheries targeting on those fish threatens to undermine the effective conservation programs implemented under the Pacific Salmon Treaty. We look toward identifying means by which we can maintain and improve this system that has worked so well. Toward that end, we recommend that agencies cooperate coast wide to sustain the CWT system by: 1) increasing tagging when and where appropriate; 2) ensuring that sampling of sport and commercial harvests are adequate to accurately estimate stock parameters, such as exploitation rates from CWT recoveries; and 3) providing accurate counts of escapements of both wild and hatchery stocks.

We would like to see the Pacific Salmon Commission (PSC) technical committees, and the technical committees of other West Coast salmon management entities, tasked with working on recommendations on how to maintain and improve the CWT system. In particular, they should look for ways to better account for the harvest of salmon with tags in growing sport fisheries and changing commercial fisheries. The technical committees should also develop standards for marking and sampling that will improve the efficacy of CWT stock identification under current and expected circumstances. Furthermore, the technical committees should look for means to help agencies meet their obligations to effectively count escapements. They may need to look for different ways to collect the information to continue to manage as we have done; but we do not think we should change the basic management approach that has worked so well.

We note that in 1991, when the chairs of the PSC Chinook Technical Committee urged the PSC ". . . to take a strong stand against the use of the adipose fins to mass-mark hatchery-reared chinook and coho," they were making a statement that Alaska supported at that time, and continues to support. Mass marking should be planned and implemented to realize its' benefits and minimize its' associated costs. Therefore, mass marking should be limited to those stocks for which harvest rates can be significantly increased through mark-selective fisheries, and for which there is an associated conservation program that will enable using mass marking to control the interaction of the hatchery stock with naturally reproducing stocks. Consistent with this, we recommend that far north migrating stocks be exempted from congressional (or any other) mandate for mass marking of Chinook from federally-funded programs. These stocks provide limited opportunities for mark-selective fisheries, and adequate programs have not been developed or funded to utilize mass marking to monitor and control hatchery or naturally reproducing brood stocks on the spawning grounds.

We offer the following comments on some specific recommendations from the report:

Recommendation 1: *Substantial improvements must be made in the CWT system to insure that the quality and reliability of collected data are consistent with the increasing demands being placed on these data by fishery managers. Areas requiring attention include quality control/quality assurance, and various sampling design issues, including expansion of catch and escapement samples in areas where little or no sampling currently takes place.*

We suggest that the PSC Coho and Chinook Technical Committees, as well as the Data Sharing committee, make recommendation one a part of their work on an annual basis. Recognizing that in many situations the agency representatives on these committees know best the deficiencies in the CWT data; we urge the committees to work together to identify the problems and find ways to improve the data.

Recommendation 4: *We recommend compilation of a comprehensive survey and statistical analysis of all relevant published and unpublished CWT studies that concern the correspondence between exploitation patterns and rates for hatchery indicator stocks as compared to their natural counterparts. This review should also include new analysis of relevant agency-collected data that have not yet been previously subjected to analysis. Recommendations for additional studies should be made if they are judged necessary.*

We suggest that the PSC Coho and Chinook Technical Committees make recommendation four a part of their work. We also would encourage the Northern and Southern Fund Committees to solicit projects that address this specific issue.

Recommendation 6: *To provide greater assurance that stock conservation objectives will be achieved, future fishery management regimes should compensate for increased uncertainty of fishery impacts on unmarked natural stocks due to degradation of the CWT system and non-landed mortality impacts related to MM and MSFs.*

The treaty has been fashioned to provide different management regimes for fisheries based on the stocks in the area, historical practices, and other considerations. Integral to these fishery plans is the expectation that there will be a level of uncertainty about fishery and stock statistics

that are based on coded wire tag recoveries. We would expect that when fisheries change substantively, e.g., implementation of mark-selective fisheries, that it would be those fisheries that would bear the burden of the compensation for introducing the increased uncertainty, rather than fisheries that remain substantively unchanged. Mark-selective fisheries produce differential fishery impacts on hatchery stocks vs. wild stocks, changing a fundamental premise that the impacts on hatchery stocks can be used as a surrogate for the impacts on the associated wild stocks. This premise has been an integral part of fishery management for decades. To compensate for this and improve management in general, we reiterate that the recommendations in the second paragraph of this document are essential.

Recommendation 12: *We recommend that the Pacific Salmon Commission support an immediate evaluation of a coordinated transition for all salmon species from genetic stock identification (GSI) based on the use of microsatellite markers to GSI based on single nucleotide polymorphism (SNPs) markers. It is important to develop standard sets of species-specific SNPs and related protocols now, so that coast-wide implementation of SNP-based GSI will be cost effective and efficient. The best approach to such a transition is for a multi-jurisdictional agency, such as the PSC, to coordinate broad, multi-agency collaborations such as those adopted during the development of the coast-wide allozyme data bases during the last decade or during the development of the CTC standardized Chinook microsatellite database developed over the last two years. Such collaborative efforts should include provisions for future tissue sample availability from all stocks included, so as to provide for periodic improvement and expansion of the databases.*

We support the use of SNPs as the GSI technique of choice for the PSC and we expect that the capability of this technique will be a reality years before the various labs have sufficient harmony to embrace this approach cooperatively. We cite the Mark Committee as an example of the cooperation and collegial relationship within the CWT community and suggest that genetics labs consider development of some similar relationship to foster open communication, scientific collaboration, and problem solving.

Recommendation 15: *PSC technical committees should explore potential fishery management regimes that would rely less on estimates of age-fishery-specific exploitation (or non-landed mortality) rates, but that would still ensure adequate protection for unmarked natural stocks of concern.*

If mark-selective fisheries based on the adipose clip are pursued, we recognize that the differential harvest rate placed on the hatchery stocks will no longer allow for those hatchery stocks to be used as surrogates for similarly situated wild stocks. Thus, for the long-term, alternative models and methods will have to be developed and employed, along with improved estimation of escapements, to understand stock status of the key wild stocks. To prepare for that eventuality, we suggest that an ad hoc committee be formed to analyze alternative approaches and assist with securing funding of the studies of methods that might be employed. The development of alternative fishery models is not something the technical committees should be tasked with; they need to focus on fixing and maintaining the CWT system that is essential for the current management of our fisheries.

One comment not specific to any of the recommendations is as follows:

We wish to clarify what has been characterized as "unwillingness" to conduct electronic sampling in Alaska. This hesitancy stems not only from the high costs and physical impediments of implementation, but also from concerns about the methodology used in electronic sampling and the utility of double index tagged (DIT) groups. We accept that the electronic detection equipment is technically capable of finding coded wire tags at an acceptable rate in the hands of experienced users. However, we believe that the effective electronic sampling is much harder to conduct than visual sampling; our observations in Washington, Canada, as well as anecdotal reports indicate that tags are being missed. We would like to see more validation that samplers will not miss tags with electronic sampling. We question the utility of the DIT groups with Chinook salmon and suspect that this practice will be abandoned. When that happens, the need for sampling unclipped chinook will be significantly lessened if not totally discarded.

Again, we commend the Expert Panel for the report. It is imperative that salmon management agencies coast wide recognize the issues raised in the report, and that there is cooperation on identifying and implementing the steps necessary to ensure that there continues to be statistically reliable data to support fishery management decisions and stock identification programs. We look forward to working within the PSC and in other arenas toward this end.

Sincerely,

David Bedford

David Bedford
Deputy Commissioner