



PACIFIC STATES MARINE FISHERIES COMMISSION

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Mr. Don Kowal
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Pacific Salmon Commission
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Dear Mr. Kowal,

Thank you for the opportunity to comment on the final “Report of the Expert Panel on the Future of the Coded Wire Tag Recovery Program for Pacific Salmon”. The Expert Panel is to be commended for their excellent work. They have provided a solid analysis of the impact of Mass Marking (MM) and Mark Selective Fisheries (MSFs) on the coastwide CWT system, along with excellent recommendations for improvements, in addition to a much needed evaluation of the capacity of other technologies to provide the requisite data to evaluate chinook and coho salmon populations.

1) CWT System Still Viable in Many Important Ways

The coastwide CWT system is remarkable for its longevity (35+ years), size of tagging and sampling programs, and for the mutual cooperation of all tagging and recovery agencies along the entire west coast of North America. There are of course flaws and shortcomings, several of which have been exacerbated by the growing role of MM and MSFs since 1997, and highlighted in this report. And yet, it is important to recognize that the current CWT program continues to be functional for a wide variety of fishery management needs, including evaluation of enhancement programs, conducting comparative experiments, monitoring ocean survival, providing certain types of data for fishery models, and evaluation of stock status.

2) Inability to Estimate Mortality of Unmarked and Non-Retained Fish in MSFs not Limited to CWT System

The one overarching flaw of the CWT program is that it can not provide required exploitation rates of unmarked fish hooked and released in MSFs. As noted in the report, MSFs violate the basic assumption that the tagged to untagged ratio of a tagged stock remains constant during its migration cycle. Instead, tagged hatchery fish (CWT + adipose clip) are retained in a MSF, while the unmarked natural fish (adipose fin intact) must be released if hooked. As such, the CWT marked hatchery fish can't serve as surrogates for evaluating stock-age-fishery exploitation rates on unmarked fish not retained in the catch under MSFs.

The Expert Panel did an excellent job in describing several new technologies (i.e. otolith thermal marking, genetic stock identification (GSI), or Radio Frequency Identification tags (RFID) tags)

that potentially could replace the CWT system within 5-10 years. PSMFC endorses this effort to plan for the future! However, by the same token, we wish to also highlight the point made in the report that these alternative marking technologies will not solve the problem of determining specific exploitation rates in unmarked fish taken and then released in a MSF. Regardless of the stock identification technology used, the release of unmarked fish in a MSF negates the ability to measure the exploitation rate on natural fish impacted by that fishery. Hence, a cautionary note that adoption of any new technology in the future must be done carefully, and with the clear understanding that this key flaw in the CWT system will not be fixed by moving to a new stock identification technology.

3) Quality Control/Quality Assurance Issues

The Expert Panel also highlighted the need for substantial improvements in the quality and reliability of collected CWT data. PSMFC's Regional Mark Processing Center (Mark Center) is responsible for housing the CWT data and acknowledges that problems continue to persist in the accuracy of the data. This includes instances of fish being reported released after being recovered, mis-matched species associated with the same tag code on release and recovery records, weights out of range, and incomplete conversion to PSC data format 4.0. Nearly all of these errors relate to much earlier years (i.e. pre 1990).

On the positive side, there are over six million CWT records in the database now, with known errors on the order of a few thousand records at best. This represents less than 0.03% of the data. Errors are unacceptable, and the Mark Center is continuing its efforts to get the errors resolved.

A variety of known errors have been corrected in the past two years by working with the reporting agencies and requesting resubmission of new data files. In addition, the Mark Center has continued to add new validation tests as new types of errors come to light. But in many cases, reporting agencies have not responded to requests for data corrections and the errors have thus persisted. It is suspected that the primary reason for this is simply that the responsible data management staff are overloaded with other more pressing duties and thus can't get to the lower priority of correcting old historical CWT. It would be of great benefit to the Mark Center to have this issue elevated to a higher importance by the PSC Commissioners.

4) Mark Center Stands Ready to Assist

The Expert Panel provided a substantial number of recommendations for improving the current CWT system. As such, the Mark Center stands ready to assist the PSC in any way that it can.

Sincerely,

Randy Fisher
Executive Director