

Columbia River Salmon and Steelhead Endorsement Recreational Anglers Board

Project Title: 2015 Lower Columbia River Main-Stem Summer and Fall Chinook Mark-Selective Sport Fishery Creel

Project Description/Objectives: This project provided staff and equipment to interview anglers and sample catches on the mainstem Columbia River below Bonneville Dam during the mark-selective fisheries for summer and fall Chinook. This project assisted region-wide efforts to meet the minimum sample rate target. Sampling activity in 2015 occurred from mid-June through July and early to mid-September.

Information collected was used to estimate: (1) angler trips, (2) the mark rate in the fisheries (marked and unmarked encounters), (3) the number of fish released and the number of mortalities, and (4) stock composition of marked and unmarked mortalities using CWTs and/or genetic data.

Methods: Four additional temporary scientific technicians were hired to supplement the existing Columbia River summer and fall Chinook sport sampling programs below Bonneville Dam. These additional staff interviewed boat and bank anglers from Cathlamet to Bonneville Dam. Sampling protocols consistent with the region-wide sampling programs were performed in cooperation with other staff and funding sources. Anglers were asked the number of fishers in each party and how long they fished. Salmonid catches were examined for fin clips and electronically wanded for coded wire and Passive Integrated Transponder (PIT) tags, and any tags found were recovered. In addition, a small punch was collected from the caudal fin for a genetic sample. Anglers were also asked if they had released any fish and whether those fish were fin clipped or not.

Additional fishery sampling assistance was provided by Tag Recovery Program staff funded by the Bonneville Power Administration, Mitchell Act funds administered by the National Marine Fisheries Service (NMFS), and Mass Mark Support Program funds provided by Washington Department of Fish and Wildlife (WDFW). The fisheries in the lower Columbia River are jointly sampled and managed by WDFW and Oregon Department of Fish and Wildlife.

Budget:

Table 2. Proposed and actual budget for the 2015 study period.

Period	Expense	Proposed	Actual
2015	Salaries & Benefits	\$27,498	\$32,363
	Goods & Services	\$12,433	\$3,831
	Indirect	\$5,661	\$5,791
	Total	\$41,054	\$41,985

Results:

Summer Chinook: Hatchery (mark-selective) adult Chinook retention was expected to remain open June 16-July 7, 2015. Harvestable numbers of summer Chinook remained available based on the updated in season forecast, associated management agreements, and harvest estimates through early July. Therefore, the season was extended through July 31 but the adult daily limit was reduced to one fish. However, any Chinook, adipose fin clipped or not, could be retained.

An estimated 50,555 angler trips produced 5,928 adult Chinook kept (record catch since at least 1969) and 1,491 released. 1,295 of the adult Chinook kept were sampled for CWTs. Fishery catch sample rates were increased from approximately 10% in years before CRSSE funding to 22% with CRSSE funds. This sampling rate meets the minimum goal (20%) that managers strive for to estimate catch and effort in the fisheries with precision. Specifically, the increased sampling rate made it possible to recover sufficient numbers of CWTs (449) to estimate stock composition and provide accurate estimates of hatchery fish kept and wild fish released. In addition, 299 DNA samples were collected for the Columbia River Intertribal Fisheries Commission (CRITFC) to be analyzed and expand/supplement the stock composition derived from CWTs. The samples will be analyzed at no additional cost to this project.

Fall Chinook: From September 8-14, 2015, an estimated 7,098 angler trips produced 1,301 adult Chinook kept and 3,757 released. 288 of the adult Chinook kept were sampled for CWTs. The fishery kept catch sample rate was 22%. The increased sampling rate made it possible to increase the total numbers of CWTs recovered (33) to estimate stock composition and provide estimates of hatchery fish kept and wild fish released. In addition, 44 DNA samples were collected for CRITFC to be analyzed and expand/supplement the stock composition derived from CWTs. Again, the samples will be analyzed at no additional cost to this project.

Economic, Angling, and Resource Benefits: The 2015 summer Chinook and mark selective fall Chinook fisheries on the mainstem Columbia below Bonneville Dam generated over \$3,300,000 based on 57,700 angler trips, spending an average of \$58 per angler trip (TCW 2008). The economic values include both Washington and Oregon fishers.

With increasing emphasis to harvest hatchery fish and efforts to reduce impacts on listed wild fish, information from this year's summer and fall Chinook main-stem sport fisheries will continue to help lay the ground work and shape future fisheries.

Summary/Conclusions: These activities are necessary to implement and manage successful mark-selective sport fisheries and to provide accurate estimates of catch and effort. There is a minimum sampling goal of 20% of the kept catch that meets the requirements for mixed stock fishery sampling. Additional funding from the CRSSEE funds is needed to meet the sample goal. With the additional CRSSE funding, the 20% sample rate goals for the 2015 summer and fall Chinook fisheries were achieved.

With increasing scrutiny on state-managed fisheries by co-managers and the NMFS, WDFW is determined to maintain as much opportunity as possible for fisheries while still meeting the

Endangered Species Act requirements by providing statistically defensible catch and stock composition estimates.

References:

TCW Economics. 2008. Economic Analysis of the Non-Treaty Commercial and Recreational Fisheries in Washington State. Prepared for: Washington Department of Fish and Wildlife. With Technical Assistance from: The Research Group Corvallis, OR. TCW Economics, Sacramento, CA. December 2008.

