

Salmon Over-harvest?

Fishing Matters

By Bruce Harpole

Virtually all commercially harvested fish stocks worldwide have been over-harvested. A few examples are the Grand Banks, the Gulf of Mexico, and the North Sea. Historically, the primary response to declining numbers of fish was to fish for the survivors more intensively. This is certainly true for salmon in the Pacific Northwest. Only in the last decade has harvest been reduced for conservation purposes.

If you think the over-harvest of Pacific Northwest salmon is a recent occurrence, guess again. The first salmon cannery opened on the Columbia River in 1867, and by 1883, 55 canneries were harvesting 43 million pounds of Chinook annually. The first conference on the alarming decline in Columbia River salmon was held in 1873, 60 years before the first dam. The first salmon hatchery on the Columbia was built in 1887, 45 years before the first dam. The harvest level of Columbia and Snake River salmon had declined more than 50% by the time the first dam was built in 1933. The reality is, salmon numbers have been steadily declining for 150 years, and now runs are less than 5% of historical levels in the states of CA, OR, WA and ID.

In a paper titled "*Salmon Decline Creates Nutrient Deficit in Northwest Streams*" Ted Gresh, Jim Lichatowich and Peter Schoonmaker stated "*the historical level of salmon production for the Northeast Pacific Ocean ecosystem was 228 million—351 million fish annually, with the following distribution: 56 percent- 65 percent of fish returned to Alaska; 19 percent-26 percent returned to British Columbia; and 15 percent- 16 percent returned to California, Oregon, Washington, and Idaho. Today, 142 million—287 million fish are produced and 81 percent-90 percent return to Alaskan rivers; 8 percent- 17 percent return to British Columbia rivers; and 1 percent—1.5 percent to rivers in California, Oregon, Washington, and Idaho.*"

Why does Alaska get such large salmon runs when a century ago the great Bristol Bay salmon were virtually extinct? The *only* difference for these runs has been to eliminate over-fishing. In Alaska all fishing is managed on an "escapement basis", meaning they only allow commercial fishing to begin after a certain number of fish have entered the rivers to spawn. Meeting this "escapement goal" prior to commercial fishing is a hard constraint to follow. With this system fishing levels become the dependent variable, not the numbers of in-river spawning fish. In contrast, Oregon, Washington and California first allow salmon fishing to occur, and then hope enough fish return to the rivers to repopulate the population. This policy does not work. Fish harvest should only be allowed after escapement goals are met.

Some argue it is Alaska's pristine habitat that is solely responsible for the health of their salmon stocks. But some Alaska rivers with healthy stocks are far from pristine; while several rivers in Washington State that remain nearly pristine have current escapement levels at a fraction of historic levels.

So why pick on commercial fishermen and not sport anglers? Good question, especially when sport anglers have been part of the over-harvest problem for decades. The answer is in the harvest method. Sport anglers can selectively harvest by using hook and line, whereas most commercial fishing methods are non-selective killers. In today's world, where abundant fin-clipped hatchery produced salmon swim side-by-side in the ocean with endangered naturally spawning salmon, the ability to selectively harvest fish is critical. The

continued *non*-selective intercept fishing of mixed stocks (hatchery fish, healthy naturally spawning fish, and Endangered Species Act-listed fish) will only result in the continued decline of the weakest stocks, the one's we are obliged to protect. The only thing that can save these weak stocks of salmon is adequate escapement.

Some argue, "What about all the other problems salmon face, its not just over-harvest"? And they're right. Salmon do face many other problems; water quality issues, dams blocking upriver spawning grounds, irrigation interests reducing in-stream flows, counterproductive hatchery practices, seals, fish-eating birds, and stupid humans. But, these things only come into play once the fish come back to the rivers. These naturally spawning fish need to be allowed back to their natal waters in sufficient numbers for them to have any chance to recover .

Fin-clipping of hatchery fish provides one means to change recreational and commercial harvest methods to allow more ESA-listed naturally spawning salmon to escape, while also allowing for a higher harvest rate on hatchery salmon. It won't work everywhere. It would work in many, many more places than it is currently being used.

One big source of over-harvest is the Canadian commercial fishermen. It is estimated that 69% of British Columbia commercially caught salmon are returning to Oregon, Washington and California. A full 70% of those are ESA listed stocks. Fortunately, the United States is renegotiating with Canada on the Chinook portion of the Pacific Salmon Treaty, and a new federal policy is to appear by the end of 2006.

Gary Loomis had a good suggestion on how to solve the non-selective harvest by commercial fishermen. He suggests the government subsidize the commercial fishing industry for a period of three years. During those years commercial fishermen and others must come up with a true selective way to harvest salmon, without nets and without impact to naturally spawning fish. By the end of year three, if there is no program for selective harvest in place, then the government can help train the commercial fishermen for a new occupation. Before you get all weepy-eyed for the poor commercial fishermen, know that their industry will not collapse if they can not kill salmon. In Oregon, only 7% of the industry's revenue comes from salmon, the bulk of their revenue is from Crab, Whitting and bottom fish.

We must stop the non-selective commercial harvest of our dwindling salmon stocks and establish generous basin by basin escapement numbers. To supply fish for the public to eat, the Indian Tribes are more than willing to harvest their allotted salmon, as agreed by treaty. The harvest would be more selective and escapement goals would be more adequately met. Over 2 million sport anglers from California to the Puget Sound would have twice as many salmon available to selectively harvest. Sport fishing would boom and so would the small communities and businesses associated with sport fishing.