



July 9, 2007

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Dear Joan,

I would like to provide comment on Proposal No. 200755700, "What was old is new again: evaluate traditional gear for selective harvest," which was reviewed by the ISRP, and is now being considered for funding by the Council. To begin with, I should clarify that Salmon For All in principle supports the examination of alternate gear forms to test for usefulness, selectivity, and cost-effectiveness. However, we believe there need to be very clear ground rules in order to do this. All proposals should be developed and tested by qualified commercial fishermen already taking part in the fishery, who should be paid to undertake the test fisheries. Traditional fisheries must continue during the testing period. And the test fisheries must last through a minimum of two annual cycles, in order to rule out the possibility of collecting inadequate or misleading data that cannot be replicated a second time.

With regards to Proposal 200755700, however, I believe it to be seriously flawed for a variety of reasons, beginning with being poorly conceived, poorly written, and poorly researched. Most especially troubling is the number of assertions contained in the proposal narrative, citing documentary evidence in support of the argument made, which in fact prove to be contradictory to what the documents cited actually say.

On p. 5 of the proposal narrative it is stated, "Pioneering work by Vander Haegen et al. (2004) was funded through a BPA Innovative Grant, and showed that spring Chinook captured using tangle nets combined with careful handling techniques, shorter nets, shorter soak times, and revival boxes survive significantly better than spring Chinook captured by gill nets and these same techniques." In fact, the test fishery data on higher survivability of salmonids released from tangle nets in (Vander Haegen et al, 2002) *Final Report for BPA Contract 2001-007-00* (WDFW, 2002) were not entirely conclusive, and dam counts of fish tagged as having been caught and released were, in fact, contradictory. Not having seen the later study, I cannot comment on it. But the data as reported in 2002 are clear that the test fisheries only suggested the possibility of survivability for fish selectively released from tangle nets greater than from gillnets under certain circumstances. The drawback was a significantly higher incidence of impact rates on steelhead with the tangle net.

Most problematic about the proposal narrative is the striking miscomprehension of the historical record. The Craig and Hacker report on "The History and Development of the Fisheries of the Columbia River," U.S. Bureau of Fisheries (Washington, 1940) is repeatedly cited incorrectly as (Craig and Hacker, 1938). In several instances, Craig and Hacker are cited as support for statements that are contradictory to the historical record and to the Craig and Hacker report.

On p. 11 of the proposal narrative, it is stated that:

“Arguably, gill net fishing continued for political reasons; there existed thousands of gill net fishers, a few hundred fish trappers, and less than 50 seiners (Smith, 1979). In contrast, of these gears, from roughly 1892-1934, beach seines caught the most fish, followed by traps, and lastly gill nets (Smith, 1979). In the present day, gill nets are the standard gear in the Columbia River for fall Chinook and coho. There is some evidence that Native Americans first used this gear in the Columbia River although no definite information is available (Craig and Hacker, 1938.) The Caucasians Hodgkins and Sanders first fished in the Columbia River with gill nets in 1853 and from 1927-1934 this gear took an average of 20% of the total salmon and steelhead catch (Craig and Hacker, 1938).”

Table 6. — *Average annual catch by species and, 1927 to 1934, inclusive* on page 170 of Craig and Hacker (1940) refutes the statement above on percentages of the annual catch caught by each gear form. Traps accounted for 21.1% of the poundage of all species caught annually during the time period 1927–1934; seines accounted for 15.3%; and drift gillnets accounted for 58.7%.¹ All other gear forms, including fish wheels, accounted for less than 5% of the total annual in-river catch combined. In the time period of 1889–1934, gillnets accounted for ~61% of the total annual catch in-river.² Furthermore, to say there were less than 50 seiners seems to ignore the fact that some seine crews employed as many as 50 men in a single site. Astoria commercial photographer Frank Woodfield took hundreds of wide-format photographs of large crews working on his brother Earnie’s seine crew on Sand Island. Seine bosses may have numbered less than 50, but many men went back to work on the seining grounds each summer year after year. Others worked on seine crews as seasonal jobs to earn money to put themselves through college.

The entire discussion of former large gear forms used in the Columbia River fishery seems to lack an understanding of how the gears were used, in what context they were deployed, and what species were targeted. The haul seine (beach seine) was effective in large part because it targeted the large summer run Chinook that were eliminated by the construction of Grand Coulee dam, and the accompanying Grand Coulee Fish Maintenance Program.³ Despite NMFS’ astonishing denial of the existence of the fabled June hogs of the Columbia River,⁴ there is ample documentary evidence to prove otherwise, from historic photographs, to catch records, to oral histories with elder fishermen and cannery workers, to biological studies on the species done in British Columbia. Large summer Chinook accounted for 70% of the catch by haul seines, which is one of the primary reasons that draft horses were introduced to the fishery in 1894. A seine crew on Sand Island encircled a bigger catch than the men were able to haul in. On the shore side of the bay, farmer Goulter was working with a team of draft horses. An experiment to try using draft horses with seine gear was tried, and proved successful. By 1895, all haul seine sites on the Columbia had been converted to horse-seining. The Columbia River is the only place horse-seining ever developed or was used. Catch statistics listed in Craig and Hacker (1940) indicate that haul seines did not fish for coho,⁵ in part because the seining grounds operated only during the summer season.

Of the three gear forms proposed in “What was old is new,” the beach seine probably has the most promise. But how it would prove effective for a mark selective fishery is another matter. Documentary film footage of seine operations in the collections of the Oregon Historical Society and the Columbia River Maritime Museum demonstrate clearly that when the fish were gathered into the bunt of the net, they comprised a writhing froth of creatures desperate trying to get away. Removing them from the bunt of the net was by means of gaff and club. How that translates into a live-release, mark selective fishery would be an issue to overcome.

Another issue with the deployment of haul seines and traps in the current day and age is pointed out in a Salmon For All position paper on selective harvest by Kent and Irene Martin.⁶ Many of the locations where seines and traps were deployed historically are now no longer accessible, because of placement in wildlife refuges, changes in beach front ownership, and the greatly increased regulatory climate of the current day. Operation of large gear is likely to be of significantly greater cost than gillnets, placing limits on the economics of their operation.

The proposal for using pound nets seems to ignore the greatly increased presence of pinnipeds on the Columbia River in recent decades, particularly sea lions, which did not frequent the Columbia River prior to the passage of the Marine Mammal Protection Act. Historically, the operation of fish traps depended on being attended by an armed guard, prepared to deal with marauding seals by use of lethal removal. Any pound net set up anywhere on the lower Columbia River will be a magnet for sea lions. Seal bombs and other non-lethal means are not likely to deter a hungry sea lion from attempting to gain access to the fish inside a trap.

Another issue that pound nets will encounter is the growth of algal blooms and invasive weedy species, such as Eurasian milfoil, in part because of high nutrient levels in the water due to pollution and agricultural runoff. Experiments in building shad traps by several fishermen in the 1980s proved to be unsuccessful, because the traps quickly became fouled with aquatic growth. The situation now, twenty years later, is considerably worse than it was when these experiments with shad traps failed. (Martin and Martin, 2000)

On page 12 of the proposal narrative, the statement that, “Fishwheels were popular traditional gears in the lower mainstem Columbia River,” is not supported by the historic record. The only place fish wheels were deployed was in the rapids of the Cascades and The Dalles, conditions specifically and purposely eliminated by impoundments behind the hydropower dams of the Columbia River. Further, these inventions only were effective where the fish were funneled into a narrow passage, such as a side channel adjacent to rapids. Craig and Hacker summarize:

The region in which wheels were operated lies between a point some 30 miles above Portland and Celilo Falls. In order to be successful a wheel must necessarily be located at a point where the channel and currents cause the salmon to concentrate in the upstream migrations. Such sites are not available in the wide, slow moving lower portion of the river.⁷

Whether the Cowlitz River would supply a site suitable for the operation of a fish wheel is another matter. Fish wheels never were used on the lower Columbia. For one thing, the fish wheel must be placed where the water moves in one direction only, which is to say beyond the reach of tidal influence. An advantage the fish wheel afforded in the mid-Columbia region was that although quite expensive to build and maintain, the device worked automatically, bringing the need for labor to an absolute minimum. Also, by time and placement of the wheel, it could be set up to fish specifically for a single target species at a time, allowing for standardized mechanization in the cannery. The only cannery on the river able to effectively utilize the mechanical butchering machine, inelegantly, and with considerable bigotry, known as the “Iron Chink,” was the Seufert’s cannery in The Dalles. By deploying their fish wheels at the correct time and place, the Seuferts could fish for blueback salmon in one period, and Chinook in another, eliminating much of the labor costs of hand-butchering and hand-filling cans, as was the case on the lower river. Lower river canneries processed fish caught in mixed stock fisheries, resulting in multiple species all needing processing at the same time. That required hand labor, both on the fishing grounds and in

the cannery. It remains to be seen whether a fish wheel on the Cowlitz would reproduce the advantage of low labor costs. Mark selective fishing would require human attendance at all times, making high construction, maintenance, and placement costs a critical issue when accompanied by labor costs as well. There is also the probability that once the sea lions find the fish wheel, being opportunistic feeders, they will take opportunity of the ways leading to the fish wheel the same way they do at the fish ladders at Bonneville dam. The fish wheel as a means of mark selective harvest would only make decent return on the high level of investment required to build the device if the fish caught by it were high-value fish marketable at top-dollar prices. Placement of the wheel may require deployment on the upper reaches of the Cowlitz River still accessible, ensuring the coho intercepted by the device would be of poor quality, and nearing the completion of their spawning cycle. In many recent years, even top quality coho have brought minimal prices, making the economics of this arrangement suspect.

One aspect of fishery management not well recognized by this proposal is that time and area of placement long have been management tools for selectively harvesting target stocks even in otherwise non-selective gillnet fisheries. Until recently, that was the way fishery managers sought to protect coho stocks listed by the state of Oregon. And it worked quite well. In 2006, following the ESA listing of Lower Columbia River coho, NMFS imposed a mandatory cap on coho harvest, which prevented harvest of healthy stocks of hatchery fish by commercial fishers, resulting in huge over escapements to the hatcheries, as noted in the proposal narrative. This spring, WDFW and ODFW made a forceful argument that abundance-based harvest management, employing time and placement as means of harvesting selectively, would provide as much protection for weak and listed stocks as the mandatory cap favored by NMFS, but were unsuccessful at persuading NMFS to change the ESA regimen for fall fisheries in 2007.⁸

One problematic matter with the proposal is what appears to be largely an erroneous claim to have discussed these issues with the Commercial Advisory Group (CAG), which consults with the Joint Management Team of the Oregon and Washington Departments of Fish and Wildlife. A number of CAG members have stated they had absolutely no prior knowledge of this proposal. To assert that discussions were held with them in 2005 is troubling. With whom were these discussion held? The specific mention of Irene Martin in the proposal narrative is especially troubling, since she demurs that she had no prior knowledge of the proposal, nor had given her permission for her name to be used. The fact that the author seems not to know that Irene Martin is the preeminent historian of the Columbia River fishery is telling, since had her works been reviewed, this would have been a much sounder proposal. To quote from *Legacy and Testament: The Story of the Columbia River Gillnetter*:

History tells us that gillnets were and are in use up and down the entire Pacific Coast and have outlived other types of gear because they were adaptable, selective, efficient, manageable, and relatively cheap. Replacing them with gear that meets those criteria will not be simple, nor will it be instant. The Columbia River gillnet has evolved for well over a century to meet changing environmental and technical demands.⁹

In closing, let me just say that if we are to test fish with alternate gear forms to see if there is a way to allow mark selective commercial fishing during the fall fishery, there are a number of problems to be worked out. The issue of water temperature in the fall time frame is universally mentioned by fishers as an impediment to mark selective harvest in the fall. That issue is never even mentioned here, which casts further doubt on the claim to have discussed these issues with

working commercial fishermen. Any proposal to examine mark selective fishing methods must be done correctly, and it must begin with a decent proposal, well and honestly written, and with impeccable documentation and research. This proposal matches none of those criteria. It is also an enormously expensive proposal, particularly in light of the low probability that it will return much in the way of useful data.

Respectfully,

Hobe Kytr, Administrator
Salmon For All

Endnotes

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- ¹ Craig, Joseph A., and Hacker, Robert L. *The History and Development of the Fisheries of the Columbia River*, Bulletin of the Bureau of Fisheries, Vol. XLIX, Bulletin No. 32 (Washington, 1940), p.170.
 - ² Ibid, pp. 169–179.
 - ³ May, Christine, reviewed by Bennett, William, “Annex 8: Grand Coulee Fish Maintenance Program,” in Ortolano, Leonard, et al. *Grand Coulee Dam and the Columbia Basin Project, USA, Final Report*, prepared for the World Commission on Dams (Cape Town, November 2000), pp A118–A153. The study makes it abundantly clear that the methodology employed by the emergency salvage efforts undertaken by the USFWS Grand Coulee Fish Maintenance Program was intended to replace the salmon runs spawning above Grand Coulee dam with blended composite stocks suitable for artificial propagation and relocation to the greatly reduced and, to a large extent, degraded habitat available in the tributaries below Grand Coulee, namely the Entiat, Methow, Okanogan, and Wenatchee Rivers.
 - ⁴ Waknitz, F. William, et al, “Status Review for Mid-Columbia River Summer Chinook Salmon,” NOAA Technical Memorandum NMFS-NWFSC-22 (Seattle, July 1995), pp. 8–9.
 - ⁵ Craig and Hacker, 1940, p.174.
 - ⁶ Martin, Kent and Irene, “Selective Harvest on the Columbia River: Issue Paper for Salmon For All” (SFA, February 2000).
 - ⁷ Craig and Hacker, 1940, p. 175.
 - ⁸ WDFW and ODFW, “Proposal for 2007 Coho Fisheries and Associated Impacts to Lower Columbia Coho” (Submitted to NOAA Fisheries, February 13, 2007).
 - ⁹ Martin, Irene, *Legacy and Testament: The Story of the Columbia River Gillnetter* (Pullman, 1994), p. 126.

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- Whissler, Jeff, “Columbia River Tooth Net Experiment During Spring, 2000” (ODFW, 2001).