

Columbia River Reboot

Will a change in fisheries management help wild salmon?

▲ JIM YUSKAVITCH

► **Salmon management** in the Columbia system revolves around protecting wild fish, and allocating the harvest of hatchery fish (net pens shown here) between sport and commercial fishermen.

THE BUOY 10 fishery at the mouth of the Columbia River, which opens into the Pacific Ocean on the Oregon-Washington border, usually starts in early August and runs until around Labor Day. Hugely popular, it attracts a veritable fleet of boats in pursuit of fall Chinook and coho salmon—as many as 6,500 anglers in a single weekend. The best fishing, arguably, is near Buoy 10, which marks the western boundary of the fishery because here you will get first crack at the sparkling bright fish just as they enter the river mouth to begin their upstream spawning run. Hundreds of boats jostle for position around Buoy 10, turning it into what many who have been out there describe as a combat fishery.

It's an apt metaphor for the Columbia River salmon fishery on the 140 river miles below Bonneville Dam, where for decades sport anglers, commercial salmon fishermen, Indian tribes, and wild-fish conservationists have engaged in political combat for their share of the salmon catch while trying to protect the Columbia River stocks of Endangered Species Act-listed wild salmon and steelhead that pass through the gauntlet of hook, line, and gillnets on their way to upriver spawning grounds. But in December 2012, the states of Oregon and Washington, which jointly manage

Photo | Jim Yuskavitch



the lower Columbia River sport and commercial salmon fishery, reached an agreement that will fundamentally change how the limited number of harvestable salmon are allocated between sport and commercial fishing interests, intending to benefit both industries while theoretically allowing more wild fish to escape upstream to spawn. Skeptics—especially commercial Columbia River salmon gillnetters—say it is nothing more than a “fish grab” by sport anglers that will destroy commercial fishing on the river while doing little to help in recovering wild fish.

With a historical estimated yearly salmon run of 11 to 16 million fish that includes Chinook, coho, sockeye, and chum salmon along with steelhead, the lives of people residing along the Columbia River have revolved around salmon for a very long time. The first were Native Americans who caught salmon in fish traps and nets, including gillnets, which were made of twine composed of cedar, nettle, hemp, and other natural materials, and weighted with rocks.

Now made from synthetic materials, gillnets are a deadly efficient way to catch salmon. A gillnet is a panel of netting with floats on the top and weights on the bottom that allow it to be suspended vertically in the water. Salmon swim into the net, whose panels are just large enough for the fish to jam their heads or forward portion of their bodies, typically catching them by their gills.

By the middle of the 19th century, European American settlers began establishing a commercial fishery on the lower Columbia River that employed an array of methods for catching fish including fish traps, fish wheels, and seines. Gillnets were first used by non-natives on the lower river in 1853. By 1883, 1,700 gillnet boats plying the lower Columbia caught about 3 million salmon. Six years later, the catch was down to half that number.

As a series of hydroelectric dams were built on the Columbia River system beginning in the 1930s, impeding salmon and steelhead migrations and preventing them from reaching traditional spawning grounds, combined with habitat degradation from other human development in the basin, wild runs declined and were largely replaced with hatchery fish. Conflicts for shares of the catch among commercial fishermen, sport anglers, and Native tribes escalated. Over the course of the

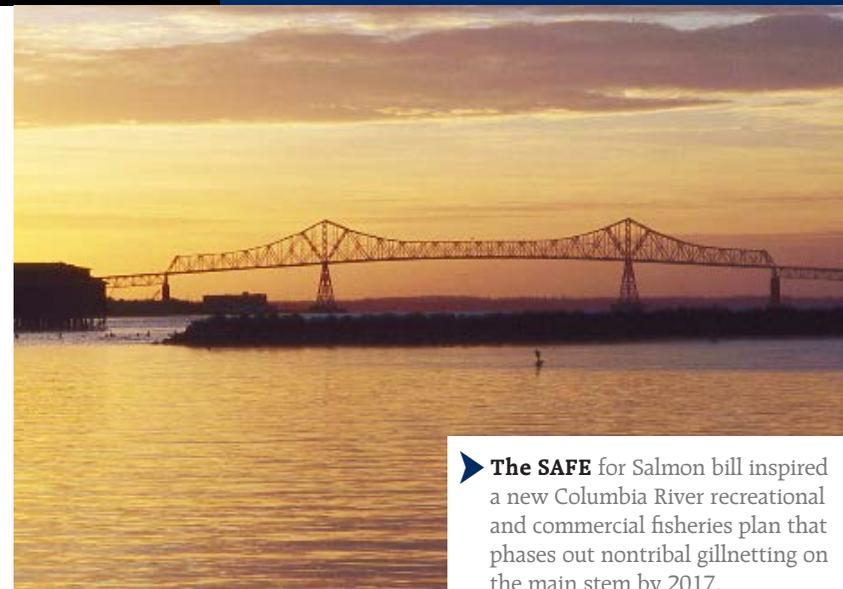


Photo | Jim Yuskavitch

► **The SAFE** for Salmon bill inspired a new Columbia River recreational and commercial fisheries plan that phases out nontribal gillnetting on the main stem by 2017.

last century all gear used by commercial fishermen on the Columbia save gillnets were outlawed. In 1974, the Boldt Decision in federal court gave Columbia River treaty tribes rights to half of the available harvest of the river's salmon. That left the sports and commercials to duke it out how the remainder was allocated.

When the federal government began listing various Columbia River salmon and steelhead stocks for protection under the Endangered Species Act in the early 1990s, it was a game changer because the incidental kill of ESA-listed fish determines how many hatchery fish can be harvested by both sport and commercial fishers, and how long salmon seasons last on the river.

Blaming commercial gillnetters for killing too many wild fish that impacted the sport salmon harvest on the lower Columbia, sportfishing groups fielded a number of voter initiatives in Oregon and Washington in the 1990s and early 2000s to ban gillnets. All of those efforts failed, until a group called the Coastal Conservation Association, along with a coalition of sportfishing and conservation organizations, got enough signatures to put Measure 81 on the 2012 Oregon ballot, setting off a response from the Oregon governor's office that would result in significant changes in how the lower Columbia River fishery is to be managed.

The lower Columbia River below Bonneville Dam is a mixed-stock fishery, meaning that it consists of different species and runs of salmon and steelhead, including both hatchery and wild fish, some of which are protected under the ESA. The fishery is under the jurisdiction of the states of Oregon and

Washington's departments of fish and wildlife. Trying to provide the maximum harvest of hatchery fish for lower river sport and commercial fishermen, ensuring enough fish are available for harvest by upriver tribal fisheries while protecting wild runs, it is devilishly difficult to manage, with multiple layers of complexity. “The departments,” said Liz Hamilton, executive director of the Northwest Sportfishing Industry Association, “are trying to manage the unmanageable.”

But manage it they must, and today the fishery is driven largely by the impact commercial and sport fishing has on ESA-listed salmon and steelhead—specifically in terms of how many of those fish are caught and incidentally killed along with the hatchery fish because, while wild fish—identified by the lack of a fin clip—must be released unharmed, a certain percentage of released fish will die from injuries or trauma sustained by being caught.

The way it works is that fishery managers convene a pre-season technical committee made up of agency and tribal representatives who develop a forecast of run sizes on the Columbia River. Those biological assessments are then sent to the federal NOAA Fisheries for review.

“NOAA Fisheries looks at the assessment and develops a biological opinion that sets parameters and limits, and the allocated take of each ESA-listed stock,” explained Tony Nigro, manager of the Oregon Department of Fish and Wildlife's Ocean Salmon and Columbia River Program.

Tables have been developed that determine the allowable percentage of wild ESA fish that can be killed as

incidental bycatch, modest enough to presumably allow an adequate number of them to reach their spawning grounds. Computer models that look at the estimated number of anglers, types of gear used, projected wild fish mortality, and other data helps refine seasons for the different salmon runs. Based on statistical projections, the season for a run that includes ESA fish will end once the take allocation is reached for those wild fish.

“It all comes down to ESA mortality rates,” said Nigro. “That determines the seasons.”

Salmon fisheries on the lower Columbia with wild ESA fish mixed with hatchery fish include upriver spring Chinook, two fall Chinook runs, and a coho run. The summer Chinook run doesn't include ESA fish, but there is a harvest limitation to ensure that enough hatchery fish make it upstream for tribal fisheries. ESA-listed steelhead, along with chum and sockeye salmon, also run up the river but there are no commercial fisheries for them.

Total take allocations vary from 5 to 2 percent of a wild run. (Further complicating matters, it's 10 percent for Indian tribes with treaty fishing rights on the Columbia, who do not have to release wild fish.) That percentage is then allocated between sport and commercial interests. Historically it has been 60 percent of the take allocation to sport anglers and 35 percent to gillnetters. (Because Oregon and Washington set their sport-commercial take allocations independently for their halves of the river, the result is that 5 percent of the allowable wild fish kill has gone unallocated.)

That allocation makeup is critical, for it ultimately determines how long salmon seasons last, and how many hatchery salmon are harvested. About 10 percent of wild fish released by hook-and-line sport anglers die, while for gillnet-caught wild salmon, mortality is around 40 percent. That high mortality percentage is the reason many sport anglers have wanted gillnetters off the river, based on the calculation that with sport angling's lower wild fish kill rate it would take longer to reach the take limit that closes the fishing down. This would result in longer seasons, more harvest of hatchery fish, and presumably increased escapement of wild fish for upriver spawning.

“The fundamental problem is that we have had an unworkable and outdated fishing management structure left over from when we had a heck of a lot more fish and less constraints on fishing,” said Jim Martin, conservation director of the Berkley Conservation Institute and a former chief of fisheries for the Oregon Department of Fish and Wildlife.

While some sport anglers wanted gillnets banned completely from the lower Columbia, the only river in Oregon where commercial gillnetting is legal, in 2008 a group called SAFE for Salmon, with Jim Martin one of the chief architects, came forward with another approach. Comprised of the Northwest Sportfishing Industry Association, Association of Northwest Steelheaders, Northwest Guides and Anglers Association, Trout Unlimited, and Puget Sound Anglers, the group proposed that gillnets be moved off the river's main channel and fished only in off-channel areas targeting hatchery salmon raised specifically to return to those areas.

In fact, these terminal fisheries, as they are called, have been in operation in several off-channel areas of the lower Columbia for years and account for more than half of the spring Chinook gillnet harvest and a quarter of the total Columbia River commercial harvest. Located in Youngs Bay, Tongue Point, Deep River, and Blind Slough/Knappa Slough, the way they work is that juvenile salmon are raised in net pens there where they acclimate to that location, then are released. When those hatchery salmon return to the river after completing the ocean phase of their lives they home on the off-channel areas where they were raised and are caught by the gillnetters.

The SAFE for Salmon proposal, which included increasing the number of off-channel terminal fisheries and number of salmon raised in them, was introduced as bills in the Oregon legislature in 2009 and 2011, failing each time. The Oregon Fish and Wildlife Commission also rejected a similar proposal in 2008.

Then in 2012, a collection of sport-fishing groups called Stop Gillnetting Now collected enough signatures to put Measure 81 on the November 2012 ballot that would make the SAFE for Salmon concept law on the Oregon side of the Columbia if it passed. The measure was sponsored

by a couple of Oregon state senators and the Coastal Conservation Association.

The battle between sport and commercial revolves around economics, and the sportfishing industry on the length of the Columbia below Bonneville Dam is clearly the bigger economic engine. Between 2001 and 2008, the sportfishing industry on the lower river was worth about \$130 million and a study funded by the Fish America Foundation found that if the SAFE for Salmon plan had been in place during that period sport anglers would have contributed an additional \$72 million from extended sport salmon fishing seasons.

By contrast, in 2007 the 575 or so gillnetters on the lower Columbia contributed \$1.7 million. Although it is not much of an economic contest between the two industries, in small river fishing communities \$1.7 million is not an insignificant number.

With those dueling economics on the table, Oregon's Democratic governor John Kitzhaber approached Stop Gillnetting Now and asked them to back off on their measure and in return his office would work for a solution to the long-standing issue that would address the groups' concerns and incorporate SAFE for Salmon's ideas, but also be a little friendlier to the gillnetters. The coalition agreed, although by that time their measure had qualified for the ballot, leaving them in the odd position of publicly announcing that they would drop their campaign to pass it and support the governor's effort instead. The measure was defeated.

Through the fall of 2012, a working group made up of the Oregon and Washington Fish and Wildlife commissioners, officials from the Oregon and Washington Departments of Fish and Wildlife and sport and commercial fishing advisors met to hash out the details. In December 2012, the Oregon Fish and Wildlife Commission adopted the new plan, followed by the Washington Commission in January 2013.

The new Columbia River recreational and commercial fisheries plan phases out nontribal gillnetting on the main stem by 2017, limiting their use to terminal fisheries in off-channel areas such as bays and tributaries, expanding the number of terminal fisheries sites while substantially increasing the number of hatchery

salmon raised for those terminal fisheries to help make up for the loss of the in-river fishing. In addition, commercial fishermen will be able to use purse and beach seines in the main stem, which have lower bycatch mortality than gillnets.

The big winners in the deal are the sportfishing industry and sport anglers because, by 2017, they will be allocated 80 percent of the all important ESA mortality while the commercial fishermen's share will drop to 20 percent, which will extend the sport salmon fishing seasons. Theoretically, between the in-river seining and increased terminal fisheries, the commercials should end up better off, with supporters for the new fisheries plan estimating that it will eventually increase the commercial catch by 15 percent and sport fishing by 20 to 40 percent, pumping that much more cash into the local river economies.

Fearing they will ultimately be driven from the river by the new management paradigm, the gillnetters are opposed to the plan and have filed a

lawsuit that has put its implementation on hold for now. They are skeptical they will be able to catch enough fish in the off-channel fisheries, if there will even physically be room for all of them to fish in those areas, and if seines in the main river will be effective.

“It can cost \$30,000 to \$50,000 to gear up for beach seining,” said ODFW's Nigro. “A lot of guys are willing to do that if there is a guarantee they will catch enough fish and, of course, we can't guarantee that.”

Theoretically, the new plan should also help the Columbia River's beleaguered wild fish runs. Sport fishing's lower bycatch mortality rate will send more ESA-listed fish upriver while increased catches of hatchery fish by gillnetters in the terminal fisheries will reduce straying onto wild fish spawning beds. But Bill Bakke, director of science and conservation for the Portland-based Native Fish Society, which has been involved in Columbia River fish issues for decades, is not sure if there is much in this deal for wild salmon.

“This is an allocation between two industries,” said Bakke. “The allocation we care about is fish to the spawning grounds and they [the Fish and Wildlife Commissions] didn't go there. Columbia River fish are managed in aggregate — by Evolutionarily Significant Units, by mixed-stock fisheries. We don't have spawning requirements by watershed or by river.”

Although the plan is now stuck in court, its advocates are confident that it will eventually be implemented and once it is, they say the gillnetters, along with the entire lower Columbia River fishing economy, will be better off.

“The big benefits of this agreement are more hatchery fish into the commercial market and a more stable sport fishery,” said Hamilton of the Northwest Sportfishing Industry Association. “I believe that in 10 years we will be asking ourselves why this wasn't done sooner.”

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Jim Yuskavitch is the editor of the FFF steelhead newsletter called *The Osprey*.