

WDFW Discussion of Application of Selectivity in Washington State Commercial Fisheries

What is selective fishing?

One way fishers can contribute to the recovery of weak stocks is by the use of selective fishing techniques. Selective fishing is the ability of a fishing operation to avoid non-target species or stocks, or when encountered, to release those animals alive and unharmed. Successful selective fishing requires that two objectives be met. First, the conservation goal must be achieved for the species or stock of concern, and second, there is a harvest goal that must be met to make the fishery economically viable.

The two components of selective fishing, avoidance, and live release, are managed very differently.

Avoidance

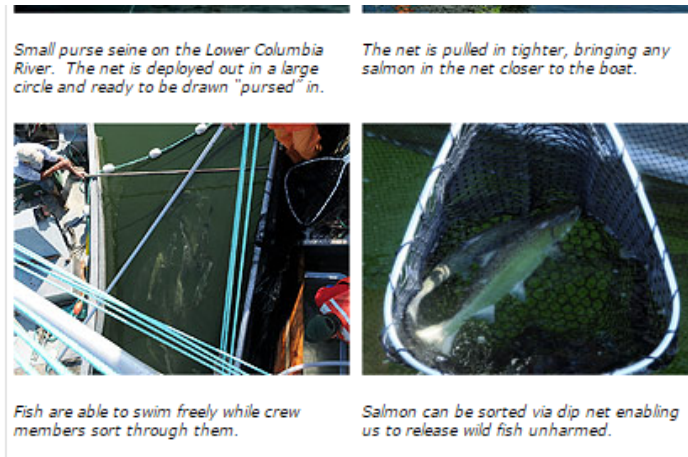
As salmon migrate back to their spawning grounds, they spend part of the time intermingled with different species and stocks, and part of the time separated from other species or stocks. To protect weak stocks in the presence of commercial fisheries, all of the fleets in Washington are presently managed by time and area closures that restrict the fleet to particular areas or times so that they avoid weak stocks or species. From this perspective, our commercial fleets are already fishing very selectively.

Avoidance very effectively meets the conservation goal because few or no encounters with fishing gears means very low harvest-related mortality. When there are few weak stocks to protect, time and area closures can also effectively meet the harvest goal. However, when many stocks require protection, time and area closures can severely limit fishing and make it very difficult for our fishers to make a living. This is the situation we have in Washington. Our fleets are experiencing unprecedented restrictions even though we have many healthy stocks of wild and hatchery salmon returning. Additionally, because there is insufficient harvest on the hatchery runs, thousands of excess, or "surplus", fish return to our hatcheries or to the spawning grounds rather than being caught for their intended purpose: fisheries.

Live Release

Selective fishing by avoidance means that there are healthy populations of fish that are not harvested because they are intermingled with weak stocks or species that require protection. If we wish to maintain harvest on the healthy stocks, we must find ways to do so that will allow live release of the non-target species or stock.

Because the modern methods of commercial fishing did not focus on live release of non-target species or stocks, efforts are underway to modify our current fishing gears and practices so that the fish are captured live and can be sorted for harvest or release.



Selective Fisheries

What is "Selectivity" and how is it used in Columbia River Fisheries?



Selective Fisheries

Commercial Fisheries

Mark-Selective

- Mainstem spring Chinook

T-A-G Selective

- Mainstem
 - Winter sturgeon
 - Summer Chinook
 - Fall Chinook
 - *Chum/Sockeye*
- Select Areas
 - Fall Chinook
 - Coho



Mainstem Columbia R Commercial Spring Chinook

Goals:

- Target harvest on hatchery CHS
- Minimize by-catch (Wild winter steelhead, sturgeon, shad)

Highly Regulated:

- Test fishing (time)
- Tangle & large-mesh nets (gear)
- Optional WWS-excluders (gear)
- Specific zones (area)
- Short periods (time)
- Short nets (survival)
- Short drift times (survival)
- Recovery boxes (survival)
- Mandatory training (survival)
- Mandatory observers



Selectivity in All Seasons

Spring

- In March we use 8" nets with recovery boxes to avoid handling winter steelhead and target early-returning Willamette Chinook
- In April and early May we use tanglenets, shorter drift times and recovery boxes when upriver Chinook are dominant and steelhead are few
- In late May and June we use 8" nets, shirt drifts and recovery boxes to avoid shad and the increasing number of Group A summer steelhead

Summer

- We use 8” nets to avoid Group A steelhead and sockeye. There are no ESA-listed Chinook in this run so we do not fish selectively. The wild portion of this run has risen to over 50% the last 4-5 years along with record returns overall.

August

- We use 9” nets to avoid steelhead and sturgeon
- We fish in river zones 4&5 (above the Lewis River) to avoid Lower River tule Chinook and to target healthy Upriver Bright Chinook

September

- We close fishing for the first 2-3 weeks to avoid the peak of the Lower River tule Chinook and Group B steelhead runs
- When we start again we use 8" nets to avoid steelhead and we stay in zones 4&5 until the tule Chinook move into the tributaries with the fall rains
- We then move into all river zones with 8" nets to spread out the fleet and to harvest healthy late-returning Chinook runs
- We use tanglenets with recovery boxes to target coho when there is still a mix of early and late stocks in the river

October

- We continue with tanglenets and recovery boxes in all zones to harvest late stock hatchery coho
- We fish with 6” nets in zones 1-3 on strong runs to harvest additional hatchery late-stock coho while staying within ESA guidelines

Federal Matrix Wild Coho Impact Limits

Year¹	Ocean	In-River²	Total	Allowable
2005	11%	7%	18%	21%
2006	7%	7%	13%	15%
2007	12%	7%	19%	20%
2008	4%	4%	7%	8%
2009	11%	11%	21%	20%
2010	8%	7%	14%	15%
2011	6%	8%	14%	15%
2012	10%	3%	13%	15%
2013	10%	3%	13%	15%
2014	12%	5%	17%	23%
2015	17%	7%	24%	23%

^{1.} *Coho listed in August 2005.*

^{2.} *In-river data includes non-Indian mainstem and Select Area commercial and sport fisheries.*