

Hook Regulations for Columbia River Recreational Salmon & Steelhead Fisheries

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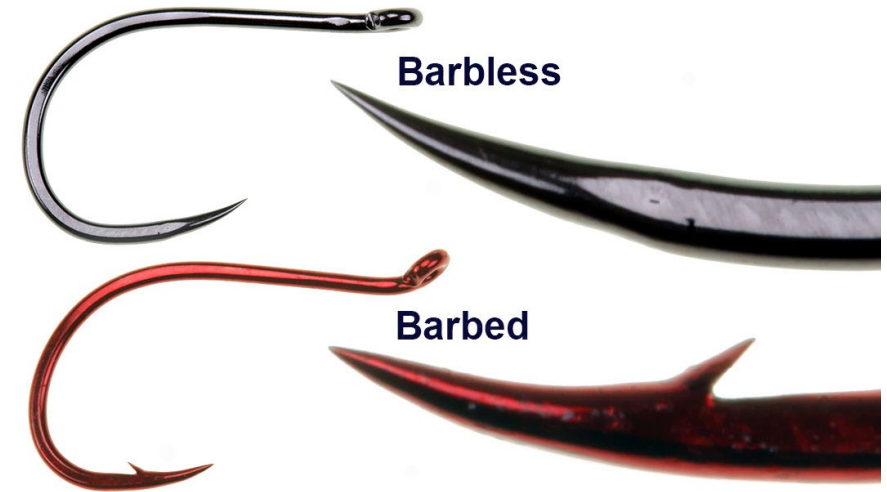


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Background – Hook Types

- Barbed hook
 - Small backward-facing point (barb)
 - Barb makes it more difficult for the fish to get off the hook
- Barbless hook
 - Can be manufactured without barb or the barb can be crimped down
 - A barbless hook is easier to remove from the fish



Credit: Mark Bachmann



Credit: Lefty Kreh

Background – Hook Regulations

- 2012 CR Fishery Management Workgroup
- 2017 Lower Willamette & Oregon Select Area exceptions
- 2019 Joint-State CR Salmon Fishery Policy Review Committee
 - OR temporary rule
 - August 2019 OFWC decision
- December 2019 Joint-Director discussions



Background – Columbia River Fisheries

- 13 ESA listed salmon & steelhead in the Columbia Basin
 - Fisheries primarily managed to ESA-impact allocations
 - Wild and hatchery fish co-mingled
 - Mark-selective fisheries common
- Non-treaty fisheries jointly managed by ODFW and WDFW
 - Objective for concurrent regulations
 - Facilitates enforcement



Background – High Number of Fish Released in Mark Selective Fisheries

Columbia River Mainstem Recreational Fisheries

Fishery	Mark-Selective?	2018-25 Ave. Releases
Spring Chinook	Yes	2,005
Summer Chinook	Yes	1,127
Fall Chinook	B-10: Yes (recent years) LCR: Limited/Occasional Upstream of BON: No	18,014
Coho	Yes (downstream of Hood River Bridge)	17,751
Steelhead	Yes	5,062
Sockeye	No	520
TOTAL		44,479



Background – Impact to Fishing Days

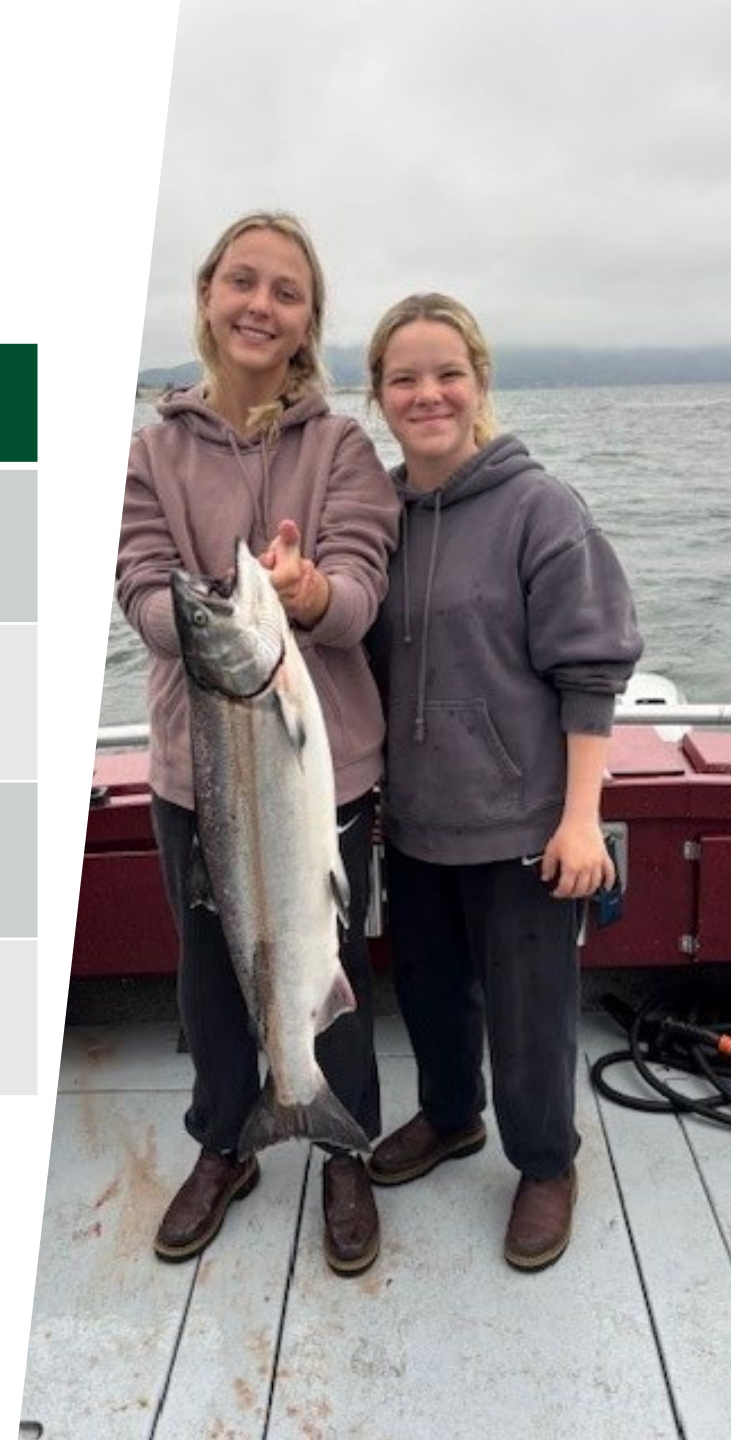
- Fisheries are managed to stay within ESA limits.
- Factors that drive the number of days a fishery can remain open include:
 - Landing rate
 - Release mortality

Lower landing rates and release mortality = more fishing days



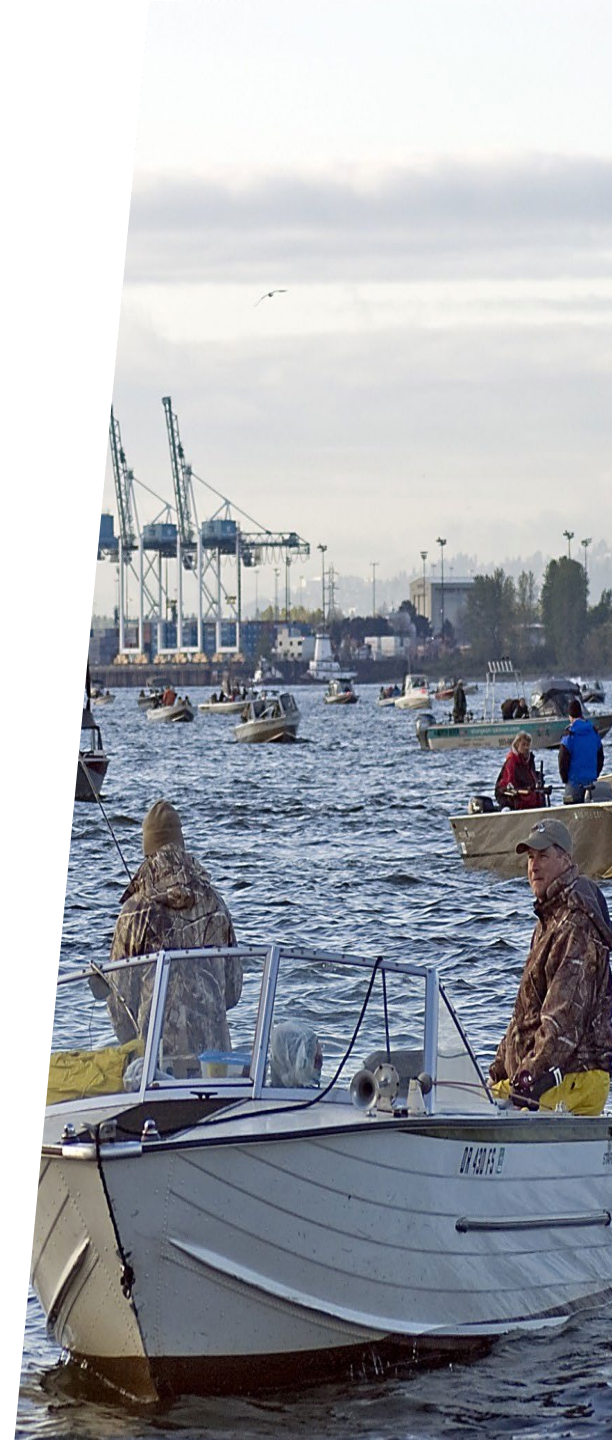
Analysis – Landing Rate

Source	#	Barbless	Barbed	Delta
Courter (2017-20): Cowlitz R Spring Chinook	2506	75%	89%	+14%
Courter (2017-20): Cowlitz R Coho		81%	87%	+6%
Courter (2017-20): Cowlitz R Steelhead		63%	74%	+11%
ODFW unpub. (2009-25): Columbia R Chinook+Coho	1256	81%	94%	+13%



Analysis – Literature Review

- **Cowlitz R fall Chinook and Coho (2023):** Some association between barbless hooks and increased survival
- **Keogh R winter steelhead (1987):** Higher release mortality rate with barbed vs. barbless hooks
- **Willamette R spring Chinook (2004):** Anatomical hook location very important; barbless hooks not evaluated
- **Literature Review (1977):** Barbed hooks may increase handling time and fish stress



Analysis – Impact to Fishing Days (preseason)

Comparison of actual and potential preseason modeled harvest rates (HR) for Upriver Bright (URB) fall Chinook in Columbia River mainstem recreational fisheries, 2025.

Scenario	Preseason Modelled HR	Percent of Allowed
2025 Actual (Barbless)	10.5%	70% of 15% allowed HR
2025 Example (Barbed) *	11.6%	77% of 15% allowed HR

** Assumes barbed hooks allowed, 10% higher landing probability, and 21% release mortality rate*

Assuming barbed hooks were allowed, the pre-season harvest rate would have exceeded the allowable take, resulting in setting fewer fishing days

Analysis – Barbless Compliance Consistently High

Columbia River Mainstem Recreational Fisheries

Angler compliance with barbless hook regulations in the Columbia River and Pacific Ocean, 2022-2025.							
	Mainstem Columbia R				Ocean		
Year	Angler checks	Warnings / Citations	Compliance Rate		Angler checks	Warnings / Citations	Compliance Rate
2022	3,096	123	96%		1,027	87	92%
2023	4,390	192	96%		2,194	52	98%
2024	5,014	321	94%		1,434	100	93%
2025	5,804	354	94%		2,466	131	95%
Average	95%				94%		
Data provided by Lnt. Ryan Howell of OSP							



Analysis – Barbed hooks

Pros

- More fish landed increases angler satisfaction
- Same gear for mainstem and tributary fisheries

Cons

- Potential season stability and length impacts
 - More fish landed potentially decreases days
 - Fall release mortality rates increase from 19% to 21%
 - Recent fishery models based on use of barbless hooks

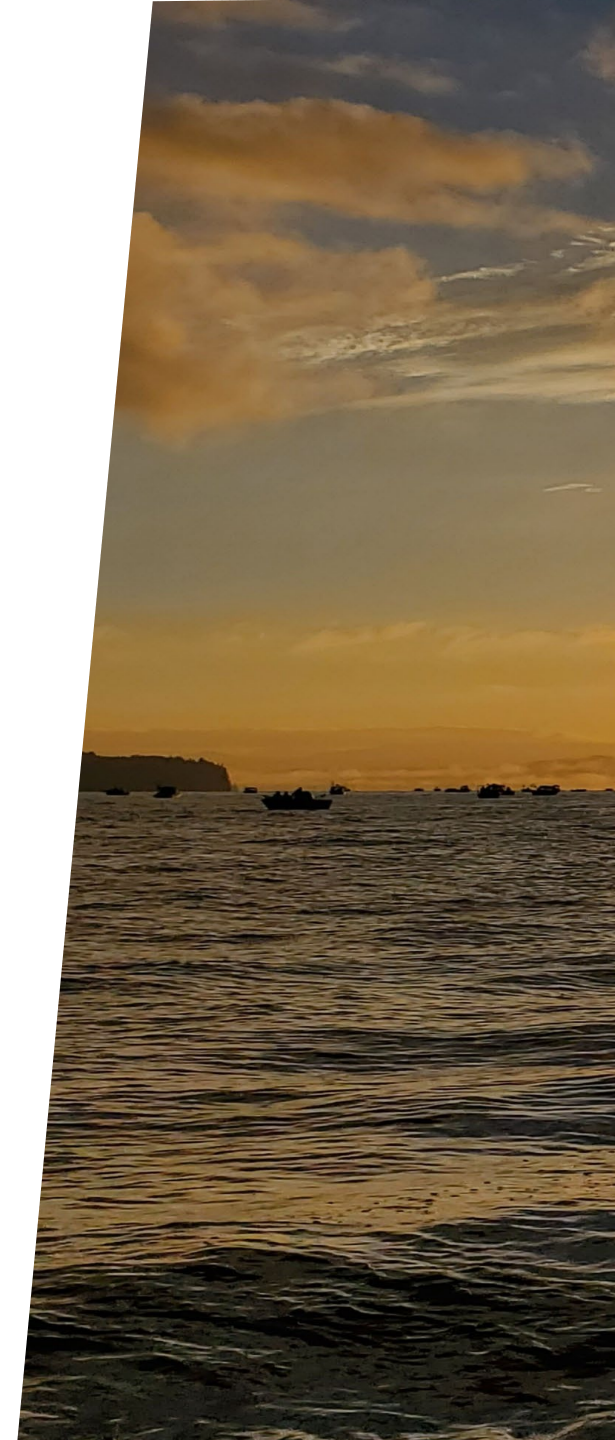
Additional considerations

- Need for concurrent regulations with WA



Summary

- Barbless hooks mostly required since 2013
- Most mainstem Columbia River recreational salmon & steelhead fisheries are mark-selective
- Limited research on barbed vs. barbless hooks for adult salmon & steelhead
- Factors such as anatomical hook location, fish handling, and water temperature are likely more important
- Compliance rate with barbless hook regulation is high
- Season stability and length impacts
- Rescinding the barbless hook regulation would require communication and concurrency with WA



Questions?



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