

**JOINT STAFF REPORT
WINTER FACT SHEET NO. 4
Columbia River Compact
March 19, 2003**

<p>Purpose: To review salmon and steelhead stock status, review ongoing spring chinook fisheries, and consider commercial fishing options in the mainstem Columbia River.</p> <p>TAC: This Fact Sheet was not reviewed by the TAC.</p>
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MANAGEMENT GUIDELINES

Endangered Species Act (ESA)

- Fisheries being considered at this Compact are addressed in a Section 7/10 Application outlining proposed non-Indian fisheries that the states of Washington and Oregon submitted to the National Marine Fisheries Service (NMFS) on November 3, 2000.
- The ESA limits aggregate fishery impacts to $\leq 2\%$ for listed wild steelhead; however, the fishery will be managed for a range of 1.6%-1.8% as a buffer against unforeseen circumstances.

Interim Management Agreement

- An Interim Management Agreement covering fisheries for upriver spring chinook, summer chinook, and sockeye is in effect for 2001-2003.
- The Interim Management Agreement includes a sliding scale spring chinook harvest matrix for 2001-2005 and allocates upriver impacts between non-Indian and treaty Indian fisheries for 2001-2003.
- Based on preseason run size forecasts, the Interim Management Agreement limits impacts to listed upriver spring chinook to $\leq 2\%$ for non-Indian fisheries and $\leq 9\%$ for treaty Indian fisheries in 2003.

Non-Indian Upriver Impact Allocation

- Non-Indian fisheries will be managed in accordance with the guiding principles, fishery management objectives, and impact sharing matrix adopted by the Oregon and Washington Fish and Wildlife Commissions and the Columbia River Compact.
- Non-Indian impacts are allocated 1.7% for fisheries below McNary Dam and 0.3% for fisheries above McNary Dam, Select Area Fisheries, and as a management buffer.
- Upriver impacts for non-Indian fisheries below McNary Dam in 2003 are further allocated 35% (0.59% impact) for commercial fisheries and 65% (1.11% impact) for sport fisheries.

Willamette Spring Chinook Management

- The Fisheries Management and Evaluation Plan (FMEP) for Willamette spring chinook limits impacts for all freshwater fisheries in 2002 to $\leq 15\%$ on wild Willamette River spring chinook.

- Based on the preseason run size forecast of 109,800 the Willamette River Basin Fish Management Plan (WFMP) allocates surplus hatchery Willamette River spring chinook 70% for sport fisheries (40,900 fish) and 30% for commercial fisheries (17,500 fish) in 2003.

STOCK STATUS

Spring Chinook

- Spring chinook primarily enter the lower Columbia River during March and April with upriver stock abundance peaking during the late March to early April timeframe.
- The preseason spring chinook run size forecasts include returns of 145,400 upriver stock and 109,800 Willamette stock to the Columbia River mouth.
- Upriver spring chinook passage over Bonneville Dam is tracking well ahead of preseason expectations with 5,500 adults passing through March 17. During 2000-2002 spring chinook counts at Bonneville Dam through March 17 ranged between 66-942 adults.
- Run sizes cannot be updated until late April for upriver stock and early May for Willamette stock.

Wild Winter Steelhead

- Wild winter steelhead pass through the lower Columbia River primarily during January through early April and peak during late March.
- The preseason forecast was for a return of 15,500 wild winter steelhead to the Columbia River mouth.
- Wild winter steelhead passage over Willamette Falls has been good to date with daily counts ranging between 17-237 during the first 13 days of March.

<i>Wild Winter Steelhead Returns</i>					
	Returns	As Of:	Percent Complete	Projected Total	Comments
Willamette Falls	5,337	3/14	24%-56%	9,500-21,900	About half of 2002
North Fork Dam	127	3/17	2%-7%	NA	Larger than 2002 (94)
Marmot Dam	138	3/17	15%-46%	NA	Similar to 2000 and 2001
Bonneville Dam	370	3/17	53%-63%	NA	91-295 during 2000-2002
Powerdale Dam	30	2/29	0%-10%	NA	Similar to 1992-2002 average

- Willamette wild winter steelhead typically represent 55% of the total wild winter steelhead return to the Columbia River. During 1993-2002 Willamette wild winter steelhead comprised 36-77% of the Columbia River wild winter steelhead return.

WATER CONDITIONS

- Columbia River water conditions at Bonneville Dam have remained relatively stable during the first half of March.
- Columbia River flow, as measured at Bonneville Dam, ranged between 125 kcfs and 175 kcfs during the first half of March. Flows typically range between 150 kcfs and 275 kcfs during early March.

- Water temperatures measured at Bonneville Dam have ranged between 42°F and 45°F during the first half of March. Temperatures typically range between 41°F-45°F during early March.
- Visibility measured at Bonneville Dam ranged between 3-6 feet during the first 17 days of March. Visibility can fluctuate widely during early March, typically ranging between 1-6 feet.
- Willamette River flows and turbidity have fluctuated widely during the first half of March while temperature has steadily increased.
- Flows measured at Salem ranged between 14,000-20,000 cfs during March 1-7 and ranged between 46,000-65,000 during March 8-14. Since March 14 flows have been dropped from 50,000 cfs on March 14 to 38,000 cfs on March 17.
- Turbidity measured at Willamette Falls ranged between 4.5-5.0 feet prior to March 8 and did not exceed 1.5 feet during March 10-14. Visibility increased to 1.8 feet on March 17.
- Temperature measured at Willamette Falls was 46°F prior to March 8 and has ranged between 48°F -50°F during March 10-17.

FISHERY UPDATES

Non-Indian Salmon Commercial Demonstration Fishery

- At the February 6, 2003 Compact hearing six 16-hour daylight fishing periods were adopted for the area below Kelley Point. Gear regulations included an 8" minimum mesh size restriction to minimize steelhead handle. Other selective fishery regulations in effect during 2002 (i.e. short soak times, short nets, and use of recovery boxes) were adopted for 2003.
- During the first two fishing periods staff monitored a total of 72 boats and 156 drifts. Total landings were similar to preseason expectations but handle of upriver spring chinook was significantly higher than expected.

<i>Chinook and Steelhead During 2003 Demonstration Fishery</i>									
Fishing Period	Chinook Kept				Chinook Released			Steelhead Released	
	Total	Upriver Stock	Willamette River Stock	Other Lower River Stock	Total	Upriver Stock	Other Lower River Stocks	Total	Wild
Feb 17-19	506	365	106	35	551	521	30	164	134

- Long-term mortality rates used to determine impact rates are the same as those recommended by the TAC: 50% for chinook and 35% for steelhead in large mesh (8"-9¾"), and 25% for chinook and 20% for steelhead in small mesh (≤4¼").
- Impacts to listed species during the first two fishing periods are estimated to be 0.305% for upriver spring chinook, 0.057% for wild Willamette spring chinook, and 0.300% for wild winter steelhead. Total impacts to date represent 52% of the upriver spring chinook impact limit, 2% of the wild Willamette spring chinook impact guideline, and 17%-19% of the wild winter steelhead impact limit.
- Based on the higher than expected impact rate on upriver spring chinook the Compact subsequently met on February 20 and rescinded the final four fishing periods of the adopted season.

- Since the season was closed on February 19 a total of four voluntary test fishing periods have occurred on February 25, March 3, March 10, and March 17.

<i>Results From 2003 Demonstration and Test Fisheries</i>							
Date	Mesh Size	Boats	Drifts	Chinook			Catch Ratio
				Catch Per Drift	Mark Rate	Percent Lower River	Marked Chinook: Unmarked Steelhead
Feb 17	8"-9¾"	36	72	0.4	44%	22%	2.5:1
Feb 19	8"-9¾"	36	84	0.5	50%	15%	4.4:1
Feb 25	≤4¼"	6	22	1.0	76%	50%	1.1:1
Mar 3	≤4¼"	6	21	0.6	46%	25%	2.0:1
Mar 10	≤4¼"	9	30	1.7	56%	66%	2.7:1
Mar 17	≤4¼"	11	31	3.7	58%	58%	5.6:1

Mainstem Spring Chinook Sport Fishery

- The mainstem Columbia River is open to adipose fin-clipped salmon, adipose fin-clipped steelhead, and shad angling from the mouth at Buoy 10 upstream to McNary Dam (excluding salmon angling from a boat and from the Washington shore between Bonneville Dam and Tower Island power lines) during January 1-May-15 below I-5 Bridge and during February 15-May 15 above I-5 Bridge.
- Fishing was generally slow during February with an estimated 9,600 angler trips resulting in 209 chinook kept and 223 chinook released. The chinook catch during February was comprised of 100% upriver stock.
- Fishing improved significantly during the first half of March, especially in the gorge just below Bonneville Dam.
- During March 1-17 angler trips were estimated to total 22,500 which resulted in 1,747 chinook kept and 884 chinook released. The chinook catch during the first half of March was comprised of 90% upriver stock and 10% lower river stocks.
- Impacts to upriver spring chinook to date have totaled 0.192% which represents 17% of the sport catch guideline of 1.11%.

Lower Willamette Spring Chinook Fishery

- The mainstem Willamette River below Willamette Falls is open for adipose fin-clipped chinook salmon and adipose fin-clipped steelhead the entire year.
- Poor fishing conditions have limited effort and catch during early March.
- Catch rates increased with improving water conditions. Since March 14 catch rates in the area above the St. Johns Bridge have been one spring chinook kept for every 4.5 boats. Fishing remains slow in the Multnomah Channel and below the St. Johns Bridge with 20 boats sampled with only one chinook kept.

FISHERY RECOMMENDATIONS

Non-Indian Salmon Commercial Demonstration Fishery

- The Joint Staff is recommending the following fishing period to allow the commercial fishery access to their Willamette River hatchery spring chinook allocation.

Recommendation

- The Joint Staff is proposing additional fishing periods for the commercial demonstration fishery.

Season:	9 AM - 7 PM Friday March 21 (10 Hours)
Area:	Mouth to Kelley Point (Zones 1 - 4).
Sanctuaries:	Grays River, Gnat Creek, Elokomina-A, Abernathy Creek, Cowlitz River, Kalama-A, and Lewis-A, sanctuaries.
Gear:	Net not to exceed 150 fathoms in length. 4¼" maximum mesh size restriction.
Allowable Sales:	Adipose fin-clipped chinook salmon and sturgeon.
Participants:	Columbia River commercial fishers with appropriate licenses and legal gear that attended a state-sponsored workshop concerning live captive commercial fishing techniques and possess a permit that allows participation in this fishery.
Miscellaneous Regulations:	Soak times, defined as time elapsed from when first mesh enters the water to when last mesh leaves the water, must not exceed 45 minutes. Use of recovery boxes will be required on all lethargic or bleeding fish. Each participant will be required to have 2 operable recovery boxes or one box with two chambers in place to participate in fishery. Operable recovery boxes will require a flow of 16-20 gallons per minute to the box or each chamber. Each box shall be operating during any time that the net is being retrieved or picked. Lighted buoys required on each end of nets being fished between sunset and sunrise. Quick Reporting Rule remains in effect for Washington buyers. Chinook catch expectations and impact rates: 2,500-3,500 chinook handled 1,400-1,700 chinook kept 0.206%-0.247% wild Willamette impacts (0.263%-0.304% cum) 0.213%-0.256% upriver impacts (0.518%-0.561% cum) Winter steelhead catch expectation and impact rates: 600-700 steelhead handled 300-360 wild winter impacts (0.544%-0.592% cum)

- Catch rate observed in the most recent test fishery is sufficient to adopt an efficient one-tide fishery using small mesh tangle nets.
- The mark rate has exceeded 50% during the last two fishing periods.
- Lower river stocks comprise the majority (~60%) of the spring chinook catch which is adequate for adopting a fishery to harvest surplus Willamette hatchery spring chinook.
- Marked chinook to unmarked steelhead ratio increased for the third consecutive test fishing period and is sufficient to adopt a fishery using small mesh tangle nets.
- Impacts to listed salmon and steelhead are expected to remain within ESA-related catch limits.
- Proposed fishery will provide valuable information regarding chinook and steelhead catch during this time period.
- Daylight fishing period allows for effective monitoring of the fishery.
- Restriction of fishing area to below Kelley Point reduces impact on upriver stocks.
- White sturgeon landings are expected to be low in this fishery.

NEXT COMPACT HEARING

- The Joint Staff is not recommending any additional Compacts at this time.

Oregon Department of Fish and Wildlife
Washington Department of Fish and Wildlife
March 19, 2003