

**Columbia River Recreational Advisor Group Meeting
Oregon Department of Fish and Wildlife
17330 SE Evelyn St, Clackamas, OR
4:00 p.m. – 6:00 p.m. February 13, 2019**

AGENDA

Columbia River Recreational Advisor Group (CRRAG) Meeting	
<ul style="list-style-type: none"> • Welcome and Introductions <ul style="list-style-type: none"> ○ Advisor Group members and Agency staff 	(5 minutes)
<ul style="list-style-type: none"> • Spring Chinook Management <ul style="list-style-type: none"> ○ 2018 returns and 2019 forecasts ○ Summary of management guidelines ○ 2019 preseason management guidelines ○ 2019 season modeling ○ 2018 fisheries 	(75 minutes)
<ul style="list-style-type: none"> • Summer Chinook Management <ul style="list-style-type: none"> ○ 2018 fisheries ○ 2019 preliminary outlook 	(15 minutes)
<ul style="list-style-type: none"> • Future Meetings <ul style="list-style-type: none"> ○ February 20 – Compact/Joint State Hearing (recreational spring Chinook) ○ March 18 – Columbia River North of Falcon public meeting 	(5 minutes)
<ul style="list-style-type: none"> • General discussion 	(20 minutes)

<i>Columbia River Adult Salmon Returns: Actual and Forecasted</i> *				
		2018	2018	2019
		Forecast	Return	Forecast
Spring Chinook	Total Spring Chinook	248,520	177,043	157,500
	Willamette River	53,820	37,441	40,200
	Sandy River	5,400	4,733	5,500
	Select Areas **	12,300	9,887	8,200
	Cowlitz River	5,150	4,076	1,300
	Kalama River	1,450	2,371	1,400
	Lewis River	3,700	3,454	1,600
	Lower River Total	81,820	61,962	58,200
	Wind River **	5,300	3,109	2,800
	Drano Lake/Little White Salmon River **	10,200	7,352	5,600
	Hood River **	2,500	2,026	2,300
	<i>Hood River wild</i> **	<i>120</i>	<i>--</i>	<i>--</i>
	Klickitat River **	1,990	667	1,100
	Yakima River **	7,000	3,155	3,000
	Umatilla River **	6,300	3,257	2,400
	Deschutes River **	5,880	1,618	1,455
	Mid-Columbia total (by subtraction)	39,200	34,641	40,000
	Upper Columbia (total)	20,100	12,844	11,200
	<i>Upper Columbia wild</i>	<i>3,400</i>	<i>1,977</i>	<i>2,100</i>
	Snake River Spring/Summer (total) ***	107,400	67,596	48,100
	<i>Snake River wild</i> ***	<i>18,500</i>	<i>11,339</i>	<i>8,200</i>
	Upriver Total	166,700	115,081	99,300
Summer Chinook	Upper Columbia	67,300	42,120	35,900
Sockeye	Total Sockeye	99,000	210,915	94,400
	Wenatchee	25,700	--	18,300
	Okanogan	72,600	--	74,500
	Yakima	50	--	1,300
	Deschutes	50	--	100
	Snake River	600	297	200
Winter Steelhead	Wild	11,700	11,323	14,400
* Components may not sum to totals shown since individual forecasts are not available for all upriver spring Chinook tributaries. Wild components are included in the stock total.				
** Return to tributary mouth.				
*** 2018 return is based on standard TAC run reconstruction methodology.				
				1/30/2019

Spring Chinook

Spring Chinook Management Guidelines

Upriver Chinook Stocks

- The 2018-2027 *U.S. v Oregon* Management Agreement (MA) provides the treaty Indian and non-treaty fishery harvest frameworks and harvest rate schedules for salmon and steelhead stocks destined for areas upstream of Bonneville Dam.
- Fisheries are also managed to meet the catch balance provision in the MA for upriver spring Chinook which requires mortalities in non-treaty fisheries not exceed the total allowable catch available for treaty Indian fisheries. The following table is derived from the harvest schedule within the MA and reflects the allowable catch and associated ESA impacts for treaty Indian and non-treaty fisheries.

Spring Management Period Harvest Rate Schedule						
Total Upriver Run Size	Snake River Natural Run Size	Treaty Indian Harvest Rate	Treaty Indian Catch Guideline	Non-Treaty Harvest Rate	Non-Treaty Mortality Guideline	Total Harvest Rate
82,000	8,200	7.4%	6,068	1.6%	6,068	9.0%
109,000	10,900	8.3%	9,047	1.7%	9,047	10.0%
141,000	14,100	9.1%	12,831	1.9%	12,831	11.0%
217,000	21,700	10.0%	21,700	2.0%	21,700	12.0%
271,000	27,100	10.8%	29,268	2.2%	29,268	13.0%
326,000	32,600	11.7%	38,142	2.3%	38,142	14.0%
380,000	38,000	12.5%	47,500	2.5%	47,500	15.0%
434,000	43,400	13.4%	58,156	2.6%	58,156	16.0%
488,000	48,800	14.3%	69,784	2.7%	69,784	17.0%

- The MA also specifies non-treaty and treaty fisheries occurring prior to a run size update be managed for a run size that is at least 30% less than the predicted upriver spring Chinook run size. Buffering the preseason forecast of 99,300 fish results in an abundance of 69,510 fish for determining preupdate allocations.
- Commission guidance is consistent regarding 1) allocation of ESA impacts for 2019 commercial and recreational fisheries (80% sport and 20% commercial), and 2) Select Area commercial impact allocations are not subject to the *U.S. v OR* run-size buffer provision.

Lower Columbia Chinook Stocks (spring run)

- ESA authorization for fisheries impacting listed lower Columbia River Chinook requires specific hatchery escapement goals be met.
- From NMFS Guidance letter to the Pacific Fishery Management Council in 2018: “The Cowlitz and Lewis River Hatcheries are being used for reintroduction of spring-run Chinook populations in Washington State. The hatchery programs are therefore critical to the overall recovery effort. Given the circumstances, maintaining the hatchery brood stocks for the Cowlitz and Lewis River Hatcheries is essential for implementation of specified recovery actions.”
- The 2019 forecast for the Cowlitz River is less than needed to meet the hatchery escapement goal. The Lewis River return is forecast to be very close to the escapement need.

- Mainstem fisheries harvesting Cowlitz and Lewis spring Chinook would reduce the expected returns to the tributaries.

Willamette Spring Chinook

- The Willamette River Fisheries Management Evaluation Plan (FMEP) limits freshwater fishery impacts on wild Willamette River spring Chinook to $\leq 15\%$.
- The Willamette River FMEP includes a sliding scale for escapement goals based on abundance of hatchery fish which determines the allocation of surplus hatchery spring Chinook to recreational and commercial fisheries downstream of Willamette Falls. The escapement goals are also intended to allow for full recreational fisheries in the upper Willamette River.
- The forecasted hatchery fish surplus is 10,980 fish and is not expected to be a fishery constraint.

2019 Mainstem Recreational - preseason management guidelines

- Based on the MA and the preseason forecast of 99,300 upriver spring Chinook, ESA impacts for 2019 fisheries are limited to 9%, with 1.6% for non-treaty fisheries and 7.4% for treaty Indian fisheries.
- To allow for uncertainty in the preseason forecast, the MA requires a 30% reduction from the forecast (i.e. a run-size buffer) to start the season, which equates to 69,510 upriver spring Chinook. At this run size, the MA allows for a non-treaty ESA limit of 1.5%, or an allowable harvest (kept plus release mortalities) of 4,866 fish prior to a run size update, of which 4,548 are allocated to recreational fisheries.

2019 Spring Chinook Preseason Management Guidelines			
	2018 postseason	2019 preseason	Difference
Upriver CHS abundance (adults)	115,081	99,300	-15,781
ESA impact rate	1.70%	1.60%	-0.10%
Willamette CHS abundance (adults)	37,441	40,200	+2,759

Commission Guidance (ESA impact allocation)	2018	2019	Difference
Sport allocation*	80%	80%	0
Commercial allocation	20%	20%	0

U.S. v OR Catch Balance	2018 preseason	2019 preseason	
30% Buffered Run	116,690	69,510	-47,180
ESA Impact rate	1.70%	1.50%	-0.20%
Catch Balance Available Pre-update	9,685	4,866	-4,819
Sport Fisheries (LCR, Z6, Snake)	9,052	4,548	-4,504
Lower Columbia (below Bonneville)	7,157	3,689	-3,468
Bonneville to OR/WA border	954	492	-462
Snake River (WA waters)	920	357	-563
Commercial Mainstem	TBD	TBD	
Commercial Select Area	≤ 633	≤ 318	-315

*Commission guidance further sub-divides the sport impact allocation 75% to fisheries <Bonneville, 10% to fisheries between Bonn-OR/WA border, and 15% to Snake River sport and Wanapum tribal fisheries.

2019 LCR Spring recreational season preliminary considerations

- Weekly mainstem test fishing is expected to begin March 18 (7 days total 3/18-4/29).
- A total of 3,689 total upriver spring Chinook mortalities are available prior to an inseason run update.
- Lower Columbia Chinook are a management concern this year. The Cowlitz return is forecast to be slightly below the escapement goal and the Lewis return is forecast to be slightly above the goal.
- Any harvest of these stocks in the mainstem or tributaries will further reduce returns to the lower river hatcheries.
- See supplemental handout for additional information.

2019 Forecasts and Escapement Goals			
	Cowlitz	Kalama	Lewis
CR Mouth Forecast*	1,340	1,440	1,550
Tributary Escapement Goal**	1,383	767	1,452
Harvestable Hatchery Fish	-63	621	77
* Includes a minor number of unmarked fish **Tributary escapement goal shown is tributary mouth return necessary to meet hatchery broodstock needs and account for fish that do not recruit to the hatchery			

- Recent conversations with NMFS staff confirmed that fisheries must be managed to address the issue of LCR Chinook hatchery escapement.
- Given this development, only one of the scenarios that staff modeled prior to this meeting addresses recreational fishing closures downstream of these tributaries.

2019 Model Output for Spring Chinook Recreational Fisheries below Bonneville.											
Run #	Description	Last Retention Day		March Days	April Days	Total Days March +April	Angler Trips	Upriver (UR)		Kept Catch	Comments
		Below I-5	Above I-5					Used	Balance		
1	Buoy 10 to Beacon Rk + Bank to Bonn. 7 d/wk	7-Apr	7-Apr	31	7	38	58,000	3,620	69	4,660	One additional day Monday 4/8) = over by 341 UR
2	Buoy 10 to Beacon Rk + Bank to Bonn. 7 d/wk beginning Apr-1	10-Apr	10-Apr	0	10	10	30,400	3,570	119	4,260	One additional day Thursday 4/11) = over by 291 UR
3	Buoy 10 to Beacon Rk + Bank to Bonn. 7 d/wk thru Mar-15, then every other day	12-Apr	12-Apr	23	6	29	51,400	3,690	4	4,610	
4	Warrior Rk to Beacon Rk + Bank to Bonn. 7 d/wk	10-Apr	10-Apr	31	10	41	49,600	3,330	359	4,045	One additional day Thursday 4/11) = over by 34 UR
Upriver Fish Available Pre-Update to LCR:								3,689			
Notes/Comments											
1) Model Run #1 is the general approach used for the past eight years (2011 - 2018). Runs #2-4 provided by request.											
2) Model run assumes no Tuesday closures											
3) Base model assumes 1 fish daily bag limit and good water conditions											
4) Base model uses 2018 effort and CPUE for March and April.											
5) Assumed upriver stock composition below Kelley Point at 58% in March and 78% in April											
6) Assumed mark rates: 83% for upriver stocks, 82% for Willamette stock											
7) Staff will monitor catches in-season. Intent is to allow fishery to run through proposed closure day if fishery is tracking within expectations; fishery checkpoint would occur on or about April 10, if sufficient balance remains staff will consider additional opportunity at that time.											

2019 BON-S/L Spring recreational season preliminary considerations

- Manage for 492 total mortalities pre run update (954 in 2018).
- Run update typically not available until early/mid-May, but wasn't possible until late May in 2017 and 2018.

Scenario	Dates	Days	May Wkend days	Kept	Morts	% of CB
1	3/16-5/5	51	2	450	461	94%
2	4/1-5/5	35	2	449	461	94%
3*	4/16-5/5	21	2	433	444	90%
4*	5/1-7	7	2	455	466	95%

* Assumed 15% additional kept/day in May due to condensed fishery/effort and assumed LCR effort

2019 Snake River Spring recreational season preliminary considerations

- Manage for 357 total mortalities pre run update (920 in 2018).
- Snake River fishery managers to determine season.
- Fishery typically opens in late April on a days-per-week basis in up to four areas.

2018 Mainstem Recreational Season

Downstream from Bonneville Dam

Season: Permanent regulations were in effect January 1 through February 28 which allow Chinook retention from Buoy 10 to the I-5 Bridge. On February 21, the states adopted a March 1–April 7 season for the lower Columbia River between Buoy 10 and Beacon Rock, plus the Oregon and Washington banks between Beacon Rock and Bonneville Dam based on a pre-update allocation of 7,157 upriver mortalities. The two-fish daily bag limit was modified to one adult spring Chinook between Buoy 10 and Bonneville Dam effective March 1. Fishing conditions were less than ideal in early March, very good during the second half of the month, and mixed during early April (ideal above the Willamette but increasing turbidity downstream). Overall, catches were less than expected, resulting in the fishery reaching just over 50% of the pre-update guideline through April 7. Based on this, the season was modified to include Saturday April 14, which brought the total upriver catch including release mortality to 4,553 fish, or about 63% of the guideline. Given the low passage at Bonneville Dam, the states chose not to consider any additional fishing time for the recreational fishery below Bonneville Dam until after the run size update.

On May 21, TAC downgraded the upriver run size to a minimum of 116,500 adults, which resulted in a balance of 2,800 upriver spring Chinook mortalities on the guideline for the recreational fishery below Bonneville Dam. The states met on May 23 and reopened the recreational fishery between Tongue Point and Beacon Rock, plus the banks only between Beacon Rock and Bonneville Dam during May 25-June 6. With catches tracking less than expected, the states met again on June 5 and adopted additional fishing opportunity on the lower Columbia between Tongue Point and Bonneville Dam with a two-fish daily bag limit during June 7-15.

Harvest/Angler Effort: The approximately 89,900 angler trips in 2018 was 75% of the recent 5-year average and produced a total catch of 9,039 adult spring Chinook (7,509 kept and 1,530 released) and 1,870 steelhead (1,476 kept and 394 released). The catch rate averaged one adult spring Chinook kept for every 12 angler trips.

Bonneville Dam upstream to Oregon/Washington Border

Season: The 2018 fishery opened under mark-selective regulations on March 16 and continued through May 7 with a daily bag limit of two fish/one Chinook. A total of 954 upriver spring Chinook (kept + release mortalities) were allocated prior to a run size update. Although the fishery was tracking behind expectations through early May, the states did not extend the pre-update season due to passage tracking late and well below expectations.

TAC's run size update on May 21 allowed the states to reopen the recreational fishery effective May 25. Beginning on June 7 the adult Chinook daily bag limit was increased to two hatchery fish, this regulation remained in place through the remainder of the spring season (June 15).

Harvest/Angler Effort: The season total catch estimate for adult spring Chinook in the area from Bonneville Dam upstream to the Oregon/Washington border was 613 kept and 100 released from approximately 6,850 angler trips, resulting in 1 Chinook kept for every 11 angler trips. The estimated catch was 36% of the recent 5-year average.

Snake River upstream to Washington/Idaho Border

Season: The fishery was initially open in three sections of the Snake River in Washington waters. Each section was open two days per week with an initial adult daily limit of one hatchery Chinook. In 2018, prior to a run size update, 920 Chinook mortalities (kept plus release mortalities) were set aside for this fishery. On April 20, the area downstream of Ice Harbor Dam opened to hatchery Chinook retention followed by the April 22 opening of the area downstream of Little Goose Dam and the area near Clarkston, Washington. Fishing at Ice Harbor was open through June 8 and at Little Goose Dam and Clarkston through June 10. Fisheries were closed as harvest levels of natural origin fish were being approached.

Harvest/Angler Effort: Season total catch estimates for adult Chinook included 742 kept and 308 released fish from about 28,200 angler hours. The kept catch represents 73% of the recent 5-year average.

POST Season ALLOWED Catch Balance for Adult Upriver Spring Chinook in Non-Treaty Fisheries^{1,2}						
	2013	2014	2015	2016	2017	2018
Mainstem salmon Winter/Spring	2,439	4,547	5,942	3,046	0	0
SAFE Commercial Winter/Spring	185	364	433	282	≤347	391
Commercial Total	2,624	4,911	6,375	3,328	347	391
Lower Columbia Rec (below Bonn)	6,168	15,682	19,316	10,792	6,334	7,264
Bonneville to McNary Rec	822	2,091	2,615	1,439	845	968
Snake River Sport/Wanapum Tribal	603	1,574	2,904	1,533	582	928
Recreational Total	7,593	19,347	24,835	13,764	7,761	9,160
Total allowed	10,217	24,258	31,210	17,091	8,108	9,550
POST Season ACTUAL Catch Balance for Adult Upriver Spring Chinook in Non-Treaty Fisheries^{1,2}						
	2013	2014	2015	2016	2017	2018
Mainstem salmon Winter/Spring	1,498	3,364	5,724	2,954	0	0
SAF Commercial Winter/Spring	259	257	804	331	463	311
Commercial Total	1,757	3,621	6,528	3,285	463	311
Lower Columbia Rec (below Bonn)	5,343	13,572	15,689	10,167	7,198	5,868
Bonneville to McNary Rec	613	2,231	1,696	1,480	18	623
Snake River Spt/Wanapum Tribal	374	1,546	1,996	1,397	101	773
Recreational Total	6,330	17,349	19,381	13,043	7,316	7,263
Total take	8,087	20,970	25,909	16,328	7,779	7,574

1. *Includes Release mortalities*
2. *All data subject to change, recent year data preliminary*
3. *Towards the end of the season, some unused ESA/CB allocations available for non-Indian fisheries shifted to Snake River sport and mainstem commercial fisheries to gain access to harvestable fish.*

Summer Chinook

2018 Mainstem Recreational Season

Downstream from Bonneville Dam

The 2018 recreational summer Chinook fishery was open for adipose-fin clipped Chinook during June 22–30 (9 days) from the Astoria-Megler Bridge upstream to Bonneville Dam with a daily limit of two adult hatchery fish. The fishery was scheduled to run through July 4 but an in-season run downgrade necessitated the early closure. Sockeye retention was initially prohibited based on concern that the Wenatchee River would not meet escapement, but was opened July 1 based on a run upgrade. Harvest during June 22-30 totaled 1,021 adult Chinook kept (356 released) from 9,636 angler trips. Season total mortalities were 475% of allocated based on the final run size.

Bonneville Dam upstream to Priest Rapids Dam

Summer season recreational fisheries were open June 16–July 31 from Bonneville Dam upstream to Priest Rapids Dam. The Chinook fishery was mark-selective; retention of Chinook was prohibited beginning July 7 in the area from Bonneville Dam to McNary Dam and beginning July 17 in the remaining area downstream of Priest Rapids Dam due to declining abundance estimates and corresponding caps on allowable harvest. Sockeye retention was allowed beginning July 1. Catch estimates total 120 adult summer Chinook kept (92 released) and 1,171 sockeye kept from 3,870 angler trips. Season total Chinook mortalities were 319% of allocated based on the final run size.

2019 Summer recreational season preliminary considerations

- Both WFWC/OFWC decisions allocate the harvestable surplus of summer Chinook downstream of PRD at 80%-20% sport-commercial.
- Both WFWC/OFWC decisions anticipate any unused commercial allocation will be transferred to escapement, or to recreational fisheries upstream of Bonneville Dam (WFWC only).
- However, the low forecast of 35,900 adult summer Chinook to the Columbia River mouth may not provide for any harvestable summer Chinook downstream of Priest Rapids Dam, given expected ocean harvest and obligations to upriver fisheries.
- The first run update is typically not available until around July 1.
- Discussions regarding 2019 summer Chinook will continue at the North of Falcon meetings. Ocean fishery regulations are set through the Pacific Fishery Management Council process.

2018 Recreational Fishery Summaries (Preliminary)

2018 Lower Columbia River Recreational Fisheries Summary.

Time Period	Area	Species Allowed	Days for Chinook	Salmonid Anglers	Adult Chin. Kept	Adult Chin. Rel'd	Jack Chin. Kept	Jack Chin. Rel.	Sthd Kept	Sthd Rel'd	Sockeye Kept	Sockeye Rel'd	Adult Coho Kept	Adult Coho Rel'd	Jack Coho Kept	Jack Coho Rel.
Feb	Buoy 10 to I-5	ChS, StW		3,293	18	0	0	0	0	36	Closed	0	0	0	0	0
March	LCR	ChS, StW	31	38,633	1,871	278	3	0	67	85	Closed	0	0	0	0	0
April 1-7 & 14	LCR	ChS, StW	8	26,486	4,119	581	18	0	42	20	Closed	0	Closed	Closed	Closed	Closed
May 16-24	TP-Bonn.	StS	0	1,524	0	105	0	8	143	21	Closed	0	Closed	Closed	Closed	Closed
May 25-31	TP-Bonn.	ChS, StS	7	7,517	468	250	12	25	442	62	Closed	0	Closed	Closed	Closed	Closed
June 1-15	TP-Bonn.	ChS, StS	15	12,429	1,033	316	21	63	782	170	Closed	90	Closed	Closed	Closed	Closed
ChS Totals	(February 1-June 15) 1/		61	89,882	7,509	1,530	54	96	1,476	394	0	90	0	0	0	0
June 16-21	Astoria Br-Bo	StS	0	3,281	0	52	11	0	569	99	Closed	60	Closed	Closed	Closed	Closed
June 22-30	Astoria Br-Bo	StS, ChR	9	9,636	1,021	356	28	18	451	291	Closed	57	Closed	Closed	Closed	Closed
July 1-31	Astoria Br-Bo	StS, Sok	0	14,558	6	342	50	23	2,270	1,532	73	5	Closed	Closed	Closed	Closed
ChR Totals	(June 16-July 31) 2/		9	27,475	1,027	750	89	41	3,290	1,922	73	122	0	0	0	0
Spring/Summer Totals				117,357	8,536	2,280	143	137	4,766	2,316	73	212	0	0	0	0
Aug	TP-BO	ChF, Co, StS	31	41,506	4,119	232	236	185	1,097	788	Closed	0	223	149	0	16
Sep 1-12	TP-BO	ChF, Co	12	28,123	5,683	645	461	173	7	73	Closed	0	427	268	32	19
Oct	TP-BO	Closed	0	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
ChF Totals	(August 1-September 12) 3/		43	69,629	9,802	877	697	358	1,104	861	0	0	650	417	32	35
LCR Spring Summer and Fall			113	186,986	18,338	3,157	840	495	5,870	3,177	73	212	650	417	32	35
OR Buoy 10	B10-TP	ChF, Co, StS	24	44,087	8,258	3,902	0	0	50	42	0	0	4,397	3,987	0	0
WN Buoy 10	B10-TP	ChF, Co, StS	24	23,231	3,362	1,137	0	0	0	0	0	0	2,364	1,903	0	0
Buoy 10 Total	(August 1- September 12) 4/		24	67,318	11,620	5,039	0	0	50	42	0	0	6,761	5,890	0	0
B10 and Mainstem Fall Totals				136,947	21,422	5,916	697	358	1,154	903	0	0	7,411	6,307	32	35
LCR and B10 Grand Totals				254,304	29,958	8,196	840	495	5,920	3,219	73	212	7,411	6,307	32	35

2018 Zone 6 (Bonneville Dam - McNary Dam) Spring and Summer Fisheries Summary.

Area	Time Period	Species Allowed	Salmonid Anglers	Adult Chin. Kept	Adult Chin. Rel.	Jack Chin. Kept	Total Sthd Kept	Total Sthd Rel.	Unclipped Sthd Rel.	Clipped Sthd Rel.	UnK Origin Sthd Rel.	Adult Coho Kept	Adult Coho Rel.	Jack Coho Kept	Sockeye Kept	Sockeye Rel.
Bonneville		ChS, Sth	678	148	4	6	0	0	7	0	0	0	0	0	0	0
The Dalles			1,543	276	59	36	0	0	0	0	0	0	0	0	0	0
John Day			1,741	177	35	7	0	0	1	0	0	0	0	0	0	0
ChS Totals	(March 16-June 15)		3,962	601	98	49	0	0	8	0	0	0	0	0	0	0
Bonneville		ChR, StS, Sok	732	3	0	0	0	48	48	0	0	0	0	0	0	9
The Dalles			144	0	0	0	0	0	0	0	0	0	0	0	0	0
John Day			352	9	0	0	0	0	0	0	0	0	1	0	0	0
ChR Totals	(June 16-July 31)		1,228	12	0	0	0	48	48	0	0	0	1	0	0	9
Spring/Summer Totals			5,190	613	98	49	0	48	56	0	0	0	1	0	0	9

2019 Lower Washington Columbia River Tributary Forecasts and Recommended Management

Table 1. Below Bonneville Dam summary of tributary forecasts, hatchery needs, and expected fishery harvest.

	Cowlitz River	Kalama River	Lewis River
Total forecast return to tributary mouth	1,300	1,400	1,500
Natural-origin fish forecast component	19	51	20
Hatchery fish forecast component	1,281	1,349	1,480
Total hatchery escapement need	1,300	600	1,300
Deep River Net Pen off-channel program	na	200	na
On-station program	1,337	400	1,300
Upper river recovery program*	If surplus available	na	If surplus available
Souther Resident Killer Whale prey enhancement	If surplus available	If surplus available	If surplus available
Escapement need at tributary mouth**	1,383	767	1,452
Harvestable surplus	-103	583	28
Tributary sport harvest with standard fishery regulations***	476	544	444
Escapement shortfall with standard fishery regulations	-579	38	-416

*Fish are trucked and released above dams for population recovery

**Includes fish spawning downriver from hatchery

***Assuming standard fishing season

Cowlitz River

- Hatchery program release numbers for years affecting the spring 2019 return were at or near goals with no apparent disease issues or other anomalies expected to affect survival.
- Standard spring Chinook tributary fishery regulations: harvest allowed lower and upper Cowlitz for entire season (January 1-July 31), daily limit of 6 fish, 2 may be adults
 - Recommended regulations for 2019: closed beginning March 1

Kalama River

- Standard tributary spring Chinook fishery regulations: Current permanent rules allow for daily limit of 6 fish, 2 may be adult Chinook for entire season (January 1-July 31)
 - Recommended regulation for 2019: beginning March 1, daily limit 6 fish, 1 adult from mouth to 1000 ft. below Kalama Falls Hatchery

Lewis River

- Hatchery program release numbers for years affecting the spring 2019 return have been below goals for some years.
 - Changes in release strategies (i.e., sizes and times of release) have been implemented and are being evaluated.
- Standard tributary spring Chinook fishery regulations: harvest allowed below Merwin Dam January 1-April 30 with daily limit of 6 fish, 1 adult; closed May 1 – July 31
 - Recommended regulations for 2019: closed beginning March 1