



Fish Passage Center

Weekly Report #01 - 27

September 14,
2001

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NOTE: This is the last issue of the **Weekly** report. The next issue will be on **September 28** and will be **BiWeekly** into October.

SIGNIFICANT POINTS

- **Mainstem migration flows were far below the NMFS Biological Opinion targets for summer migrants both in the Snake River and in the Columbia River during 2001.**

SUMMARY OF EVENTS:

Reservoir Operations: Reservoir elevation changes over the past week are illustrated in the following table. Libby outflow will continue at 6 Kcfs through the middle of the month. Releases from Hungry Horse will be maintained to provide a minimum flow at Columbia falls of 3.26 Kcfs. Grand Coulee will be refilled to elevation 1283 feet by September 30 for kokanee spawning.

Reservoir	Elevations (feet) September 7 –September 13
Libby	2434.14 – 2433.35
Hungry Horse	3538.21 – 3537.14
Grand Coulee	1279.30 – 1280.00
Dworshak	1519.61 – 1518.92
Brownlee	2051.96 – 2051.46*

*As of midnight September 12, 2001

The Upper Snake River, Boise River and Payette River system of reservoirs continue to be drafted for irrigation purposes. The Boise system, Anderson Ranch, Arrowrock, Lucky Peak are presently at 19% of capacity compared to 21% a week ago. The Payette River system comprised of Cascade and Deadwood reservoirs is at 40% of capacity compared to 41% a week ago. The Upper Snake River system comprised of Jackson Lake, Palisades,

Grassy Lake, Island Park, Ririe, American Falls and Lake Walcott is at 13% of capacity compared to 14% last week.

Flows: Flows at McNary, Lower Granite, and Priest Rapids dams over the past week averaged 87.4 Kcfs, 15 Kcfs and 68.3Kcfs, respectively.

Smolt Monitoring Program. This week's daily subyearling chinook collections averaged 190 at Lower Granite Dam (down 43%), 77 at Little Goose Dam (down 39%), and 49 at Lower Monumental Dam (down 43%). In the lower Columbia River, daily subyearling chinook passage indices averaged 1,778 at McNary Dam (down 73%), 3,016 at John Day Dam (down 78%), and 1,149 at Bonneville Dam (down 66%).

Adult Fish Passage: At Bonneville Dam, counts of adult fall chinook ranged between 12,000 and 26,700 per day (ave. – 19,779 per day) through the week ending September 13, with the cumulative count now 307,298. This compares with 162,213 for year 2000 and 133,898 for the 10-year average. It appears that this year's fall chinook, coho, and steelhead runs peaked during the week. The numbers and percentage of "tule" and "bright" fall chinook through September 13 are 111,500 (36.3%) and 195,800 (63.7%), respectively (data supplied by WDFW). The "tule" fall chinook are destined for Bonneville Pool tributaries and Spring Creek National Fish Hatchery while the "bright" component of the fall chinook run are destined for most larger tributaries and streams in the basin including the Hanford Reach area. About 36.4% of the adult fall chinook counted at Bonneville Dam had passed The Dalles Dam with 44,162 adult fall

chinook over McNary Dam through September 13. About 4,600 adult fall chinook have been counted at Ice Harbor Dam, with the mid-Columbia count at Priest Rapids about 9,200. The majority of fall chinook counted at McNary Dam generally migrate to the Hanford Reach (including Priest Rapids Hatchery) and the Yakama River basin. Note: This year's fall chinook run total at Bonneville Dam should exceed all count totals back to the start of counting at the Dam in 1938.

Steelhead counts at Bonneville Dam ranged between 5,020 and 9,836 for the week (ave. – 7,111 per day) with the cumulative count at 547,133, about 2.3 and 2.8 times greater than the respective year 2000 and 10-year average counts. The official count of B-Run steelhead started August 26 and will continue through the end of the count season. The B-Run steelhead are normally fish that spend 2-years in the ocean and return primarily to the Clearwater River in Idaho as well as some tributaries of the Salmon River in Idaho. Returns of unclipped (mostly wild) steelhead are at 140,227 to date. About 28.3% of the fish counted at Bonneville have arrived at McNary Dam (155,078). The steelhead passage at Ice Harbor Dam increased from about 1,100 per day to greater than 5,400 per day by September 13 with the cumulative count near 72,000 to date. This total was 1.7 and 2.6 times greater than the respective 2000 and 10-year average. Steelhead counts at Priest Rapids Dam averaged 352 per day through the week with the season total of 18,753, about 2.3 and 3.5 times greater than the respective 2000 and 10-year average. Steelhead passing Rocky Reach Dam will be destined for the Entiat, Methow, and Okanogan River basins or to Wells Hatchery. Note: Both the Snake River and upper Columbia River should have record or near record returns based on passage of adult steelhead into both Reaches to date and the continued high numbers of steelhead still passing Bonneville Dam.

Coho salmon counts at Bonneville Dam ranged from 5,700 to 20,500. The season total is now 157,288 and compares with 45,715 in year 2000 and the 10-year average count of 12,388. Note: This year's run of coho has already ex-

ceeded the previous yearly record total at Bonneville Dam, set in 1986. PIT tagged coho salmon returning from the 2000 migration year have been from the Snake River basin (Clearwater River releases), upper Columbia (Winthrop and Leavenworth area), and Yakama River basin. Other release sites such as the Klickitat River, Umatilla River, and Little White Salmon River did not have PIT tagged fish in their release groups. Most returning coho salmon passing Bonneville Dam are destined for the Bonneville pool tributaries and hatcheries.

The Tribal gill-net fishery in Zone 6 continues for given number of days per week to achieve their catch/quota of salmon for the season. Zone 6 encompasses the area from above Bonneville Dam to McNary Dam.

Hatchery Releases. *Snake River* – Releases of yearling and subyearling chinook, sockeye, and coho salmon and steelhead are completed for the 2001 migration season.

Mid-Columbia [above McNary Dam] – Releases of yearling and subyearling chinook, sockeye, and coho salmon and steelhead are completed for the 2001 migration season. A release of hatchery sockeye into Lake Wenatchee was completed and numbers will be updated when received from WDFW. It is anticipated that the majority of these fish will migrate in spring 2002 although we know a portion of these fish will leave the Lake this fall. They will be listed as 2002 Migration Year.

Lower Columbia [McNary Dam to Bonneville Dam] – Releases of yearling chinook and coho salmon, and steelhead are completed for the 2001 migration season.

Daily Average Flow and Spill (in kcfs) at Mid-Columbia Projects

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/31/01	72.5	0.1	75.2	0.0	77.5	6.7	75.5	0.0	75.8	0.0	86.0	2.1	91.3	3.2
09/01/01	48.3	0.1	51.4	0.0	50.4	0.0	48.8	0.0	49.6	0.0	52.4	1.7	59.0	0.9
09/02/01	51.8	0.1	50.7	0.0	51.0	0.0	51.1	0.0	52.3	0.0	53.7	1.8	51.5	1.0
09/03/01	67.5	0.1	69.6	0.0	71.7	0.0	70.0	0.0	68.1	0.0	67.4	1.8	71.2	1.2
09/04/01	81.8	0.1	88.4	0.0	85.3	0.0	85.7	0.0	86.7	0.0	85.9	2.0	86.0	1.1
09/05/01	68.0	0.1	68.4	0.0	70.7	0.0	75.6	0.0	78.2	0.0	85.7	2.0	87.7	1.0
09/06/01	55.9	0.1	50.6	0.0	48.0	0.0	45.8	0.0	45.9	0.0	62.9	1.5	75.3	0.9
09/07/01	55.0	0.1	56.2	0.0	55.0	0.0	54.6	0.0	55.0	0.0	52.4	1.6	45.0	0.6
09/08/01	43.3	0.1	44.4	0.0	44.6	0.0	46.0	0.0	46.0	0.0	42.6	1.7	44.4	1.2
09/09/01	41.5	0.1	41.7	0.0	42.1	0.0	41.8	0.0	41.0	0.0	48.0	1.9	48.4	1.0
09/10/01	84.9	0.1	82.2	0.0	78.2	0.0	79.0	0.0	79.4	0.0	71.2	1.9	70.8	1.1
09/11/01	82.9	0.0	90.1	0.0	93.9	0.0	93.1	0.0	92.5	0.0	100.1	2.0	101.6	1.1
09/12/01	79.4	0.0	81.5	0.0	76.7	0.0	78.5	0.0	79.1	0.0	85.1	1.3	88.1	1.0
09/13/01	67.1	0.0	66.0	0.0	65.7	0.0	71.5	0.0	73.8	0.0	79.7	1.8	80.1	0.9

Daily Average Flow and Spill (in kcfs) at Snake Basin Projects

Date	Dworshak		Brownlee Canyon		Hells Granite		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/31/01	1.6	0.0	8.2	9.6	14.0	0.0	13.9	0.0	14.5	0.0	14.2	0.0	14.2	0.0
09/01/01	1.6	0.0	7.9	7.6	13.4	0.0	13.7	0.0	13.8	0.0	11.9	0.0	11.9	0.0
09/02/01	1.5	0.0	8.2	7.5	13.0	0.0	13.5	0.0	13.7	0.0	13.5	0.0	13.5	0.0
09/03/01	1.5	0.0	8.5	10.2	12.9	0.0	13.2	0.0	14.2	0.0	14.8	0.0	14.8	0.0
09/04/01	1.5	0.0	8.6	11.2	13.4	0.0	13.4	0.0	13.8	0.0	13.0	0.0	13.0	0.0
09/05/01	1.4	0.0	8.7	13.7	16.3	0.0	15.8	0.0	15.6	0.0	15.8	0.0	15.8	0.0
09/06/01	1.3	0.0	8.4	10.4	16.9	0.0	16.0	0.0	15.7	0.0	12.1	0.0	12.1	0.0
09/07/01	1.4	0.0	8.7	9.2	15.6	0.0	17.1	0.0	17.7	0.0	16.1	0.0	16.1	0.0
09/08/01	1.4	0.0	8.6	7.6	13.5	0.0	13.3	0.0	14.0	0.0	14.6	0.0	14.6	0.0
09/09/01	1.4	0.0	8.8	7.2	13.3	0.0	13.4	0.0	13.8	0.0	13.1	0.0	13.1	0.0
09/10/01	1.4	0.0	10.3	12.4	13.6	0.0	13.2	0.0	13.1	0.0	11.6	0.0	11.6	0.0
09/11/01	1.4	0.0	8.9	10.4	16.9	0.4	14.8	0.0	13.9	0.0	12.2	0.0	12.2	0.0
09/12/01	1.4	0.0	9.5	11.2	16.1	0.0	17.4	0.0	14.0	0.0	15.3	0.0	15.3	0.0
09/13/01	1.4	0.0	---	---	16.7	0.0	14.7	0.0	16.5	0.0	15.8	0.0	15.8	0.0

Daily Average Flow and Spill (in kcfs) at Lower Columbia Projects

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
08/31/01	95.6	0.0	88.0	0.0	88.8	32.0	101.3	49.7	0.5	44.4
09/01/01	102.0	0.0	89.8	0.0	88.5	0.0	94.4	2.3	0.6	84.8
09/02/01	65.3	0.0	79.1	0.0	84.1	0.0	91.7	2.3	0.5	82.2
09/03/01	73.5	0.0	83.5	0.0	86.6	0.0	88.9	2.3	0.5	79.4
09/04/01	78.9	0.0	76.7	0.0	77.2	0.0	86.0	2.3	0.7	76.3
09/05/01	96.0	0.0	87.2	0.0	89.1	0.0	92.9	2.3	0.5	83.4
09/06/01	95.9	0.0	80.6	0.0	80.7	0.0	80.5	2.3	0.6	70.9
09/07/01	63.9	0.0	63.8	0.0	68.9	0.0	79.8	2.3	0.5	70.3
09/08/01	54.9	0.0	64.1	0.0	65.6	0.0	76.0	2.3	0.5	66.5
09/09/01	63.5	0.0	62.7	0.0	66.8	0.0	76.5	2.3	0.5	67.0
09/10/01	68.8	0.0	75.8	0.0	78.0	0.0	76.8	2.3	0.6	67.2
09/11/01	92.5	0.0	80.1	0.0	80.8	0.0	85.4	2.3	0.6	75.8
09/12/01	110.8	0.0	101.0	0.0	103.7	0.0	104.4	2.3	1.7	93.7
09/13/01	94.8	0.0	94.6	0.0	94.0	0.0	95.9	2.3	0.7	86.2

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph							
	24 h			12 h	24 h			#	24 h			12 h	24 h			12 h	24 h			12 h	#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/31	102	102	103	23	106	107	107	23	102	102	102	23	102	103	105	23	103	103	103	104	23			
9/1	102	102	103	25	106	106	107	25	102	102	102	25	102	103	106	25	103	103	103	103	24			
9/2	102	103	103	24	105	106	106	24	101	101	102	24	101	102	105	23	102	103	103	103	24			
9/3	101	102	102	24	105	105	105	24	101	101	102	24	101	101	104	22	102	102	103	103	23			
9/4	101	102	102	24	104	105	105	24	101	101	102	24	100	101	101	21	102	102	102	102	23			
9/5	102	103	103	23	105	105	105	23	101	101	101	23	100	101	103	20	102	102	102	102	23			
9/6	103	103	104	24	105	105	106	24	101	101	101	24	101	101	103	22	101	102	102	102	23			
9/7	104	105	106	24	104	104	105	24	100	100	101	24	100	100	102	20	101	101	101	101	23			
9/8	102	103	104	23	104	105	105	24	100	101	101	24	101	102	102	23	101	101	101	101	23			
9/9	102	102	103	24	105	105	106	24	101	101	102	21	101	103	105	24	101	101	102	102	23			
9/10	101	102	102	24	105	105	107	24	101	101	102	24	100	101	103	24	101	101	102	102	22			
9/11	101	102	103	24	104	104	106	24	101	101	101	24	99	100	101	24	101	101	102	102	22			
9/12	101	102	102	24	104	105	106	24	101	101	101	24	100	101	102	24	102	102	103	103	24			
9/13	101	101	102	24	104	104	105	24	101	101	101	24	100	100	102	24	102	102	102	102	23			

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr							
	24 h			12 h	24 h			#	24 h			12 h	24 h			12 h	24 h			12 h	#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/31	103	103	104	23	103	103	104	23	105	106	106	23	106	107	107	15	---	---	---	---	0			
9/1	103	103	104	24	102	102	103	24	103	103	104	24	105	105	106	11	---	---	---	---	0			
9/2	102	103	104	24	102	103	104	23	101	102	103	23	105	105	105	16	---	---	---	---	0			
9/3	102	102	103	23	101	101	101	24	101	102	102	24	104	104	104	15	---	---	---	---	0			
9/4	101	102	102	23	101	102	102	24	101	102	102	24	103	103	103	16	---	---	---	---	0			
9/5	101	102	102	23	101	101	101	23	101	101	102	23	101	102	102	19	---	---	---	---	0			
9/6	101	102	102	23	100	101	101	22	100	101	102	22	100	101	101	21	---	---	---	---	0			
9/7	101	101	103	22	100	100	101	23	100	100	101	23	100	101	101	18	---	---	---	---	0			
9/8	101	102	103	23	100	101	102	24	100	101	102	24	100	101	102	24	---	---	---	---	0			
9/9	102	103	104	23	101	102	103	24	101	102	102	24	101	102	102	23	---	---	---	---	0			
9/10	102	103	104	19	101	102	103	24	101	102	102	24	102	102	102	19	---	---	---	---	0			
9/11	102	102	104	19	101	102	102	24	101	102	102	24	101	101	102	23	---	---	---	---	0			
9/12	102	104	105	24	101	102	103	23	101	102	102	23	102	102	102	22	---	---	---	---	0			
9/13	103	104	105	23	102	102	102	18	101	102	102	18	102	102	102	20	---	---	---	---	0			

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids							
	24 h			12 h	24 h			#	24 h			12 h	24 h			12 h	24 h			12 h	#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/31	106	106	107	14	106	106	107	11	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/1	105	105	106	13	106	106	107	10	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/2	104	104	105	12	105	105	106	8	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/3	104	104	104	15	104	104	105	13	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/4	103	103	104	14	104	104	104	13	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/5	101	101	102	20	102	102	103	16	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/6	100	100	101	19	101	101	102	15	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/7	99	99	100	14	100	100	101	15	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/8	100	101	101	23	101	102	102	17	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/9	100	101	102	21	102	102	103	20	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/10	101	101	101	18	102	102	102	13	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/11	101	101	102	23	102	102	102	6	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/12	101	102	102	19	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	---	0			
9/13	101	101	102	20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	---	0			

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Lower Columbia and Snake River Sites

Date	Priest R. Dnst			Pasco			Dworshak			Clrwtr-Peck			Anatone			#				
	24 h		12 h	#	24 h		12 h	#	24 h		12 h	#	24 h		12 h					
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High					
8/31	---	---	---	0	105	105	106	21	104	104	105	23	100	100	100	23	101	103	105	23
9/1	---	---	---	0	103	103	104	23	103	104	105	23	100	100	100	23	101	103	105	24
9/2	---	---	---	0	---	---	---	0	104	105	107	24	---	---	---	0	101	104	107	24
9/3	---	---	---	0	102	103	103	24	105	106	107	22	100	100	101	22	101	103	105	24
9/4	---	---	---	0	102	103	104	24	105	107	108	23	100	100	101	18	101	103	105	24
9/5	---	---	---	0	102	103	103	24	106	106	107	15	---	---	---	0	100	101	103	23
9/6	---	---	---	0	101	102	103	24	105	106	107	24	---	---	---	0	100	102	104	24
9/7	---	---	---	0	100	100	101	24	105	106	107	24	---	---	---	0	101	102	104	24
9/8	---	---	---	0	100	101	101	24	105	107	108	24	---	---	---	0	101	103	105	24
9/9	---	---	---	0	101	102	102	24	106	107	108	24	---	---	---	0	102	104	106	23
9/10	---	---	---	0	102	102	103	24	106	107	108	24	---	---	---	0	101	103	104	24
9/11	---	---	---	0	102	103	104	24	105	107	108	24	---	---	---	0	101	102	104	24
9/12	---	---	---	0	102	103	103	24	106	107	109	24	---	---	---	0	101	102	105	24
9/13	---	---	---	0	102	103	103	21	106	107	108	24	---	---	---	0	100	102	103	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr			#				
	24 h		12 h	#	24 h		12 h	#	24 h		12 h	#	24 h		12 h					
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High					
8/31	103	107	111	23	106	108	109	22	100	101	101	22	99	100	104	22	98	98	99	22
9/1	102	105	109	23	103	104	105	24	100	100	101	24	99	99	99	24	98	98	99	24
9/2	102	106	108	24	102	104	105	24	99	100	101	24	101	104	105	24	99	100	101	24
9/3	103	106	109	22	103	104	105	23	99	100	101	23	101	102	102	23	100	100	101	23
9/4	102	106	109	24	103	103	104	23	99	100	101	23	101	102	102	23	99	100	100	23
9/5	99	99	101	9	100	101	102	24	98	99	100	24	101	101	101	24	100	100	101	24
9/6	---	---	---	0	99	100	100	23	98	99	100	23	99	100	100	21	99	99	99	21
9/7	---	---	---	0	99	100	100	24	98	98	99	24	99	99	100	24	98	99	99	24
9/8	---	---	---	0	100	100	101	24	98	99	100	24	100	100	101	24	99	100	100	24
9/9	---	---	---	0	100	101	103	24	99	101	102	24	102	105	110	24	99	100	100	24
9/10	---	---	---	0	100	101	103	24	99	100	102	24	101	103	109	24	99	99	100	24
9/11	---	---	---	0	101	102	103	24	99	100	106	24	100	101	105	24	97	97	98	24
9/12	---	---	---	0	100	101	102	24	97	97	97	23	100	102	103	24	97	98	98	24
9/13	---	---	---	0	97	97	98	23	95	95	96	14	100	100	101	24	97	98	98	24

Total Dissolved Gas Saturation Data at Snake and Lower Columbia River Sites

Date	Lower Mon.			L. Mon. Tlwr			Ice Harbor			Ice Harbor Tlwr			McNary-Oregon			#				
	24 h		12 h	#	24 h		12 h	#	24 h		12 h	#	24 h		12 h					
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High					
8/31	98	99	101	23	99	100	101	23	101	101	103	22	102	103	104	22	105	106	107	24
9/1	97	98	98	24	98	99	101	24	99	99	100	24	100	101	102	24	104	104	105	24
9/2	99	100	103	24	98	99	100	24	100	101	102	23	100	102	102	23	---	---	---	0
9/3	100	101	103	24	98	100	101	24	100	101	103	24	100	101	103	24	102	103	105	24
9/4	100	100	101	24	98	99	100	24	100	100	100	24	100	101	103	24	104	105	107	24
9/5	98	98	100	24	97	98	100	24	98	99	100	24	99	100	101	24	102	103	104	24
9/6	97	97	98	22	97	98	100	22	97	97	97	23	99	100	101	23	101	101	102	24
9/7	98	100	100	24	97	98	98	24	97	98	99	24	99	100	100	24	101	102	103	24
9/8	99	99	99	24	98	100	101	24	97	98	99	24	100	101	102	24	100	101	103	24
9/9	98	99	99	24	99	99	101	21	98	99	99	24	101	102	103	24	103	104	107	24
9/10	98	98	99	23	98	99	100	21	98	99	100	23	101	101	103	23	104	105	106	24
9/11	99	99	100	24	99	99	100	24	98	98	98	24	100	101	102	24	104	105	107	24
9/12	101	102	105	24	99	100	101	24	98	99	99	24	100	101	102	23	104	105	107	24
9/13	100	101	101	24	99	100	100	24	99	99	100	24	100	101	101	24	103	104	106	24

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	McNary-Wash			McNary-Tlwr			John Day			John Day Tlwr			The Dalles			#				
	24 h	12 h		24 h	12 h		24h	12h		24h	12h		24h	12h						
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	AVG	High					
8/31	104	104	107	24	102	103	103	24	99	99	99	23	100	100	100	24	99	99	100	23
9/1	103	104	104	24	102	103	103	24	99	99	99	23	100	101	101	24	99	99	99	23
9/2	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/3	104	105	106	24	102	103	103	24	98	99	99	23	100	100	100	23	99	99	99	23
9/4	104	105	105	24	102	102	103	17	98	98	99	23	100	100	101	24	99	99	99	23
9/5	102	102	103	24	101	101	102	24	97	98	98	23	99	99	100	24	98	98	99	22
9/6	101	101	101	24	100	101	101	24	97	97	97	20	99	99	99	20	98	98	98	22
9/7	100	101	103	24	100	100	101	24	97	97	98	23	99	99	99	24	98	98	98	23
9/8	100	101	102	24	100	100	101	24	97	98	99	23	99	99	100	24	98	98	99	23
9/9	103	105	107	24	101	101	102	24	98	98	99	23	100	100	100	24	99	99	99	23
9/10	102	103	104	24	101	101	102	24	98	99	100	22	98	99	99	24	99	99	99	23
9/11	104	106	107	24	101	102	102	24	99	100	104	19	98	98	98	23	99	99	99	23
9/12	105	106	107	24	102	103	103	24	99	100	102	24	98	98	98	24	99	99	99	24
9/13	104	105	106	24	102	102	102	24	99	99	101	17	98	98	98	17	98	99	99	17

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			Bonneville			Warrendale			Skamania			CamasWashugal			#				
	24 h	12 h		24 h	12 h		24h	12h		24h	12h		24h	12h						
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	AVG	High					
8/31	110	111	112	23	104	104	104	23	112	113	114	23	109	110	111	23	108	108	109	24
9/1	103	107	111	24	103	103	104	23	106	108	112	23	103	104	109	23	108	108	109	24
9/2	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/3	100	100	100	24	103	103	103	23	103	103	104	23	102	102	103	23	102	102	103	24
9/4	100	100	101	24	103	103	104	23	103	104	104	23	102	102	102	23	102	102	103	24
9/5	99	100	100	24	100	101	103	23	101	101	102	23	100	100	102	23	100	101	101	24
9/6	99	99	100	22	99	99	99	23	100	100	101	23	98	98	99	23	99	99	100	23
9/7	100	100	101	24	99	99	100	23	100	101	101	23	98	99	99	23	99	100	100	24
9/8	100	101	101	24	100	100	100	23	101	102	103	23	99	100	100	23	100	100	101	24
9/9	101	102	102	24	100	101	101	23	101	102	102	23	100	100	101	23	100	101	102	24
9/10	101	101	102	24	101	101	101	22	101	101	105	21	100	100	101	22	100	101	101	24
9/11	100	101	101	24	101	101	101	19	101	102	103	20	100	100	101	18	100	101	102	24
9/12	100	100	101	24	101	101	102	23	102	102	104	24	100	101	102	24	101	101	102	24
9/13	100	100	100	17	101	101	101	23	102	102	103	23	100	101	102	23	101	101	102	24

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/31/2001	---	---	---	---	0	1	2	0	0	225	0
09/01/2001	---	---	---	---	4	0	1	---	0	100	0
09/02/2001	---	---	---	---	0	0	0	---	40	0	0
09/03/2001	---	---	---	---	0	2	1	---	0	150	25
09/04/2001	---	---	---	---	8	0	1	---	6	150	0
09/05/2001 *	---	---	---	---	20	0	0	---	0	30	0
09/06/2001	---	---	---	---	1	0	2	---	0	0	0
09/07/2001	---	---	---	---	0	0	1	---	0	0	0
09/08/2001	---	---	---	---	0	0	3	---	0	0	0
09/09/2001	---	---	---	---	0	0	1	---	0	40	0
09/10/2001	---	---	---	---	0	0	0	---	0	22	13
09/11/2001	---	---	---	---	0	0	0	---	0	40	0
09/12/2001	---	---	---	---	0	0	2	---	0	36	0
09/13/2001	---	---	---	---	0	0	0	---	6	100	4
Total:	0	0	0	0	33	3	14	0	52	893	42
# Days:	0	0	0	0	14	14	14	1	14	14	14
Average:	0	0	0	0	2	0	1	0	4	64	3
YTD	12,660	26,732	9,049	527	1,957,956	749,737	553,416	6,575	2,299,288	1,006,010	1,687,814

COMBINED SUBYEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/31/2001	---	---	---	---	386	198	161	11	17,220	22,200	4,292
09/01/2001	---	---	---	---	476	115	84	---	11,680	16,600	3,798
09/02/2001	---	---	---	---	496	56	39	---	7,500	15,900	4,106
09/03/2001	---	---	---	---	324	88	65	---	1,310	12,525	3,057
09/04/2001	---	---	---	---	248	123	86	---	2,142	11,425	2,274
09/05/2001 *	---	---	---	---	224	150	84	---	1,374	7,065	2,220
09/06/2001	---	---	---	---	176	155	90	---	4,380	8,180	3,583
09/07/2001	---	---	---	---	290	78	60	---	5,466	6,650	2,243
09/08/2001	---	---	---	---	227	70	55	---	1,080	3,670	1,737
09/09/2001	---	---	---	---	147	75	67	---	520	2,420	1,390
09/10/2001	---	---	---	---	133	102	27	---	640	2,078	588
09/11/2001	---	---	---	---	117	65	50	---	1,120	1,970	438
09/12/2001	---	---	---	---	193	50	52	---	1,476	1,992	731
09/13/2001	---	---	---	---	225	96	34	---	2,142	2,330	913
Total:	0	0	0	0	3,662	1,421	954	11	58,050	115,005	31,370
# Days:	0	0	0	0	14	14	14	1	14	14	14
Average:	0	0	0	0	262	102	68	11	4,146	8,215	2,241
YTD	1	1	13	31	724,245	172,175	52,506	22,638	10,713,832	2,846,050	2,923,479

*The total, #days and average do not include the current day's data. *See sampling comments. <http://www.fpc.org/current/daily/smpcomments.htm>. This means that one or more of the sites on this date had an incomplete or biased sample.

These data are preliminary and have been derived from various sources. For verification and/or origin of these data, contact the operators of the Fish Passage Data System at (503) 230-4099.

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's,) subyearling chinook (chinook 0's), steelhead, coho, and sockeye. Two classes of fish counts are shown in these tables: collection counts, which account for sample rates but are not adjusted for flow; and passage indices, which are collection counts divided by the proportion of water passing through the sampled powerhouse. Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations. The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Two-Week Summary of Passage Indices

COMBINED COHO

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/31/2001	---	---	---	---	25	36	7	0	0	225	0
09/01/2001	---	---	---	---	8	25	3	---	0	100	21
09/02/2001	---	---	---	---	16	21	1	---	0	150	0
09/03/2001	---	---	---	---	12	23	3	---	0	0	0
09/04/2001	---	---	---	---	8	15	2	---	0	0	0
09/05/2001 *	---	---	---	---	16	12	5	---	0	90	0
09/06/2001	---	---	---	---	10	18	1	---	0	0	0
09/07/2001	---	---	---	---	5	23	0	---	6	0	0
09/08/2001	---	---	---	---	4	21	2	---	0	75	12
09/09/2001	---	---	---	---	2	23	2	---	0	40	0
09/10/2001	---	---	---	---	2	19	1	---	0	32	0
09/11/2001	---	---	---	---	2	10	0	---	0	20	6
09/12/2001	---	---	---	---	2	10	0	---	4	48	0
09/13/2001	---	---	---	---	6	4	3	---	0	130	4
Total:	0	0	0	0	118	260	30	0	10	910	43
# Days:	0	0	0	0	14	14	14	1	14	14	14
Average:	0	0	0	0	8	19	2	0	1	65	3
YTD	0	0	0	6	58,163	21,699	2,667	45,428	147,003	81,508	2,163,695

COMBINED STEELHEAD

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/31/2001	---	---	---	---	189	74	209	0	0	0	0
09/01/2001	---	---	---	---	236	76	125	---	20	0	0
09/02/2001	---	---	---	---	152	51	45	---	0	0	0
09/03/2001	---	---	---	---	116	29	46	---	20	75	12
09/04/2001	---	---	---	---	120	25	42	---	6	0	0
09/05/2001 *	---	---	---	---	224	35	22	---	12	30	0
09/06/2001	---	---	---	---	181	60	31	---	0	30	0
09/07/2001	---	---	---	---	175	48	23	---	6	30	12
09/08/2001	---	---	---	---	110	61	47	---	0	50	0
09/09/2001	---	---	---	---	55	69	52	---	4	0	0
09/10/2001	---	---	---	---	33	80	27	---	0	20	13
09/11/2001	---	---	---	---	33	69	23	---	0	10	0
09/12/2001	---	---	---	---	58	30	19	---	8	12	0
09/13/2001	---	---	---	---	45	43	31	---	12	34	0
Total:	0	0	0	0	1,727	750	742	0	88	291	37
# Days:	0	0	0	0	14	14	14	1	14	14	14
Average:	0	0	0	0	123	54	53	0	6	21	3
YTD	4,567	34,103	4,357	5,399	5,577,374	836,632	358,839	17,846	561,878	191,078	489,275

Two-Week Summary of Passage Indices

COMBINED SOCKEYE

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/31/2001	---	---	---	---	0	0	2	16	20	75	15
09/01/2001	---	---	---	---	0	1	0	---	0	0	0
09/02/2001	---	---	---	---	4	3	0	---	0	0	12
09/03/2001	---	---	---	---	4	7	2	---	0	150	12
09/04/2001	---	---	---	---	4	0	0	---	0	0	25
09/05/2001 *	---	---	---	---	4	0	1	---	6	0	25
09/06/2001	---	---	---	---	0	3	0	---	24	0	0
09/07/2001	---	---	---	---	1	3	0	---	12	30	37
09/08/2001	---	---	---	---	1	1	1	---	6	25	0
09/09/2001	---	---	---	---	3	1	0	---	0	20	0
09/10/2001	---	---	---	---	2	2	0	---	8	20	0
09/11/2001	---	---	---	---	2	0	0	---	16	10	6
09/12/2001	---	---	---	---	1	0	0	---	32	12	4
09/13/2001	---	---	---	---	3	0	0	---	24	34	8
Total:	0	0	0	0	29	21	6	16	148	376	144
# Days:	0	0	0	0	14	14	14	1	14	14	14
Average:	0	0	0	0	2	2	0	16	11	27	10
YTD	24	0	0	0	4,619	9,826	1,018	3,028	284,601	103,933	106,797

Definitions for Smolt Index Counts

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

BO1 (Index) = Bonneville Dam First Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 1 Flow / (Powerhouse 1 & 2 Flow + Spill)}

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD/Washington Dept. of Fish and Wildlife.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

IMN data collected for the FPC by the Nez Perce Tribe.

Cumulative Adult Passage at Mainstem Dams Through: 09/13

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2001		2000		10-Yr Avg.		2001		2000		10-Yr Avg.		2001		2000		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	391,367	14,172	178,302	21,259	70,775	4,654	76,156	14,723	30,616	13,554	21,085	3,689	307,298	41,370	162,213	30,468	133,898	13,958
TDA	302,372	9,953	102,953	14,796	41,161	3,200	71,462	10,926	25,147	10,433	16,934	2,708	111,894	21,123	99,881	17,272	65,823	7,645
JDA	262,221	6,181	86,553	12,157	33,812	2,643	64,186	10,049	23,023	8,113	15,922	2,287	66,854	14,439	72,827	12,400	45,343	4,857
MCN	258,689	6,683	64,647	10,836	30,645	2,566	67,894	9,600	20,544	7,152	16,193	2,237	44,162	9,587	44,380	5,799	31,438	3,318
IHR	171,173	3,026	38,807	9,489	16,921	1,647	15,278	2,397	4,241	3,179	4,326	762	4,557	1,585	3,460	1,431	1,632	268
LMN	180,787	1,784	35,520	10,336	15,613	1,755	19,287	1,612	4,680	3,277	4,108	777	3,909	1,251	2,525	1,207	1,057	227
LGS	174,823	2,990	34,330	10,152	14,769	1,744	15,927	2,785	4,204	3,788	3,944	847	2,459	740	1,517	710	583	124
LWG	171,958	3,136	33,822	10,318	13,830	1,676	13,737	3,804	3,939	3,756	4,106	857	1,708	836	1,485	698	455	110
PRD	50,379	987	20,098	1,092	9,843	292	53,170	3,207	22,306	2,504	14,742	806	9,189	2,250	23,278	1,828	9,356	730
RIS	39,785	1,761	14,850	1,558	7,292	362	48,844	13,086	20,251	12,056	12,475	2,102	3,975	2,275	4,466	1,268	2,448	527
RRH	15,895	543	5,336	392	1,847	90	39,174	5,548	14,633	4,198	6,239	868	3,795	1,347	3,435	752	1,598	521
WEL	9,994	887	2,130	457	869	97	33,244	4,882	6,447	3,709	3,571	703	1,097	522	935	415	344	99

DAM	Coho						Sockeye			Steelhead			Wild 2001
	2001		2000		10-Yr Avg.		10-Yr			10-Yr			
	Adult	Jack	Adult	Jack	Adult	Jack	2001	2000	Avg.	2001	2000	Avg.	
BON	157,288	3,868	45,715	5,816	12,388	1,350	114,933	93,398	46,485	547,133	242,486	192,745	140,227
TDA	15,093	742	11,749	1,559	2,155	316	102,709	73,383	36,191	306,393	148,634	97,378	94,015
JDA	5,830	514	6,534	723	1,206	201	107,872	88,367	38,891	198,168	123,553	69,277	58,088
MCN	939	262	2,366	231	320	53	97,170	60,242	37,151	155,078	63,329	48,400	47,915
IHR	83	9	76	4	7	0	27	215	30	71,696	41,391	27,853	16,186
LMN	11	2	40	21	4	2	32	291	37	65,801	33,741	22,223	17,777
LGS	10	1	29	0	2	0	71	296	38	46,873	23,971	13,929	14,119
LWG	0	6	8	0	0	0	36	299	36	40,133	23,839	15,190	12,245
PRD	64	46	64	7	14	1	111,316	89,547	44,813	18,753	8,025	5,407	**
RIS	63	0	60	0	8	0	104,830	76,508	39,145	15,776	6,838	4,076	9,290
RRH	45	0	43	0	4	0	66,213	57,425	23,356	11,306	4,786	2,702	5,632
WEL	0	0	0	0	0	0	74,453	59,928	22,360	7,206	2,376	1,475	3,313

PRD is through 09/12; RIS, RRH are through 09/11.

WEL is through 09/05.

**PRD is not reporting Wild Steelhead numbers.

These numbers were collected from the COE's Running Sums text files.

Wild steelhead numbers are included in the total.

Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC.

Historic counts 1997 to present were obtained from the Corps of Engineers.

Two Week Transportation Summary

		09/01/01 TO 09/14/01						
		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	3,648	33	117	29	1,721	5,548	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	0	0	0	0	938	938	
	Sum of Numbertrucked	3,468	32	115	22	772	4,409	
	Sum of TotalProjectMortalities	180	1	2	7	11	201	
LGS	Sum of NumberCollected	1,421	2	260	21	793	2,454	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	0	0	0	0	768	725	
	Sum of Numbertrucked	1,309	0	227	15	6	1,557	
	Sum of TotalProjectMortalities	112	2	33	6	19	172	
LMN	Sum of NumberCollected	954	14	30	6	742	1,746	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	0	0	0	0	733	733	
	Sum of Numbertrucked	913	14	30	6	0	963	
	Sum of TotalProjectMortalities	41	0	0	0	9	50	
MCN	Sum of NumberCollected	58,050	52	10	148	88	58,348	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of Numbertrucked	57,614	52	10	145	77	57,898	
	Sum of TotalProjectMortalities	436	0	0	3	11	450	
Total Sum of NumberCollected		64,224	99	425	204	3,344	68,096	
Total Sum of NumberBarged		0	0	0	0	0	0	
Total Sum of NumberBypassed		0	0	0	0	2,439	2,396	
Total Sum of Numbertrucked		63,304	98	382	188	855	64,827	
Total Sum of TotalProjectMortalities		773	1	36	16	50	873	

YTD Transportation Summary

TO: 09/14/01

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	723,543	1,957,953	58,145	4,619	5,577,060	8,321,320
	Sum of NumberBarged	651,045	1,867,778	55,289	4,115	5,270,209	7,848,436
	Sum of NumberBypassed	1	79,198	976	221	267,658	348,054
	Sum of NumberTrucked	68,928	6,578	1,746	259	36,926	114,437
	Sum of TotalProjectMortalities	3,569	4,398	134	24	2,266	10,391
LGS	Sum of NumberCollected	173,176	751,905	21,729	9,834	838,175	1,794,819
	Sum of NumberBarged	144,995	745,094	19,896	9,648	820,895	1,740,528
	Sum of NumberBypassed	2,253	53	44	1	3,139	5,490
	Sum of NumberTrucked	20,432	1,104	1,415	108	4,446	27,505
	Sum of TotalProjectMortalities	5,349	3,724	217	67	5,227	14,584
LMN	Sum of NumberCollected	52,418	553,414	2,651	1,018	358,704	968,205
	Sum of NumberBarged	42,822	529,615	1,868	983	343,630	918,918
	Sum of NumberBypassed	338	16,478	293	0	6,926	24,035
	Sum of NumberTrucked	8,412	5,802	483	26	5,529	20,252
	Sum of TotalProjectMortalities	846	1,519	7	7	2,619	4,998
MCN	Sum of NumberCollected	10,666,629	2,226,059	141,346	269,133	552,356	13,855,523
	Sum of NumberBarged	9,728,580	1,037,644	80,195	128,948	236,020	11,211,387
	Sum of NumberBypassed	529,460	1,181,681	60,173	139,208	310,382	2,220,904
	Sum of NumberTrucked	328,075	366	91	413	550	329,495
	Sum of TotalProjectMortalities	80,514	6,368	887	564	4,094	92,427
Total Sum of NumberCollected		11,615,766	5,489,331	223,871	284,604	7,326,295	24,939,867
Total Sum of NumberBarged		10,567,442	4,180,131	157,248	143,694	6,670,754	21,719,269
Total Sum of NumberBypassed		532,052	1,277,410	61,486	139,430	588,105	2,598,483
Total Sum of NumberTrucked		425,847	13,850	3,735	806	47,451	491,689
Total Sum of TotalProjectMortalities		90,278	16,009	1,245	662	14,206	122,400