



Fish Passage Center

Weekly Report #01 - 26

September 07,

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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) August 31 – September 6
Libby	2434.92 – 2434.30
Hungry Horse	3539.43 – 3538.35
Grand Coulee	1278.30 – 1278.80
Dworshak	1520.45 – 1519.71
Brownlee	2053.91 – 2052.04

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 21% of capacity compared to 24% a week ago. The Payette River system comprised of Cascade and Deadwood reservoirs is at 41% of capacity compared to 44% 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 14% of capacity compared to 17% last week.

Flows: Biological opinion flow targets ended on August 31. Flows at McNary, Lower Granite, and Priest Rapids dams averaged 86.7 Kcfs, 14.3 Kcfs and 74.6 over the past week, respectively.

Spill: Summer spill for fish passage at The Dalles and Bonneville dams began on July 24th and ended on August 31st. Gas bubble disease monitoring ended on August 30.

Smolt Monitoring Program: This week's daily subyearling chinook collections averaged 359 at Lower Granite Dam (down 61%), 126 at Little Goose Dam (down 50%), and 87 at Lower Monumental Dam (down 41%). Collection data for September 6 is not available for Lower Granite and Lower Monumental dams at this time since reporting is every other day. This season's sampling at Rock Island Dam ended on August 31. In the lower Columbia River, daily subyearling chinook passage indices averaged 6,515 at McNary Dam (down 48%), 13,414 at John Day Dam (down 26%), and 3,333 at Bonneville Dam (down 53%).

Adult Fish Passage: At Bonneville Dam, counts of adult fall chinook ranged between 8,000 and 16,600 per day through the week ending September 6, with the cumulative count now 168,845. This compares with 128,206 for year 2000 and 92,492 for the 10-year average. It is expected that this year's fall chinook run should peak during the upcoming week. The numbers and percentage of "tule" and "bright" fall chinook through September 6 are 61,111 (36.2%) and 107,735 (63.8%), 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 34.2% of the adult fall chinook counted at Bonneville Dam had passed The Dalles Dam with 19,500 adult fall chinook over McNary Dam through September 6. About 2,000 adult fall chinook have been counted at Ice Harbor Dam, with the mid-Columbia count at Priest Rapids about 6,400. The majority of fall chinook counted at McNary Dam generally migrate to the Hanford Reach (including Priest Rapids Hatchery) and the Yakama River basin.

Steelhead counts at Bonneville Dam ranged between 3,200 and 4,500 for the week with the cumulative count at 497,354, about 2.3 and 2.9 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 generally larger 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 135,000 to date. About 24.6% of the fish counted at Bonneville have arrived at McNary Dam (122,224). The steelhead passage at Ice Harbor and Lower Monumental dams increased from about 600 per day to greater than 1,000 per day by week’s end with their cumulative counts near 55,000 to date. Lower Monumental count of steelhead through September 6 was 2.5 and 3.3 times greater than the respective 2000 and 10-year average. Steelhead counts at Priest Rapids Dam averaged 300 per day through the week with the season total near 16,400, about 2.4 and 3.7 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. 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 1,500 to 8,100. The season total is

now 54,045 and compares with 29,420 in year 2000 and the 10-year average count of 6,319. Expectation of a record run above Bonneville Dam remains possible this year. 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 was initiated last week and fishing will continue for a given number of days per week to achieve their catch/quota of salmon for the season.

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 this past week. 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. About 300,000 subyearling spring chinook were released in the Big White Salmon River in mid-August. It is anticipated that these fish will migrate during this fall with the remainder migrating in spring 2002 (listed as 2001 Migration Year).

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
08/24/01	78.3	0.1	80.9	0.0	81.2	6.8	76.8	0.0	75.6	0.0	68.5	1.8	69.7	1.0
08/25/01	70.7	0.1	69.8	0.0	68.7	5.5	69.4	0.0	70.9	0.0	74.7	1.8	76.6	1.0
08/26/01	63.6	0.1	68.6	0.0	66.2	5.8	62.0	0.0	61.4	0.0	64.5	1.9	66.9	0.9
08/27/01	103.2	0.1	96.3	0.0	97.9	7.7	97.6	0.0	96.5	0.0	98.1	2.0	100.6	1.2
08/28/01	84.8	0.1	89.9	0.0	93.8	8.7	94.7	0.0	98.8	0.0	104.4	2.1	108.6	11.9
08/29/01	71.6	0.1	77.9	0.0	78.5	7.1	83.5	0.0	84.8	0.0	88.5	2.0	88.9	10.9
08/30/01	90.0	0.1	89.6	0.0	83.0	6.8	79.1	0.0	80.7	0.0	80.4	1.9	82.5	5.5
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	58.9	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

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

Date	Dworshak		Hells Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/24/01	10.7	0.0	7.6	8.4	23.3	0.0	23.0	0.0	23.5	0.0	23.3	0.0
08/25/01	10.7	0.0	7.6	7.7	21.9	0.0	22.9	0.0	24.2	0.0	23.7	0.0
08/26/01	10.8	0.0	8.1	8.8	21.7	0.0	21.7	0.0	21.9	0.0	21.7	0.0
08/27/01	10.5	0.0	8.2	12.9	22.7	5.7	20.9	0.0	20.0	0.0	18.2	0.0
08/28/01	4.9	0.0	8.1	10.4	25.3	7.3	25.3	0.0	26.7	0.0	25.7	0.0
08/29/01	2.6	0.0	8.1	10.4	17.2	1.3	18.1	0.0	19.1	0.0	19.2	0.0
08/30/01	1.6	0.0	9.2	9.9	16.2	0.0	16.3	0.0	17.0	0.0	17.3	0.0
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
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
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
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
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
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
09/06/01	1.4	0.0	---	---	16.9	0.0	16.0	0.0	15.7	0.0	12.1	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		
08/24/01	88.3	0.0	72.9	0.0	74.4	20.1	85.7	49.7	0.5	28.9
08/25/01	105.3	0.0	105.9	0.0	106.8	38.2	107.9	49.8	0.6	50.9
08/26/01	95.3	0.0	103.8	0.0	103.6	39.6	118.9	49.9	0.6	61.8
08/27/01	93.7	0.0	113.7	0.0	113.4	41.0	123.8	49.6	0.6	67.0
08/28/01	128.5	0.0	120.1	0.0	118.8	43.8	123.3	49.7	0.6	66.3
08/29/01	113.7	0.0	112.4	0.0	113.0	43.1	124.1	49.7	0.6	67.1
08/30/01	111.6	0.0	112.4	0.0	108.0	40.1	116.5	49.7	0.5	59.6
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

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 8/24/01 to 9/6/01

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
USFWS	Spring Creek	CH0	SP	2001	350,000	08-17-01	08-24-01	White Salmon R	White Salmon River
USFWS Total					350,000				
GRAND TOTAL					350,000				

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	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High					
8/24	102	103	104	24	---	---	---	0	101	101	102	24	101	102	105	24	103	103	104	23
8/25	101	102	102	24	108	108	108	1	101	102	102	24	102	102	105	20	103	104	104	23
8/26	101	102	103	23	115	115	115	1	102	102	102	24	102	103	106	22	103	104	104	23
8/27	102	102	103	24	121	121	124	10	102	102	102	24	102	102	104	24	103	103	104	23
8/28	102	102	102	25	119	119	124	6	102	102	102	25	102	102	105	25	103	103	104	24
8/29	102	102	104	24	114	119	124	23	102	102	102	24	102	103	105	24	103	104	104	23
8/30	102	102	103	24	106	107	107	24	102	102	102	24	102	103	106	24	103	104	104	21
8/31	102	102	103	23	106	107	107	23	102	102	102	23	102	103	105	23	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	24
9/2	102	103	103	24	105	106	106	24	101	101	102	24	101	102	105	23	102	103	103	24
9/3	101	102	102	24	105	105	105	24	101	101	102	24	101	101	104	22	102	102	103	23
9/4	101	102	102	24	104	105	105	24	101	101	102	24	100	101	101	21	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	23
9/6	103	103	104	24	105	105	106	24	101	101	101	24	101	101	103	22	101	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	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High					
8/24	104	104	105	23	102	103	103	24	104	105	106	24	106	106	106	13	108	108	108	12
8/25	102	104	107	21	103	103	104	20	105	105	107	20	106	106	106	12	108	108	108	12
8/26	103	104	105	20	104	105	106	24	105	106	106	24	106	106	106	14	108	108	108	13
8/27	103	103	105	23	104	104	104	24	106	106	107	24	106	106	106	12	108	108	108	11
8/28	103	103	105	24	104	104	105	25	106	106	107	25	106	106	106	14	108	108	109	10
8/29	103	104	105	22	103	104	105	22	106	107	107	22	106	106	106	11	108	108	108	10
8/30	103	104	105	20	104	104	105	22	106	106	107	22	107	107	107	7	---	---	---	0
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

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High					
8/24	107	107	108	18	109	110	110	17	104	105	105	24	104	105	105	24	105	105	107	24
8/25	108	108	108	16	110	110	110	15	106	107	108	24	105	106	106	24	106	106	107	24
8/26	108	108	108	16	110	110	110	16	107	108	110	24	106	106	106	24	107	107	108	24
8/27	108	108	108	16	110	110	110	15	---	---	---	0	---	---	---	0	---	---	---	0
8/28	108	108	108	18	110	110	110	18	---	---	---	0	---	---	---	0	---	---	---	0
8/29	108	108	108	17	109	109	110	17	107	109	110	24	106	106	107	24	107	107	108	24
8/30	106	107	107	15	107	107	107	14	108	108	109	24	106	107	107	24	107	108	109	24
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

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	#	24 h	12 h		#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High		hr	Avg	Avg	High
8/24	104	104	105	24	100	101	101	24	98	98	99	23	99	101	101	23	101	103	105	24
8/25	105	105	106	24	102	103	103	23	98	98	99	24	99	101	102	24	102	104	106	24
8/26	105	106	107	24	103	104	105	24	98	99	99	22	100	101	102	22	102	104	106	23
8/27	---	---	---	0	104	105	105	24	98	98	99	23	100	101	103	23	102	104	106	24
8/28	---	---	---	0	104	104	105	25	97	97	98	25	101	102	104	24	101	103	105	25
8/29	107	108	113	24	104	105	105	24	98	99	100	24	100	100	101	24	102	104	105	24
8/30	108	109	113	24	105	105	106	23	105	107	110	23	100	100	101	23	102	104	106	24
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

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	#	24 h	12 h		#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High		hr	Avg	Avg	High
8/24	102	104	105	23	101	102	102	24	99	99	100	24	99	99	99	23	98	98	99	23
8/25	102	104	106	24	104	107	109	24	99	100	100	24	101	102	105	22	98	99	99	22
8/26	102	104	106	22	108	109	111	24	100	100	101	24	101	102	105	24	98	99	100	24
8/27	102	104	106	23	105	107	107	24	108	116	118	24	99	99	100	24	98	98	98	24
8/28	102	105	107	25	106	108	111	25	108	114	116	24	99	100	107	25	98	98	99	25
8/29	104	107	110	24	110	111	112	24	107	113	120	23	103	104	107	24	99	100	101	24
8/30	104	107	111	23	110	111	112	24	102	104	112	24	106	107	108	24	99	99	100	24
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

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	#	24 h	12 h		#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High		hr	Avg	Avg	High
8/24	100	100	101	22	98	99	100	22	101	101	104	23	100	101	102	23	103	104	106	24
8/25	103	105	107	24	99	100	101	24	103	104	106	24	103	105	114	24	103	105	106	23
8/26	103	104	105	24	99	100	102	24	102	104	105	23	102	102	103	22	102	104	106	24
8/27	99	100	101	24	98	99	100	24	100	101	102	23	102	102	103	23	105	106	109	23
8/28	99	100	106	25	98	99	100	25	102	104	108	25	103	104	104	25	106	109	112	25
8/29	104	106	106	24	99	101	102	24	107	108	109	24	104	105	108	24	107	110	111	24
8/30	102	103	106	24	100	101	102	24	107	108	110	24	104	104	105	24	107	109	111	24
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

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	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
8/24	102	102	105	24	101	101	102	24	96	97	97	21	98	99	99	24	97	98	98	23
8/25	104	105	106	23	101	102	102	23	98	99	100	23	98	99	99	24	98	98	98	23
8/26	103	104	107	24	101	102	102	24	100	101	106	23	99	99	99	23	98	99	99	22
8/27	104	104	105	24	101	101	101	24	97	98	98	23	98	98	99	24	98	99	100	23
8/28	106	107	111	25	102	102	103	25	98	98	99	24	98	98	99	25	99	99	100	24
8/29	107	109	112	24	103	103	104	24	100	102	105	23	99	100	100	24	99	99	100	23
8/30	106	107	109	24	103	104	104	24	99	100	100	20	99	100	100	23	99	100	100	23
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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			Bonneville			Warrendale			Skamania			Camas\Washugal							
	24 h	12 h	#	24 h	12 h	#	24h	12h	#	24h	12h	#	24h	12h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
8/24	107	108	109	23	103	103	104	23	113	114	115	23	110	111	111	23	108	109	109	24
8/25	109	110	111	24	103	104	104	23	113	113	114	23	109	110	110	23	110	110	111	24
8/26	110	110	111	24	104	104	105	23	112	113	114	23	109	109	110	23	109	109	110	24
8/27	109	109	110	24	104	104	105	23	111	112	113	23	108	109	111	23	108	109	109	24
8/28	110	111	111	24	103	103	104	24	112	113	113	24	109	110	112	24	108	109	110	25
8/29	110	111	112	24	104	105	105	23	112	113	114	23	108	109	110	23	108	109	109	24
8/30	111	111	111	24	104	105	105	23	113	113	113	22	109	110	111	23	108	109	109	20
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

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)
08/24/2001	---	---	---	---	0	0	1	0	20	100	18
08/25/2001	---	---	---	---	0	0	6	0	30	150	0
08/26/2001	---	---	---	---	4	3	1	0	50	0	0
08/27/2001	---	---	---	---	0	1	1	0	40	100	38
08/28/2001	---	---	---	---	5	1	3	0	0	75	35
08/29/2001	---	---	---	---	6	0	0	0	30	150	0
08/30/2001	---	---	---	---	0	0	2	0	0	75	0
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	---	---	---	---	---	0	---	---	0	0	0
Total:	0	0	0	0	47	8	19	0	216	1,305	116
# Days:	0	0	0	0	13	14	13	8	14	14	14
Average:	0	0	0	0	4	1	1	0	15	93	8
YTD	12,660	26,732	9,049	527	1,957,955	749,737	553,407	6,575	2,299,282	1,005,736	1,687,797

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)
08/24/2001	---	---	---	---	688	199	149	36	4,060	29,200	6,138
08/25/2001	---	---	---	---	600	231	126	30	4,548	13,200	3,917
08/26/2001	---	---	---	---	556	244	100	31	17,170	18,550	9,559
08/27/2001	---	---	---	---	555	187	127	18	20,300	16,200	7,555
08/28/2001	---	---	---	---	1,021	226	146	37	16,480	16,275	13,458
08/29/2001	---	---	---	---	1,172	361	195	35	15,630	17,925	5,238
08/30/2001	---	---	---	---	500	318	178	25	9,750	16,125	3,946
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	---	---	---	---	---	155	---	---	4,380	8,180	3,583
Total:	0	0	0	0	7,246	2,651	1,540	223	133,544	221,370	73,141
# Days:	0	0	0	0	13	14	13	8	14	14	14
Average:	0	0	0	0	557	189	118	28	9,539	15,812	5,224
YTD	1	1	13	31	722,737	171,494	52,071	22,638	10,701,388	2,822,924	2,915,439

*The total, #days and average do not include the current day's data. *See sampling comments. [http://www.fpc.org/current daily/smpcomments.htm](http://www.fpc.org/current%20daily/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	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/24/2001	---	---	---	---	28	48	32	2	0	0	0
08/25/2001	---	---	---	---	36	27	15	0	0	0	0
08/26/2001	---	---	---	---	8	35	12	0	0	200	0
08/27/2001	---	---	---	---	12	37	7	1	60	100	38
08/28/2001	---	---	---	---	37	37	5	0	0	75	35
08/29/2001	---	---	---	---	18	33	1	2	0	150	0
08/30/2001	---	---	---	---	26	43	1	2	0	0	0
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	---	---	---	---	---	18	---	---	0	0	0
Total:	0	0	0	0	250	410	94	7	60	1,090	94
# Days:	0	0	0	0	13	14	13	8	14	14	14
Average:	0	0	0	0	19	29	7	1	4	78	7
YTD	0	0	0	6	58,130	21,586	2,658	45,428	146,993	81,103	2,163,673

COMBINED STEELHEAD

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/24/2001	---	---	---	---	308	150	431	1	0	0	0
08/25/2001	---	---	---	---	284	83	297	0	6	0	33
08/26/2001	---	---	---	---	152	50	281	1	10	150	0
08/27/2001	---	---	---	---	275	58	122	0	20	0	0
08/28/2001	---	---	---	---	481	84	95	0	0	100	0
08/29/2001	---	---	---	---	505	112	130	0	30	150	0
08/30/2001	---	---	---	---	243	86	195	2	30	0	36
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	---	---	---	---	---	60	---	---	0	30	0
Total:	0	0	0	0	3,285	973	2,040	4	154	535	81
# Days:	0	0	0	0	13	14	13	8	14	14	14
Average:	0	0	0	0	253	70	157	1	11	38	6
YTD	4,567	34,103	4,357	5,399	5,576,684	836,195	358,586	17,846	561,848	190,874	489,250

Two-Week Summary of Passage Indices

COMBINED SOCKEYE

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/24/2001	---	---	---	---	4	4	1	0	30	0	0
08/25/2001	---	---	---	---	0	6	0	3	6	0	0
08/26/2001	---	---	---	---	4	5	0	2	20	0	0
08/27/2001	---	---	---	---	4	4	0	0	20	0	0
08/28/2001	---	---	---	---	0	10	1	2	30	0	0
08/29/2001	---	---	---	---	0	4	0	0	30	0	0
08/30/2001	---	---	---	---	4	3	1	0	0	75	0
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	---	---	---	---	---	3	---	---	24	0	0
Total:	0	0	0	0	32	50	8	23	186	300	89
# Days:	0	0	0	0	13	14	13	8	14	14	14
Average:	0	0	0	0	2	4	1	3	13	21	6
YTD	24	0	0	0	4,606	9,819	1,017	3,028	284,503	103,734	106,742

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: 09/06

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	168,845	24,914	128,206	18,976	92,492	7,673
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	57,680	10,510	73,915	9,588	42,314	3,852
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	30,652	6,478	56,476	7,750	27,764	2,441
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	19,527	4,796	34,517	3,718	17,145	1,607
IHR	171,173	3,026	38,807	9,489	16,921	1,647	15,278	2,397	4,241	3,179	4,326	762	1,776	439	2,208	451	766	88
LMN	180,787	1,784	35,520	10,336	15,613	1,755	19,287	1,612	4,680	3,277	4,108	777	1,813	491	1,610	534	541	95
LGS	174,823	2,990	34,330	10,152	14,769	1,744	15,927	2,785	4,204	3,788	3,944	847	916	217	907	237	281	41
LWG	171,958	3,136	33,822	10,318	13,830	1,676	13,737	3,804	3,939	3,756	4,106	857	694	271	928	285	249	45
PRD	50,379	987	20,098	1,092	9,843	292	53,170	3,207	22,306	2,504	14,742	806	6,440	1,445	18,814	1,135	6,491	464
RIS	39,785	1,761	14,850	1,558	7,292	362	48,844	13,086	20,251	12,056	12,475	2,102	2,692	1,759	3,178	999	1,516	369
RRH	15,895	543	5,336	392	1,847	90	39,174	5,548	14,633	4,198	6,239	868	2,790	922	2,398	578	1,018	348
WEL	9,994	887	2,130	457	869	97	33,244	4,882	6,447	3,709	3,571	703	307	134	935	415	344	99

DAM	Coho						Sockeye			Steelhead			Wild 2001
	2001		2000		10-Yr Avg.		10-Yr Avg.			10-Yr Avg.			
	Adult	Jack	Adult	Jack	Adult	Jack	2001	2000	Avg.	2001	2000	Avg.	
BON	54,045	2,553	29,420	2,985	6,319	667	114,932	93,398	46,485	497,354	219,473	173,072	134,995
TDA	2,762	308	5,827	690	839	110	102,709	73,379	36,189	234,107	115,532	74,576	81,014
JDA	1,026	257	2,489	238	378	55	107,822	88,366	38,890	135,099	85,627	50,087	45,148
MCN	315	111	1,041	114	120	20	97,167	60,241	37,149	122,224	49,328	36,484	41,827
IHR	47	7	13	1	1	0	27	215	29	53,874	25,406	19,416	13,262
LMN	4	0	12	0	1	0	32	291	37	55,731	22,253	16,756	14,849
LGS	4	1	0	0	0	0	71	296	38	33,361	13,767	9,625	11,121
LWG	0	1	0	0	0	0	36	299	36	30,188	15,213	11,804	9,762
PRD	43	45	40	6	11	1	111,258	89,542	44,811	16,372	6,811	4,423	**
RIS	34	0	13	0	3	0	104,817	76,507	39,120	13,322	5,334	3,203	7,976
RRH	42	0	25	0	2	0	66,190	57,423	23,340	9,447	3,580	2,099	4,700
WEL	0	0	0	0	0	0	74,461	59,928	22,360	7,492	2,376	1,475	3,460

IHR, LGS, PRD are through 09/05. RIS, RRH are through 09/03. LGS is missing 09/04.

WEL is through 09/05 and is from Douglas CO. PUD.

**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

		08/25/01 TO 09/07/01					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	6,548	44	232	32	2,972	9,828
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	0	0	0	0	740	740
	Sum of Numbertrucked	6,966	43	276	33	2,470	9,788
	Sum of TotalProjectMortalities	229	1	3	3	11	247
LGS	Sum of NumberCollected	2,651	8	410	50	973	4,092
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	0	0	0	0	877	877
	Sum of Numbertrucked	2,351	4	362	35	135	2,887
	Sum of TotalProjectMortalities	310	4	48	12	24	398
LMN	Sum of NumberCollected	1,540	19	94	8	2,040	3,701
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	0	0	72	0	2,030	2,102
	Sum of Numbertrucked	1,682	21	21	8	5	1,737
	Sum of TotalProjectMortalities	43	0	1	0	10	54
MCN	Sum of NumberCollected	133,544	216	60	186	154	134,160
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	131,438	224	58	157	148	132,025
	Sum of TotalProjectMortalities	1,324	2	2	5	6	1,339
Total Sum of NumberCollected		144,283	287	796	276	6,139	151,781
Total Sum of NumberBarged		0	0	0	0	0	0
Total Sum of NumberBypassed		0	0	72	0	3,647	3,719
Total Sum of Numbertrucked		142,437	292	717	233	2,758	146,437
Total Sum of TotalProjectMortalities		1,906	7	54	20	51	2,038

YTD Transportation Summary

TO: 09/07/01

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	722,039	1,957,952	58,112	4,606	5,576,371	8,319,080
	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	266,977	347,373
	Sum of NumberTrucked	67,519	6,577	1,713	252	36,926	112,987
	Sum of TotalProjectMortalities	3,474	4,398	134	18	2,258	10,282
LGS	Sum of NumberCollected	172,489	751,905	21,611	9,827	837,732	1,793,564
	Sum of NumberBarged	144,995	745,094	19,896	9,648	820,895	1,740,528
	Sum of NumberBypassed	2,253	53	44	1	2,715	5,066
	Sum of NumberTrucked	19,769	1,104	1,300	100	4,440	26,713
	Sum of TotalProjectMortalities	5,321	3,724	203	65	5,214	14,527
LMN	Sum of NumberCollected	51,983	553,405	2,642	1,017	358,451	967,498
	Sum of NumberBarged	42,822	529,615	1,868	983	343,630	918,918
	Sum of NumberBypassed	338	16,478	293	0	6,679	23,788
	Sum of NumberTrucked	8,003	5,793	474	25	5,529	19,824
	Sum of TotalProjectMortalities	820	1,519	7	7	2,613	4,966
MCN	Sum of NumberCollected	10,654,185	2,226,053	141,336	269,035	552,326	13,842,935
	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	311,416	360	81	294	526	312,677
	Sum of TotalProjectMortalities	80,375	6,368	887	561	4,088	92,279
Total Sum of NumberCollected		11,600,696	5,489,315	223,701	284,485	7,324,880	24,923,077
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	586,753	2,597,131
Total Sum of NumberTrucked		406,707	13,834	3,568	671	47,421	472,201
Total Sum of TotalProjectMortalities		89,990	16,009	1,231	651	14,173	122,054