



Fish Passage Center

Weekly Report #01 - 1

March 16, 2001

2501 SW First Ave., Suite 230
 Portland, OR 97201-4752
 phone: 503/230-4582
 fax: 503/230-7559

PLEASE NOTE:

The Fish Passage Center Weekly Report is available on Friday of each week by 4:00 p.m. on our internet homepage at www.fpc.org. If you can get the information from the website, you will get your information sooner and help us utilize our resources more efficiently by saving postage and paper costs. We can also send you the report via email. Reduced use of paper also helps the environment. Please let us know if you want to be taken off the weekly report mailing list or if you would rather receive the report by email rather than traditional mail. You can email us at fpcstaff@fpc.org. Thanks!

SUMMARY OF EVENTS:

Water Supply: The 2001 water year appears to be among the lowest water years on record. Precipitation was scarce all over the region during the October 2000 through March 2001 period. The highest cumulative rain precipitation of 89% of average for the October through March period was recorded at Owyhee/Malheur basin, and the lowest cumulative precipitation of 43% was recorded at SW WA Cascades/Cowlitz basin. The cumulative rain precipitation for October-March for the Columbia above Grand Coulee was 55% of average, for the Columbia above The Dalles was 57% of average, and for the Snake River above Ice Harbor was 71% of average. The precipitation for the period of March 1-13 was in the range of 31% of average at Pend Oreille/Spokane and 92% of average at Owyhee/Malheur. The upper Snake basin is only 35% of average for March 1-13, compared with 76% of average for the October-March period.

The Columbia above Grand Coulee received 37% of average precipitation, the Snake River above Ice Harbor received 52% of average precipitation

and the Columbia above The Dalles received 46% of average precipitation for the March 1-13 period.

Runoff Volumes have been decreasing significantly since January. Monthly decreases are in the range of 2% to 10%. The largest decreases are recorded at Brownlee from 61% of average in January to 41% of average in March, and Libby from 73% of average in January to 53% of average in March. The March Runoff Volume Forecast for the major sites in the basin is in the range of 41% of average in the Snake River basin to 76% of average in the upper Columbia. The Summary of the Runoff Volume Forecasts is given in the following Table:

Site	January Final		February Final		March Final	
	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg
<i>Mica (April-Sept.)</i>	10800	85	9990	78	9620	76
<i>Hungry Horse (Apr-Sep)</i>	1550	71	1320	60	1320	60
<i>Libby (April-Sep.)</i>	5110	75	4180	62	3570	53
<i>Grand Coulee (Jan-July)</i>	48800	77	41200	65	37600	59
<i>The Dalles (January-July)</i>	80400	76	66400	63	58600	55
<i>Brownlee (April-July)</i>	3530	61	2850	49	2390	41
<i>Dworshak (April-July)</i>	2300	85	1800	67	1550	57
<i>Lower Granite (Jan-July)</i>	23600	79	18800	63	16300	55
<i>Heise (ID) (April-July)</i>	3010	87	2230	65	2170	63
<i>Weiser (ID) (April-July)</i>	3230	59	2620	48	2230	41

Reservoir Operations: Reservoirs are being operated for power generation needs, and are far below the required end of month flood control elevations. Under the current low water supply forecast it is highly unlikely that reservoirs will be refilled by the end of June as required by 2000 Biological Opinion. A summary of the actual elevations and required flood control elevations at the end of March are shown in the following Table:

Reservoir	Actual Elev. as of March 15, 2001 [ft]	Required End of March Flood Control Elev. [ft]	Maximum Reservoir pool [ft]
<i>Libby</i>	2389.08	2448.0	2459
<i>Hungry Horse</i>	3494.76	3555.2	3560
<i>Grand Coulee</i>	1221.3	1283.3	1290
<i>Brownlee</i>	2074.1*	2077.0	2077
<i>Dworshak</i>	1503.48	1581.8	1600

* as of March 14

Libby reservoir is operating at a minimum outflow of 4 kcfs. Inflows are in the range of 2.5 kcfs-3.2 kcfs for the period of March 9-15.

Hungry Horse is operating at a minimum outflow to meet the required minimum of 3.5 kcfs at Columbia Falls.

Grand Coulee is operating at outflow to maintain minimum tailwater elevation below Bonneville for protection of chum redds. The most current outflows were in the range of 52.9 kcfs-88.9 kcfs for the period of March 9-15. For the same period, inflows were in the range of 64.4 kcfs-80.2 kcfs.

Brownlee is operating up to required flood control elevations. The outflows at Hells Canyon Dam project are in the range of 8.7 kcfs to 16.3 kcfs for the period of March 9-15. The *Brownlee* inflows are in the range of 13.6 kcfs to 15.6 kcfs for the same period.

Dworshak is operating at a minimum outflow of 1.5 kcfs. Inflow was fluctuating between 2.2 kcfs and 3.2 kcfs for the period of March 9-15. Upper Snake projects continue with refill since fall. Currently, as of March 15, the system is at 72% of capacity. American Falls is at 92% of capacity, Palisades is at 44% of capacity and Jackson Lake is at 75 % of capacity.

Flows: Since the beginning of the year, the Federal Agencies have operated the system to pro-

vide flows in the range of 120 kcfs and 150 kcfs, for power generation and to provide a stable tailrace elevation at Bonneville Dam for the protection of chum salmon redds below the project. Flows fluctuated between 116.8 kcfs and 120.4 kcfs for the period of March 9-15.

The other flow request for fall/winter period includes provision of flows below Priest Rapids for protection of redds at Vernita Bar. Redd counts on November 19, 2000 determined the minimum required protection flow of 65 kcfs for the season 2000-2001. The hydro-system has been operated for maintaining this minimum flow during the entire season.

Spill: A total of 5.25 million tule fall chinook were released from Spring Creek National Fish Hatchery on March 8, 2001. The release date was changed from March 15th so that spill could coincide with a weekend when power loads were low, and with a favorable tidal regime below Bonneville Dam that would allow maintenance of a tailrace elevation with lower flows. Spill was provided from 1800 to 0600 hours on the nights of March 10th, 11th and 12th and ended on the morning of Tuesday, March 13th at 0600 hours. This spill is a significant reduction in the protection usually afforded this release, but was limited due to the present water and economic conditions.

Spill would normally be requested up to the 120% total dissolved gas variance. However, the low flows and low tailwater elevation at Bonneville Dam have resulted in shallow water for the redds at the Ives/Pierce Island area. Consequently, to eliminate the potential for impact to the emerging ESA listed chum salmon in the Ives/Pierce Island area, the requested spill amount was reduced to 50 Kcfs. The area where the redds were located was monitored by USFWS for total dissolved gas levels during the spill. (Actual spill levels were less than 50 Kcfs because of technical difficulties experienced by the COE setting the spill gate openings). GBT monitoring occurred on March 12 and 13, 2001. Over 200 fish were sampled and one hatchery chinook was observed on 3/12/01 with a bubble in its anal fin, and one hatchery chinook with a lateral line bubble was observed on

3/13/01. In addition, one pikeminnow was observed on 3/13/01 with a bubble in its caudal fin and in its dorsal fin.

The total dissolved gas levels during the three 12-hour spill periods were well below the gas variance levels at all the downstream fixed monitoring stations.

Smolt Monitoring: The Year 2001 smolt migration monitoring has begun with sampling currently underway at the traps on the Salmon, Imnaha, and Grande Ronde rivers and at Bonneville Dam Powerhouse 2. Monitoring is scheduled to begin next week at the Snake River trap at Lewiston, March 26 at Lower Granite and McNary dams, and April 1 at Little Goose, Lower Monumental, Rock Island and John Day dams. Monitoring of this years smolt migration should prove very interesting given the exceedingly low flows that are expected.

Adult Fish Passage: Adult fish passage facilities should be operating at full criteria at this time of year with annual Maintenance completed on the fish pumps, turbines, fish ladders and passage equipment during the winter months. Fish counts will be starting April 1 at most COE projects with exception of Bonneville Dam (March 15) and Lower Granite Dam (March 1). The PUD projects on the Mid-Columbia River will begin on or near April 15 at Priest Rapids, Rock Island, and Rocky Reach dams with Wells Dam starting May 1. The FPC Weekly Report will list in a Table; the adult fish counts for the week with the previous year (2000) and the 10-year average through the same ending date so the reader can compare passage throughout the year for the individual species.

Numbers of adult spring Chinook returning to the Columbia Basin are predicted to should be near double the 2000 Run that was 178,600 at Bonneville Dam. This will be a pleasant relief from the precarious low return numbers experienced during the 1990's and previous years. About 400 adult chinook were counted at Bonneville Dam (8 hour video counts) from March 1-14. This total is well above previous year counts for early March. See the FPC website: www.fpc.org/adult.html to find the Table with these Adult Fish Returns.

Hatchery Releases: The 2001 Tentative/Proposed release schedules from State, Federal and Tribal Hatcheries and Acclimation Ponds for this year's migration of yearling and subyearling fish can be found on the FPC Website. The Release Schedule will be updated throughout the 2001 fish migration season as they are received from the hatchery coordinators or directly from the hatcheries (above Bonneville Dam only). The Weekly Report will list the Releases made from hatcheries during the Previous 2-Weeks as well as for the upcoming 2-Weeks. The following table lists the proposed numbers received to date with all releases not received from the agencies yet.

2001 Migration Year – Hatchery Release Numbers through 3/12/01

	Spring Chinook	Summer Chinook	Fall Chinook
Snake R	2,809,274	1,345,112	2,641,500
Mid-Col.	3,278,500	4,280,300	12,239,000
Low Col.	5,535,121	No Rel.	15,662,000

Steelhead	Coho	Sockeye	Total
9,708,800	Unknown	86,114	16,590,800
1,240,450	2,131,750	241,216	23,411,216
554,900	6,650,000	No Rel	28,402,021

Snake River – As expected, based on the low numbers of adult fish returning in 1999, release of yearling or subyearling spring Chinook from hatcheries in NE Oregon, Idaho, and SE Washington will be reduced from more normal years. In 2001, hatchery spring Chinook will be approximately 1/2 the numbers released in 2000 and 1/3 the 1999 totals. Most spring Chinook are released from Mid-March to late April in the Snake River Basin. Some hatcheries release fish over time (Volitional Release) while others release fish directly from the raceways to the stream. Summer Chinook will be released mainly into the S. Fk. Salmon River from McCall H during April. Summer Chinook production is close to the numbers released during the previous two seasons. Fall Chinook are reared at the Lyons Ferry Hatchery with yearling and subyearling fish released from upstream Acclimation Ponds as well as directly from the Hatchery. This year's release is less than 2000, but more than the previous nine years for the Snake River.

Hatchery steelhead production for 2001 falls within numbers released over the past five years, in the 9.2 to 9.9 million range. About 86,000 Sockeye will be released from the upper Salmon River Lakes, (RedFish, Pettit, and Alturas) for the 2001 migration. Most sockeye were released during the past summer (July) and fall (October) with a small number to be released this spring. The 2001 coho numbers are expected to be close to the past three years, which range from 700,000 to 800,000.

Mid-Columbia [above McNary Dam] – Spring chinook production in the Mid-Columbia is projected to be lower than the previous two years. Part of that reduction might be expected, as Ringold Hatchery will not be releasing Brood Year 99 spring chinook. Most hatcheries will be releasing fish the latter half of April either volitionally or directly from the raceways to the streams. Summer chinook production is projected for 4.3 million, a total that would be more than any individual release year reported in the FPC database from 1979 to 2001. Yearling summer chinook are normally released in April with subyearling fish released in June. Fall chinook numbers will be very close to normal, with 12.2 million projected for release in the Mid-Columbia Reach. The bulk of the fall chinook are released from Priest Rapids, Ringold, and Yakama River hatcheries/acclimation ponds as subyearling fish from late May through June. Numbers of steelhead to be released were fairly consistent to previous years with the Methow, Okanogan, and Wenatchee rivers receiving most of the steelhead. Based on the FPC database, the projected 2001 release of coho (2.1 million) will be the record high total. Sockeye in the Mid-Columbia are normally released into Lake Wenatchee from net pens and into Lake Osoyoos (direct releases) during the previous fall prior to their migration in the spring, April through May.

Lower Columbia [McNary Dam to above Bonneville Dam]– Spring chinook production of 5.5 million in this Reach will be nearly equal the prior two years. Yearling spring chinook will be released in the Umatilla, Klickitat, White Salmon and Little White Salmon, Wind, Deschutes, and Hood Rivers.

The majority of spring chinook are released in April; however, spring chinook from the Klickitat and Umatilla rivers were released March 7 and 9, respectively. There are no summer chinook or sockeye salmon liberated in this Reach. Fall chinook numbers are presently projected to be 15.7 million and appear to be far short of the normal plants for this Reach. Unless numbers are not in the database, this total would be the record low release of fall chinook made in this Reach since 1979. The initial release of subyearling fall chinook (5.25 million) was completed from Spring Creek National Fish Hatchery on March 8th with the first yearling release of “bright” fall chinook made March 12 in the Umatilla River. Presently, 554,900 juvenile steelhead are projected for release from this Reach. Steelhead will be released in the Umatilla, Klickitat, Deschutes, Hood, and White Salmon rivers normally in the April to May time frame. About 6.7 million coho are projected for release in 2001; slightly below normal; however, release numbers will be revised and likely will be more than listed.

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
03/02/01	88.6	0.0	91.5	0.0	93.1	0.0	94.0	0.0	96.4	0.0	101.6	0.0	104.7	0.0
03/03/01	78.7	0.0	80.2	0.0	80.3	0.0	78.4	0.0	77.4	0.0	74.2	0.0	78.1	0.0
03/04/01	72.0	0.0	71.1	0.0	64.7	0.0	60.9	0.0	66.2	0.0	68.3	0.0	71.6	0.0
03/05/01	84.3	0.0	86.9	0.0	86.0	0.0	84.8	0.0	86.5	0.0	77.4	0.0	81.4	0.0
03/06/01	91.5	0.0	92.5	0.0	91.8	0.0	93.4	0.0	97.1	0.0	98.7	0.0	101.8	0.0
03/07/01	94.8	0.0	94.3	0.0	92.0	0.0	88.0	0.0	89.4	0.0	85.4	0.0	90.8	0.0
03/08/01	93.6	0.0	94.5	0.0	92.1	0.0	92.0	0.0	95.3	0.0	100.7	0.0	104.3	0.0
03/09/01	80.1	0.0	83.4	0.0	84.6	0.0	90.3	0.0	87.4	0.0	92.0	0.0	95.9	0.0
03/10/01	61.8	0.0	62.7	0.0	61.5	0.0	59.7	0.0	61.1	0.0	67.4	0.0	77.4	0.0
03/11/01	52.9	0.0	55.2	0.0	53.1	0.0	51.5	0.0	53.5	0.0	75.1	0.0	70.6	0.0
03/12/01	87.8	0.0	86.1	0.0	85.9	0.0	87.1	0.0	87.3	0.0	75.0	0.0	85.1	0.0
03/13/01	88.9	0.0	94.3	0.0	92.0	0.0	91.7	0.0	96.6	0.0	85.3	0.0	84.7	0.0
03/14/01	81.3	0.0	86.0	0.0	86.8	0.0	87.6	0.0	87.9	0.0	90.3	0.0	94.6	0.0
03/15/01	87.9	0.0	87.8	0.0	85.5	0.0	84.7	0.0	88.3	0.0	93.3	0.0	99.6	0.0

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
03/02/01	1.4	0.0	12.1	12.8	14.6	0.0	13.8	0.0	13.7	0.0	15.9	0.0	15.9	0.0
03/03/01	1.4	0.0	11.2	8.9	14.9	0.0	15.0	0.0	15.2	0.0	15.2	0.0	15.2	0.0
03/04/01	1.4	0.0	11.9	9.3	16.7	0.0	13.0	0.0	13.0	0.0	12.5	0.0	12.5	0.0
03/05/01	1.4	0.0	12.9	12.5	17.4	0.0	14.9	0.0	14.8	0.0	14.2	0.0	14.2	0.0
03/06/01	1.4	0.0	12.9	11.2	23.1	0.0	21.5	0.0	21.8	0.0	22.1	0.0	22.1	0.0
03/07/01	1.4	0.0	13.7	12.1	19.3	0.0	19.3	0.0	20.1	0.0	20.1	0.0	20.1	0.0
03/08/01	1.5	0.0	15.0	12.3	21.1	0.0	20.7	0.0	20.7	0.0	20.0	0.0	20.0	0.0
03/09/01	1.5	0.0	15.3	8.8	28.3	0.0	28.5	0.0	29.8	0.0	28.8	0.0	28.8	0.0
03/10/01	1.5	0.0	15.6	8.8	26.1	0.0	26.9	0.0	28.7	0.0	29.3	0.0	29.3	0.0
03/11/01	1.5	0.0	14.5	11.4	20.9	0.0	21.3	0.0	21.9	0.0	21.9	0.0	21.9	0.0
03/12/01	1.5	0.0	15.4	14.6	23.0	0.0	23.3	0.0	24.6	0.0	25.5	0.0	25.5	0.0
03/13/01	1.5	0.0	13.6	14.1	25.9	0.0	27.2	0.0	28.1	0.0	27.4	0.0	27.4	0.0
03/14/01	1.5	0.0	---	16.3	31.5	0.0	31.2	0.0	33.0	0.0	34.3	0.0	34.3	0.0
03/15/01	1.5	0.0	---	---	26.6	0.0	27.2	0.0	27.7	0.0	25.9	0.0	25.9	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		
03/02/01	117.5	0.0	113.7	0.0	114.0	0.0	127.3	0.0	74.0	47.2
03/03/01	104.9	0.0	115.7	0.0	113.9	0.0	126.7	0.0	73.5	47.3
03/04/01	95.4	0.0	97.7	0.0	102.3	0.0	129.8	0.0	74.2	49.9
03/05/01	107.8	0.0	130.6	0.0	130.5	0.0	128.9	0.0	76.8	45.3
03/06/01	112.9	0.0	115.0	0.0	122.9	0.0	128.6	0.0	82.9	37.5
03/07/01	117.0	0.0	114.6	0.0	109.7	0.0	124.8	0.0	83.2	33.4
03/08/01	98.3	0.0	99.8	0.0	98.9	0.0	117.8	0.0	75.4	33.9
03/09/01	127.6	0.0	119.8	0.0	120.8	0.0	117.8	0.0	38.6	70.4
03/10/01	117.5	0.0	111.1	0.0	110.4	0.0	116.8	12.0	0.6	95.4
03/11/01	103.0	0.0	109.3	0.0	109.0	0.0	117.7	23.6	0.5	84.7
03/12/01	99.0	0.0	109.2	0.0	112.0	0.0	120.0	23.6	1.2	86.3
03/13/01	106.6	0.0	102.7	0.0	108.3	0.0	118.2	11.7	1.7	95.8
03/14/01	123.4	0.0	127.8	0.0	119.6	0.0	118.8	0.0	6.9	103.0
03/15/01	118.2	0.0	119.8	0.0	119.3	0.0	120.4	0.0	10.9	100.6

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	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					
3/2	---	---	---	0	102	102	103	24	102	102	103	24	102	102	104	24	---	---	---	0
3/3	---	---	---	0	102	104	109	24	101	102	102	24	101	102	102	24	---	---	---	0
3/4	---	---	---	0	113	118	119	24	102	102	102	23	102	102	102	23	---	---	---	0
3/5	---	---	---	0	118	120	122	23	101	101	102	23	101	102	104	23	---	---	---	0
3/6	---	---	---	0	110	117	119	24	101	101	101	23	101	101	102	23	---	---	---	0
3/7	---	---	---	0	102	103	103	24	101	101	102	23	101	101	103	23	---	---	---	0
3/8	---	---	---	0	102	103	103	24	101	102	102	23	101	102	104	23	---	---	---	0
3/9	---	---	---	0	102	103	103	24	102	102	102	23	102	102	103	23	---	---	---	0
3/10	---	---	---	0	102	103	103	24	102	102	102	23	102	103	103	19	---	---	---	0
3/11	---	---	---	0	102	103	104	24	102	102	102	23	103	104	105	23	103	103	112	14
3/12	---	---	---	0	103	103	104	24	102	102	103	23	102	102	103	23	103	103	103	24
3/13	---	---	---	0	103	104	105	24	103	103	103	23	103	103	105	23	103	104	104	24
3/14	---	---	---	0	102	103	103	24	102	102	102	23	102	102	104	23	103	103	103	24
3/15	---	---	---	0	103	104	104	24	102	103	103	23	102	103	104	23	103	103	104	24

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	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	
3/2	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/3	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/4	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/5	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/6	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/9	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/10	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/11	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	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	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	
3/2	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/3	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/4	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/5	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/6	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/9	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/10	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/11	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/15	---	---	---	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		24 h		12 h		24 h		12 h
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
3/2	---	---	---	0	102	103	103	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/3	---	---	---	0	102	103	103	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/4	---	---	---	0	102	103	103	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/5	---	---	---	0	102	103	103	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/6	---	---	---	0	103	104	104	24	106	106	107	24	---	---	---	0	---	---	---	0			
3/7	---	---	---	0	103	104	105	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/8	---	---	---	0	103	104	104	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/9	---	---	---	0	103	103	104	24	107	108	111	24	---	---	---	0	---	---	---	0			
3/10	---	---	---	0	103	104	105	24	107	107	108	24	---	---	---	0	---	---	---	0			
3/11	---	---	---	0	103	104	104	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/12	---	---	---	0	103	104	105	24	107	108	109	24	---	---	---	0	---	---	---	0			
3/13	---	---	---	0	103	103	104	24	107	108	110	24	---	---	---	0	---	---	---	0			
3/14	---	---	---	0	102	103	104	24	105	106	107	24	---	---	---	0	---	---	---	0			
3/15	---	---	---	0	103	103	104	24	106	106	108	24	---	---	---	0	---	---	---	0			

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		24 h		12 h
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
3/2	---	---	---	0	103	104	104	24	103	104	104	24	---	---	---	0	---	---	---	0			
3/3	---	---	---	0	103	103	103	23	103	103	103	24	---	---	---	0	---	---	---	0			
3/4	---	---	---	0	103	103	104	24	103	103	103	24	---	---	---	0	---	---	---	0			
3/5	---	---	---	0	103	103	104	24	102	102	103	24	---	---	---	0	---	---	---	0			
3/6	---	---	---	0	102	102	103	24	102	102	102	24	---	---	---	0	---	---	---	0			
3/7	---	---	---	0	103	104	105	24	102	102	102	24	---	---	---	0	---	---	---	0			
3/8	---	---	---	0	103	103	104	24	102	102	103	24	---	---	---	0	---	---	---	0			
3/9	---	---	---	0	103	103	103	24	103	103	103	24	---	---	---	0	---	---	---	0			
3/10	---	---	---	0	104	104	104	24	103	104	104	24	---	---	---	0	---	---	---	0			
3/11	---	---	---	0	103	104	104	24	103	104	104	24	---	---	---	0	---	---	---	0			
3/12	---	---	---	0	104	104	111	23	104	104	104	23	---	---	---	0	---	---	---	0			
3/13	---	---	---	0	104	105	105	22	104	105	105	24	---	---	---	0	---	---	---	0			
3/14	---	---	---	0	103	103	104	24	103	103	104	24	---	---	---	0	---	---	---	0			
3/15	---	---	---	0	104	104	104	24	104	104	105	24	---	---	---	0	---	---	---	0			

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		24 h		12 h
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
3/2	---	---	---	0	---	---	---	0	102	102	102	24	102	102	102	24	103	104	104	24			
3/3	---	---	---	0	---	---	---	0	101	102	102	24	101	102	103	24	103	104	105	24			
3/4	---	---	---	0	---	---	---	0	102	102	102	24	101	102	103	24	103	103	103	24			
3/5	---	---	---	0	---	---	---	0	101	102	102	24	101	102	102	24	102	103	103	24			
3/6	---	---	---	0	---	---	---	0	102	103	105	24	101	101	102	24	102	102	103	24			
3/7	---	---	---	0	---	---	---	0	103	104	105	24	102	102	103	24	103	103	105	24			
3/8	---	---	---	0	---	---	---	0	103	104	105	24	102	102	103	24	103	104	104	24			
3/9	---	---	---	0	---	---	---	0	103	103	104	24	102	102	103	24	104	104	105	24			
3/10	---	---	---	0	---	---	---	0	103	103	104	24	103	103	104	24	105	106	107	24			
3/11	---	---	---	0	---	---	---	0	103	103	103	24	103	103	104	24	105	105	105	24			
3/12	---	---	---	0	---	---	---	0	103	103	104	24	103	103	104	24	104	105	105	24			
3/13	---	---	---	0	---	---	---	0	104	104	105	24	103	104	105	24	104	105	105	24			
3/14	---	---	---	0	---	---	---	0	103	103	103	23	102	103	103	23	104	104	105	24			
3/15	---	---	---	0	---	---	---	0	103	104	104	20	103	103	103	24	104	105	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	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
3/2	103	103	103	24	103	103	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/3	103	103	103	24	102	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/4	103	103	103	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/5	102	102	102	24	102	102	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/6	102	102	103	24	102	102	102	24	---	---	---	0	---	---	---	0	---	---	---	0
3/7	103	104	104	24	102	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/8	103	104	104	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/9	103	103	104	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/10	104	105	105	24	104	104	105	24	---	---	---	0	---	---	---	0	---	---	---	0
3/11	104	104	105	24	104	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/12	104	104	104	24	103	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/13	104	104	105	24	104	104	105	24	---	---	---	0	---	---	---	0	---	---	---	0
3/14	103	103	103	24	103	103	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/15	104	104	104	24	104	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0

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	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
3/2	---	---	---	0	105	105	105	24	104	105	105	23	104	105	105	24	105	105	106	24
3/3	---	---	---	0	105	105	105	24	105	105	106	24	105	105	105	24	105	105	106	24
3/4	---	---	---	0	105	105	105	24	104	105	105	24	104	104	105	24	104	104	105	23
3/5	---	---	---	0	103	104	104	24	103	104	104	24	103	104	104	24	103	104	104	23
3/6	---	---	---	0	104	104	104	24	104	104	105	24	104	105	105	24	104	105	105	23
3/7	---	---	---	0	104	105	105	24	104	105	106	24	105	105	106	24	105	106	106	23
3/8	---	---	---	0	105	105	105	24	105	105	105	24	105	105	106	24	105	106	106	23
3/9	---	---	---	0	105	106	106	24	105	106	106	24	106	106	107	24	106	107	107	23
3/10	---	---	---	0	105	105	106	24	106	106	111	24	106	106	110	24	106	106	107	23
3/11	---	---	---	0	104	104	104	24	109	113	114	24	107	109	110	24	107	108	111	23
3/12	---	---	---	0	103	103	104	24	109	112	114	22	106	108	109	24	108	110	111	23
3/13	---	---	---	0	103	103	104	23	108	111	114	23	106	108	109	23	106	108	110	23
3/14	---	---	---	0	102	103	103	22	103	103	103	24	103	103	103	24	104	105	107	23
3/15	---	---	---	0	104	104	104	24	103	104	104	24	104	104	106	24	103	103	104	23

Hatchery Release Summary

From: 3/2/01 to 3/15/01

IDFG

Hatchery	Species	Race	MigrYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Rapid River	Chinook Yearling	SP	2001	736,000	03/15/2001	04/25/2001	Rapid River H	Little Salmon River

IDFG TOTAL **736,000**

Umatilla Tribe

L White Salmon	Chinook Yearling	SP	2001	175,000	03/10/2001	03/20/2001	Imeques Acclim Pd	Umatilla River
Lower Herman C	Coho	UN	2001	750,000	03/10/2001	03/20/2001	Pendelton Acclim Pd	Umatilla River
Umatilla	Chinook Yearling	SP	2001	340,000	03/09/2001	03/09/2001	Imeques Acclim Pd	Umatilla River
Bonneville	Chinook Yearling	FA	2001	240,000	03/16/2001	03/16/2001	Thornhollow Acclim Pd	Umatilla River

UMATILLA TOTAL **1,505,000**

USFWS

Spring Creek	Chinook Subyearling	FA	2001	5,250,000	03/08/2001	03/08/2001	Spring Creek H	L Col R (D/s McN Dam)
--------------	------------------------	----	------	-----------	------------	------------	----------------	--------------------------

USFWS TOTAL **5,250,000**

WDFW

Klickitat	Chinook Yearling	SP	2001	610,000	03/07/2001	03/11/2001	Klickitat H	Klickitat River
-----------	---------------------	----	------	---------	------------	------------	-------------	-----------------

WDFW TOTAL **610,000**

Yakima Tribe

Cle Elum	Chinook Yearling	SP	2001	266,600	03/15/2001	05/31/2001	Easton Pd	Yakama River
Cle Elum	Chinook Yearling	SP	2001	257,700	03/15/2001	05/31/2001	Jack Creek Acclim Pd	Yakama River
Cle Elum	Chinook Yearling	SP	2001	232,700	03/15/2001	05/31/2001	Clark Flat Acclim Pd	Yakama River

YAKIMA TRIBE TOTAL **757,000**

TOTAL RELEASE **8,858,000**

Hatchery Release Summary

From: 3/16/01 to 3/29/01

Hatchery	Species	Race	MigraYr	NumRel	IDFG			RelRiver
					RelStart	RelFinish	RelSite	
McCall	Chinook Yearling	SU	2001	1,077,900	03/26/2001	03/31/2001	S Fk Salmon R	Salmon River
McCall	Chinook Yearling	SU	2001	88,500	03/26/2001	03/31/2001	S Fk Salmon R	Salmon River
Niagara Springs	Steelhead	SU	2001	550,000	03/26/2001	04/07/2001	Hells Canyon Dam	Snake River
IDFG TOTAL				1,716,400				
Nez Perce Tribe								
Clearwater	Chinook Yearling	SP	2001	155,000	03/19/2001	03/30/2001	Lolo Cr	Clearwater Rvr M F
Clearwater	Chinook Yearling	SP	2001	155,000	03/19/2001	03/30/2001	Newsome Cr	S Fk Clearwater River
NEZ PERCE TRIBE TOTAL				297,000				
ODFW								
Wallowa	Steelhead	SU	2001	174,000	03/30/2001	03/31/2001	Wallowa Acclim Pd	Grande Ronde River
Imnaha	Chinook Yearling	SP	2001	123,000	03/22/2001	04/15/2001	Imnaha Acclim Pd	Imnaha River
ODFW TOTAL				297,000				
Umatilla Tribe								
L White Salmon	Chinook Yearling	SP	2001	175,000	03/10/2001	03/20/2001	Imeques Acclim Pd	Umatilla River
Bonneville	Chinook Yearling	FA	2001	240,000	03/16/2001	03/16/2001	Thornhollow Acclim Pd	Umatilla River
Lower Herman C	Coho	UN	2001	750,000	03/10/2001	03/20/2001	Pendelton Acclim Pd	Umatilla River
UMATILLA TRIBE TOTAL				1,165,000				
USFWS								
Warm Springs	Chinook Yearling	SP	2001	785,000	03/25/2001	04/18/2001	Warm Springs H	Warm Springs River
USFWS TOTAL				785,000				
WDFW								
Lyons Ferry	Steelhead	SU	2001	100,000	03/26/2001	04/30/2001	Dayton Acclim Pd	Touchet River
Lyons Ferry	Steelhead	SU	2001	200,000	03/26/2001	04/30/2001	Cottonwood Acclim Pd	Grande Ronde River
WDFW TOTAL				300,000				
Warm Spgs Tribe								
Parkdale Pond	Chinook Yearling	SP	2001	7,000	03/19/2001	03/19/2001	Parkdale Acclim Pd	Hood River
WARM SPGS TRIBE TOTAL				7,000				
GRAND TOTAL				4,567,400				

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)
03/02/2001	---	2	---	---	---	---	---	---	---	---	---
03/03/2001	---	2	---	---	---	---	---	---	---	---	---
03/04/2001	---	0	---	---	---	---	---	---	---	---	---
03/05/2001	---	0	---	---	---	---	---	---	---	---	---
03/06/2001	---	0	---	---	---	---	---	---	---	---	---
03/07/2001	---	5	---	---	---	---	---	---	---	---	---
03/08/2001	---	1	---	---	---	---	---	---	---	---	---
03/09/2001	---	1	---	---	---	---	---	---	---	---	---
03/10/2001	---	2	---	---	---	---	---	---	---	---	---
03/11/2001	---	2	---	---	---	---	---	---	---	---	---
03/12/2001	0	9	0	0	---	---	---	---	---	---	---
03/13/2001	0	3	0	0	---	---	---	---	---	---	463
03/14/2001	3	15	1	0	---	---	---	---	---	---	249
03/15/2001	0	30	5	0	---	---	---	---	---	---	256
03/16/2001	9	---	0	0	---	---	---	---	---	---	401
Total:	12	72	6	0	0	0	0	0	0	0	1,369
# Days:	5	14	5	5	0	0	0	0	0	0	4
Average:	2	5	1	0	0	0	0	0	0	0	342

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)
03/02/2001	---	0	---	---	---	---	---	---	---	---	---
03/03/2001	---	0	---	---	---	---	---	---	---	---	---
03/04/2001	---	0	---	---	---	---	---	---	---	---	---
03/05/2001	---	0	---	---	---	---	---	---	---	---	---
03/06/2001	---	0	---	---	---	---	---	---	---	---	---
03/07/2001	---	0	---	---	---	---	---	---	---	---	---
03/08/2001	---	0	---	---	---	---	---	---	---	---	---
03/09/2001	---	0	---	---	---	---	---	---	---	---	---
03/10/2001	---	0	---	---	---	---	---	---	---	---	---
03/11/2001	---	0	---	---	---	---	---	---	---	---	---
03/12/2001	0	0	0	0	---	---	---	---	---	---	---
03/13/2001	0	0	0	0	---	---	---	---	---	---	59,454
03/14/2001	0	0	0	0	---	---	---	---	---	---	31,679
03/15/2001	0	0	0	0	---	---	---	---	---	---	18,041
03/16/2001	0	---	0	0	---	---	---	---	---	---	5,075
Total:	0	0	0	0	0	0	0	0	0	0	114,249
# Days:	5	14	5	5	0	0	0	0	0	0	4
Average:	0	0	0	0	0	0	0	0	0	0	28,562

*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 SOCKEYE

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
03/04/2001	---	0	---	---	---	---	---	---	---	---	---
03/05/2001	---	0	---	---	---	---	---	---	---	---	---
03/06/2001	---	0	---	---	---	---	---	---	---	---	---
03/07/2001	---	0	---	---	---	---	---	---	---	---	---
03/08/2001	---	0	---	---	---	---	---	---	---	---	---
03/09/2001	---	0	---	---	---	---	---	---	---	---	---
03/10/2001	---	0	---	---	---	---	---	---	---	---	---
03/11/2001	---	0	---	---	---	---	---	---	---	---	---
03/12/2001	---	0	---	---	---	---	---	---	---	---	---
03/13/2001	---	0	---	---	---	---	---	---	---	---	---
03/14/2001	0	0	0	0	---	---	---	---	---	---	---
03/15/2001	0	0	0	0	---	---	---	---	---	---	0
03/16/2001	0	0	0	0	---	---	---	---	---	---	0
03/02/2001	0	0	0	0	---	---	---	---	---	---	0
03/03/2001	0	---	0	0	---	---	---	---	---	---	0
Total:	0	0	0	0	0	0	0	0	0	0	0
# Days:	5	14	5	5	0	0	0	0	0	0	4
Average:	0	0	0	0	0	0	0	0	0	0	0

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 03/14

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	---	---					---	---					---	---				
TDA	---	---					---	---					---	---				
JDA	---	---					---	---					---	---				
MCN	---	---					---	---					---	---				
IHR	---	---					---	---					---	---				
LMN	---	---					---	---					---	---				
LGS	---	---					---	---					---	---				
LWG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	---	---					---	---					---	---				
RIS	---	---					---	---					---	---				
RRH	---	---					---	---					---	---				
WEL	---	---					---	---					---	---				

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	---	---					---			---			---
TDA	---	---					---			---			---
JDA	---	---					---			---			---
MCN	---	---					---			---			---
IHR	---	---					---			---			---
LMN	---	---					---			---			---
LGS	---	---					---			---			---
LWG	0	0	0	0	0	0	0	0	0	591	744	833	44
PRD	---	---					---			---			---
RIS	---	---					---			---			---
RRH	---	---					---			---			---
WEL	---	---					---			---			---

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

Wild steelhead numbers are included in the total.

***PRD is not reporting Wild Steelhead numbers.

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.