



# Fish Passage Center Weekly Report #08 - 2

March 14, 2008

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## Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 26% and 104% of average at individual sub-basins over the beginning of March. Precipitation above The Dalles has been 56% of average over March. Over the entire water year, precipitation has generally been near or above average.

**Table 1. Summary of March precipitation and cumulative October through March precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.**

Location	Water Year 2008 March 1-10		Water Year 2008 October 1, 2007 to March 10, 2008	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.21	54	13.9	107
Snake River Above Ice Harbor	0.30	56	10.11	110
Columbia Above The Dalles	0.35	56	13.8	106
Kootenai	0.25	44	13.42	100
Clark Fork	0.3	79	9.48	116
Flathead	0.32	61	10.92	99
Pend Oreille/Spokane	0.61	68	19.89	109
Central Washington	0.07	26	4.15	78
Snake River Plain	0.11	30	5.01	94
Salmon/Boise/Payette	0.31	50	13.18	115
Clearwater	0.94	104	17.56	105
SW Washington Cascades/Cowlitz	0.94	41	44.61	92
Willamette Valley	1.06	51	42.53	104

Snowpack within the Columbia Basin is above average. Average snowpack in the Columbia River for basins above the Snake River confluence is 105% of average, for Snake River Basins the average snowpack is 102% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 144% of average.

Table 2 displays the February Final and March Final runoff volume forecasts for multiple reservoirs. Water Supply Forecasts have held steady between the February Final and March Final forecasts at The Dalles; however, increased several percent in all other Basins. The current forecast at The Dalles between January and July is 103000 Kaf (96% of average).

**Table 2. February Final and March Final Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.**

Location	February Final		March Final	
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	96	103000	96	103000
Grand Coulee (Jan-July)	97	61100	99	62300
Libby Res. Inflow, MT (Jan-July)	95	5960	98	6190
Hungry Horse Res. Inflow, MT (Jan-July)	92	2050	94	2100
Lower Granite Res. Inflow (Apr-July)	103	22200	107	23000
Brownlee Res. Inflow (Apr-July)	83	5260	87	5500
Dworshak Res. Inflow (Apr-July)	105	2780	110	2920

Grand Coulee Reservoir is at 1254.7 feet (3-13-08) and has drafted 1.3 feet in the last week. At the March 12, 2008 TMT Meeting the Salmon Managers and the Action agencies agreed to a DWR/GCL shift. This shift will effectively reduce Dworshak Dam's flood control (FC) liability (reservoir will be operated higher than normal FC) and increase Grand Coulees FC liability (reservoir will be operated lower than normal FC). The end of March shifted FC elevation is 1256.7 feet at Grand Coulee and the estimated shifted April 10th (interpolated between the March 31st and April 15th shifted Flood control elevations) elevation is 1244.2 feet at Grand Coulee. Outflows at Grand Coulee have ranged between 57.4 and 90.6 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2397.8 feet (3-13-08) and drafted 0.5 feet last week. The end of March VarQ FC elevation at Libby is 2399.8 feet, the estimated April 10th elevation is also 2399.8 feet at Libby. Outflows at Libby have been 4.0 Kcfs.

Hungry Horse is currently at an elevation of 3510.6 ft (3-13-08) and has drafted 1.3 feet last week. Outflows at Hungry Horse have been 2.6-2.9 Kcfs last week; Hungry Horse has been operating to Columbia Falls Minimum outflows. Hungry Horse's end of March VarQ FC elevation is 3530.5 feet, the estimated April 10th elevation is 3528.3 feet at Hungry Horse.

Dworshak is currently at an elevation of 1519.3 feet (3-13-08) and drafted 1.0 feet last week; outflows at Dworshak are 6.5 Kcfs. As stated previously, there will be a DWR/GCL shift in 2008. The end of March Shifted FC elevation is 1519.1 feet; the estimated April 10th Shifted FC elevation is 1524.3 feet at Dworshak.

The Brownlee Reservoir was at an elevation of 2030.7 feet on March 13th, 2008, drafting 0.5 feet last week. The end of March FC elevation is 2039.8 feet, the estimated April 10th elevation is 2037.3 feet at Brownlee Dam. Outflows at Brownlee Dam have been 12.9 to 17.0 Kcfs over the last week.

**Spill:** Spill at Bonneville Dam for the Spring Creek Hatchery releases of tule fall Chinook on March 5 and March 6 commenced at 2400 hours on March 6th at a level of approximately 36 Kcfs. Spill continued until 0600 on March 10th. Turbine units were operated at the low end of the 1% efficiency range from 0600 hours on March 6th through 0600 hours on March 10th. On March 10th an increased mortality in the Smolt Monitoring Program sample was detected. Consequently, the turbine loading was again decreased to the low end of the 1% efficiency range. This operation continued until 1700 hours on March 13, 2008.

Total dissolved gas levels below Bonneville Dam were measured at a 12 - hour average of 114% at the Cascade Island gage during this spill operation. Tailwater elevations at Bonneville Dam were maintained such that the depth compensated TDG levels over the chum salmon redds were 105%.

**Smolt Monitoring:** Smolt monitoring activities began at Bonneville Dam on March 3 in anticipation of arrival of subyearling chinook salmon released from Spring Creek Hatchery. Approximately 3.7 million subyearling Chinook were released by 0920 hours on the morning of March 5th and another 3.75 million subyearling tule fall Chinook were released by 0945 hours on the morning of March 6th. According to Smolt Monitoring personnel the fish began arriving on March 6 at about 1900 hours. The SMP crew at Bonneville reported that mortality rate for the first sample of Spring Creek fish was 0.4%; this is a relatively low rate compared to historic mortality rate for these fish—which has typically ranged between 1 and 1.5%. In addition to the hatchery Chinook, the site also reported collecting Chinook and Coho fry as well.

On the morning of March 10 the COE increased turbine loading in the second powerhouse units at Bonneville Dam, operating above the low end peak efficiency. The SMP crews reported an increase in mortality rate of subyearling chinook. The SMP crew increased the sample rate to get a better estimate of the mortality rate that was occurring. In 5 hours of sampling, the crew captured 125 subyearling chinook with 22 mortalities for an overall

mortality rate of 17.6%. The Fish Passage Advisory Committee (FPAC) recommended that due to the increasing mortality rate and since the Spring Creek fish were still passing in relatively large numbers, that the COE return to operating the turbines at the lower end of 1% efficiency. The COE responded by returning to operations on the lower end of peak efficiency later that day.

On March 13, the COE cleaned 5 vertical barrier screens (11A-C, 12A and 14A) in powerhouse 2. The SMP crew reported that debris and dead fish resulting from the VBS cleaning appeared in the sample tank between 1:45pm and 3pm. There were 114 mortalities and 5 live fish recovered in the sample tank during that time period during and after VBS cleaning (sample rate was 20%). The condition of the 114 mortalities recovered indicated they had been dead for several days according to the SMP crew. Fish condition in the sample that day was good prior to and after VBS cleaning. The inclusion of those mortalities in the sample ending March 14 at 7:00 am resulted in a mortality rate of 34% (119 mortalities out of a total of 335 subyearling chinook) for the 24 hour sample period. It is likely that the mortality rate was not that high, but that the dead fish were from previous days and were only forced out of the gatewells during VBS cleaning. However, the presence of this large number of mortalities from 5 gatewells suggests that fish were impinged on those and other screens during the past several days of operations. Thus mortality rates for prior days may have been underestimated to some extent due to mortalities not being included in previous samples.

Smolt Monitoring traps have all begun sampling as of this weekly report. The Grande Ronde Trap, operated by the Oregon Department of Fish and Wildlife, located at river mile two in the Grande Ronde River, began sampling March 4. Small numbers of juvenile salmonids have been captured at the Grande Ronde Trap in the first few days of sampling. The Lewiston and Salmon River traps began sampling this past week. The Salmon River Trap, operated by Idaho Department of Fish

and Game, is located at river mile 103 on the Salmon River near White Bird. While the Lewiston Trap, also operated by IDFG, is located on the Snake River, at the head of Lower Granite Reservoir, at river mile 225. The Imnaha Trap, located at river mile seven on the Imnaha River, operated by the Nez Perce Tribe, has been sampling since late February.

### **Hatchery Release:**

**Snake River Zone:** The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. Many of the releases of juvenile Chinook mentioned in last week's weekly report were based on preliminary data that have subsequently been changed. Specifically, the volitional release of 2.5 million spring Chinook juveniles from Rapid River Hatchery is now scheduled to begin in mid-March. The releases of approximately 1.13 million spring Chinook juveniles to the Clearwater River from Clearwater Hatchery are now scheduled to take place in late March to early April. Finally, the release of 415,900 spring Chinook juveniles to Powell Pond on the Lochsa River is now scheduled to take place in mid-March to early April.

There were a few scheduled releases of juvenile Chinook over the past week to the Snake River Zone. Beginning March 10, approximately 88,000 summer Chinook from McCall Hatchery were released by the Nez Perce Tribe to Johnson Creek. Also scheduled to begin on March 10 was a release of approximately 489,000 spring Chinook juveniles into the Snake River, below Hells Canyon Dam. These spring Chinook were reared at Rapid River Hatchery. Finally, a release of about 200,000 Rapid River Hatchery spring Chinook to the Little Salmon River, at Pine Hurst Bridge, was scheduled to begin on March 13th.

There are several scheduled releases of yearling spring Chinook to this zone over the next two weeks. In all, these releases will total about 6.5 million spring Chinook juveniles. Of these, approximately 38.7% will be released to the Little Salmon River from Rapid River Hatchery, 24.8% will be released to the middle fork of the Clearwater River from Dworshak NFH and Kooskia NFH, and 17.6%

will be released to the south fork of the Clearwater River from Clearwater Hatchery. The remaining 18.9% are scheduled for release into the Lochsa (6.4%), Grande Ronde (5.7%), Imhama (5.6%), and Wallowa rivers (1.2%). In addition to the spring Chinook, approximately 1.06 million summer Chinook juveniles are scheduled for release into the Salmon River from McCall Hatchery, beginning March 17th. Finally, about 983,000 summer steelhead are scheduled for release into the Snake River Zone over the next two weeks. Of these, 53% are scheduled for release into the Snake River, below Hells Canyon Dam, and 47% are scheduled for release into the Salmon River and its tributaries.

**Mid-Columbia Zone:** The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Volitional releases of approximately 650,000 spring Chinook juveniles from Cle Elum Hatchery continued over the past week. There were no other releases of juvenile salmonids to this zone scheduled to begin over the past week.

The volitional releases from Cle Elum Hatchery are expected to run through mid-May. The only other release of juvenile salmonids scheduled to begin over the next two weeks is a release of approximately 240,000 spring Chinook to the Walla Walla River. This release is currently scheduled to begin on March 24th.

**Lower Columbia Zone:** The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. The volitional release of 400,000 yearling spring Chinook from Imeques Acclimation Pond that was originally scheduled to begin on March 4th is now scheduled for April 8th. Two volitional releases of subyearling Chinook from acclimation facilities on the Umatilla River ended on March 11th. In all, 496,438 subyearling Chinook were released during these volitional releases. Finally, the schedule for the volitional releases of coho to the Umatilla River has changed. From March 4th to March 11th, 487,204 juvenile coho were released from the Pendleton Acclimation Pond on the Umatilla River. A release of approximately 1.0 million coho juveniles from this pond is now scheduled for early April.

Only one release of juvenile salmonids to this zone is scheduled to begin over the next two weeks. This is a release of approximately 376,000 spring Chinook juveniles into the Deschutes River, from the Warm Springs NFH.

### **Adult Fish Passage**

Traditional counts at Bonneville Dam do not begin until March 15th. Traditional counts allow for comparison of current year counts with historical data. Traditional counts began on March 1st at Lower Granite Dam. Lower Granite Dam uses video counts from March 1st through March 31st. Bonneville Dam uses video counts from January 1st through March 31st. Video counts are used during the winter months for counting adults. Video counts can cause a delay in posting the data to the web, because the COE staff at the projects have to review the tapes. Willamette Falls Dam counts adults year round. They also use video counts which, at times, causes a delay in the posting of their data. The following paragraph describes the winter counts for 2008 and compares them with 2007 counts.

Many steelhead and a few spring Chinook have been counted at Bonneville Dam this year. In the winter months steelhead begin to move through the hydro system to reach their tributaries and spawning sites. The majority of steelhead overwinter in pools and will complete their spawning trip in March through early May. At Bonneville Dam, the total steelhead count from Jan 1st through March 13th was 520. In 2007, for the same date range, the Bonneville steelhead count was 1,600. So far, this year's Bonneville steelhead count is only about 32.5% of the 2007 (includes hatchery and wild fish). The 2008 wild steelhead count of 250 was half of the 2007 count of 488. At Willamette Falls Dam, the 2008 count for steelhead was 1,714, as of March 11th. This year's steelhead count is about 47.6% of the 2007 count of 3,600 at Willamette Falls Dam.

Daily counts at Lower Granite ranged from 57 to 288 adult steelhead last week. The total steelhead count passing at Lower Granite Dam as of March 11th was 1,152. The 2008 count was

about 1.53 times larger than the 2007 count of 752 and 1.06 times larger than the 10-year average count of 1,081 at Lower Granite Dam. The 2008 wild steelhead at Lower Granite Dam as of March 11th was 228.

This year, the first spring Chinook was counted at Bonneville Dam on Feb 5th. As of March 13th, 31 spring Chinook have been counted at Bonneville Dam. In 2007, as of March 13th, 18 spring Chinook had crossed Bonneville Dam. In 2007, one spring Chinook had passed Willamette Falls Dam, as of February 15th. This year, no spring Chinook have been counted so far at Willamette Falls Dam.

**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
02/29/2008	63.9	0.0	63.1	0.0	64.0	0.0	61.6	0.0	62.6	0.0	68.7	0.0	66.7	0.0
03/01/2008	78.1	0.0	73.3	0.0	73.0	0.0	70.6	0.0	70.1	0.0	68.3	0.0	61.0	0.0
03/02/2008	61.7	0.0	58.6	0.0	62.7	0.0	65.8	0.0	66.7	0.0	74.1	0.0	73.3	0.0
03/03/2008	93.0	0.0	105.8	0.0	105.1	0.7	102.1	1.1	100.5	0.0	97.9	1.4	92.0	0.7
03/04/2008	82.8	0.0	81.0	0.0	85.6	0.0	88.8	0.0	90.4	0.0	104.6	0.6	108.6	0.0
03/05/2008	92.0	0.0	87.6	0.0	96.3	0.0	98.5	0.0	100.9	0.0	101.6	0.0	105.2	0.0
03/06/2008	95.2	0.0	102.4	0.0	95.0	0.0	93.3	0.0	94.1	0.0	96.8	0.0	100.3	0.0
03/07/2008	90.4	0.0	84.8	0.0	87.6	0.0	89.8	0.0	90.9	0.0	105.5	0.0	101.4	0.0
03/08/2008	53.5	0.0	57.4	0.0	61.1	0.0	61.3	0.0	62.6	0.0	72.5	0.0	63.3	0.0
03/09/2008	64.3	0.0	65.2	0.0	62.6	0.0	63.2	0.0	65.5	0.0	67.5	0.0	71.2	0.0
03/10/2008	90.6	0.0	90.6	0.0	92.1	0.0	90.8	0.0	91.6	0.0	84.6	0.0	85.0	0.0
03/11/2008	57.4	0.0	59.6	0.0	66.1	0.0	68.8	0.0	68.7	0.0	81.9	0.0	81.6	0.0
03/12/2008	78.3	0.0	80.6	0.0	82.5	0.0	81.6	0.0	81.9	0.0	85.4	0.0	78.1	0.0
03/13/2008	87.1	0.0	85.5	0.0	84.2	0.0	82.7	0.0	85.4	0.0	95.6	0.0	90.9	0.0

**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
02/29/2008	1.3	0.0	12.7	10.5	30.1	0.0	31.8	0.0	35.2	0.0	34.1	0.0
03/01/2008	1.3	0.0	12.8	10.8	25.7	0.0	23.7	0.0	28.0	0.0	26.8	0.0
03/02/2008	1.3	0.0	14.9	13.5	32.3	0.0	30.9	0.0	35.0	0.0	35.4	0.0
03/03/2008	6.3	0.0	14.1	16.8	33.3	0.0	33.0	0.0	37.8	0.0	35.8	0.0
03/04/2008	6.6	0.0	13.7	15.9	38.5	0.0	37.3	0.0	41.4	0.0	39.9	0.0
03/05/2008	6.3	0.0	13.8	16.3	42.0	0.0	42.7	0.0	47.9	0.0	46.7	0.0
03/06/2008	6.3	0.0	13.2	18.6	34.4	0.0	33.5	0.0	34.3	0.0	34.2	0.0
03/07/2008	1.3	0.0	13.0	16.0	35.3	0.0	32.4	0.0	33.4	0.0	32.4	0.0
03/08/2008	1.3	0.0	13.1	15.1	27.6	0.0	28.4	0.0	31.0	0.0	29.2	0.0
03/09/2008	1.3	0.0	13.4	14.3	30.3	0.0	29.3	0.0	31.5	0.0	30.6	0.0
03/10/2008	3.1	0.0	13.4	15.9	31.1	0.0	31.3	0.0	33.7	0.0	35.6	0.0
03/11/2008	6.5	0.0	14.0	14.4	36.1	0.0	33.5	0.0	35.9	0.0	35.1	0.0
03/12/2008	6.5	0.0	15.0	15.3	37.9	0.0	37.6	0.0	41.9	0.0	41.0	0.0
03/13/2008	6.5	0.0	---	---	40.3	0.0	40.5	0.0	44.9	0.0	43.0	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		
02/29/2008	104.6	0.0	112.1	0.0	113.1	0.0	133.1	0.7	74.7	51.0
03/01/2008	92.5	0.0	102.0	0.0	104.7	0.0	127.4	1.0	76.8	40.7
03/02/2008	107.1	0.0	111.0	0.0	113.2	0.0	129.5	1.3	74.3	45.7
03/03/2008	130.3	0.2	135.8	0.0	137.7	0.0	141.7	1.3	79.2	54.3
03/04/2008	142.1	0.0	143.6	0.0	140.6	0.0	161.0	1.4	69.2	83.6
03/05/2008	149.5	0.0	160.6	0.0	164.1	0.0	175.2	1.4	78.6	86.7
03/06/2008	139.1	0.0	142.4	0.0	137.4	0.0	148.2	1.4	69.0	65.9
03/07/2008	137.8	0.0	141.3	0.0	139.2	0.0	154.6	37.0	41.4	64.3
03/08/2008	122.2	0.0	131.0	0.0	133.2	0.0	143.8	36.9	31.1	64.0
03/09/2008	99.5	0.0	107.0	0.0	108.4	0.0	145.6	35.1	33.8	64.2
03/10/2008	118.6	0.0	115.9	0.0	119.5	0.0	127.7	10.2	42.8	63.7
03/11/2008	116.8	0.0	117.6	0.0	116.3	0.0	135.6	1.4	58.4	64.9
03/12/2008	131.1	0.0	137.4	0.0	140.0	0.0	144.5	1.4	67.5	64.6
03/13/2008	131.9	0.0	141.0	0.0	141.5	0.0	157.1	1.4	75.5	69.6

## HATCHERY RELEASE LAST TWO WEEKS

### Hatchery Release Summary

From: **2/29/2008** to **03/13/08**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2008	200,000	03-13-08	03-13-08	Pine Bar/Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2008	489,000	03-10-08	03-12-08	Hells Canyon Dam	Snake River
<b>Idaho Dept. of Fish and Game</b>									
<b>Total</b>					<b>689,000</b>				
Nez Perce Tribe	Eagle Creek NFH	CO	UN	2008	275,000	03-05-08	03-05-08	Clear Creek	Clearwater River M F
Nez Perce Tribe	Eagle Creek NFH	CO	UN	2008	275,000	03-07-08	03-07-08	Lapwai Creek	Clearwater River M F South Fork Salmon River
Nez Perce Tribe	McCall Hatchery	CH1	SU	2008	88,000	03-10-08	03-13-08	Johnson Cr Idaho	River
<b>Nez Perce Tribe Total</b>					<b>638,000</b>				
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2008	3,693,551	03-06-08	03-06-08	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2008	3,722,505	03-05-08	03-05-08	Spring Creek Hatchery	L Col R (D/s McN Dam)
<b>U.S. Fish and Wildlife Service</b>									
<b>Total</b>					<b>7,416,056</b>			Thornhollow Acclim Pond	
Umatilla Tribe	Bonneville Hatchery	CH1	FA	2008	237,952	03-04-08	03-12-08		Umatilla River
Umatilla Tribe	Bonneville Hatchery	CH1	FA	2008	258,486	03-04-08	03-11-08	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Lower Herman Cr	CO	UN	2008	487,204	03-04-08	03-11-08	Pendelton Acclim Pond	Umatilla River
<b>Umatilla Tribe Total</b>					<b>983,642</b>				
Yakama Tribe	Klickitat Hatchery	CH1	SP	2008	600,000	03-05-08	03-05-08	Klickitat River	Klickitat River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2008	8,336	03-07-08	03-07-08	Prosser Acclim Pond	Yakima River
<b>Yakama Tribe Total</b>					<b>608,336</b>				
<b>Grand Total</b>					<b>10,335,034</b>				

## HATCHERY RELEASE NEXT TWO WEEKS

### Hatchery Release Summary

From: **3/14/2008** to **3/27/2008**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
								Crooked R Acclim Pond	
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2008	141,700	03-26-08	03-31-08		S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2008	415,900	03-19-08	04-03-08	Powell Acclim Pond	Lochsa River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2008	424,700	03-24-08	04-04-08	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2008	566,800	03-26-08	03-31-08	Crooked River	S Fk Clearwater River
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2008	1,061,000	03-17-08	03-20-08	S Fk Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2008	260,000	03-27-08	04-01-08	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2008	525,000	03-17-08	03-27-08	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2008	2,500,000	03-17-08	04-25-08	Rapid River Hatchery	Little Salmon River
<b>Idaho Dept. of Fish and Game</b>									
<b>Total</b>					<b>5,895,100</b>				
								Hazard Creek/Little Salmon R	
Nez Perce Tribe	Hagerman NFH	ST	SU	2008	40,000	03-26-08	04-02-08		Little Salmon River
Nez Perce Tribe	Hagerman NFH	ST	SU	2008	158,000	03-26-08	04-02-08	Little Salmon River	Salmon River (ID)
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2008	74,400	03-19-08	04-01-08	Lostine Accim Pond	Wallowa River
<b>Nez Perce Tribe Total</b>					<b>272,400</b>				
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2008	360,000	03-20-08	03-20-08	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Willard Hatchery	CH1	SP	2008	239,652	03-24-08	03-31-08	Walla Walla River	Walla Walla River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>599,652</b>				
U.S. Fish and Wildlife Service	Dworshak NFH	CH1	SP	2008	950,000	03-21-08	04-09-08	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Kooskia NFH	CH1	SP	2008	653,000	03-24-08	04-04-08	Kooskia Hatchery Warm Springs	Clearwater River M F
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2008	376,000	03-23-08	04-23-08	Hatchery	Deschutes River
<b>U.S. Fish and Wildlife Service Total</b>					<b>1,979,000</b>				
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2008	116,923	03-27-08	04-12-08	Catherine Creek Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2008	125,000	03-27-08	04-12-08	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2008	127,520	03-27-08	04-12-08	Pond	Grande Ronde River
<b>Umatilla Tribe Total</b>					<b>369,443</b>				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	211,004	03-15-08	05-15-08	Clark Flat Acclim Pond Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	217,146	03-15-08	05-15-08	Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	219,470	03-15-08	05-15-08	Easton Pond	Yakima River
<b>Yakama Tribe Total</b>					<b>647,620</b>				
<b>Grand Total</b>					<b>9,763,215</b>				

CH = Chinook, ST = Steelhead, CO = Coho, SO = Sockeye, CT = Cutthroat Trout, CM = Chum

## 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	<u>Hungry H. Dnst</u>			#	<u>Boundary</u>			#	<u>Grand Coulee</u>			#	<u>Grand C. Tlwr</u>			#	<u>Chief Joseph</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
2/29	---	---	---	0	102	103	104	22	100	100	101	24	101	102	104	22	---	---	---	0
3/1	---	---	---	0	101	102	102	24	100	100	100	24	101	101	103	24	---	---	---	0
3/2	---	---	---	0	100	101	101	23	98	99	99	24	100	100	102	23	---	---	---	0
3/3	---	---	---	0	102	102	103	22	100	100	101	24	100	101	103	22	---	---	---	0
3/4	---	---	---	0	106	107	109	23	99	100	100	24	100	101	102	23	---	---	---	0
3/5	---	---	---	0	107	108	108	22	99	99	99	24	100	101	101	22	---	---	---	0
3/6	---	---	---	0	108	108	109	24	99	99	100	24	100	101	101	24	---	---	---	0
3/7	---	---	---	0	108	109	110	24	100	100	100	24	101	101	102	24	---	---	---	0
3/8	---	---	---	0	106	109	110	23	100	100	100	24	101	101	102	23	---	---	---	0
3/9	---	---	---	0	102	103	103	22	100	100	100	22	101	101	102	22	---	---	---	0
3/10	---	---	---	0	102	103	104	24	102	102	103	24	102	102	104	24	---	---	---	0
3/11	100	100	125	11	103	104	105	22	100	101	101	24	102	102	103	22	---	---	---	0
3/12	97	98	98	24	103	104	105	24	101	101	101	24	102	102	105	24	---	---	---	0
3/13	98	98	99	24	104	105	105	21	102	102	102	24	103	103	106	21	---	---	---	0

### Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			#	<u>Wells</u>			#	<u>Wells Dwnstrm</u>			#	<u>Rocky Reach</u>			#	<u>Rocky R. Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
2/29	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/1	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/2	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/3	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/4	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/5	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/6	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/9	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/10	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/11	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

### Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			#	<u>Rock I. Tlwr</u>			#	<u>Wanapum</u>			#	<u>Wanapum Tlwr</u>			#	<u>Priest Rapids</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
2/29	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/1	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/2	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/3	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/4	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/5	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/6	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/9	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/10	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/11	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	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	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwr-Peck</u>			<u>Anatone</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>			<u>Avg</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>
2/29	---	---	---	0	---	---	---	0	108	109	109	24	---	---	---	0	---	---	---	0
3/1	---	---	---	0	---	---	---	0	107	108	108	24	---	---	---	0	---	---	---	0
3/2	---	---	---	0	---	---	---	0	106	107	107	24	---	---	---	0	---	---	---	0
3/3	---	---	---	0	---	---	---	0	98	101	106	24	---	---	---	0	---	---	---	0
3/4	---	---	---	0	---	---	---	0	98	98	102	11	---	---	---	0	---	---	---	0
3/5	---	---	---	0	---	---	---	0	100	100	103	8	---	---	---	0	---	---	---	0
3/6	---	---	---	0	---	---	---	0	98	98	101	11	---	---	---	0	---	---	---	0
3/7	---	---	---	0	---	---	---	0	103	104	104	24	---	---	---	0	---	---	---	0
3/8	---	---	---	0	---	---	---	0	103	103	104	24	---	---	---	0	---	---	---	0
3/9	---	---	---	0	---	---	---	0	103	104	104	22	---	---	---	0	---	---	---	0
3/10	---	---	---	0	---	---	---	0	103	104	104	24	---	---	---	0	---	---	---	0
3/11	---	---	---	0	---	---	---	0	97	98	103	24	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	97	98	102	24	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	0	98	99	104	24	---	---	---	0	---	---	---	0

### Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>			<u>Avg</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>
2/29	---	---	---	0	---	---	---	0	103	103	103	24	---	---	---	0	104	104	104	24
3/1	---	---	---	0	---	---	---	0	102	103	104	24	---	---	---	0	103	103	103	24
3/2	---	---	---	0	---	---	---	0	100	101	101	24	---	---	---	0	101	101	101	24
3/3	---	---	---	0	---	---	---	0	101	102	102	24	---	---	---	0	102	103	103	24
3/4	---	---	---	0	---	---	---	0	101	101	102	24	---	---	---	0	102	102	102	24
3/5	---	---	---	0	---	---	---	0	101	101	101	24	---	---	---	0	101	101	102	24
3/6	---	---	---	0	---	---	---	0	101	101	101	24	---	---	---	0	101	101	102	24
3/7	---	---	---	0	---	---	---	0	101	101	101	24	---	---	---	0	102	102	102	24
3/8	---	---	---	0	---	---	---	0	101	101	101	24	---	---	---	0	101	101	102	24
3/9	---	---	---	0	---	---	---	0	101	101	101	22	---	---	---	0	101	101	102	22
3/10	---	---	---	0	---	---	---	0	104	104	105	24	---	---	---	0	106	112	118	24
3/11	---	---	---	0	---	---	---	0	101	101	102	22	---	---	---	0	101	102	102	24
3/12	---	---	---	0	---	---	---	0	102	103	103	24	---	---	---	0	102	102	102	24
3/13	---	---	---	0	---	---	---	0	103	103	104	24	---	---	---	0	103	103	103	24

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>			<u>Avg</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>
2/29	---	---	---	0	105	106	106	24	---	---	---	0	104	105	105	24	---	---	---	0
3/1	---	---	---	0	104	105	105	24	---	---	---	0	104	104	105	24	---	---	---	0
3/2	---	---	---	0	103	103	103	24	---	---	---	0	103	103	103	24	---	---	---	0
3/3	---	---	---	0	104	104	104	24	---	---	---	0	104	105	105	20	---	---	---	0
3/4	---	---	---	0	103	103	104	24	---	---	---	0	104	104	104	24	---	---	---	0
3/5	---	---	---	0	102	102	102	24	---	---	---	0	103	103	104	24	---	---	---	0
3/6	---	---	---	0	102	102	103	24	---	---	---	0	103	104	105	24	104	105	108	24
3/7	---	---	---	0	102	102	103	24	---	---	---	0	103	104	104	24	---	---	---	0
3/8	---	---	---	0	102	102	102	24	---	---	---	0	103	104	104	24	---	---	---	0
3/9	---	---	---	0	102	102	102	22	---	---	---	0	103	103	104	22	---	---	---	0
3/10	---	---	---	0	110	112	113	24	---	---	---	0	102	102	102	24	---	---	---	0
3/11	---	---	---	0	102	102	103	23	---	---	---	0	103	103	103	24	---	---	---	0
3/12	---	---	---	0	102	103	103	24	---	---	---	0	103	103	103	24	---	---	---	0
3/13	---	---	---	0	103	103	104	24	---	---	---	0	104	104	104	24	---	---	---	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 River Sites

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>AVG</u>	<u>High</u>	#	
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High	Avg		AVG
2/29	---	---	---	0	103	103	103	24	---	---	---	0	104	104	105	24	---	---	---	0
3/1	---	---	---	0	102	102	103	24	---	---	---	0	103	103	104	24	---	---	---	0
3/2	---	---	---	0	101	101	101	24	---	---	---	0	102	102	103	24	---	---	---	0
3/3	---	---	---	0	102	103	103	24	---	---	---	0	103	104	105	24	---	---	---	0
3/4	---	---	---	0	102	102	102	24	---	---	---	0	103	103	103	24	---	---	---	0
3/5	---	---	---	0	101	102	102	24	---	---	---	0	102	103	103	24	---	---	---	0
3/6	---	---	---	0	102	102	102	24	---	---	---	0	103	103	103	24	---	---	---	0
3/7	---	---	---	0	102	102	103	24	---	---	---	0	103	103	103	24	---	---	---	0
3/8	---	---	---	0	103	103	103	24	---	---	---	0	102	103	103	24	---	---	---	0
3/9	---	---	---	0	103	103	103	22	---	---	---	0	102	103	103	22	---	---	---	0
3/10	---	---	---	0	103	103	103	24	---	---	---	0	102	102	102	24	---	---	---	0
3/11	---	---	---	0	103	103	103	23	---	---	---	0	103	103	103	24	---	---	---	0
3/12	---	---	---	0	104	105	105	24	---	---	---	0	104	104	104	24	---	---	---	0
3/13	---	---	---	0	105	106	106	24	---	---	---	0	105	105	106	24	---	---	---	0

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas/Washougal</u>			<u>Cascade Island</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	<u>High</u>	#	
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High	Avg		Avg
2/29	104	104	105	24	105	105	105	24	105	105	106	24	105	106	106	24	110	111	115	24
3/1	102	103	103	24	103	104	105	24	105	106	106	24	104	105	105	24	113	116	119	24
3/2	101	102	102	24	102	103	103	24	104	104	104	24	105	106	107	24	113	116	118	24
3/3	103	104	104	24	103	103	103	24	104	104	104	24	104	105	106	24	112	115	117	24
3/4	102	103	103	24	102	102	103	24	103	103	103	24	103	104	104	24	114	115	116	24
3/5	102	103	103	24	102	103	103	24	103	104	104	24	103	104	105	24	113	114	114	24
3/6	103	103	104	24	103	103	103	24	105	105	106	24	104	105	106	24	113	114	116	24
3/7	103	103	104	24	103	103	104	24	108	109	109	24	106	107	108	24	114	114	115	24
3/8	103	103	103	24	103	104	104	24	109	109	110	24	108	108	109	24	114	114	115	24
3/9	103	103	104	23	103	104	104	22	109	109	110	22	107	108	109	22	114	114	114	22
3/10	101	102	102	24	102	102	102	24	104	105	105	24	103	103	104	24	106	106	107	24
3/11	103	103	103	24	103	103	103	24	105	106	106	24	106	107	108	24	112	113	115	24
3/12	103	104	104	23	104	104	104	24	106	106	107	24	106	108	108	24	112	113	114	24
3/13	104	105	105	24	104	104	105	24	106	106	107	24	106	107	108	24	112	113	115	24





## Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
02/29/2008	---	0	---	---	---	---	---	---	---	---	---
03/01/2008	---	0	---	---	---	---	---	---	---	---	---
03/02/2008	---	0	---	---	---	---	---	---	---	---	---
03/03/2008	---	0	---	---	---	---	---	---	---	---	---
03/04/2008 *	---	0	---	---	---	---	---	---	---	---	0
03/05/2008	---	0	0	---	---	---	---	---	---	---	0
03/06/2008	---	0	0	---	---	---	---	---	---	---	0
03/07/2008	---	0	0	---	---	---	---	---	---	---	0
03/08/2008	---	0	0	---	---	---	---	---	---	---	0
03/09/2008	---	0	0	---	---	---	---	---	---	---	0
03/10/2008	0	0	0	0	---	---	---	---	---	---	0
03/11/2008	0	0	0	0	---	---	---	---	---	---	0
03/12/2008	0	0	0	0	---	---	---	---	---	---	0
03/13/2008	0	---	0	0	---	---	---	---	---	---	0
03/14/2008	0	---	0	---	---	---	---	---	---	---	0
<hr/>											
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>5</b>	<b>13</b>	<b>10</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>

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.

**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  
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts  
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts  
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts  
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$
- MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts  
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts  
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts  
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

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: 3/13**

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2008		2007		10-Yr Avg.		2008		2007		10-Yr Avg.		2008		2007		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TDA	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LGR	03/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL	--	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	03/11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2008		2007		10-Yr Avg.		2008	2007	10-Yr Avg.	2008	2007	10-Yr Avg.	Wild 2008
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	0	0	0	0	0	0
TDA	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	0	0	0	0	0	0	0	0	0	0	0	0	0
LGR	0	0	0	0	0	0	0	0	0	1,152	752	1,081	228
PRD	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	0	0	2	0	0	0	0	0	0	1,714	3,600	0	0

BON and LGR have switched to video counts so the data is delayed.

\*PRD is not posting wild steelhead numbers.

These numbers were collected from USACE, Grant PUD, Douglas PUD, Chelan PUD, ODFW and DART.

Wild steelhead numbers are included in the total. Wild Steelhead are defined as unclipped fish.

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.

Page last updated on: 3/14/2008

BON counts to date - 1/1/2008 to 3/13/2008 (our traditional counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2008	31	0	520	250
2007	18	0	1,600	488