



Fish Passage Center Weekly Report #08 - 04

March 28, 2008

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 42% and 131% of average at individual sub-basins over March. Precipitation above The Dalles has been 86% 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 1-24		Water Year 2008 October 1, 2007 to March 24, 2008	
	Observed (inches)	% Average	Observed (inches)	% Average
	Columbia Above Coulee	1.05	75	14.63
Snake River Above Ice Harbor	1.19	93	11.00	111
Columbia Above The Dalles	1.27	86	14.73	106
Kootenai	0.94	68	14.10	99
Clark Fork	0.83	89	10.00	115
Flathead	1.11	88	11.71	99
Pend Oreille/Spokane	2.06	96	21.34	109
Central Washington	0.27	42	4.35	76
Snake River Plain	0.57	65	5.47	93
Salmon/Boise /Payette	1.22	81	14.08	114
Clearwater	2.85	131	19.47	108
SW Washington Cascades/Cowlitz	4.81	88	48.48	93
Willamette Valley	5.07	102	46.54	106

Snowpack within the Columbia Basin is above average. Average snowpack in the Columbia River for basins above the Snake River confluence is 108% of average, for Snake River Basins the average snowpack is 105% of average, and for the

lower Columbia Basins between McNary and Bonneville Dam average snowpack is 157% of average.

Table 2 displays the March Final and April EarlyBird runoff volume forecasts for multiple reservoirs. Water Supply Forecasts generally decreased somewhat between the March Final and April EarlyBird forecasts, with the exception of Dworshak and Lower Granite Dam which increased 8% and 2%, respectively. The current forecast (April EarlyBird) at The Dalles between January and July is 102000 Kaf (95% of average).

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

Location	March Final		April EarlyBird	
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	96	103000	95	102000
Grand Coulee (Jan-July)	99	62300	97	61300
Libby Res. Inflow, MT (Jan-July)	98	6190	96	6080
Hungry Horse Res. Inflow, MT (Jan-July)	94	2100	94	2080
Lower Granite Res. Inflow (Apr-July)	107	23000	109	23500
Brownlee Res. Inflow (Apr-July)	87	5500	86	5440
Dworshak Res. Inflow (Apr-July)	110	2920	118	3110

Grand Coulee Reservoir is at 1251.2 feet (3-27-08) and has drafted 1.4 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 Dams 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 54.1 and 102.4 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2396.6 feet (3-27-08) 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 3507.6 ft (3-27-08) and has drafted 1.3 feet last week. Outflows at Hungry Horse have been 2.7-2.8 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 1516.9 feet (3-27-08) and drafted 2.2 feet last week; outflows at Dworshak are 8.4 Kcfs. There will be a DWR/GCL shift in 2008. At the March 26th, 2008 TMT Meeting all parties agreed to increase outflows to a flat 8.4 Kcfs through Sunday (March 30, 2008) at 9pm, after which outflows will be increased to full powerhouse capacity (approximately 10 Kcfs). This decision was based on a desire of all parties to not have April outflows from Dworshak of more than 14 Kcfs (approximately 4 Kcfs of spill) and exceed the Idaho water quality standard of 110% Total Dissolved Gas. The end of March Shifted FC elevation is 1519.1 feet; the estimated April 10th Shifted FC elevation is 1510.6 feet at Dworshak.

The Brownlee Reservoir was at an elevation of 2034.6 feet on March 27th, 2008, refilling 1.3 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 12.5 to 17.4 Kcfs over the last week.

Spill: Small amounts of spill occurred at Lower Monumental Dam on March 18th, 21st, 24th, 25th, 26th, 27th as part of RSW testing. Some spill may occur in upcoming days at John Dam as part of TSW testing. The start date for spill at Snake River projects is April 3rd, and April 10th at Lower Columbia projects. The second Powerhouse corner collector is operating at Bonneville Dam.

Smolt Monitoring: Sampling began this week at Lower Granite Dam while SMP activities continued at Bonneville Dam and SMP traps in the Snake River. 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. The Lewiston and Salmon River traps began sampling March 10. 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.

A relatively large numbers of hatchery yearling Chinook were captured at the Salmon River Trap over the past several days. These fish were likely releases from McCall hatchery into the Little Salmon River that began on March 17 or releases into Johnson Creek that began on March 10. Of the 3 PIT-tag recaptures reported at the trap, two were wild yearling chinook marked in Johnson Creek in August of 2007, indicating that some wild fish are beginning to move out of that basin.

Small numbers of juvenile salmonids have been captured at the Grande Ronde Trap, Imnaha Trap and the Lewiston Trap on the Snake River in

the past few weeks of sampling. The Imnaha Trap captured 101 yearling Chinook on March 27 and those fish were entirely unmarked-likely they were all wild fish since at least half of the hatchery release that began at Imnaha Weir (river km 74) were adipose clipped.

At Lower Granite Dam small numbers of yearling Chinook have been captured the first few days of sampling. Six of the nine yearling Chinook in the sample the last two days have been holdover fall Chinook. The only PIT-tagged juvenile Chinook detected to date at Lower Granite was a fall Chinook released from Nez Perce Tribal Hatchery in June of 2007.

At Bonneville Dam the subyearling Chinook catch has continued to decrease as the large releases from Spring Creek hatchery in early March have mostly passed the project. Relatively large numbers of Chinook fry have been captured in the sample. Increasing numbers of yearling Chinook have been passing the project the past few days-the majority of which were unmarked.

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. Releases of approximately 1.13 million yearling spring Chinook from Clearwater Hatchery to the south fork of the Clearwater River were scheduled to begin this past week. A volitional release of 127,491 yearling spring Chinook from the Grande Ronde Acclimation Pond was completed this week. In addition, a volitional release of approximately 117,000 yearling spring Chinook from Catherine Creek Acclimation Pond into the Grande Ronde River began this week. This release is expected to run through mid-April. Finally, a volitional release of approximately 360,000 yearling spring Chinook from the Imnaha Acclimation Pond on the Imnaha River began this week. This release is expected to run through April 6th.

A release of approximately 450,000 yearling fall Chinook from Lyons Ferry Hatchery on the Snake River is scheduled to begin during the first

week of April. There are several releases of yearling spring Chinook scheduled to begin over the next two weeks in this zone. In all, these releases will total about 2.5 million spring Chinook juveniles. Of these, approximately 82% will be released to the Clearwater River or its tributaries. The remaining 18% will be split between the Grande Ronde River (5.3%), the Tucannon River (7.4%), and the Wallowa River (5.3%). Approximately 1.04 million yearling summer Chinook from Pahsimeroi Hatchery are scheduled for release into the Pahsimeroi River, beginning March 31st. Finally, several releases totaling about 3.92 million summer steelhead are scheduled to begin over the next two weeks in this zone. Of these, 43% are scheduled for release into the Salmon River and its tributaries, 21% are scheduled for release into the Pahsimeroi River, and 13% are scheduled for release into the Snake River, below Hells Canyon Dam. The remaining 23% will be split between the Clearwater River (12%), the Wallowa River (9%), and the Tucannon River (2%).

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Approximately 240,000 yearling spring Chinook were scheduled for release into the Walla Walla River, beginning March 24th. There were no other releases of juvenile salmonids scheduled to begin over the past week to the Mid-Columbia River Zone.

Approximately 345,000 yearling spring Chinook are scheduled for release from Ringold Hatchery into the Mid-Columbia River. This release is currently scheduled to occur sometime in early to mid-April. Also scheduled for release in early to mid-April are approximately 32,000 coho to the Wenatchee River and about 905,000 coho to the Yakima River. These releases are part of the Yakama Tribal Program to re-establish Coho runs in the Yakima, Methow, and Wenatchee basins. In all, approximately 2.5 million coho are scheduled for release as part of this program throughout April and May. Finally, approximately 180,000 summer steelhead are scheduled for release from Ringold Hatchery, beginning April 1st. This is a volitional

release that is expected to run through mid-May. At this time, about 240,500 summer steelhead from Turtle Rock Hatchery are scheduled for release into the Wenatchee River, beginning April 1st. However, this date is preliminary and it is unclear as to when these releases will begin. The hatchery database will be updated as soon as we receive verification from the hatchery as to when these releases will begin.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Approximately 376,000 yearling spring Chinook were scheduled for release into the Deschutes River from the Warm Springs National Fish Hatchery, beginning March 23rd. There were no other releases of juvenile salmonids scheduled to begin over the past week in this zone.

A release of approximately 460,000 yearling spring Chinook from Imeques Acclimation Pond to the Umatilla River is scheduled to begin on April 8th. The Warm Springs Tribe is planning a voluntary release of about 69,000 yearling spring Chinook from the Blackberry Acclimation Pond on Hood River, beginning April 9th. This release is expected to run through early May. As part of a PGE passage study, approximately 4,000 summer steelhead from Oak Springs Hatchery are scheduled for release into Lake Billy Chinook on the Deschutes River on or around March 31st. In addition, about 162,000 summer steelhead from Round Butte Hatchery are scheduled for release into the Deschutes River, beginning April 7th. Finally, a release of approximately 2.55 million coho to the Klickitat River is scheduled to begin on March 31st.

Adult Fish Passage:

The traditional or historical counting schedule at Bonneville began March 15th and continues through November 15th. This counting schedule allows for comparison of current year counts with historical data. The traditional counting schedule began on March 1st at Lower Granite Dam. Willamette Falls Dam counts adult salmon throughout the entire year.

Adult counts at Bonneville Dam have been updated through March 25th. Between March 15th and March 25th, 67 spring Chinook had passed Bonneville Dam; this compares to 31 spring Chinook adults over the same period in 2007 and a 10-year average count of 1,009. From March 15th through March 25th, spring Chinook have passed Bonneville Dam on a daily basis. The Bonneville adult steelhead count for the same date range this year was 258 fish which was about 56.5% of the 2007 count of 456 fish. The 2008 wild steelhead count at Bonneville Dam was 117 fish as of March 25th. At Willamette Falls Dam, the 2008 count for steelhead was 1,767, as of March 24th. This year's steelhead count is about 43.7% of the 2007 count of 4,044 at Willamette Falls Dam.

At upriver sites, adult steelhead continue to move through the hydro system to reach their tributaries and spawning sites. The majority of these fish over-wintered in the pools and will complete their trip to the spawning grounds in March through early May. Daily counts at Lower Granite ranged from 120 to 223 adult steelhead last week. The total steelhead count passing at Lower Granite Dam as of March 24th was 3,003. The 2008 count was about 63.8% of the 2007 count of 4,704 and about 84.8% of the 10-year average count of 3,540 at Lower Granite Dam. The 2008 wild steelhead at Lower Granite Dam as of March 24th was 593.

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
03/14/2008	83.1	0.0	91.6	0.0	94.1	0.0	89.3	0.0	86.6	0.0	86.2	0.0	85.6	0.0
03/15/2008	89.6	0.0	85.6	0.0	85.6	0.0	87.5	0.0	91.2	0.0	94.9	0.0	90.6	0.0
03/16/2008	51.2	0.0	47.3	0.0	53.0	0.0	50.9	0.0	52.0	0.0	75.3	0.0	81.2	0.0
03/17/2008	87.2	0.0	93.9	0.0	96.8	0.0	92.9	0.0	94.3	0.0	86.5	0.0	76.2	0.0
03/18/2008	85.8	0.0	85.9	0.0	89.1	0.0	87.0	0.0	87.5	0.0	97.0	0.0	95.2	0.0
03/19/2008	84.8	0.0	81.0	0.0	83.8	0.0	82.3	0.0	84.6	0.0	86.7	0.0	83.9	0.0
03/20/2008	81.7	0.0	84.4	0.0	90.7	0.0	88.6	0.0	87.7	0.0	95.1	0.0	92.0	0.0
03/21/2008	84.1	0.0	80.5	0.0	79.4	0.0	82.5	0.0	84.6	0.0	88.9	0.0	88.6	0.0
03/22/2008	66.9	0.0	62.7	0.0	66.8	0.0	60.8	0.0	61.8	0.0	80.6	0.0	82.8	0.0
03/23/2008	54.1	0.0	61.9	0.0	57.6	0.0	55.0	0.0	54.9	0.0	51.2	0.0	61.5	0.0
03/24/2008	99.6	0.0	102.6	0.0	104.8	0.0	97.2	0.0	97.6	0.0	96.3	0.0	78.8	0.0
03/25/2008	102.4	0.0	95.8	0.0	98.4	0.0	101.4	0.0	98.7	0.0	115.5	0.0	117.4	0.0
03/26/2008	88.6	0.0	92.8	0.0	99.3	0.0	102.3	0.0	103.2	0.0	107.1	0.0	102.1	0.0
03/27/2008	78.6	0.0	88.4	0.0	96.0	0.0	87.4	0.0	86.5	0.0	109.4	0.0	113.0	0.0

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

Date	Dworshak		Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
03/14/2008	1.4	0.0	17.3	16.3	40.9	0.0	40.2	0.0	44.7	0.0	44.7	0.0
03/15/2008	1.3	0.0	17.4	17.7	33.6	0.0	32.5	0.0	33.3	0.0	32.7	0.0
03/16/2008	1.3	0.0	17.1	17.9	37.4	0.0	36.2	0.0	41.2	0.0	38.3	0.0
03/17/2008	7.3	0.0	16.6	18.3	43.8	0.0	42.0	0.0	44.2	0.0	43.7	0.0
03/18/2008	7.6	0.0	15.2	12.7	39.5	0.0	39.4	0.0	43.1	1.5	44.0	0.0
03/19/2008	7.6	0.0	16.7	12.4	37.3	0.0	37.3	0.0	40.8	0.0	41.1	0.0
03/20/2008	7.6	0.0	17.4	16.7	43.3	0.0	40.7	0.0	43.9	0.0	42.0	0.0
03/21/2008	1.3	0.0	18.1	18.7	35.6	0.0	35.4	0.0	37.5	0.1	35.2	0.0
03/22/2008	1.3	0.0	17.4	14.9	33.6	0.0	33.4	0.0	38.1	0.0	37.2	0.0
03/23/2008	1.3	0.0	16.0	12.7	32.7	0.0	30.7	0.0	30.9	0.0	29.6	0.0
03/24/2008	7.6	0.0	14.7	16.4	34.3	0.0	33.3	0.0	36.3	0.8	34.5	0.0
03/25/2008	6.3	0.0	15.7	15.5	41.6	0.0	40.0	0.0	44.3	1.7	45.8	0.0
03/26/2008	7.0	0.0	15.7	16.5	42.0	0.0	40.8	0.0	44.1	1.6	41.3	0.0
03/27/2008	8.4	0.0	16.4	18.1	35.2	0.0	33.7	0.0	34.8	1.9	33.2	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		
03/14/2008	151.0	0.0	155.1	0.0	158.7	0.0	172.5	1.4	76.1	84.0
03/15/2008	114.4	0.0	130.7	0.0	133.3	0.0	151.2	1.4	66.1	72.7
03/16/2008	126.0	0.0	112.1	0.0	115.3	0.0	133.7	1.3	48.7	72.5
03/17/2008	122.7	0.0	133.5	0.0	135.0	0.0	163.2	1.5	70.4	80.4
03/18/2008	139.2	0.0	129.2	0.0	131.2	0.0	145.3	1.4	75.4	59.8
03/19/2008	137.8	0.0	154.3	0.0	158.1	0.0	164.4	1.3	89.6	64.5
03/20/2008	140.1	0.0	142.2	0.0	142.8	0.0	163.9	1.4	91.3	62.7
03/21/2008	131.0	0.0	144.1	0.0	149.0	0.0	162.4	1.4	90.2	61.9
03/22/2008	126.5	0.0	122.6	0.0	123.9	0.0	152.8	1.4	85.9	57.0
03/23/2008	102.9	0.0	107.7	0.0	111.6	0.0	121.4	1.4	37.3	71.7
03/24/2008	118.7	0.0	127.0	0.0	128.5	0.0	126.6	1.3	44.4	69.8
03/25/2008	133.6	0.0	139.6	0.0	144.3	0.0	163.7	1.2	71.8	79.7
03/26/2008	155.4	0.0	150.6	0.0	155.1	0.0	168.4	1.1	71.9	84.3
03/27/2008	155.4	0.0	158.7	0.0	155.3	0.0	163.8	1.2	69.2	82.4

HATCHERY RELEASE LAST TWO WEEKS

Hatchery Release Summary

From: **3/14/2008** to **03/27/08**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2008	141,700	03-26-08	03-31-08	Crooked R Acclim Pond	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	1,060,540	03-17-08	03-20-08	S Fk Salmon River	Salmon River (ID)
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
Idaho Dept. of Fish and Game Total					5,109,640				
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2008	74,400	03-19-08	04-01-08	Lostine Accim Pond	Wallowa River
Nez Perce Tribe Total					74,400				
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2008	360,000	03-25-08	04-06-08	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
Oregon Dept. of Fish and Wildlife Total					599,652				
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2008	376,000	03-23-08	04-23-08	Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service Total					376,000				
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2008	116,892	03-24-08	04-14-08	Catherine Creek	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2008	127,491	03-17-08	03-24-08	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe Total					244,383				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	211,004	03-15-08	05-15-08	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	217,146	03-15-08	05-15-08	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	219,470	03-15-08	05-15-08	Easton Pond	Yakima River
Yakama Tribe Total					647,620				
Grand Total					7,051,695				

HATCHERY RELEASE NEXT TWO WEEKS

Hatchery Release Summary

From: 3/28/2008 to 4/10/2008

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2008	141,700	03-26-08	03-31-08	Crooked R Acclim Pond	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	Clearwater Hatchery	ST	SU	2008	83,000	04-07-08	04-18-08	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2008	144,600	04-07-08	04-18-08	Crooked River Redhouse (SFk ClearH2O R)	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2008	248,500	04-07-08	04-18-08	Squaw Cr Acclim Pond	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2008	60,000	04-07-08	04-07-08		Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2008	215,000	04-07-08	04-10-08	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2008	55,000	04-01-08	04-24-08	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2008	260,000	03-31-08	04-09-08	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2008	525,000	03-31-08	04-09-08	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2008	830,000	04-03-08	04-21-08	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2008	1,038,000	03-31-08	04-15-08	Pahsimeroi River Rapid River	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2008	2,500,000	03-17-08	04-25-08	Hatchery	Little Salmon River
Idaho Dept. of Fish and Game Total					7,508,200				
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2008	309,300	04-01-08	04-08-08	Meadow Creek - SELW Hazard Creek/Little	Selway River
Nez Perce Tribe	Hagerman NFH	ST	SU	2008	40,000	03-31-08	04-02-08	Salmon R	Little Salmon River
Nez Perce Tribe	Hagerman NFH	ST	SU	2008	158,000	03-31-08	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	Wallowa River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2008	131,500	04-10-08	04-17-08	Lostine Accim	Wallowa River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH1	SP	2008	126,000	04-01-08	04-08-08	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe Total					839,200				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2008	360,000	04-08-08	04-08-08	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2008	360,000	03-25-08	04-06-08	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Oak Springs Hatchery	ST	SU	2008	4,000	03-31-08	03-31-08	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2008	162,000	04-07-08	04-07-08	Deschutes River	Deschutes 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
Oregon Dept. of Fish and Wildlife Total					1,125,652				

HATCHERY RELEASE NEXT TWO WEEKS (cont'd)

U.S. Fish and Wildlife	Dworshak NFH	CH1	SP	2008	950,000	04-02-08	04-09-08	Dworshak Hatchery	Clearwater River M
U.S. Fish and Wildlife	Hagerman NFH	ST	SU	2008	100,000	04-02-08	04-04-08	Little Salmon River	Salmon River (ID)
U.S. Fish and Wildlife	Hagerman NFH	ST	SU	2008	782,000	04-07-08	04-25-08	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife	Kooskia NFH	CH1	SP	2008	653,000	04-07-08	04-07-08	Kooskia Hatchery	Clearwater River M
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2008	376,000	03-23-08	04-23-08	Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service Total					2,861,000				
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2008	116,892	03-24-08	04-14-08	Catherine Creek Grande Ronde	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2008	132,501	04-07-08	04-14-08	Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2008	460,000	04-08-08	04-08-08	Imequas Acclim	Umatilla River
Umatilla Tribe Total					709,393				
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2008	69,612	04-09-08	05-07-08	Blackberry Acclim Pond	Hood River
Warm Springs Tribe					69,612				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2008	450,000	04-01-08	04-07-08	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH1	SP	2008	345,000	04-01-08	04-15-08	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2008	180,000	04-01-08	05-05-08	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2008	78,000	04-01-08	04-18-08	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2008	106,000	04-01-08	04-18-08	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2008	57,000	04-01-08	04-18-08	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2008	7,500	04-01-08	04-30-08	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2008	48,000	04-01-08	04-30-08	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2008	87,000	04-01-08	04-30-08	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2008	98,000	04-01-08	04-30-08	Nason Creek	Wenatchee River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2008	2,550,000	03-31-08	03-31-08	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife Total					4,006,500				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	211,004	03-15-08	05-15-08	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	217,146	03-15-08	05-15-08	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2008	219,470	03-15-08	05-15-08	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2008	40,964	04-07-08	05-01-08	Prosser Acclim	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2008	100,000	04-07-08	05-01-08	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2008	100,000	04-07-08	05-01-08	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2008	100,000	04-07-08	05-01-08	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2008	150,000	04-07-08	05-01-08	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2008	40,150	04-07-08	05-01-08	Prosser Acclim	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2008	40,579	04-07-08	05-01-08	Boone Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2008	41,095	04-07-08	05-01-08	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2008	42,447	04-07-08	05-01-08	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2008	120,425	04-07-08	05-01-08	Holmes Pond	Yakima River
Yakama Tribe	Washougal Hatchery	CO	NO	2008	39,726	04-07-08	05-01-08	Yakama River	Yakima River
Yakama Tribe	Washougal Hatchery	CO	NO	2008	89,328	04-07-08	05-01-08	Boone Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2008	32,271	04-01-08	04-10-08	Nason Creek	Wenatchee River
Yakama Tribe Total					1,584,605				
Grand Total					18,704,162				

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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
3/14	98	98	98	24	104	104	104	23	102	102	102	24	103	103	106	23	---	---	---	0
3/15	98	98	98	24	103	104	104	22	102	102	102	24	103	103	105	22	---	---	---	0
3/16	97	98	98	24	103	103	104	22	101	101	102	24	103	103	105	22	---	---	---	0
3/17	97	98	98	24	103	104	105	24	102	102	102	24	103	103	104	24	---	---	---	0
3/18	97	98	98	24	103	104	105	24	102	102	102	24	103	104	105	24	---	---	---	0
3/19	97	98	98	24	103	104	104	23	102	102	103	24	103	104	105	23	---	---	---	0
3/20	97	97	98	24	103	103	103	22	102	102	102	24	103	103	105	22	---	---	---	0
3/21	97	97	97	24	102	102	103	7	101	101	102	24	102	102	103	7	---	---	---	0
3/22	96	96	97	24	103	103	104	14	101	101	101	24	102	102	103	14	---	---	---	0
3/23	97	98	98	24	103	103	104	23	102	103	103	24	104	105	106	23	---	---	---	0
3/24	97	98	98	24	103	104	104	23	102	102	103	24	103	104	105	23	---	---	---	0
3/25	97	97	98	24	103	104	104	23	103	104	104	24	103	104	105	23	---	---	---	0
3/26	97	98	98	24	103	103	104	24	104	105	105	24	103	104	106	24	---	---	---	0
3/27	97	98	98	24	104	104	105	22	104	104	104	24	103	103	105	22	---	---	---	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
3/14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/19	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/21	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/25	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/26	---	---	---	0	103	104	104	19	103	104	104	19	---	---	---	0	---	---	---	0
3/27	---	---	---	0	102	103	103	24	103	103	103	24	---	---	---	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
3/14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/19	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/21	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/25	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/26	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/27	---	---	---	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>Clrwrtr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
3/14	---	---	---	0	---	---	---	0	105	107	107	24	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	107	108	109	24	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	106	107	107	24	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	101	101	106	10	---	---	---	0	---	---	---	0
3/18	---	---	---	0	---	---	---	0	97	99	104	21	---	---	---	0	---	---	---	0
3/19	---	---	---	0	---	---	---	0	97	99	103	24	99	99	100	9	102	102	103	14
3/20	---	---	---	0	---	---	---	0	99	99	105	13	99	99	101	24	102	102	103	24
3/21	---	---	---	0	---	---	---	0	104	106	107	24	101	102	104	24	101	102	103	24
3/22	---	---	---	0	---	---	---	0	105	106	107	24	101	103	105	24	102	104	105	24
3/23	---	---	---	0	---	---	---	0	106	107	108	24	101	102	103	24	102	103	104	24
3/24	---	---	---	0	---	---	---	0	96	96	100	8	99	100	102	24	102	103	103	24
3/25	---	---	---	0	105	105	110	8	99	99	106	13	99	100	102	24	102	103	104	24
3/26	---	---	---	0	103	104	104	24	97	99	106	24	99	100	102	24	102	103	105	24
3/27	---	---	---	0	102	102	103	24	95	95	96	7	98	98	99	24	102	103	104	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwrtr-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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
3/14	---	---	---	0	---	---	---	0	104	104	104	24	---	---	---	0	102	103	103	24
3/15	---	---	---	0	---	---	---	0	103	103	104	24	---	---	---	0	102	103	105	24
3/16	---	---	---	0	---	---	---	0	102	102	103	24	---	---	---	0	101	101	102	24
3/17	---	---	---	0	---	---	---	0	102	102	102	24	---	---	---	0	101	102	102	24
3/18	---	---	---	0	103	103	115	10	102	102	102	24	---	---	---	0	102	102	103	24
3/19	102	102	103	11	101	101	101	24	101	101	101	24	---	---	---	0	102	102	102	24
3/20	101	102	103	24	101	101	101	24	101	101	101	24	---	---	---	0	102	102	103	24
3/21	101	102	104	24	100	101	101	24	100	101	101	24	---	---	---	0	101	101	102	24
3/22	102	105	107	24	100	101	101	24	101	101	102	24	---	---	---	0	100	101	102	24
3/23	102	103	104	24	102	102	102	24	102	102	102	24	---	---	---	0	102	102	102	24
3/24	101	102	104	24	101	101	102	24	101	102	102	24	---	---	---	0	101	101	102	24
3/25	101	103	105	24	101	102	102	24	101	102	102	24	---	---	---	0	101	101	102	24
3/26	101	103	105	24	102	102	103	24	102	102	102	24	---	---	---	0	101	102	102	24
3/27	100	102	104	24	102	102	102	24	102	102	102	24	101	101	102	12	101	101	102	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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
3/14	---	---	---	0	103	103	104	24	---	---	---	0	104	104	105	24	---	---	---	0
3/15	---	---	---	0	103	103	103	24	---	---	---	0	103	103	105	24	---	---	---	0
3/16	---	---	---	0	102	102	102	24	---	---	---	0	102	102	103	24	---	---	---	0
3/17	---	---	---	0	102	102	102	24	---	---	---	0	102	103	103	24	---	---	---	0
3/18	---	---	---	0	103	104	109	24	---	---	---	0	102	103	103	24	---	---	---	0
3/19	---	---	---	0	102	102	102	24	---	---	---	0	102	103	103	24	---	---	---	0
3/20	---	---	---	0	102	102	102	24	---	---	---	0	102	102	103	24	---	---	---	0
3/21	---	---	---	0	101	102	105	24	---	---	---	0	101	101	103	24	---	---	---	0
3/22	---	---	---	0	101	102	103	24	---	---	---	0	101	101	102	24	---	---	---	0
3/23	---	---	---	0	102	103	103	24	---	---	---	0	102	103	103	24	---	---	---	0
3/24	---	---	---	0	103	105	110	24	---	---	---	0	102	102	103	24	---	---	---	0
3/25	---	---	---	0	104	105	108	24	---	---	---	0	102	102	103	24	---	---	---	0
3/26	103	103	104	9	104	106	111	24	103	103	103	13	103	103	104	24	---	---	---	0
3/27	102	102	103	24	104	106	110	24	102	102	103	24	102	102	103	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>	
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
3/14	---	---	---	0	105	105	105	24	---	---	---	0	104	105	105	24	---	---	---	0
3/15	---	---	---	0	104	105	105	24	---	---	---	0	104	104	104	24	---	---	---	0
3/16	---	---	---	0	103	103	104	24	---	---	---	0	103	103	103	24	---	---	---	0
3/17	---	---	---	0	103	103	103	24	---	---	---	0	103	103	104	24	---	---	---	0
3/18	---	---	---	0	103	103	104	24	---	---	---	0	103	104	104	24	---	---	---	0
3/19	---	---	---	0	103	103	104	24	105	105	111	10	103	103	104	24	104	104	104	12
3/20	---	---	---	0	103	103	103	24	104	104	104	24	103	103	103	24	103	103	104	24
3/21	---	---	---	0	102	102	103	24	103	103	104	24	102	102	103	24	102	102	103	24
3/22	---	---	---	0	102	103	103	24	103	104	104	24	102	103	103	24	102	103	103	24
3/23	---	---	---	0	103	103	104	24	104	104	105	24	103	104	105	24	104	104	105	24
3/24	---	---	---	0	103	103	103	24	103	103	104	24	103	103	106	24	103	103	103	24
3/25	104	104	105	12	103	104	104	24	103	104	104	24	103	103	103	24	103	104	104	24
3/26	104	105	105	24	105	105	105	24	104	104	104	24	103	103	103	24	104	104	104	24
3/27	103	103	104	24	103	103	103	24	103	103	103	24	102	102	103	24	102	102	103	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>CamasWashougal</u>			<u>Cascade Island</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>	
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
3/14	104	104	105	24	104	104	105	24	106	106	107	24	106	106	107	24	112	113	114	24
3/15	104	104	104	24	104	104	104	24	106	106	107	24	105	106	106	24	112	113	114	24
3/16	102	102	103	24	102	103	103	24	106	106	107	24	105	106	106	24	112	113	114	24
3/17	103	103	104	24	102	103	103	24	105	105	106	24	105	106	106	24	113	114	116	24
3/18	103	104	104	24	103	103	103	24	104	104	105	24	105	105	105	24	111	113	114	24
3/19	103	104	104	24	103	103	104	24	104	104	105	24	104	105	106	24	112	113	115	24
3/20	103	103	104	24	103	103	104	24	104	104	105	24	104	105	106	24	112	113	114	24
3/21	102	102	102	24	102	102	103	24	103	104	104	24	103	104	105	24	111	112	114	24
3/22	102	103	103	24	102	103	103	24	103	104	104	24	103	104	105	24	114	115	115	24
3/23	103	104	104	24	103	103	103	24	106	107	107	24	103	104	104	24	113	115	117	24
3/24	103	103	103	24	103	103	104	24	107	107	108	24	106	107	108	24	113	114	115	24
3/25	103	103	104	24	104	104	105	24	106	106	106	24	106	107	108	24	116	118	121	24
3/26	103	103	104	24	104	104	105	24	105	106	106	24	105	106	107	24	116	118	120	24
3/27	102	102	102	24	102	103	103	24	104	105	105	24	104	105	106	24	116	117	118	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)
03/14/2008	0	0	0	0	---	---	---	---	---	---	0
03/15/2008	0	0	0	0	---	---	---	---	---	---	0
03/16/2008	0	0	0	0	---	---	---	---	---	---	0
03/17/2008	0	0	0	0	---	---	---	---	---	---	0
03/18/2008	0	0	0	0	---	---	---	---	---	---	0
03/19/2008	*	0	0	0	---	---	---	---	---	---	0
03/20/2008	*	0	0	0	---	---	---	---	---	---	0
03/21/2008	*	0	0	0	---	---	---	---	---	---	0
03/22/2008	*	0	0	0	---	---	---	---	---	---	0
03/23/2008		0	0	0	---	---	---	---	---	---	0
03/24/2008		0	0	0	---	---	---	---	---	---	0
03/25/2008		0	0	0	---	---	---	---	---	---	0
03/26/2008		0	0	0	0	---	---	---	---	---	0
03/27/2008	*	0	---	0	0	10	---	---	---	---	0
03/28/2008		---	---	---	---	---	---	---	---	---	---
<hr/>											
Total:	0	0	0	0	10	0	0	0	0	0	0
# Days:	14	13	14	14	2	0	0	0	0	0	14
Average:	0	0	0	0	5	0	0	0	0	0	0
YTD	0	0	0	0	10	0	0	0	0	0	0

* 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.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

3/28/08 9:39 AM

03/14/08 TO 03/28/08

		Species			
Site	Data	CH1	SO	ST	Grand Total
LGR	Sum of NumberCollected	90	10	10	110
	Sum of NumberBarged	0	0	0	0
	Sum of NumberBypassed	90	10	10	110
	Sum of Numbertrucked	0	0	0	0
	Sum of SampleMorts	0	0	0	0
	Sum of FacilityMorts	0	0	0	0
	Sum of ResearchMorts	0	0	0	0
	Sum of TotalProjectMorts	0	0	0	0
Total Sum of NumberCollected		90	10	10	110
Total Sum of NumberBarged		0	0	0	0
Total Sum of NumberBypassed		90	10	10	110
Total Sum of Numbertrucked		0	0	0	0
Total Sum of SampleMorts		0	0	0	0
Total Sum of FacilityMorts		0	0	0	0
Total Sum of ResearchMorts		0	0	0	0
Total Sum of TotalProjectMorts		0	0	0	0

YTD Transportation Summary

Source: Fish Passage Center

Updated:

3/28/08 9:39 AM

TO: 03/28/08

		Species			
Site	Data	CH1	SO	ST	Grand Total
LGR	Sum of NumberCollected	90	10	10	110
	Sum of NumberBarged	0	0	0	0
	Sum of NumberBypassed	90	10	10	110
	Sum of NumberTrucked	0	0	0	0
	Sum of SampleMorts	0	0	0	0
	Sum of FacilityMorts	0	0	0	0
	Sum of ResearchMorts	0	0	0	0
	Sum of TotalProjectMorts	0	0	0	0
Total Sum of NumberCollected		90	10	10	110
Total Sum of NumberBarged		0	0	0	0
Total Sum of NumberBypassed		90	10	10	110
Total Sum of NumberTrucked		0	0	0	0
Total Sum of SampleMorts		0	0	0	0
Total Sum of FacilityMorts		0	0	0	0
Total Sum of ResearchMorts		0	0	0	0
Total Sum of TotalProjectMorts		0	0	0	0

Cumulative Adult Passage at Mainstem Dams Through: 03/27

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	03/25	67	0	31	0	1009	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	03/24	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	03/24	0	0	13	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	258	456	411	117	
TDA	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	
MCN	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	
LMN	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	
LGR	0	0	0	0	0	0	0	0	3003	4704	3540	593	
PRD	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	
RRH	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	
WFA	0	0	2	0	-	-	0	0	1767	4044	-	-	

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: 03/28/08

BON counts from January 1, 2008 to March 14, 2008 (our traditional counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2008	42	0	578	278
2007	22	0	1,677	517