



Fish Passage Center

Weekly Report #09 - 02

March 20, 2009

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 67% and 161% of average at individual sub-basins over the first half of March. Precipitation above The Dalles has been 129% of average over March. Over the entire water year, precipitation has generally been near 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 2009 March 1-16		Water Year 2009 October 1, 2008 to March 16 2009	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.17	127	12.6	94
Snake River Above Ice Harbor	1.02	120	9.72	102
Columbia Above The Dalles	1.28	129	12.94	97
Kootenai	1.29	140	12.25	89
Clark Fork	0.73	118	9.59	114
Flathead	0.94	111	10.84	95
Pend Oreille/Spokane	1.94	136	17.14	91
Central Washington	0.61	142	4.83	88
Snake River Plain	0.39	67	5.14	92
Salmon/Boise/Payette	1.61	161	10.37	88
Clearwater	1.83	127	19.13	111
SW Washington Cascades/Cowlitz	3.97	109	43.27	86
Willamette Valley	4.13	125	34.32	81

Snowpack within the Columbia Basin has generally been below average with the exception of lower Columbia Basins. Average snowpack in the Columbia River for basins above the Snake River confluence is 84% of average, for Snake River Basins the average snowpack is 85% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 112% of average.

Table 2 displays the March Final and March Mid-Month runoff volume forecasts for multiple reservoirs. In all cases, Water Supply Forecasts have increased between the March Final and March Mid-Month forecasts. The current forecast at The Dalles between January and July is 87700 Kaf (82% of average).

Table 2. March Final and March Mid-Month Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.

Location	March Final		March Mid-Month	
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	80	86200	82	87700
Grand Coulee (Jan-July)	87	54900	88	55600
Libby Res. Inflow, MT (Apr-Aug)	84 84*	5250 5296*	87	5440
Hungry Horse Res. Inflow, MT (Jan-July)	90	2010	92	2050
Lower Granite Res. Inflow (Apr- July)	75	16200	79	17100
Brownlee Res. Inflow (Apr-July)	53	3350	58	3670
Dworshak Res. Inflow (Apr-July)	82 92*	2170 2461*	87	2290

* Denotes COE Forecast

Grand Coulee Reservoir is at 1283.1 feet (3-19-09) and has drafted 1.1 feet in the last week. The Salmon Managers and the Action agencies have 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 1281.6 feet at Grand Coulee. Outflows at Grand Coulee have ranged between 45.7 and 91.3 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2404.2 feet (3-19-09) and drafted 0.6 feet last week. The end of March VarQ FC elevation at Libby is 2442.6 feet, therefore Libby is currently 38.4 feet below the end of March VarQ FC elevation at Libby. Outflows at Libby have been 4.0 Kcfs.

Hungry Horse is currently at an elevation of 3509.8 ft (3-19-09) and has drafted 1.2 feet last week. Outflows at Hungry Horse have been 2.8-2.9 Kcfs last week; Hungry Horse has been operating to Columbia Falls Minimum outflows. Hungry Horse's end of March VarQ FC elevation is 3539.5 feet, therefore Hungry Horse is currently 29.7 feet below the end of March VarQ FC elevation at Hungry Horse.

Dworshak is currently at an elevation of 1532.5 feet (3-19-09) and refilled 2.2 feet last week; outflows at Dworshak are 1.6 Kcfs. As stated previously, there will be a DWR/GCL shift in 2009. The end of March Shifted FC elevation is 1542.7 feet at Dworshak.

The Brownlee Reservoir was at an elevation of 2053.0 feet on March 19th, 2009, refilling 1.5 feet last week. The end of March FC elevation is 2074.6 feet at Brownlee Dam, therefore Brownlee is currently 21.6 feet below its end of March FC elevation. Outflows at Brownlee Dam have been 9.8 to 14.9 Kcfs over the last week.

Smolt Monitoring:

Smolt monitoring activities continued this week at Bonneville Dam. 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 9. 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 on March 9 as well. 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. 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.

In the next few weeks more SMP sites will begin reporting data. Lower Granite Dam will begin sampling March 26 and other SMP traps will also begin Marking towards the end of March.

Significant numbers of hatchery yearling Chinook were captured at traps on the Imnaha Trap and Salmon River Trap over the past several days as hatcheries began volitional releases within those basins. The Looking Glass Hatchery began the release of 125,000 smolts on March 18 at the Lostine Acclimation facility, while a direct volitional release from Rapid River Hatchery of 2,500,000 yearling Chinook began on March 16.

At Bonneville Dam the passage of Klickitat River hatchery yearling Chinook have diminished to only a few fish per day in the past week. The SMP crew have captured mostly Chinook and Coho fry over the past few days of sampling.

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. There were several releases of yearling spring Chinook scheduled to begin over the past week in this zone. In all, these releases total approximately 5.8 million spring Chinook juveniles. Of these, approximately 59% were scheduled for release into the Little Salmon River from Rapid River Hatchery, while 39% were scheduled for release throughout the Clearwater River Basin. The remaining 2% of these spring Chinook juveniles were released from the Lostine Acclimation Ponds on the Wallowa River. In addition to the spring Chinook releases, approximately 91,000 summer Chinook juveniles were scheduled for release into Johnson Creek, beginning March 16th.

There are several releases of yearling spring Chinook juveniles to this zone scheduled to take place over the next two weeks. In all, these releases will total about 4.6 million spring Chinook juveniles. Of these, approximately 54% are being released into the Little Salmon River from Rapid River Hatchery. This release was scheduled to begin on March 16th and will run through April 2nd.

Approximately 43.5% of the yearling spring Chinook scheduled for release over the next two weeks will be released to the Clearwater River or its tributaries by various hatcheries throughout the basin. The remaining 2.5% are scheduled for release from Curl Lake Acclimation Pond on the Tucannon River. Approximately 1.98 million yearling summer Chinook are scheduled for release into this zone over the next two week. Of these, 56% will be released into the Salmon River while the remaining 44% will be released into the Pahsimeroi River. Beginning the first week of April, about 450,000 yearling fall Chinook are scheduled for release from Lyons Ferry Hatchery into the Snake River. Finally, nearly 2.23 million summer steelhead are scheduled for release into the Snake River Zone over the next two weeks. Of these, 37% are scheduled for release into the Clearwater River, 32% are scheduled for release into the Salmon River or Little Salmon River, 23% are scheduled for release into the Snake River at Hells Canyon Dam, and 8% are scheduled for release into the Grand Rhonde River.

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 772,000 spring Chinook juveniles from Cle Elem Hatchery acclimation sites were scheduled to begin on March 16th. These releases are expected to run through mid-May. There were no other releases of juvenile salmonids scheduled to begin over the past week to the Mid-Columbia River Zone.

Approximately 250,000 yearling spring Chinook from Carson NFH are scheduled for release into the Walla Walla River, beginning April 1st. Also scheduled for release in early to mid-April are approximately 39,000 coho to the Wenatchee River. This release is part of the Yakama Tribal Program to re-establish Coho runs in the Yakima, Methow, and Wenatchee basins. In all, approximately 2.4 million coho are scheduled for release in 2009 as part of this program. These releases are scheduled to run from early April to mid-May.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Approximately, 570,000 yearling spring Chinook juveniles from Warm Spring NFH were scheduled for release into the Deschutes River, beginning March 20th. This release is expected to run through mid-April. Also, scheduled for release this week were 500,000 coho juveniles to the Umatilla River.

Approximately 85% of these coho juveniles are unmarked.

Approximately 12,400 summer steelhead are scheduled for release into Lake Billy Chinook as part of a PGE passage study on the Deschutes River. Finally, a release of approximately 2.5 million coho to the Klickitat River is scheduled to begin on April 1st.

Adult Fish Passage:

Historically counts began at Bonneville Dam on March 15th. Using the historical counting schedule allows comparison of current year counts with historical data. We use the historical counting schedule to generate our online Annual Adult Comparison table and our Adult Salmon Passage Graph.

The Lower Granite Dam historical counting schedule starts on March 1st. 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 also uses video counts and reports adult counts year round. We collect the adult count data from these projects throughout the day, continuously updating our Adult Dam Count report linked on our homepage (www.fpc.org). The following paragraph describes the Bonneville Dam winter counts for 2009 and compares them with 2008 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 over-winter in pools and will complete their spawning trip in March through early May. At Bonneville Dam, the total winter steelhead count from Jan 1st through March 14th was 321. In 2008, for the same date range, the Bonneville steelhead count was 568. This year's Bonneville Dam winter steelhead count is only about 56.5% of the 2008 count (includes hatchery and wild fish). The 2009 winter wild steelhead count of 109 is 40% of the 2008 winter count of 273. The 2009 winter adult spring Chinook count at Bonneville Dam of 19 was about 45.2% of the 2008 count of 42.

The following paragraphs describe the counts at Bonneville Dam, Willamette Falls Dam, and Lower Granite Dam using the historical counting schedule.

Between March 15th and March 18th, 24 spring Chinook have been counted at Bonneville Dam.

In 2008, 26 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2009 adult Chinook count at Bonneville Dam is only 5% of the 10 year average of 446. At Willamette Falls Dam 6 adult spring Chinook have been counted so far this year.

The Bonneville Dam 2009 steelhead count of 80 was 74.7% of the 2008 count of 107. The 2009 steelhead count is about 47.3% of the 10-year average. This year's Lower Granite steelhead count of 1346 is 70.5% of the 2008 count of 1908 and 52.3% of the 10 year average of 2572. At Willamette Falls Dam, the 2009 count for steelhead was 1431, as of March 17th. This year's steelhead count is only about 58.1% of the 2008 count of 2460 at Willamette Falls Dam for the same date range.

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
03/06/2009	67.0	0.0	65.5	0.0	69.2	0.0	75.1	0.0	76.6	0.0	75.2	0.0	66.8	0.0
03/07/2009	41.8	0.0	40.6	0.0	39.8	0.0	35.4	0.0	37.7	0.0	61.1	0.0	61.9	0.0
03/08/2009	41.1	0.0	38.8	0.0	49.7	0.0	54.4	0.0	54.6	0.0	69.2	0.0	61.5	0.0
03/09/2009	90.8	0.0	93.4	0.0	88.2	0.0	81.2	0.0	81.3	0.0	54.2	0.0	62.3	0.0
03/10/2009	85.4	0.0	88.7	0.0	93.6	0.0	90.7	0.0	90.7	0.0	69.9	0.0	62.0	0.0
03/11/2009	64.3	0.0	64.6	0.0	66.7	0.0	68.7	0.0	73.3	0.0	72.7	0.0	68.9	0.0
03/12/2009	64.3	0.0	60.8	0.0	57.2	0.0	52.3	0.0	53.9	0.0	65.8	0.0	68.8	0.0
03/13/2009	57.0	0.0	61.3	0.0	64.6	0.0	64.6	0.0	66.0	0.0	63.4	0.0	62.0	0.0
03/14/2009	45.7	0.0	43.8	0.0	49.0	0.0	49.5	0.0	49.4	0.0	67.3	0.0	61.9	0.0
03/15/2009	51.0	0.0	56.2	0.0	55.0	0.0	55.9	0.0	55.7	0.0	59.8	0.0	62.1	0.0
03/16/2009	91.3	0.0	93.5	0.0	92.8	0.0	88.7	0.0	88.6	0.0	74.3	0.0	63.6	0.0
03/17/2009	82.3	0.0	79.1	0.0	82.6	0.0	82.7	0.0	84.3	0.0	89.2	0.0	87.2	0.0
03/18/2009	78.3	0.0	77.8	0.0	82.5	0.0	83.4	0.0	85.5	0.0	95.3	0.0	94.2	0.0
03/19/2009	67.0	0.0	67.3	0.0	71.3	0.0	72.2	0.0	74.3	0.0	84.9	0.0	82.6	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
03/06/2009	1.6	0.0	15.6	16.4	45.8	0.0	37.9	0.0	40.0	0.0	40.9	0.0	40.9	0.0
03/07/2009	1.6	0.0	15.0	19.6	38.8	0.0	37.3	0.0	39.6	0.0	38.5	0.0	38.5	0.0
03/08/2009	1.6	0.0	13.2	12.9	35.0	0.0	35.0	0.0	36.7	0.0	37.3	0.0	37.3	0.0
03/09/2009	1.6	0.0	13.3	16.6	33.8	0.0	32.6	0.0	36.0	0.0	37.8	0.0	37.8	0.0
03/10/2009	1.6	0.0	13.1	20.6	32.5	0.0	30.6	0.0	31.5	0.0	31.8	0.0	31.8	0.0
03/11/2009	1.6	0.0	12.2	18.2	38.2	0.0	36.2	0.5	39.5	0.0	39.5	0.0	39.5	0.0
03/12/2009	1.6	0.0	13.1	17.7	35.4	0.0	35.4	0.0	37.4	0.0	36.8	0.0	36.8	0.0
03/13/2009	1.6	0.0	12.0	15.2	31.5	0.0	36.3	0.0	36.9	0.0	37.8	0.0	37.8	0.0
03/14/2009	1.6	0.0	11.5	12.7	28.3	0.0	32.6	0.0	34.5	0.0	35.4	0.0	35.4	0.0
03/15/2009	1.6	0.0	11.5	9.9	26.5	0.0	26.7	0.0	30.0	0.0	30.1	0.0	30.1	0.0
03/16/2009	1.6	0.0	13.1	16.3	30.5	0.0	27.8	0.8	31.7	0.0	33.8	0.0	33.8	0.0
03/17/2009	1.6	0.0	15.6	10.9	37.6	0.0	36.2	2.1	41.7	0.0	42.3	0.0	42.3	0.0
03/18/2009	1.6	0.0	14.8	11.6	34.6	0.0	32.5	2.1	37.4	0.0	37.7	0.0	37.7	0.0
03/19/2009	1.6	0.0	---	---	32.2	0.0	30.9	2.0	33.6	0.0	33.5	0.0	33.5	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		
03/06/2009	110.4	0.0	130.0	0.0	134.4	0.0	157.8	1.3	41.7	108.4
03/07/2009	106.5	0.0	100.6	0.0	102.9	0.0	114.2	1.4	7.2	99.6
03/08/2009	108.3	0.0	114.1	0.0	113.4	0.0	119.0	1.4	8.6	103.0
03/09/2009	100.8	0.0	106.9	0.0	108.4	0.0	121.7	1.3	17.1	97.3
03/10/2009	101.2	0.0	108.1	0.0	110.6	0.0	122.5	1.3	18.7	96.4
03/11/2009	107.4	0.0	108.5	0.0	111.1	0.0	125.0	1.4	49.8	67.8
03/12/2009	108.3	0.0	119.1	0.0	117.9	0.0	127.1	1.8	49.8	69.6
03/13/2009	104.6	0.0	109.3	0.0	114.9	0.0	125.3	1.3	17.6	100.4
03/14/2009	103.1	0.0	105.4	0.0	108.3	0.0	120.3	1.3	15.3	97.2
03/15/2009	98.7	0.0	97.4	0.0	100.2	0.0	115.8	1.3	8.8	99.7
03/16/2009	108.7	0.0	114.3	0.0	113.7	0.0	118.3	1.3	10.0	100.9
03/17/2009	122.0	0.0	124.4	0.0	128.6	0.0	141.8	1.3	24.9	109.6
03/18/2009	124.2	0.0	133.3	0.0	136.5	0.0	150.4	1.3	48.2	94.9
03/19/2009	119.4	0.0	118.6	0.0	118.2	0.0	132.5	1.3	29.7	95.5

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 3/6/2009 **to** 03/19/09

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	333,914	03-15-09	04-15-09	Lochsa River	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	404,155	03-15-09	04-15-09	Lochsa River	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	404,989	03-15-09	04-15-09	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	703,326	03-15-09	04-15-09	Crooked River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2009	500,000	03-16-09	03-19-09	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2009	2,500,000	03-16-09	04-02-09	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game									
Total					4,846,384				
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2009	399,953	03-15-09	04-15-09	Selway River	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2009	124,500	03-18-09	03-31-09	Lostine Accim Pond	Wallowa River
									South Fork Salmon River
Nez Perce Tribe	McCall Hatchery	CH1	SU	2009	91,150	03-16-09	03-20-09	Johnson Cr Idaho	River
Nez Perce Tribe Total					615,603				
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2009	58,854	03-12-09	03-12-09	Imnaha River	Imnaha River
Oregon Dept. of Fish and Wildlife Total					58,854				
Umatilla Tribe	Bonneville Hatchery	CH0	FA	2009	227,950	03-04-09	03-10-09	Pendelton Acclim Pond	Umatilla River
								Thornhollow Acclim Pond	
Umatilla Tribe	Bonneville Hatchery	CH0	FA	2009	239,024	03-04-09	03-11-09	Pond	Umatilla River
Umatilla Tribe	Lower Herman Cr	CO	UN	2009	509,450	03-04-09	03-10-09	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Oxbow-Oregon	CO	UN	2009	500,000	03-15-09	03-15-09	Umatilla River	Umatilla River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2009	460,000	03-02-09	04-15-09	Imeques Acclim Pond	Umatilla River
Umatilla Tribe Total					1,936,424				
								Jack Creek Acclim Pond	
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	251,067	03-16-09	05-15-09	Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	254,889	03-16-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	266,044	03-16-09	05-15-09	Clark Flat Acclim Pond	Yakima River
Yakama Tribe Total					772,000				
Grand Total					8,229,265				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:									
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	333,914	03-15-09	04-15-09	Lochsa River	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	404,155	03-15-09	04-15-09	Lochsa River	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	404,989	03-15-09	04-15-09	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2009	703,326	03-15-09	04-15-09	Crooked River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2009	100,686	04-01-09	04-30-09	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2009	165,457	04-01-09	04-30-09	Crooked River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2009	264,219	04-01-09	04-30-09	S Fk Clearwater River	Clearwater River M F
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2009	1,106,000	03-23-09	03-26-09	S Fk Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2009	170,000	04-01-09	05-01-09	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2009	275,000	04-01-09	04-08-09	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2009	525,000	03-23-09	04-01-09	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2009	871,110	03-30-09	04-15-09	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2009	200,000	03-20-09	03-20-09	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2009	2,500,000	03-16-09	04-02-09	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game Total					8,023,856				
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2009	399,953	03-15-09	04-15-09	Selway River	Clearwater River M F
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2009	25,360	04-01-09	04-30-09	Meadow Creek - CLES	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2009	25,360	04-01-09	04-30-09	Mill Cr Bridge	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2009	50,271	04-01-09	04-30-09	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2009	73,324	04-01-09	04-30-09	Crooked River	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2009	131,939	04-01-09	04-30-09	Red River	S Fk Clearwater River
Nez Perce Tribe	Hagerman NFH	ST	SU	2009	160,000	03-30-09	04-03-09	Little Salmon River	Salmon River (ID)
Nez Perce Tribe	Kooskia NFH	CH1	SP	2009	162,000	03-24-09	04-04-09	Kooskia Hatchery	Clearwater River M F
Nez Perce Tribe	Kooskia NFH	CH1	SP	2009	443,000	03-24-09	04-04-09	Kooskia Hatchery	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2009	61,800	03-31-09	03-31-09	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2009	62,100	03-31-09	03-31-09	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2009	124,500	03-18-09	03-31-09	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	McCall Hatchery	CH1	SU	2009	91,150	03-16-09	03-20-09	Johnson Cr Idaho Nez Perce Tribal	River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH1	SP	2009	133,000	04-01-09	04-15-09	Hatchery	Clearwater River M F
Nez Perce Tribe Total					1,943,757				
Oregon Dept. of Fish and Wildlife	Oak Springs Hatchery	ST	SU	2009	12,400	04-01-09	04-01-09	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					12,400				
U.S. Fish and Wildlife Service	Dworshak NFH	CH1	SP	2009	1,025,000	03-21-09	04-09-09	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2009	100,000	03-25-09	03-27-09	Little Salmon River Warm Springs	Salmon River (ID)
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2009	570,000	03-20-09	04-20-09	Hatchery	Deschutes River
U.S. Fish and Wildlife Service Total					1,695,000				
Umatilla Tribe	Carson NFH	CH1	SP	2009	250,000	04-01-09	04-08-09	Walla Walla River	Walla Walla River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2009	460,000	03-02-09	04-15-09	Imeques Acclim Pond	Umatilla River
Umatilla Tribe Total					710,000				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2009	447,500	04-01-09	04-15-09	Lyons Ferry Hatchery Cottonwood Acclim	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2009	168,000	04-01-09	04-30-09	Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2009	55,000	04-01-09	04-21-09	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2009	59,000	04-01-09	04-21-09	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2009	2,500,000	04-01-09	04-15-09	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife Total					3,229,500				
Yakama Tribe	Cascade Hatchery	CO	UN	2009	38,869	04-01-09	04-15-09	Nason Creek Jack Creek Acclim	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	251,067	03-16-09	05-15-09	Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	254,889	03-16-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	266,044	03-16-09	05-15-09	Clark Flat Acclim Pond	Yakima River
Yakama Tribe Total					810,869				
Grand Total					16,425,382				

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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
3/6	---	---	---	0	106	107	108	23	100	101	101	24	102	103	104	23	---	---	---	0
3/7	---	---	---	0	108	108	108	23	101	102	102	24	104	106	107	23	---	---	---	0
3/8	---	---	---	0	106	107	107	22	101	102	102	22	103	104	105	22	---	---	---	0
3/9	---	---	---	0	106	107	107	24	101	102	102	24	103	104	105	24	---	---	---	0
3/10	---	---	---	0	103	104	106	24	100	101	101	24	102	102	104	24	99	99	99	15
3/11	---	---	---	0	101	102	102	24	100	100	100	24	101	102	103	24	99	100	100	24
3/12	---	---	---	0	101	102	103	22	100	100	100	24	102	102	103	22	99	99	100	24
3/13	---	---	---	0	102	103	103	23	100	100	100	8	103	104	105	23	100	100	101	24
3/14	---	---	---	0	103	103	104	23	---	---	---	0	105	106	107	23	101	101	102	24
3/15	---	---	---	0	103	103	104	23	---	---	---	0	106	107	108	23	102	102	102	24
3/16	---	---	---	0	102	102	104	22	---	---	---	0	104	105	108	22	101	101	101	24
3/17	---	---	---	0	101	101	102	22	---	---	---	0	103	104	106	22	101	101	101	24
3/18	---	---	---	0	101	103	104	23	101	101	101	18	103	103	104	23	101	101	102	24
3/19	---	---	---	0	102	103	104	23	102	102	102	22	104	105	106	23	102	102	102	24

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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
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	104	104	104	1	---	---	---	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
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	102	103	104	15	---	---	---	0	---	---	---	0	---	---	---	0
3/19	108	109	111	24	---	---	---	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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>				
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>						
3/6	---	---	---	0	---	---	---	0	100	101	101	24	100	101	101	24	101	101	102	24
3/7	---	---	---	0	---	---	---	0	101	101	102	24	102	102	102	24	102	102	103	24
3/8	---	---	---	0	---	---	---	0	101	101	102	24	101	101	102	24	102	102	102	24
3/9	---	---	---	0	---	---	---	0	100	101	101	24	101	101	101	24	101	102	102	24
3/10	---	---	---	0	---	---	---	0	100	100	101	24	100	100	101	24	100	100	101	24
3/11	---	---	---	0	---	---	---	0	99	99	100	24	100	100	100	24	99	100	100	24
3/12	---	---	---	0	---	---	---	0	99	99	99	24	100	100	100	24	100	100	101	24
3/13	---	---	---	0	---	---	---	0	100	100	101	24	101	102	102	24	101	102	103	24
3/14	---	---	---	0	---	---	---	0	101	102	103	24	103	103	103	24	103	103	104	24
3/15	---	---	---	0	---	---	---	0	103	103	104	24	103	104	104	24	103	104	104	24
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

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			Clrwrtr-Peck			Anatone			#				
	24 h	12 h	High	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h					
	Avg	Avg			Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg					
3/6	101	102	102	24	---	---	---	0	99	100	101	24	---	---	---	0	---	---	---	0
3/7	102	103	103	24	---	---	---	0	100	101	101	24	---	---	---	0	---	---	---	0
3/8	102	102	103	24	---	---	---	0	100	101	101	23	---	---	---	0	---	---	---	0
3/9	102	102	102	24	---	---	---	0	100	101	101	24	---	---	---	0	---	---	---	0
3/10	100	101	101	24	---	---	---	0	99	100	100	24	---	---	---	0	---	---	---	0
3/11	100	100	101	24	---	---	---	0	99	100	101	24	---	---	---	0	---	---	---	0
3/12	100	101	101	24	---	---	---	0	99	100	101	24	---	---	---	0	---	---	---	0
3/13	102	103	103	24	---	---	---	0	99	99	99	7	---	---	---	0	---	---	---	0
3/14	103	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/15	103	104	105	24	---	---	---	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

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwrtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr			#				
	24 h	12 h	High	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h					
	Avg	Avg			Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg					
3/6	---	---	---	0	---	---	---	0	101	101	102	24	---	---	---	0	101	101	102	24
3/7	---	---	---	0	---	---	---	0	101	101	102	24	---	---	---	0	101	101	102	24
3/8	---	---	---	0	---	---	---	0	101	101	101	22	---	---	---	0	100	100	101	22
3/9	---	---	---	0	---	---	---	0	100	100	101	24	---	---	---	0	100	100	100	24
3/10	---	---	---	0	---	---	---	0	99	99	100	24	---	---	---	0	98	99	99	24
3/11	---	---	---	0	---	---	---	0	98	98	99	24	---	---	---	0	99	100	105	24
3/12	---	---	---	0	---	---	---	0	99	99	99	24	---	---	---	0	98	99	99	24
3/13	---	---	---	0	---	---	---	0	99	99	100	7	---	---	---	0	99	99	99	7
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

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	High	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h					
	Avg	Avg			Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg					
3/6	---	---	---	0	101	101	102	24	---	---	---	0	101	102	102	24	---	---	---	0
3/7	---	---	---	0	102	102	102	24	---	---	---	0	102	102	103	24	---	---	---	0
3/8	---	---	---	0	101	101	102	22	---	---	---	0	102	102	102	22	---	---	---	0
3/9	---	---	---	0	101	101	102	24	---	---	---	0	102	102	102	24	---	---	---	0
3/10	---	---	---	0	100	100	101	24	---	---	---	0	101	101	101	24	---	---	---	0
3/11	---	---	---	0	99	100	100	24	---	---	---	0	100	100	101	24	---	---	---	0
3/12	---	---	---	0	99	99	100	24	---	---	---	0	100	100	100	24	---	---	---	0
3/13	---	---	---	0	99	99	99	8	---	---	---	0	100	100	100	7	---	---	---	0
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	100	100	101	7	---	---	---	0
3/18	---	---	---	0	---	---	---	0	---	---	---	0	101	101	101	24	---	---	---	0
3/19	---	---	---	0	---	---	---	0	102	102	102	9	101	102	102	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	McNary-Wash			#	McNary Tlwr			#	John Day			#	John Day Tlwr			#	The Dalles			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24h Avg	12h Avg	High		24h Avg	12h Avg	High		24h Avg	AVG	High	
3/6	---	---	---	0	102	102	102	24	---	---	---	0	103	103	103	24	---	---	---	0
3/7	---	---	---	0	102	103	103	24	---	---	---	0	104	104	104	24	---	---	---	0
3/8	---	---	---	0	102	102	102	22	---	---	---	0	103	103	103	23	---	---	---	0
3/9	---	---	---	0	102	102	102	24	---	---	---	0	102	102	103	24	---	---	---	0
3/10	---	---	---	0	100	100	101	24	---	---	---	0	101	102	103	24	---	---	---	0
3/11	---	---	---	0	100	100	100	24	---	---	---	0	101	101	102	24	---	---	---	0
3/12	---	---	---	0	100	100	100	24	---	---	---	0	100	101	102	24	---	---	---	0
3/13	---	---	---	0	100	100	100	7	---	---	---	0	100	100	100	7	---	---	---	0
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	102	102	105	13	101	102	102	22	103	103	103	7
3/19	---	---	---	0	---	---	---	0	103	103	104	24	103	103	103	24	104	104	105	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			#	Bonneville			#	Warrendale			#	Camas\Washougal			#	Cascade Island			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24h Avg	12h Avg	High		24h Avg	12h Avg	High		24h Avg	AVG	High	
3/6	103	103	103	24	---	---	---	0	104	104	104	24	---	---	---	0	---	---	---	0
3/7	104	104	104	24	---	---	---	0	104	104	105	24	---	---	---	0	---	---	---	0
3/8	104	104	104	23	---	---	---	0	104	104	105	22	---	---	---	0	---	---	---	0
3/9	103	103	104	24	---	---	---	0	104	104	104	24	---	---	---	0	---	---	---	0
3/10	102	102	103	24	---	---	---	0	103	103	104	24	---	---	---	0	---	---	---	0
3/11	102	102	103	24	---	---	---	0	103	103	104	24	---	---	---	0	---	---	---	0
3/12	102	102	103	24	---	---	---	0	102	103	103	24	---	---	---	0	---	---	---	0
3/13	102	102	102	7	---	---	---	0	103	103	103	7	---	---	---	0	---	---	---	0
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	102	103	103	22	---	---	---	0	104	104	105	22	---	---	---	0	---	---	---	0
3/19	104	105	105	24	104	104	105	12	105	106	106	24	---	---	---	0	113	113	117	11

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)
03/06/2009	---	0	---	---	---	---	---	---	---	---	0
03/07/2009	---	0	---	---	---	---	---	---	---	---	0
03/08/2009	---	0	---	---	---	---	---	---	---	---	4
03/09/2009	0	0	0	0	---	---	---	---	---	---	0
03/10/2009	0	0	0	0	---	---	---	---	---	---	0
03/11/2009	0	0	0	0	---	---	---	---	---	---	0
03/12/2009	*	0	0	0	---	---	---	---	---	---	0
03/13/2009	*	0	0	0	---	---	---	---	---	---	0
03/14/2009	0	---	0	0	---	---	---	---	---	---	0
03/15/2009	*	0	0	0	---	---	---	---	---	---	0
03/16/2009	*	0	0	0	---	---	---	---	---	---	0
03/17/2009	*	0	0	0	---	---	---	---	---	---	0
03/18/2009	0	0	0	0	---	---	---	---	---	---	0
03/19/2009	0	---	0	0	---	---	---	---	---	---	0
03/20/2009	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	0	0	0	0	0	4
# Days:	11	12	11	11	0	0	0	0	0	0	14
Average:	0	0	0	0	0	0	0	0	0	0	0
YTD	0	0	0	0	0	0	0	0	0	0	4

* 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

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)}

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: 03/19

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	03/18	24	0	26	0	446	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	03/17	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	03/17	6	0	0	0	-	-	0	0	0	0	0	-	-	0	0	0	0	-

DAM	Coho						Sockeye			Steelhead			
	2009		2008		10-Yr Avg.		2009	2008	10-Yr Avg.	2009	2008	10-Yr Avg.	Wild 2009
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	0	0	80	107	169	20
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	1346	1908	2572	284
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	0	0	-	-	0	0	-	1431	2460	-	-

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.

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BON counts from January 1, 2009 to March 14, 2009 (our traditional counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2009	19	-1	321	109
2008	42	0	568	273