



Fish Passage Center

Weekly Report #10 - 04

April 9, 2010

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 66% and 115% of average at individual sub-basins over March. Precipitation above The Dalles has been 81% of average over March. Over the 2010 water year, precipitation has ranged between 69 and 85% of 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 2010 March 1-29		Water Year 2010 October 1, 2009 to March 29, 2010	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.36	81	10.70	76
SNAKE RIVER ABOVE ICE HARBOR	1.23	79	7.97	78
Columbia Above The Dalles	1.46	81	11.23	79
Kootenai	1.44	86	11.44	79
Clark Fork	0.91	81	6.19	69
Flathead	1.34	88	9.59	79
Pend Oreille/Spokane	1.95	75	14.78	74
Central Washington	0.51	66	4.96	85
SNAKE RIVER PLAIN	0.79	74	4.77	79
Salmon/Boise/Payette	1.38	76	10.18	81
Clearwater	2.29	88	13.84	75
SW Washington Cascades/Cowlitz	6.45	97	43.63	82
Willamette Valley	6.85	115	37.42	83

Snowpack within the Columbia Basin has been below average but has recently seen some increases with recent storms. Average snowpack in the Columbia River for basins above the Snake River confluence is 74% of average, for Snake River Basins the average snowpack is 76% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 75% of average.

Table 2 displays the March Final and April Final runoff volume forecasts for multiple reservoirs. The current forecast at The Dalles between January and July is 69700 Kaf (65% of average).

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

Location	March Final		April Final	
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan- July)	67	71800	65	69700
Grand Coulee (Jan-July)	75	47300	73	46000
Libby Res. Inflow, MT (Apr-Aug)	71 80*	4410 5084*	68 81*	4270 5103*
Hungry Horse Res. Inflow, MT (Jan- July)	71	1570	69	1540
Lower Granite Res. Inflow (Apr- July)	56	12100	56	12000
Brownlee Res. Inflow (Apr-July)	39	2470	41	2590
Dworshak Res. Inflow (Apr-July)	53 59*	1410 1571*	50 52*	1330 1398*

* Denotes COE Forecast

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite). According to the April Final Water Supply Forecast, the flow objectives this spring is 85 Kcfs at Lower Granite. Flows at Lower Granite Dam from April 3-7 have averaged 30.3 Kcfs.

Grand Coulee Reservoir is at 1276.3 feet (4-7-10) and drafted 1.7 feet over the last week. Outflows

at Grand Coulee have ranged between 44.2 and 66.7 Kcfs over the last week. The April 10th FC elevation at Grand Coulee is 1283.3 feet.

The Libby Reservoir is currently at elevation 2403.1 feet (4-7-10) and has drafted 0.4 feet last week. Outflows at Libby are currently 4.0 Kcfs. The April 10th FC Elevation at Libby is 2444 feet.

Hungry Horse is currently at an elevation of 3521.3 feet (4-7-10) and has refilled 0.4 feet last week. Outflows at Hungry Horse have been approximately 0.8-1.1 Kcfs last week. The April 10th FC Elevation at Hungry Horse is 3554.4 feet.

Dworshak is currently at an elevation of 1528.5 feet (4-7-10) and has refilled approximately 2.5 feet last week. Over the last week outflows at Dworshak were 1.2-1.3 Kcfs. The April 10th System FC Elevation at Dworshak is 1594.1 feet.

The Brownlee Reservoir was at an elevation of 2063.7 feet on April 7, 2010 drafting 0.7 feet last week. The April FC Elevation at Brownlee is 2077 feet. Over the last week, outflows at Brownlee have ranged between 11.0-18.1 Kcfs.

Spill: The 2010 planned spring spill program at the lower Snake River Projects began on April 3 at 0001 hours. The following table shows the planned operations for 2010.

Project	Day/Night Spill
Lower Granite	20Kcfs/20Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	April 3-April 28: 45 kcfs/Gas Cap April 28-June 20: 30%/30% vs. 45 kcfs/Gas Cap

Low flows in the Snake River have constrained the full implementation of the planned spill at some projects. Spill at Lower Granite Dam is occurring as spill in excess to the operation of one turbine unit, up to the 20 Kcfs instantaneous level. Since April 3 spill has ranged from a daily average of 12.3 to 20 Kcfs. Spill at Little Goose Dam achieved the 30% of instantaneous flow and has ranged from a daily average of 7.2 to 10.4 Kcfs. Spill to the gas cap at Lower Monumental

Dam is occurring as all flow in excess of that needed to operate one turbine unit. Spill at Ice Harbor Dam is presently occurring as all flow in excess of that required to operate one turbine unit.

The 2010 spill program at the lower Columbia River projects will begin at 0001 hours on April 10th.

All total dissolved gas levels have been below the waiver amounts over the past week.

Smolt Monitoring: Sampling is underway at all Smolt Monitoring Program dams and traps. Sampling began April 1 at Rock Island, John Day and Lower Monumental dams. The last site to begin sampling was Little Goose Dam, which began on April 5. Fish collections at the dams have remained relatively low over the first few weeks of sampling. Bonneville Dam is the only dam collection site that had significant numbers of smolts passing. At the SMP traps large numbers of smolts have been collected over the first few weeks of sampling as tributary flows increased due to regional increases in precipitation and runoff which coincided with some hatchery releases.

At the Salmon River Trap, located at River km 103, and operated by Idaho Department of Fish and Game, sampling began on March 7. Over the past two weeks the trap has captured almost all yearling Chinook. About 90 percent of the Chinook collected over the past week were clipped—indicating hatchery origin. Few steelhead have been collected to date. Flows in the Salmon River at White Bird, ranged between 5500 and 4400 cfs, between April 2 to April 9. Historically median flows ranged between 6500 and 8000 cfs for the same time period.

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 7. Over the past two weeks there has been a large increase in the numbers of yearling Chinook collected at the trap. Hatchery origin Chinook predominated in the catch over the past week, with just over 75% either adipose clipped or coded wire tagged. Flows in the Grande Ronde River have been very low ranging from 2500 down to 2000 cfs over the past week. Flows April 9 were about 36% of the median historic flows of over 5000 cfs.

The Imnaha River Trap, operated by the Nez Perce Tribe, provides data to the SMP, on their fish collection. The trap has been operating since mid-February. The Imnaha Trap has been collecting relatively large numbers of yearling Chinook the past

week. The trap collected over 11,000 yearling Chinook over the past week. About 20% of these fish were wild origin, since the hatchery release above the trap was 100% adipose clipped fish. Flows in the Imnaha River declined from 400 cfs to 300 cfs over the past week. The median historic flows for this week, on the Imnaha River would have ranged between 550 and 700 cfs over the past week, as measured at the gage at river mile 19.3.

Collections at Lower Granite Dam have remained very low this past week. Passage indices have remained below 500 smolts per day (all species combined) since the start of sampling. At Bonneville Dam the largest collections over the past week have been fry. Chinook fry predominate, with estimated collections between 250 to 500 fish per day. In addition to Chinook fry, the site is also collecting coho fry and chum salmon fry. Over the past week 24 chum fry were collected.

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. A volitional release of 633,000 yearling spring Chinook from Kooskia NFH was scheduled to end this week. This release was scheduled to begin on April 1st. One other release of yearling spring Chinook to this zone was scheduled to begin this week. This was a release of nearly 1.46 million yearling spring Chinook from Sawtooth Hatchery into the Salmon River. Nearly 50,000 yearling summer Chinook were scheduled for release into Johnson Creek on the South Fork Salmon River this week. All of these summer Chinook juveniles are unclipped but were tagged with coded wire and yellow Elastomer tags. A volitional release of 350,000 unclipped coho juveniles from Kooskia NFH was scheduled to end this week. This release began on March 30th. Finally, approximately 1.34 million summer steelhead were scheduled for release into this zone this week. Of these, approximately 83% are scheduled for release into the Salmon River and its tributaries. Many of these Salmon River releases are expected to run through mid-April. The remaining 17% are scheduled for release into the Grande Ronde (12%), Imnaha (4%), and Tucannon (1%) rivers.

There are several releases of yearling fall Chinook juveniles scheduled to take place next week. In all, these releases will total about 919,000 fall Chinook juveniles. Of these, approximately 84% are

scheduled for release from acclimation facilities located above Lower Granite Dam, while the remaining 16% will be released directly from Lyons Ferry Hatchery. Many of the earlier volitional releases of spring Chinook to this zone are scheduled to end next week. In addition to these releases, two releases totaling about 528,000 yearling spring Chinook are scheduled to begin in the next two weeks. The first is a release of about 404,000 juveniles from Sawtooth Hatchery into Yankee Fork of the Salmon River. The second is a release of 124,000 spring Chinook juveniles from the Lostine Acclimation Ponds into the Wallowa River.

Finally, over 4.7 million summer steelhead are scheduled for release into this zone over the next two weeks. Of these, approximately 44% are scheduled for release into the Clearwater River and its tributaries, 31% are scheduled for release into the Salmon River, and 17% are scheduled for release into the Pahsimeroi River. The remaining 8% are scheduled for release into the Grande Ronde, Tucannon, and Snake rivers.

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 64,000 unclipped fall Chinook juveniles from Prosser Hatchery were scheduled for release into the Yakima River this week. Of these, 47,000 are subyearlings and 17,000 are yearlings. A volitional release of nearly 58,000 coho to the Wenatchee River was scheduled to end this week. This release began on April 1st and is part of the Yakama Tribal Program to re-establish Coho runs in the Yakima, Methow, and Wenatchee basins. In all, nearly 2.5 million coho juveniles are scheduled for release in 2010 as part of this program. The majority of these releases are scheduled to run from mid-April to mid-May. Finally, a volitional release of 85,000 summer steelhead from the Dayton Acclimation Ponds on the Touchet River began this week. This release is scheduled to run through April 14th.

Approximately 760,000 subyearling fall Chinook are scheduled for release into the Yakima River over the next two weeks. Of these, about 37% are unmarked. In addition, over 2.9 million yearling spring Chinook are scheduled for release into this zone over the next two weeks. Of these, 64% are to be released into the Wenatchee River while 36% are to be released into the Methow River. All of the yearling spring Chinook released into the Methow River are unclipped, but are tagged with coded-wire-tags. The Wenatchee River spring Chinook juveniles are adipose clipped.

Nearly 1.3 million yearling summer Chinook are also scheduled for release into this zone over the next two weeks. Of these summer Chinook, about 43% are scheduled for release into the Okanogan River, 31% are scheduled for release into the Methow River, and 26% are scheduled for release into the mid-Columbia River.

Beginning next week, just over 1.0 million coho juveniles will be released into the Yakima and Mid-Columbia rivers. These releases are part of the Yakama Tribal Program mentioned above. Approximately 87% of these coho are scheduled for release into the Yakima River while 13% are scheduled for direct release into the Mid-Columbia River. Finally, nearly 741,000 summer steelhead are scheduled for release into this zone over the next two weeks. Of these, 38% will be released into the Methow River, 20% will be released into the Mid-Columbia River, 14% will be released into the Okanogan River, 13% will be released into the Walla Walla River, 8% will be released into the Touchet, and 7% will be released into the Wenatchee River.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. A release of about 6.1 million subyearling fall Chinook tules from Spring Creek NFH was scheduled to begin today. This release could run through April 13th. A volitional release of nearly 1.9 million coho juveniles to the Klickitat River was scheduled to end this week. This release began on April 1st and approximately 59% of these juveniles are unclipped. In addition, about 500,000 coho juveniles from Klickitat Hatchery were scheduled to be released into the Klickitat River this week. These Klickitat Hatchery coho are 100% adipose clipped. Finally, about 162,000 summer steelhead from Round Butte Hatchery were scheduled for release into the Deschutes River this week.

In addition to the Spring Creek NFH release from this week, approximately 1.7 million subyearling fall Chinook tules from Little White Salmon NFH are scheduled for release next week. In addition, about 2.45 million yearling spring Chinook are scheduled for release into this zone over the next two weeks. Of these, about 52% are scheduled for release into the Wind River, 24% are scheduled for release into the Umatilla River, 23% are scheduled for release into the Little White Salmon River, and 1% are scheduled for release into the Deschutes River. Finally, approximately 164,500 summer steelhead are scheduled for release to this zone over the next two weeks. Of these, about 91% will be released into the Umatilla River. The remaining

9% will be released into Crooked River as part of the PGE passage study on the Deschutes River.

Adult Fish Passage :

The 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 historical counting schedule began on March 1st at Lower Granite Dam. Counting began on April 1st for The Dalles Dam, John Day Dam, McNary Dam, Lower Monumental Dam, and Little Goose Dam. Willamette Falls Dam counts adult salmon throughout the entire year.

Adult counts at Bonneville Dam have been updated through April 1st. Daily adult spring Chinook counts at Bonneville Dam ranged from 23 to 166 adult salmon per day. Between March 15th and April 1st, 578 spring Chinook have been counted at Bonneville Dam. In 2009, 151 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2010 adult spring Chinook count at Bonneville Dam is 3.8 times greater than the 2009 count. The Bonneville spring Chinook adult count is only about 15.5% of the 10 year average of 3719. At Willamette Falls Dam 263 adult spring Chinook have been counted so far this year. At The Dalles Dam the 2010 adult spring Chinook is 42 and at McNary Dam 8 adult spring Chinook have been counted.

The Bonneville Dam 2010 steelhead count of 1705 is about 2.9 times greater than the 2009 count of 578. The 2010 steelhead count is about 2.2 times greater than the 10-year average of 784. 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 pools and will complete their trip to their spawning grounds in March through early May. Daily adult steelhead counts at Lower Granite Dam ranged from 174 to 358 adults per day last week. This year's Lower Granite steelhead count of 6230 is 1.3 times greater than the 2009 count of 4622 and 1.2 times greater than the 10 year average of 5061. The 2010 Lower Granite wild steelhead count as of April 1st was 1925. At Willamette Falls Dam, the 2010 count for steelhead was 2775, as of March 27th. This year's steelhead count is about 1.5 times greater than the 2009 count of 1866 at Willamette Falls Dam for the same date range.

At Bonneville Dam, daily counts of adult salmon and steelhead found on the separator and by passed are being tracked this year for the period of

March 1st to April 17th. From March 15th to March 31st, daily adult steelhead by passed counts ranged from 1 to 8. A total of 81 adult steelhead have been by passed so far this year.

Hatchery Releases Last Two Weeks

From:		3/26/2010		to		04/08/10			
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	229,600	03-23-10	04-14-10	Clear Creek	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	413,300	03-23-10	04-14-10	Powell Acclim Pond	Lochsa River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	1,209,150	03-23-10	04-14-10	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	60,000	04-05-10	04-09-10	Shoup Br (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	124,000	04-05-10	04-09-10	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	152,000	04-05-10	04-09-10	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	187,550	04-05-10	04-16-10	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	315,000	04-05-10	04-16-10	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2010	275,000	04-01-10	04-08-10	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2010	525,000	03-22-10	04-01-10	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2010	1,174,000	03-31-10	03-31-10	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2010	2,500,000	03-05-10	04-23-10	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game					7,164,600				
Total									
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2010	402,300	04-01-10	04-10-10	Meadow Creek - SELW	Selway River
Nez Perce Tribe	Eagle Creek NFH	CO	UN	2010	275,000	03-30-10	04-01-10	Clear Creek	Clearwater River M F
Nez Perce Tribe	Kooskia NFH	CH1	SP	2010	633,000	04-01-10	04-04-10	Kooskia Hatchery	Clearwater River M F
Nez Perce Tribe	Kooskia NFH	CO	UN	2010	350,000	03-30-10	04-08-10	Clear Creek	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2010	123,000	03-17-10	03-30-10	Lostine Accim Pond	Wallowa River
									South Fork Salmon River
Nez Perce Tribe	McCall Hatchery	CH1	SU	2010	49,930	04-05-10	04-05-10	Johnson Cr Idaho	
	Nez Perce Tribal							Nez Perce Tribal	
Nez Perce Tribe	Hatchery	CH1	SP	2010	200,000	04-01-10	04-15-10	Hatchery	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal	CO	UN	2011	30,000	04-01-10	04-30-10	Orofino Creek	Clearwater River M F
Nez Perce Tribe Total					2,063,230				
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2010	266,000	04-01-10	04-14-10	Lookingglass Creek	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2010	396,000	04-01-10	04-14-10	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Oak Springs Hatchery	ST	SU	2010	12,400	04-01-10	04-01-10	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2010	162,000	04-08-10	04-08-10	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					836,400				
U.S. Fish and Wildlife Service	Dworshak NFH	CH1	SP	2010	1,115,000	03-31-10	03-31-10	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service Total					1,115,000				
Umatilla Tribe	Carson NFH	CH1	SP	2010	249,379	03-30-10	03-30-10	Walla Walla River	Walla Walla River
Umatilla Tribe	Cascade Hatchery	CO	UN	2010	250,000	03-25-10	03-31-10	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Cascade Hatchery	CO	UN	2010	750,000	04-01-10	04-01-10	Pendelton Acclim Pond	Umatilla River
								Catherine Cr Acclim	
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	34,112	03-29-10	04-12-10	Pond	Grande Ronde River
								Grande Ronde Acclim	
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	41,819	03-30-10	04-13-10	Pond	Grande Ronde River
								Grande Ronde Acclim	
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	64,663	03-30-10	04-13-10	Pond	Grande Ronde River
								Catherine Cr Acclim	
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	110,242	03-29-10	04-12-10	Pond	Grande Ronde River
Umatilla Tribe Total					1,500,215				
Washington Dept. of Fish and Wildlife	Chelan Hatchery	CH1	SU	2010	200,000	04-01-10	04-30-10	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	85,000	04-06-10	04-14-10	Dayton Acclim Pond	Touchet River
								Cottonwood Acclim	
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	160,000	04-05-10	04-16-10	Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2010	86,000	04-01-10	04-12-10	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2010	87,000	04-01-10	04-12-10	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2010	18,209	04-05-10	04-05-10	Tucannon Hatchery	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2010	1,892,000	04-01-10	04-07-10	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife Total					2,528,209				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2010	280,960	03-15-10	05-14-10	Clark Flat Acclim Pond	Yakima River
								Jack Creek Acclim	
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2010	282,011	03-15-10	05-14-10	Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2010	288,342	03-15-10	05-14-10	Easton Pond	Yakima River
Yakama Tribe	Klickitat Hatchery	CO	UN	2010	500,000	04-05-10	04-05-10	Klickitat Hatchery	Klickitat River
Yakama Tribe	Willard Hatchery	CO	UN	2010	57,846	04-01-10	04-07-10	Nason Creek	Wenatchee River
Yakama Tribe Total					1,409,159				
Grand Total					16,616,813				

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

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	4/9/2010		to		4/22/2010				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Ringold Springs Hatchery	CH1	SU	2010	190,000	04-10-10	04-30-10	Bonaparte Acclimation Pond	Okanogan River
Colville Tribe Total					190,000				
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	229,600	03-23-10	04-14-10	Clear Creek	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	413,300	03-23-10	04-14-10	Powell Acclim Pond	Lochsa River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	1,209,150	03-23-10	04-14-10	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2010	144,900	04-15-10	04-26-10	Clear Creek	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2010	176,400	04-15-10	04-26-10	S Fk Clearwater River Redhouse (SfK ClearH20 R)	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2010	186,600	04-15-10	04-26-10	ClearH20 R)	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	60,000	04-05-10	04-09-10	Shoup Br (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	124,000	04-05-10	04-09-10	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	152,000	04-05-10	04-09-10	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	187,550	04-05-10	04-16-10	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	250,000	04-21-10	04-23-10	Squaw Cr Acclim Pond	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	315,000	04-05-10	04-16-10	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2010	325,000	04-19-10	04-21-10	East Fk Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2010	830,000	04-12-10	05-03-10	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2010	2,500,000	03-05-10	04-23-10	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2010	404,000	04-19-10	04-23-10	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2010	1,459,800	04-09-10	04-09-10	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game Total					8,967,300				
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2010	402,300	04-01-10	04-10-10	Meadow Creek - SELW	Selway River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2010	85,600	04-10-10	04-20-10	Crooked River	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2010	103,700	04-13-10	04-17-10	Newsome Creek	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2010	153,500	04-10-10	04-20-10	Red River	S Fk Clearwater River
Nez Perce Tribe	Dworshak NFH	ST	SU	2010	60,000	04-12-10	04-16-10	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	ST	SU	2010	150,000	04-12-10	04-16-10	S Fk Clearwater River	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2010	124,000	04-10-10	04-11-10	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2010	140,000	04-14-10	04-15-10	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2010	150,000	04-15-10	04-15-10	Big Canyon (Clearwater River)	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2010	150,000	04-15-10	04-15-10	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH1	SP	2010	200,000	04-01-10	04-15-10	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal	CO	UN	2011	30,000	04-01-10	04-30-10	Orofino Creek	Clearwater River M F
Nez Perce Tribe Total					1,749,100				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2010	50,000	04-09-10	04-09-10	Big Sheep Creek	Imnaha River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2010	156,000	04-16-10	04-16-10	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2010	266,000	04-01-10	04-14-10	Lookingglass Creek	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2010	396,000	04-01-10	04-14-10	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2010	14,500	04-15-10	04-15-10	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	ST	SU	2010	50,000	04-16-10	04-16-10	Meacham Creek	Umatilla River
Oregon Dept. of Fish and Wildlife	Wizard Falls Hatchery	CH1	SP	2010	19,500	04-15-10	04-15-10	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					952,000				
U.S. Fish and Wildlife Service	Carson NFH	CH1	SP	2010	1,279,400	04-15-10	04-15-10	Carson Hatchery	Wind River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2010	1,030,000	04-12-10	04-16-10	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2010	69,869	04-12-10	04-12-10	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2010	833,919	04-13-10	04-28-10	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2010	1,250,000	04-22-10	04-22-10	Leavenworth Hatchery	Wenatchee River
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2010	1,700,000	04-15-10	04-15-10	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2010	575,000	04-15-10	04-15-10	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2010	6,100,000	04-09-10	04-13-10	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2010	505,000	04-15-10	04-15-10	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2010	29,000	04-20-10	04-30-10	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2010	71,000	04-20-10	04-30-10	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service Total					13,443,188				

Hatchery Releases Next Two Weeks

Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	34,112	03-29-10	04-12-10	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	41,819	03-30-10	04-13-10	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	64,663	03-30-10	04-13-10	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	110,242	03-29-10	04-12-10	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2010	600,000	04-10-10	04-10-10	Imequens Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2010	50,000	04-16-10	04-16-10	Minthorn Acclimation Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2010	50,000	04-16-10	04-16-10	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe Total					950,836				
Washington Dept. of Fish and Wildlife	Chelan Hatchery	CH1	SU	2010	200,000	04-01-10	04-30-10	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2010	610,000	04-15-10	05-15-10	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2010	350,000	04-10-10	05-05-10	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2010	479,000	04-12-10	04-14-10	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	5,600	04-12-10	04-12-10	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	50,000	04-12-10	04-26-10	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	60,000	04-15-10	04-20-10	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	85,000	04-06-10	04-14-10	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	100,000	04-15-10	04-20-10	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	100,000	04-15-10	04-20-10	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	160,000	04-05-10	04-16-10	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2010	79,000	04-20-10	04-30-10	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2010	202,000	04-20-10	04-30-10	Twisp River	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2010	260,000	04-20-10	04-30-10	Chewuch Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2010	400,000	04-20-10	05-01-10	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2010	150,000	04-15-10	04-25-10	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2010	86,000	04-01-10	04-12-10	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2010	87,000	04-01-10	04-12-10	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2010	29,912	04-12-10	04-13-10	Tucannon Hatchery	Tucannon River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2010	50,000	04-10-10	05-15-10	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2010	335,000	04-15-10	06-01-10	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2010	105,000	04-20-10	05-05-10	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2010	180,000	04-20-10	05-05-10	Methow River	Methow River
Washington Dept. of Fish and Wildlife Total					4,163,512				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2010	280,960	03-15-10	05-14-10	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2010	282,011	03-15-10	05-14-10	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2010	288,342	03-15-10	05-14-10	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	15,846	04-12-10	05-15-10	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	37,806	04-12-10	05-15-10	Boone Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	45,060	04-12-10	05-15-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	134,850	04-12-10	05-15-10	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	135,086	04-12-10	05-15-10	Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	205,926	04-12-10	05-15-10	Naches River	Yakima River
Yakama Tribe	Little White Salmon NFH	CH0	FA	2010	480,000	04-16-10	04-16-10	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2010	17,000	04-09-10	04-09-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH1	FA	2010	17,000	04-09-10	04-09-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2010	30,000	04-09-10	04-09-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2010	280,000	04-16-10	04-16-10	Marion Drain	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2010	280,000	04-16-10	04-16-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	38,159	04-12-10	05-15-10	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,342	04-12-10	05-15-10	Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,438	04-12-10	05-15-10	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,438	04-12-10	05-15-10	Naches River	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	137,659	04-12-10	05-15-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2010	131,777	04-15-10	04-25-10	Wells Hatchery	Mid-Columbia River
Yakama Tribe Total					2,706,262				
Grand Total					33,122,198				

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

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
03/26/2010	56.1	0.0	57.1	0.0	56.7	0.0	55.3	0.0	56.7	0.0	62.4	0.0	63.6	0.0
03/27/2010	43.8	0.0	53.2	0.0	57.2	0.0	57.9	0.0	59.5	0.0	67.6	0.0	63.8	0.0
03/28/2010	61.9	0.0	55.2	0.0	54.9	0.0	53.5	0.0	55.6	0.0	62.3	0.0	63.3	0.0
03/29/2010	57.3	0.0	56.1	0.0	72.5	0.0	74.2	0.0	75.7	0.0	71.5	0.0	63.4	0.0
03/30/2010	53.1	0.0	56.0	0.0	60.5	0.0	61.4	0.0	63.0	0.0	68.0	0.0	67.8	0.0
03/31/2010	56.5	0.0	57.8	0.0	55.2	0.0	57.3	0.0	59.5	0.0	62.5	0.0	62.6	0.0
04/01/2010	54.8	0.0	57.9	0.0	48.9	0.0	48.0	0.0	48.1	0.0	64.7	0.0	61.5	0.0
04/02/2010	64.2	0.0	56.6	0.0	67.3	0.0	67.9	0.0	70.4	0.0	65.9	0.0	61.5	0.0
04/03/2010	44.9	0.0	51.5	0.0	51.9	0.0	53.0	0.0	54.7	0.0	65.5	0.0	61.4	0.0
04/04/2010	44.2	0.0	41.8	0.0	42.9	0.0	41.8	0.0	42.3	0.0	59.8	0.0	61.5	0.0
04/05/2010	66.7	0.0	68.9	0.0	71.8	0.0	70.7	0.0	71.9	0.0	64.2	0.0	62.0	0.0
04/06/2010	56.1	0.0	57.1	0.0	63.7	0.0	63.6	0.0	66.6	0.0	68.9	0.0	62.0	0.0
04/07/2010	53.8	0.0	55.2	0.0	68.1	0.0	72.1	0.0	72.3	0.0	66.9	0.4	65.5	0.0
04/08/2010	55.9	0.0	55.0	0.0	50.7	0.0	48.2	0.0	49.4	0.0	66.3	0.0	66.9	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
03/26/2010	1.2	0.0	14.5	17.8	28.0	0.0	28.0	0.0	25.8	0.0	26.6	0.0
03/27/2010	1.3	0.0	14.0	16.1	30.7	0.0	28.2	0.0	33.7	0.0	34.0	0.0
03/28/2010	1.3	0.0	12.2	12.8	22.2	0.0	21.8	0.0	20.3	0.0	20.1	0.0
03/29/2010	1.3	0.0	13.1	15.5	30.4	0.0	30.5	0.0	32.3	0.0	34.8	0.0
03/30/2010	1.2	0.0	14.2	13.1	35.4	0.0	34.2	0.0	33.5	0.0	33.9	0.0
03/31/2010	2.4	0.0	14.1	12.6	33.4	0.2	34.2	0.0	38.7	0.0	41.0	0.0
04/01/2010	1.3	0.0	14.4	15.9	33.7	0.0	32.2	0.0	32.6	0.0	34.2	0.0
04/02/2010	1.2	0.0	14.6	19.2	39.4	0.0	39.1	0.0	42.5	0.0	45.0	0.0
04/03/2010	1.3	0.0	13.8	16.1	36.2	20.0	34.5	10.4	34.7	22.5	34.9	24.9
04/04/2010	1.2	0.0	13.6	13.0	31.8	18.8	32.4	9.8	32.0	20.0	33.1	23.5
04/05/2010	1.2	0.0	14.2	17.0	27.7	15.2	25.7	7.6	25.9	13.8	27.0	17.3
04/06/2010	1.2	0.0	12.7	13.2	30.4	17.8	29.0	8.7	29.6	17.6	31.3	21.7
04/07/2010	1.2	0.0	12.3	12.9	25.2	12.7	24.1	7.2	25.1	13.0	26.3	16.7
04/08/2010	1.2	0.0	12.8	12.7	24.9	12.3	24.1	7.2	23.7	11.7	25.1	15.6

Daily Average Flow and Spill (in kcfs) at Lower Columbia Projects

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
03/26/2010	83.4	0.0	83.7	0.0	82.8	0.0	93.9	0.0	1.0	81.6
03/27/2010	99.0	0.0	93.2	0.0	97.9	0.0	115.7	0.0	10.4	94.0
03/28/2010	91.9	0.0	102.9	0.0	101.5	0.0	112.1	0.0	4.6	96.2
03/29/2010	112.4	0.0	107.5	0.0	109.8	0.0	123.5	0.2	10.2	103.1
03/30/2010	96.2	0.0	115.9	0.0	114.4	0.0	143.9	0.3	29.8	103.6
03/31/2010	101.4	0.0	103.0	0.0	111.2	0.0	144.8	0.0	28.2	104.6
04/01/2010	101.5	0.0	96.9	0.0	99.3	0.0	125.3	1.4	11.5	100.0
04/02/2010	101.4	0.0	95.5	0.0	95.3	0.0	112.8	0.2	7.3	92.8
04/03/2010	101.2	0.0	104.7	3.6	108.9	0.0	107.6	1.5	2.6	91.0
04/04/2010	95.0	0.0	95.8	0.0	107.7	0.0	114.8	1.6	4.5	96.3
04/05/2010	99.4	0.0	111.0	1.8	109.4	0.0	120.1	1.5	11.5	94.7
04/06/2010	92.5	0.0	88.7	4.0	89.6	0.0	106.4	1.6	1.9	90.5
04/07/2010	89.4	0.0	102.3	0.0	102.0	0.0	112.8	1.6	9.5	89.4
04/08/2010	83.3	1.1	73.1	0.0	76.2	0.0	98.7	1.5	0.2	84.6

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	Hungry H. Dnst			#	Boundary			#	Grand Coulee			#	Grand C. Tlwr			#	Chief Joseph			#
	24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/26	97.1	97.5	97.9	24	104.1	104.6	105.0	24	104.7	105.2	105.8	24	105.1	105.6	106.3	24	---	---	---	0
3/27	96.4	96.7	97.2	24	103.0	104.1	104.4	24	103.7	104.1	104.4	24	104.3	104.7	105.1	24	---	---	---	0
3/28	97.3	97.8	98.1	23	104.4	105.0	105.7	22	105.1	105.4	105.7	24	106.7	108.0	108.6	22	---	---	---	0
3/29	98.7	99.3	99.7	24	105.7	106.5	107.4	24	106.4	106.6	106.6	24	107.6	108.6	110.1	24	105.9	105.9	106.0	10
3/30	99.6	100.3	100.8	24	105.0	105.6	106.2	22	106.1	106.3	106.5	24	106.8	107.1	107.5	22	105.4	105.6	105.8	24
3/31	99.8	100.4	101.3	24	104.1	104.7	105.1	22	105.4	105.8	106.1	24	105.2	105.4	105.8	22	104.9	105.2	105.4	24
4/1	99.5	100.0	100.7	24	103.9	104.9	105.7	23	105.9	106.2	106.6	24	105.0	105.9	106.4	23	105.2	105.5	105.7	24
4/2	99.9	100.6	101.5	24	104.0	105.6	106.0	24	106.6	106.9	107.0	24	106.7	107.4	108.0	24	105.7	105.9	105.9	24
4/3	99.6	99.9	100.3	23	103.7	104.9	105.4	22	105.7	105.9	106.4	24	106.8	107.3	108.2	22	105.0	105.2	105.6	24
4/4	99.5	100.1	100.9	24	103.6	105.0	105.6	23	105.5	105.8	106.0	24	106.6	107.7	108.4	23	105.0	105.5	105.7	24
4/5	99.0	99.4	100.0	24	103.8	105.1	105.3	21	105.7	105.9	106.0	24	106.1	106.9	108.1	21	105.2	105.3	105.5	24
4/6	97.6	97.9	98.4	24	103.4	104.5	105.2	20	104.4	104.8	105.8	24	102.9	104.2	105.3	20	104.6	104.8	105.0	24
4/7	97.3	97.7	98.8	23	103.0	104.3	105.6	20	103.5	104.0	104.7	24	102.4	102.8	104.0	20	104.1	104.4	104.9	24
4/8	97.5	97.8	98.1	22	103.0	104.0	105.3	20	104.6	105.2	105.6	24	104.6	104.9	106.6	19	105.1	105.3	105.5	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst			#	Wells			#	Wells Dwnstrm			#	Rocky Reach			#	Rocky R. Tlwr			#
	24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/26	---	---	---	0	---	---	---	0	94.5	95.0	95.4	24	---	---	---	0	---	---	---	0
3/27	---	---	---	0	---	---	---	0	93.6	93.9	94.1	24	---	---	---	0	---	---	---	0
3/28	---	---	---	0	---	---	---	0	94.7	95.1	95.4	24	---	---	---	0	---	---	---	0
3/29	106.9	106.9	107.9	12	---	---	---	0	96.2	96.4	96.7	24	---	---	---	0	---	---	---	0
3/30	106.6	107.2	108.4	24	---	---	---	0	96.0	96.3	96.8	24	---	---	---	0	---	---	---	0
3/31	106.4	107.1	108.0	24	---	---	---	0	95.0	95.3	95.8	24	---	---	---	0	---	---	---	0
4/1	106.0	106.6	107.1	24	---	---	---	0	94.6	94.8	95.1	24	103.4	103.4	106.0	9	95.3	95.3	105.4	9
4/2	105.8	106.3	106.7	24	---	---	---	0	95.2	95.5	95.6	24	106.0	106.3	106.4	24	105.7	106.0	106.0	24
4/3	105.6	106.1	106.6	24	---	---	---	0	95.0	95.2	95.4	24	104.6	104.9	105.5	24	104.5	104.8	105.2	24
4/4	105.8	106.7	107.6	24	---	---	---	0	95.1	95.5	95.5	24	104.8	105.3	105.6	24	104.7	105.3	105.5	24
4/5	105.3	105.8	106.7	24	---	---	---	0	95.2	95.5	95.8	24	105.5	105.6	105.7	24	105.2	105.4	105.5	24
4/6	104.9	105.4	106.2	24	---	---	---	0	94.1	94.4	94.9	24	104.7	104.9	105.4	24	104.4	104.7	105.1	24
4/7	104.7	105.5	106.3	24	---	---	---	0	93.7	94.1	94.7	24	104.3	104.8	105.6	24	104.2	104.5	105.3	24
4/8	106.1	106.8	107.4	24	---	---	---	0	94.3	94.9	95.2	24	104.8	105.4	106.0	24	104.8	105.3	105.7	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			#	Rock I. Tlwr			#	Wanapum			#	Wanapum Tlwr			#	Priest Rapids			#
	24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/26	---	---	---	0	---	---	---	0	105.7	106.3	107.0	24	105.2	105.8	106.0	24	104.8	105.4	106.5	24
3/27	---	---	---	0	---	---	---	0	104.1	104.6	105.3	24	103.8	104.4	104.6	24	105.0	106.2	107.2	24
3/28	---	---	---	0	---	---	---	0	105.5	105.7	106.1	24	105.2	105.6	105.9	24	106.3	106.8	107.5	24
3/29	---	---	---	0	---	---	---	0	107.0	107.3	107.4	24	106.9	107.3	107.8	24	106.9	107.1	107.3	24
3/30	---	---	---	0	---	---	---	0	106.9	107.2	107.5	24	106.7	107.0	107.4	24	106.1	106.5	106.7	24
3/31	---	---	---	0	---	---	---	0	105.8	106.0	106.2	24	105.6	105.9	106.3	24	105.5	105.9	106.3	24
4/1	100.5	100.5	100.7	9	106.0	106.0	106.5	9	105.5	105.8	106.2	24	105.3	105.7	106.1	24	104.4	104.8	105.6	24
4/2	100.6	100.7	100.7	24	106.2	106.6	106.8	24	106.1	106.5	106.8	24	105.9	106.3	106.8	24	105.2	105.8	106.6	24
4/3	100.6	100.6	100.7	24	105.1	105.4	105.9	24	105.1	105.3	105.9	24	105.2	105.4	105.6	24	103.3	103.8	104.9	24
4/4	100.6	100.7	100.8	24	105.3	105.9	106.4	24	105.4	106.0	106.3	24	105.7	106.3	106.6	24	104.2	105.6	106.0	24
4/5	100.6	100.7	100.7	24	105.4	105.6	106.0	24	105.8	106.0	106.3	24	105.9	106.2	106.5	24	105.8	106.0	106.2	24
4/6	100.6	100.6	100.8	24	104.6	104.9	105.3	24	104.2	104.5	105.2	24	104.3	104.6	105.0	24	104.4	104.8	105.7	24
4/7	100.6	100.6	100.7	24	104.6	105.1	105.8	24	103.9	104.4	105.2	24	103.9	104.5	105.1	24	104.1	105.0	106.3	24
4/8	100.6	100.7	100.8	24	105.3	105.9	106.4	24	104.6	105.2	105.8	24	104.5	105.1	105.4	24	105.0	106.0	106.9	24

Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

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

Date	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clwrtr-Peck</u>			#	<u>Anatone</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>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/26	103.8	104.1	104.5	24	102.5	103.0	103.6	24	106.7	107.6	109.3	24	101.5	102.3	103.4	21	101.4	102.1	103.0	24
3/27	103.4	104.3	104.6	24	103.2	104.6	105.1	24	106.4	107.5	109.4	24	102.4	104.2	106.1	22	102.1	103.5	104.8	24
3/28	104.8	105.0	105.2	24	104.5	105.1	105.4	24	107.2	108.0	108.5	24	102.3	103.5	104.7	24	102.5	103.2	103.9	24
3/29	105.5	105.7	105.9	24	105.1	105.5	105.7	24	107.2	108.2	109.1	24	102.4	103.2	104.3	24	102.2	102.7	103.5	24
3/30	104.6	104.9	105.5	24	102.9	103.4	103.9	24	107.6	108.2	109.2	24	101.1	101.6	102.8	23	101.0	101.5	102.1	24
3/31	104.0	104.4	104.8	24	102.3	103.4	104.0	24	104.0	107.8	109.5	24	100.3	101.2	102.1	23	100.7	101.5	102.4	24
4/1	104.0	104.3	104.7	24	103.2	104.2	105.1	24	105.0	107.0	108.7	24	102.6	106.1	108.0	24	101.1	101.9	102.7	24
4/2	105.2	105.7	106.2	24	103.5	104.0	104.4	24	105.9	106.8	108.1	24	107.0	107.2	107.3	24	101.3	101.8	102.2	24
4/3	103.7	104.0	104.5	24	101.6	102.2	102.4	24	106.2	107.2	108.0	24	106.8	106.9	107.1	24	101.4	102.2	102.9	24
4/4	104.4	105.2	105.5	24	103.1	104.4	104.9	24	106.2	107.1	108.4	24	106.4	106.8	107.5	24	101.9	102.9	103.7	24
4/5	105.1	105.3	105.5	24	103.6	104.2	104.7	24	106.3	107.1	107.8	24	105.7	105.9	106.1	24	100.9	101.3	101.7	24
4/6	103.4	103.8	104.5	24	102.3	102.9	103.3	24	105.9	106.5	107.8	24	103.6	104.8	105.6	24	100.9	101.6	102.4	24
4/7	103.5	104.3	105.1	24	103.1	104.7	105.5	24	105.2	106.0	106.8	24	102.6	104.8	106.4	23	102.1	103.7	104.8	24
4/8	103.9	104.6	105.5	24	103.5	104.3	105.5	24	106.4	106.7	107.0	24	101.5	102.1	103.1	23	101.6	102.2	102.5	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clwrtr-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>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>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/26	99.1	100.2	101.4	24	102.6	103.1	103.5	24	102.0	102.4	103.0	24	101.6	101.9	102.2	24	101.0	101.3	101.8	24
3/27	101.1	102.4	103.7	17	101.5	101.8	102.5	24	101.1	101.6	102.2	24	100.7	101.1	101.4	24	100.5	101.1	101.3	24
3/28	99.7	100.8	101.4	23	102.5	102.6	102.7	24	102.0	102.2	102.6	24	102.8	103.2	103.8	24	101.9	102.3	102.6	24
3/29	99.3	99.6	100.2	21	103.8	104.2	104.7	24	103.1	103.5	103.9	24	104.2	104.6	104.7	24	103.3	103.7	104.3	24
3/30	96.1	96.1	98.1	6	103.7	104.1	104.3	24	102.9	103.3	103.7	24	103.5	103.7	103.9	24	102.9	103.4	104.4	24
3/31	101.3	101.3	102.4	11	101.8	102.1	102.5	24	101.6	101.9	104.0	24	102.2	102.6	103.4	24	101.7	102.0	102.3	24
4/1	100.9	102.3	103.2	24	100.9	101.0	101.1	24	100.5	100.7	101.4	24	101.7	101.9	102.0	24	101.1	101.3	101.5	24
4/2	100.4	101.1	101.5	23	102.3	102.7	102.9	24	101.7	102.0	102.3	24	102.1	102.4	102.6	24	101.2	101.7	102.1	24
4/3	100.5	101.6	102.6	24	101.0	101.4	101.9	24	111.5	111.9	112.2	24	101.0	101.1	101.6	24	106.7	108.5	109.3	24
4/4	102.2	104.5	106.0	24	100.2	100.4	100.5	24	111.1	111.6	111.8	24	101.0	101.4	101.7	24	108.7	109.0	109.5	24
4/5	101.1	101.9	102.7	23	99.4	99.7	100.1	24	110.0	110.3	110.9	24	101.3	101.5	101.9	24	107.9	108.3	108.7	24
4/6	101.5	103.3	105.0	23	98.6	98.8	99.1	24	111.0	111.9	112.2	24	99.7	100.0	100.7	24	107.3	107.7	108.0	24
4/7	103.2	106.0	107.9	23	98.8	99.3	100.1	24	111.8	113.2	114.4	24	99.3	99.8	100.6	24	107.7	108.6	108.9	24
4/8	101.2	102.2	103.2	24	99.8	100.4	101.7	24	112.0	112.7	113.1	24	99.7	100.3	100.8	24	107.6	108.1	109.0	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>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>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/26	102.2	102.7	103.2	24	101.8	102.2	102.3	24	103.2	103.6	104.1	24	103.9	104.4	105.0	24	---	---	---	0
3/27	101.5	101.9	102.5	24	101.6	102.2	102.4	24	102.6	103.1	103.6	24	103.4	104.0	104.3	24	---	---	---	0
3/28	102.6	102.8	103.2	24	102.4	102.9	103.4	24	103.7	104.0	104.6	24	104.8	105.5	106.3	24	---	---	---	0
3/29	104.2	104.5	104.8	24	103.6	104.0	104.4	24	105.0	105.2	105.4	24	105.4	105.8	106.6	24	---	---	---	0
3/30	103.5	103.8	104.1	24	103.1	103.6	104.4	24	104.1	104.3	104.6	24	104.6	105.0	106.0	24	---	---	---	0
3/31	102.0	102.2	102.4	24	101.7	101.9	102.4	24	102.7	102.8	103.1	24	103.4	103.6	104.3	24	---	---	---	0
4/1	101.5	101.7	102.0	24	101.6	102.2	103.4	24	102.2	102.4	102.6	24	102.9	103.3	103.6	24	---	---	---	0
4/2	102.6	103.0	103.2	24	102.5	103.0	103.2	24	102.9	103.2	103.4	24	103.2	103.5	103.8	24	---	---	---	0
4/3	101.5	101.7	102.2	24	114.7	116.6	117.3	24	101.7	101.9	102.3	24	112.3	113.8	114.3	24	---	---	---	0
4/4	101.9	102.3	102.8	24	115.8	117.8	119.1	24	102.3	102.9	103.2	24	112.6	114.0	114.8	24	---	---	---	0
4/5	101.8	102.1	102.7	24	112.9	114.5	115.8	24	101.9	102.3	102.7	24	111.2	112.3	113.2	24	---	---	---	0
4/6	100.1	100.5	100.9	24	113.5	114.6	117.2	24	100.6	100.9	101.4	24	111.4	112.8	113.5	24	---	---	---	0
4/7	99.7	100.2	101.1	24	111.9	112.3	112.7	24	101.2	102.4	103.9	24	110.1	110.7	111.2	24	---	---	---	0
4/8	102.0	102.2	102.5	24	111.0	111.6	112.7	24	104.4	104.6	104.8	24	109.2	109.6	110.1	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	12 h	High		24 h	12 h	High		24h	12h	High		24h	12h	High		24h	12h	High		24h	12h	High
	Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	AVG	High
3/26	103.6	103.8	104.3	24	103.2	103.5	103.7	24	101.4	101.7	102.0	24	103.1	103.7	104.1	24	104.1	104.3	104.8	24			
3/27	103.8	104.8	105.7	24	103.2	104.2	104.6	24	100.9	102.0	102.5	24	102.2	102.7	102.9	24	103.6	104.2	104.5	24			
3/28	105.1	105.3	105.6	24	104.7	105.1	105.3	24	101.4	101.7	102.3	24	103.2	103.7	103.9	24	105.0	105.5	105.9	24			
3/29	106.1	106.4	106.7	24	105.7	106.0	106.1	24	102.4	103.3	103.6	24	104.7	105.0	105.1	24	106.0	106.1	106.2	24			
3/30	105.1	105.6	110.6	23	104.2	104.4	104.6	24	102.6	103.0	103.4	24	104.4	104.8	105.2	24	105.3	105.6	105.8	24			
3/31	104.1	104.3	104.4	24	103.3	103.7	104.0	24	101.0	101.4	101.6	24	102.8	103.1	103.5	24	104.1	104.3	104.5	24			
4/1	103.7	103.9	104.2	24	103.0	103.3	103.6	24	100.7	101.1	101.6	24	102.0	102.1	102.2	24	103.5	103.8	104.2	24			
4/2	104.0	104.4	104.8	24	103.1	103.6	103.8	24	101.7	102.2	102.8	24	102.4	102.9	103.5	24	104.3	104.6	104.8	24			
4/3	102.2	102.4	102.9	24	101.4	101.7	102.2	24	100.8	101.8	103.2	24	102.5	104.2	106.2	24	103.2	103.5	103.7	24			
4/4	103.0	103.8	104.2	24	101.9	102.7	102.9	24	103.9	104.3	104.6	24	101.3	101.9	102.4	24	103.9	104.6	105.0	24			
4/5	102.9	103.3	103.9	24	102.3	102.5	102.7	24	103.4	103.7	103.9	24	102.3	103.8	105.2	24	103.6	104.0	105.0	24			
4/6	101.5	101.7	101.9	24	100.7	101.1	101.3	24	101.4	101.7	102.4	24	103.2	105.0	107.1	24	101.9	102.3	102.7	24			
4/7	101.8	102.7	103.7	24	100.7	101.9	102.6	24	101.3	101.8	102.4	24	101.3	101.9	102.3	24	102.1	102.7	104.8	22			
4/8	103.6	103.9	104.1	24	102.2	102.6	103.5	24	101.3	101.8	102.5	24	101.2	101.6	102.3	24	102.8	103.7	105.2	24			

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			#	Bonneville			#	Warrendale			#	Camas\Washougal			#	Cascade Island			#			
	24 h	12 h	High		24 h	12 h	High		24h	12h	High		24h	12h	High		24h	12h	High		24h	12h	High
	Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	AVG	High
3/26	104.4	104.6	104.8	24	104.4	105.0	105.8	24	109.7	110.7	111.3	24	105.3	106.0	107.1	24	117.4	118.2	119.0	24			
3/27	104.2	104.8	105.1	24	104.4	104.9	105.1	24	109.5	110.1	110.7	24	107.4	107.7	108.1	24	116.4	116.8	117.1	24			
3/28	105.1	105.5	106.4	24	105.6	106.0	106.4	24	109.6	110.4	110.9	24	107.4	108.2	108.7	24	118.0	118.6	119.4	24			
3/29	106.1	106.4	106.7	24	106.5	106.8	107.1	24	110.0	110.6	111.2	24	107.5	108.0	108.6	24	117.4	118.3	119.4	24			
3/30	105.3	105.6	105.8	24	105.6	105.9	106.0	24	107.5	107.7	107.9	24	106.2	106.4	106.5	24	114.4	114.9	115.4	24			
3/31	104.2	104.5	104.6	24	104.6	104.8	105.0	24	107.3	107.6	107.8	24	105.6	106.4	107.0	24	113.2	113.4	113.6	24			
4/1	103.3	103.7	104.0	24	104.3	104.6	104.7	24	107.8	108.1	108.5	24	106.6	108.0	108.9	24	111.8	112.4	112.9	24			
4/2	104.5	105.3	105.6	24	104.8	105.3	105.6	24	108.0	109.1	109.5	24	106.2	107.0	108.0	24	113.7	114.6	115.1	24			
4/3	103.5	103.7	104.1	24	103.0	103.3	103.6	24	107.6	108.3	108.8	24	104.3	105.2	105.9	24	110.6	111.3	111.6	24			
4/4	103.6	104.2	104.8	24	103.8	104.0	104.3	24	108.7	109.0	109.5	24	104.5	104.8	105.6	24	111.1	112.2	113.8	24			
4/5	103.0	103.3	103.6	24	103.9	104.3	104.6	24	109.6	110.4	110.9	24	105.1	106.1	106.6	24	111.6	113.1	115.1	24			
4/6	101.7	102.4	102.6	24	102.5	103.0	104.1	24	107.7	108.4	108.7	24	104.7	105.3	105.6	24	111.0	112.6	114.0	24			
4/7	103.2	103.6	104.1	24	102.6	103.3	104.1	24	109.4	110.3	110.9	24	106.7	108.1	109.1	24	111.1	112.6	114.7	24			
4/8	103.9	104.3	104.6	24	102.9	103.6	104.4	24	108.4	109.0	109.6	24	106.0	106.7	108.5	24	111.2	113.3	115.5	24			

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2010	420	50	9	6	0	---	---	---	---	---	166
03/27/2010	179	61	11	1	0	---	---	---	---	---	56
03/28/2010	23	44	11	2	5	---	---	---	---	---	85
03/29/2010 *	6	3	7	0	0	---	---	---	---	---	56
03/30/2010	533	551	31	0	10	---	---	---	---	---	382
03/31/2010	2,569	1,364	416	1	5	---	---	---	---	---	359
04/01/2010 *	1,134	780	463	0	40	---	5	3	---	20	205
04/02/2010 *	1,894	574	341	4	90	---	---	6	---	28	169
04/03/2010 *	1,275	1,850	506	8	247	---	2	6	---	16	142
04/04/2010 *	1,107	1,551	170	1	176	---	---	2	---	21	121
04/05/2010 *	1,266	1,178	74	2	132	7	0	0	---	36	136
04/06/2010 *	1,121	2,222	77	3	206	---	---	8	---	28	290
04/07/2010 *	1,331	3,131	16	1	286	---	---	9	20	42	245
04/08/2010 *	762	---	69	0	167	---	0	6	---	28	297
04/09/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	13,620	13,359	2,201	29	1,364	7	7	40	20	219	2,709
# Days:	14	13	14	14	14	1	4	8	1	8	14
Average:	973	1,028	157	2	97	7	2	5	20	27	194
YTD	24,120	15,208	2,330	31	1,364	7	7	40	20	219	8,733

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2010	0	0	0	2	0	---	---	---	---	---	380
03/27/2010	0	0	0	2	10	---	---	---	---	---	515
03/28/2010	0	0	0	0	0	---	---	---	---	---	699
03/29/2010 *	0	0	0	5	0	---	---	---	---	---	585
03/30/2010	0	0	0	3	0	---	---	---	---	---	1,739
03/31/2010	0	0	0	2	0	---	---	---	---	---	1,912
04/01/2010 *	0	0	0	1	0	---	0	12	---	0	1,702
04/02/2010 *	0	0	0	5	0	---	---	4	---	0	2,081
04/03/2010 *	0	0	0	6	0	---	0	3	---	0	2,246
04/04/2010 *	0	0	0	1	12	---	---	6	---	0	711
04/05/2010 *	0	0	0	2	0	0	0	23	---	0	663
04/06/2010 *	0	0	1	1	11	---	---	17	---	0	846
04/07/2010 *	0	0	0	6	0	---	---	40	0	0	529
04/08/2010 *	0	---	0	4	0	---	0	29	---	0	666
04/09/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	1	40	33	0	0	134	0	0	15,274
# Days:	14	13	14	14	14	1	4	8	1	8	14
Average:	0	0	0	3	2	0	0	17	0	0	1,091
YTD	0	1	1	77	33	0	0	134	0	0	26,740

Two-Week Summary of Passage Indices

COMBINED COHO											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2010	0	0	0	0	0	---	---	---	---	---	240
03/27/2010	0	0	0	0	0	---	---	---	---	---	210
03/28/2010	0	0	0	0	0	---	---	---	---	---	94
03/29/2010 *	0	0	0	0	0	---	---	---	---	---	82
03/30/2010	0	0	0	0	0	---	---	---	---	---	823
03/31/2010	0	0	0	0	0	---	---	---	---	---	895
04/01/2010 *	0	0	0	0	0	---	0	0	---	0	420
04/02/2010 *	0	0	0	0	0	---	---	0	---	0	293
04/03/2010 *	0	0	0	0	0	---	0	0	---	0	512
04/04/2010 *	0	0	0	0	0	---	---	0	---	4	224
04/05/2010 *	0	0	0	0	0	0	0	0	---	0	250
04/06/2010 *	0	0	0	0	0	---	---	0	---	0	504
04/07/2010 *	0	0	0	0	0	---	---	1	0	0	368
04/08/2010 *	0	---	0	0	0	---	0	1	---	0	500
04/09/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	0	0	2	0	4	5,415
# Days:	14	13	14	14	14	1	4	8	1	8	14
Average:	0	0	0	0	0	0	0	0	0	1	387
YTD	0	0	0	1	0	0	0	2	0	4	6,438

COMBINED STEELHEAD											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2010	0	2	1	2	0	---	---	---	---	---	13
03/27/2010	0	2	0	1	15	---	---	---	---	---	0
03/28/2010	0	1	0	2	15	---	---	---	---	---	5
03/29/2010 *	0	1	0	1	10	---	---	---	---	---	0
03/30/2010	3	25	0	4	10	---	---	---	---	---	24
03/31/2010	2	67	0	1	25	---	---	---	---	---	48
04/01/2010 *	2	58	0	6	40	---	0	0	---	4	72
04/02/2010 *	3	337	1	2	70	---	---	2	---	4	59
04/03/2010 *	1	198	0	5	41	---	2	0	---	8	55
04/04/2010 *	1	182	0	8	47	---	---	1	---	41	45
04/05/2010 *	3	91	0	3	132	9	2	1	---	28	79
04/06/2010 *	3	63	0	7	137	---	---	0	---	45	52
04/07/2010 *	2	55	0	4	95	---	---	1	90	29	88
04/08/2010 *	3	---	0	1	118	---	0	1	---	28	109
04/09/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	23	1,082	2	47	755	9	4	6	90	187	649
# Days:	14	13	14	14	14	1	4	8	1	8	14
Average:	2	83	0	3	54	9	1	1	90	23	46
YTD	24	1,106	2	52	755	9	4	6	90	187	723

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)
03/26/2010	0	0	0	0	0	---	---	---	---	---	0
03/27/2010	0	0	0	0	0	---	---	---	---	---	0
03/28/2010	0	0	0	0	0	---	---	---	---	---	0
03/29/2010 *	0	0	0	0	0	---	---	---	---	---	0
03/30/2010	0	0	0	0	0	---	---	---	---	---	0
03/31/2010	0	0	0	0	0	---	---	---	---	---	0
04/01/2010 *	0	0	0	0	0	---	0	0	---	4	10
04/02/2010 *	0	0	0	0	0	---	---	0	---	0	0
04/03/2010 *	0	0	0	0	6	---	0	1	---	0	0
04/04/2010 *	0	0	0	0	0	---	---	2	---	0	0
04/05/2010 *	0	0	0	0	0	0	0	2	---	0	13
04/06/2010 *	0	0	0	0	0	---	---	9	---	0	0
04/07/2010 *	0	0	0	0	0	---	---	31	0	8	4
04/08/2010 *	0	---	0	0	0	---	0	7	---	4	0
04/09/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	6	0	0	52	0	16	27
# Days:	14	13	14	14	14	1	4	8	1	8	14
Average:	0	0	0	0	0	0	0	7	0	2	2
YTD	0	0	0	0	6	0	0	52	0	16	31

* 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.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

4/9/10 1:22 PM

		03/26/10	TO	04/09/10		
		Species				
Site	Data	CH0	CH1	ST	SO	Grand Total
LGR	Sum of NumberCollected	20	785	455	5	1,265
	Sum of NumberBarged	0	0	0	0	0
	Sum of NumberBypassed	20	785	454	5	1,264
	Sum of Numbertrucked	0	0	0	0	0
	Sum of SampleMorts	0	0	1	0	1
	Sum of FacilityMorts	0	0	0	0	0
	Sum of ResearchMorts	0	0	0	0	0
	Sum of TotalProjectMorts	0	0	1	0	1
LGS	Sum of NumberCollected			5	6	11
	Sum of NumberBarged			0	0	0
	Sum of NumberBypassed			5	6	11
	Sum of Numbertrucked			0	0	0
	Sum of SampleMorts			0	0	0
	Sum of FacilityMorts			0	0	0
	Sum of ResearchMorts			0	0	0
	Sum of TotalProjectMorts			0	0	0
LMN	Sum of NumberCollected			6	2	8
	Sum of NumberBarged			0	0	0
	Sum of NumberBypassed			6	2	8
	Sum of Numbertrucked			0	0	0
	Sum of SampleMorts			0	0	0
	Sum of FacilityMorts			0	0	0
	Sum of ResearchMorts			0	0	0
	Sum of TotalProjectMorts			0	0	0
MCN	Sum of NumberCollected			20	90	110
	Sum of NumberBarged			0	0	0
	Sum of NumberBypassed			20	90	110
	Sum of Numbertrucked			0	0	0
	Sum of SampleMorts			0	0	0
	Sum of FacilityMorts			0	0	0
	Sum of ResearchMorts			0	0	0
	Sum of TotalProjectMorts			0	0	0
Total Sum of NumberCollected		20	816	553	5	1,394
Total Sum of NumberBarged		0	0	0	0	0
Total Sum of NumberBypassed		20	816	552	5	1,393
Total Sum of Numbertrucked		0	0	0	0	0
Total Sum of SampleMorts		0	0	1	0	1
Total Sum of FacilityMorts		0	0	0	0	0
Total Sum of ResearchMorts		0	0	0	0	0
Total Sum of TotalProjectMorts		0	0	1	0	1

YTD Transportation Summary

Source: Fish Passage Center

Updated:

4/9/10 1:22 PM

TO: 04/09/10

		Species					
Site	Data	CH0	CH1	SO	ST	Grand Total	
LGR	Sum of NumberCollected	20	785		5	455	1,265
	Sum of NumberBarged	0	0		0	0	0
	Sum of NumberBypassed	20	785		5	454	1,264
	Sum of NumberTrucked	0	0		0	0	0
	Sum of SampleMorts	0	0		0	1	1
	Sum of FacilityMorts	0	0		0	0	0
	Sum of ResearchMorts	0	0		0	0	0
	Sum of TotalProjectMorts	0	0		0	1	1
LGS	Sum of NumberCollected			5		6	11
	Sum of NumberBarged			0		0	0
	Sum of NumberBypassed			5		6	11
	Sum of NumberTrucked			0		0	0
	Sum of SampleMorts			0		0	0
	Sum of FacilityMorts			0		0	0
	Sum of ResearchMorts			0		0	0
	Sum of TotalProjectMorts			0		0	0
LMN	Sum of NumberCollected			6		2	8
	Sum of NumberBarged			0		0	0
	Sum of NumberBypassed			6		2	8
	Sum of NumberTrucked			0		0	0
	Sum of SampleMorts			0		0	0
	Sum of FacilityMorts			0		0	0
	Sum of ResearchMorts			0		0	0
	Sum of TotalProjectMorts			0		0	0
MCN	Sum of NumberCollected			20		90	110
	Sum of NumberBarged			0		0	0
	Sum of NumberBypassed			20		90	110
	Sum of NumberTrucked			0		0	0
	Sum of SampleMorts			0		0	0
	Sum of FacilityMorts			0		0	0
	Sum of ResearchMorts			0		0	0
	Sum of TotalProjectMorts			0		0	0
Total Sum of NumberCollected		20	816		5	553	1,394
Total Sum of NumberBarged		0	0		0	0	0
Total Sum of NumberBypassed		20	816		5	552	1,393
Total Sum of NumberTrucked		0	0		0	0	0
Total Sum of SampleMorts		0	0		0	1	1
Total Sum of FacilityMorts		0	0		0	0	0
Total Sum of ResearchMorts		0	0		0	0	0
Total Sum of TotalProjectMorts		0	0		0	1	1

Cumulative Adult Passage at Mainstem Dams Through: 04/08

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	04/08	2474	20	584	2	13613	25	0	0	0	0	0	0	0	0	0	0	0	0
TDA	04/07	724	0	134	1	3724	5	0	0	0	0	0	0	0	0	0	0	0	0
JDA	04/07	436	2	41	1	2053	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	04/08	193	4	24	0	1201	2	0	0	0	0	0	0	0	0	0	0	0	0
IHR	04/08	121	0	11	0	513	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	04/08	37	1	3	0	189	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	04/08	6	0	1	0	82	0	0	0	0	0	0	0	0	0	0	0	0	0
LGR	04/08	7	0	0	0	28	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	04/05	336	0	32	0	-	-	-	-	-	-	-	-	0	0	0	0	-	-

DAM	Coho						Sockeye			Steelhead			
	2010		2009		10-Yr Avg.		2010	2009	10-Yr Avg.	2010	2009	10-Yr Avg.	Wild 2010
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	0	0	2196	990	1230	667
TDA	0	0	0	0	0	0	0	0	0	491	265	402	211
JDA	0	0	0	0	0	0	0	0	0	598	634	924	325
MCN	0	0	0	0	0	0	0	0	0	514	608	843	190
IHR	0	0	0	0	0	0	0	0	0	1172	1008	1019	441
LMN	0	0	0	0	0	0	0	0	0	1134	1502	1036	574
LGS	0	0	0	0	0	0	0	0	0	821	1254	979	342
LGR	0	0	0	0	0	0	0	0	0	7295	6438	6373	2410
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	-	-	-	-	-	3560	2123	-	-

PRD does not post 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: 04/09/10

BON counts from January 1, 2009 to March 14, 2010 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2010	39	0	2,318	657
2009	19	-1	321	109