



# Fish Passage Center

## Weekly Report #10 - 03

April 2, 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		Water Year 2010	
	March 1-29		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 slight increases with recent storms. Average snowpack in the Columbia River for basins above the Snake River

confluence is 70% of average, for Snake River Basins the average snowpack is 69% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 58% of average.

Table 2 displays the March Final and April Early runoff volume forecasts for multiple reservoirs. The current forecast at The Dalles between January and July is 70300 Kaf (66% of average).

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

Location	March Final		April Early	
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	67	71800	66	70300
Grand Coulee (Jan-July)	75	47300	74	46700
Libby Res. Inflow, MT (Apr-Aug)	71 80*	4410 5084*	71	4420
Hungry Horse Res. Inflow, MT (Jan-July)	71	1570	68	1520
Lower Granite Res. Inflow (Apr- July)	56	12100	56	12100
Brownlee Res. Inflow (Apr-July)	39	2470	40	2500
Dworshak Res. Inflow (Apr-July)	53 59*	1410 1571*	53	1390

\* Denotes COE Forecast

Grand Coulee Reservoir is at 1278 feet (4-1-10) and refilled 0.8 feet over the last week. Outflows at Grand Coulee have ranged between 43.8 and 61.9 Kcfs over the last week. The end of March FC elevation at Grand Coulee was 1283.3 feet.

The Libby Reservoir is currently at elevation 2403.5 feet (4-1-10) and has drafted 0.2 feet last week. Outflows at Libby are currently 4.0 Kcfs. The end of March FC Elevation at Libby was 2444 feet.

Hungry Horse is currently at an elevation of 3520.9 feet (4-1-10) and has refilled 0.6 feet last week. Outflows at Hungry Horse have been approximately 0.8-1.6 Kcfs last week. The end of March FC Elevation at Hungry Horse was 3553.9 feet.

Dworshak is currently at an elevation of 1526.0 feet (4-1-10) and has refilled approximately 3.8 feet last week. Over the last week outflows at Dworshak were 1.2-1.3 Kcfs, however were increased to approximately 5 Kcfs for a period of six hours on 3-31-10 for the benefit of a Dworshak Hatchery release. The end of March System FC Elevation at Dworshak was 1587.5 feet.

The Brownlee Reservoir was at an elevation of 2064.4 feet on April 1, 2010 holding steady last week. The end of March FC Elevation at Brownlee was 2077 feet. Over the last week, outflows at Brownlee have ranged between 10.1-18.1 Kcfs.

The lower Snake River reservoirs are expected to draft to Minimum Operating Pool (MOP) by April 3<sup>rd</sup>, 2010.

**Spill:**

The total dissolved gas waivers went into effect on April 1, 2010. Consequently, the Bonneville corner collector operation should not be constrained by dissolved gas criteria. It is anticipated that the spring spill program will begin at all lower Snake River dams at 0001 hours on April 3<sup>rd</sup>, 2010.

**Smolt Monitoring:** Smolt monitoring activities began on March 25 at Lower Granite Dam with the first sample available Friday March 26. Sampling also began April 1 at Rock Island, John Day and Lower Monumental dams. Fish collections at the dams have remained relatively low over the first few days of sampling at these sites. 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 past two days as tributary flows increased due to regional increases in precipitation and runoff.

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. Small numbers of juvenile salmonids have been captured at the Grande Ronde Trap in the first few weeks of sampling. However, over the past few days of sampling the numbers of yearling Chinook increased to over 400 fish per day. These fish were about equally, unmarked and adipose-fin clipped fish, indicating that many were wild as well as hatchery fish. Flows in the Grande Ronde River have been very low ranging between 2000 and 3000 cfs over the past week compared to median historic flows of 4500 to 5000 cfs.

At the Salmon River Trap, located at River km 103, and operated by Idaho Department of Fish and Game, sampling began on March 7. The trap has captured almost all yearling Chinook to this point. A large number of hatchery yearling Chinook have been collected in the past few days. Of the 3,600 yearling Chinook collected March 31 and April 1 only about 200 of those fish were wild origin. Flows in the Salmon River at White Bird, ranged between 4200 and 4300 cfs from March 26 to March 29; and then flows rose sharply to 6,500 cfs on March 30. Historically median flows ranged between 5500 and 6500 cfs for the same time period.

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 few days. The trap collected over 1,300 yearling Chinook on March 31, following a spike in flows on March 30. These should all be wild origin fish since the only hatchery releases would be 100% adipose clipped fish. Flows in the Imnaha River began the week at about 250 cfs but then spiked to 600 cfs on March 30. The median historic flows for this week, on the Imnaha River would have ranged between 400 and 600 cfs over the past week, as measured at the gage at river mile 19.3.

At Bonneville Dam the largest collections over the past week have been Chinook fry with estimated collections well over 1,000 fish per day. Chinook and coho fry continue to be collected in largest numbers at the Bonneville bypass early in the season. Small numbers of holdover fall Chinook were also captured. The first hatchery yearling Chinook released from Klickitat Hatchery were captured in the March 12 sample. However those fish have mostly passed the project by April 1.

**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 123,000 yearling spring Chinook from the Lostine Acclimation Ponds on the Wallowa River was scheduled to end this week. This release began on March 17<sup>th</sup>. Several other releases of yearling spring Chinook to this zone were scheduled to begin this week. In all, these releases total approximately 3.4 million yearling spring Chinook juveniles. Of these, approximately 2.35 million were scheduled for release from various hatcheries throughout the Clearwater River Basin. Several volitional releases into the Grande Ronde River also began this week. In all, these Grande Ronde River releases are expected to total nearly 517,000 spring Chinook smolts. These fish were all reared at Lookingglass Hatchery and are being released from the Grande Ronde and Catherine Creek acclimation facilities, as well as a direct release into Lookingglass Creek. All of these releases are expected to run for the next two weeks. A volitional release of approximately 396,000 spring Chinook juveniles from the Imnaha Acclimation Ponds also began this week. Finally, about 173,000 spring Chinook juveniles were scheduled for release into the Tucannon River this week.

Approximately 1.2 million yearling summer Chinook were scheduled for release into the Pahsimeroi River this week. All of these summer Chinook juveniles were reared at Pahsimeroi Hatchery. About 623,000 coho juveniles were scheduled to be released into the Clearwater River this week. Approximately 80% of these coho juveniles are unmarked. A release of 525,000 summer steelhead to the Snake River (below Hells Canyon Dam) was scheduled to end this week. Finally, 275,000 summer steelhead juveniles were scheduled for release into the Little Salmon River this week.

There are several releases of yearling fall Chinook juveniles scheduled to take place over the next two weeks. 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 over the next two weeks. In addition to these releases, two releases totaling nearly 1.6

million yearling spring Chinook are scheduled to begin in the next two weeks. The first is a release of about 1.46 million juveniles from Sawtooth Hatchery into the Salmon River. The second is a release of 124,000 spring Chinook juveniles from the Lostine Acclimation Ponds into the Wallowa River. Also, nearly 50,000 yearling summer Chinook from McCall Hatchery are scheduled for release into Johnson Creek, beginning April 5<sup>th</sup>. These summer Chinook juveniles are all unclipped but are marked with yellow Elastomer tags.

Finally, nearly 5.1 million summer steelhead are scheduled for release into this zone over the next two weeks. Of these, approximately 41% are scheduled for release into the Clearwater River and its tributaries, 34% are scheduled for release into the Salmon River, and 16% are scheduled for release into the Pahsimeroi River. The remaining 9% are scheduled for release into the Grande Ronde, Tucannon, Imnaha, 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 250,000 yearling spring Chinook from Carson NFH were scheduled for release into the Walla Walla River this week. About 200,000 yearling summer Chinook from Chelan Hatchery were scheduled to be released into the Mid-Columbia River, at Chelan Falls. Finally, nearly 58,000 coho were scheduled for release into the Wenatchee River on April 1<sup>st</sup>. This coho release 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.

Approximately 64,000 fall Chinook juveniles from Prosser Hatchery are scheduled for release into the Yakima River over the next two weeks. In addition, over 1.1 million yearling spring Chinook are scheduled for release into this zone over the next two weeks. Of these, 55% are to be released into the Wenatchee River while 45% are to be released into the Methow River. Approximately 875,000 yearling summer Chinook are also scheduled for release into this zone over the next two weeks. Of these summer Chinook, about 62% will be released into the Okanogan River while 38% will be released directly into the mid-Columbia River.

Just over 1.0 million coho are scheduled to be released into the Yakima and Mid-Columbia rivers over the next two weeks. 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 441,000 summer steelhead are scheduled for release into this zone over the next two weeks. Of these, 34% will be released into the Mid-Columbia River, 32% will be released into the Touchet River, 23% will be released into the Walla Walla River, and 11% 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 250,000 coho juveniles from the Pendleton Acclimation Ponds on the Umatilla River was scheduled to end this week. In addition, another volitional release of 750,000 coho juveniles from these acclimation ponds was scheduled to begin this week. Nearly 1.9 million coho juveniles were scheduled for release into the Klickitat River this week. These coho juveniles were reared at Washougal Hatchery and about 59.3% are unmarked. Finally, about 12,400 summer steelhead were scheduled for release into the Deschutes River this week. These summer steelhead were to be released into Lake Billy Chinook as part of an ongoing PGE passage study on the Deschutes River.

Approximately 7.8 million subyearling fall Chinook tules are scheduled for release into this zone over the next two weeks. About 6.1 million of these fall Chinook tules are scheduled for release on April 9<sup>th</sup> from Spring Creek NFH. The remaining 1.7 million are scheduled for release on April 15<sup>th</sup> from Little White Salmon NFH. In addition, nearly 1.5 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.

In addition to the Washougal Hatchery coho that were scheduled to be released into the Klickitat River this week, 500,000 coho juveniles from Klickitat Hatchery are scheduled for release into the Klickitat River on April 5<sup>th</sup>. Finally, approximately 176,500 summer steelhead are scheduled for release into the Deschutes River over the next two weeks. Of these, about 14,500 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 15<sup>th</sup> and continues through November 15<sup>th</sup>. This counting schedule allows for comparison of current year counts with historical data. The historical counting schedule began on March 1<sup>st</sup> at Lower Granite Dam. Counting began on April 1<sup>st</sup> 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 1<sup>st</sup>. Daily adult spring Chinook counts at Bonneville Dam ranged from 23 to 166 adult salmon per day. Between March 15<sup>th</sup> and April 1<sup>st</sup>, 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 1<sup>st</sup> was 1925. At Willamette Falls Dam, the 2010 count for steelhead was 2775, as of March 27<sup>th</sup>. 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 bypassed are being tracked this year for the period of

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

### Hatchery Releases Last Two Weeks

**Hatchery Release Summary**  
3/19/2010 to 04/01/10

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	McCall Hatchery	CH1	SU	2010	1,038,000	03-23-10	03-26-10	S Fk 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
<b>Idaho Dept. of Fish and Game Total</b>					<b>7,364,050</b>				
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 Acclim Pond	Wallowa 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
<b>Nez Perce Tribe Total</b>					<b>1,983,300</b>				
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
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>674,400</b>				
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	Warm Springs NFH	CH1	SP	2010	706,512	03-20-10	03-20-10	Warm Springs Hatchery	Deschutes River
<b>U.S. Fish and Wildlife Service Total</b>					<b>1,821,512</b>				
Umatilla Tribe	Carson NFH	CH1	SP	2010	249,500	03-30-10	03-31-10	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
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	41,822	03-30-10	04-13-10	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	64,665	03-30-10	04-13-10	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	110,246	03-29-10	04-12-10	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	125,868	03-15-10	03-22-10	Grande Ronde Acclim Pond	Grande Ronde River
<b>Umatilla Tribe Total</b>					<b>1,626,213</b>				
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	Tucannon Hatchery	CH1	SP	2010	86,000	04-01-10	04-15-10	Tucannon Hatchery	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2010	87,000	04-01-10	04-15-10	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
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>2,265,000</b>				
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	Willard Hatchery	CO	UN	2010	57,846	04-01-10	04-07-10	Nason Creek	Wenatchee River
<b>Yakama Tribe Total</b>					<b>909,159</b>				
<b>Grand Total</b>					<b>16,643,634</b>				

### Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	4/2/2010		to		4/15/2010				
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
<b>Colville Tribe Total</b>					<b>190,000</b>				
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	229,600	03-23-10	04-14-10	Clear Creek Powell Acclim	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2010	413,300	03-23-10	04-14-10	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 S Fk Clearwater	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2010	176,400	04-15-10	04-26-10	River	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2010	186,600	04-15-10	04-26-10	Redhouse (SFk 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	R) Shoup Br (Salmon	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	830,000	04-12-10	05-03-10	Pahsimeroi River Rapid River	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2010	2,500,000	03-05-10	04-23-10	Hatchery	Little Salmon River
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)
<b>Idaho Dept. of Fish and Game Total</b>					<b>8,263,300</b>				
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 S Fk Clearwater	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	ST	SU	2010	150,000	04-12-10	04-16-10	River	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 Lostine Accim	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2010	124,000	04-10-10	04-11-10	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 South Fork Salmon
Nez Perce Tribe	McCall Hatchery	CH1	SU	2010	49,930	04-05-10	04-05-10	Johnson Cr Idaho Nez Perce Tribal	River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH1	SP	2010	200,000	04-01-10	04-15-10	Hatchery	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal Hatchery	CO	UN	2011	30,000	04-01-10	04-30-10	Orofino Creek	Clearwater River M F
<b>Nez Perce Tribe Total</b>					<b>2,782,030</b>				

**Hatchery Releases Next Two Weeks**

Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2010	50,000	04-09-10	04-09-10	Big Sheep Creek Lookingglass	Imnaha River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2010	266,000	04-01-10	04-14-10	Creek Imnaha Acclim	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2010	396,000	04-01-10	04-14-10	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	Round Butte Hatchery	ST	SU	2010	162,000	04-08-10	04-08-10	Deschutes River	Deschutes 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
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>908,000</b>				
U.S. Fish and Wildlife Service	Carson NFH	CH1	SP	2010	1,279,400	04-15-10	04-15-10	Carson Hatchery Dworshak	Wind River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2010	1,030,000	04-12-10	04-16-10	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) Little White	Salmon River (ID) Little White Salmon
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2010	1,700,000	04-15-10	04-15-10	Salmon Hatchery Little White	River Little White Salmon
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2010	575,000	04-15-10	04-15-10	Salmon Hatchery Spring Creek	River
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2010	6,100,000	04-09-10	04-13-10	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
<b>U.S. Fish and Wildlife Service Total</b>					<b>12,093,188</b>				
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	41,822	03-30-10	04-13-10	Acclim Pond Grande Ronde	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	64,665	03-30-10	04-13-10	Acclim Pond Catherine Cr	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2010	110,246	03-29-10	04-12-10	Acclim Pond Imeques Acclim	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2010	600,000	04-10-10	04-10-10	Pond	Umatilla River
<b>Umatilla Tribe Total</b>					<b>850,845</b>				
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 Similkameen	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2010	350,000	04-10-10	05-05-10	Acclim Pd Lyons Ferry	Okanogan River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2010	479,000	04-15-10	04-20-10	Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	5,600	04-15-10	04-20-10	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	50,000	04-15-10	04-20-10	Baileysburg Bridge Lyons Ferry	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	60,000	04-15-10	04-20-10	Hatchery Dayton Acclim	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	85,000	04-15-10	04-30-10	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 Cottonwood	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2010	160,000	04-15-10	04-30-10	Acclim Pond Ringold Springs	Grande Ronde River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2010	150,000	04-15-10	04-25-10	Hatchery Tucannon	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2010	86,000	04-01-10	04-15-10	Hatchery Tucannon	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2010	87,000	04-01-10	04-15-10	Hatchery Tucannon	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2010	55,000	04-15-10	04-25-10	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	Washougal Hatchery	CO	NO	2010	1,892,000	04-01-10	04-07-10	Klickitat River	Klickitat 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
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>4,854,600</b>				



**Hatchery Releases Next Two Weeks**

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	Naches River	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	205,926	04-12-10	05-15-10	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	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	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	Marion Drain	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	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	57,846	04-01-10	04-07-10	Nason Creek	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2010	131,777	04-15-10	04-25-10	Wells Hatchery	Mid-Columbia River
<b>Yakama Tribe Total</b>					<b>2,504,108</b>				
<b>Grand Total</b>					<b>32,446,071</b>				

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
03/19/2010	61.6	0.0	65.5	0.0	67.4	0.0	66.9	0.0	69.6	0.0	73.0	0.0	71.7	0.0
03/20/2010	45.4	0.0	44.8	0.0	50.4	0.0	51.4	0.0	53.4	0.0	67.2	0.0	66.2	0.0
03/21/2010	38.9	0.0	41.7	0.0	36.8	0.0	36.7	0.0	38.8	0.0	59.2	0.0	63.0	0.0
03/22/2010	58.1	0.0	57.5	0.0	55.6	0.1	55.6	0.0	55.7	0.0	62.9	0.0	63.9	0.0
03/23/2010	72.2	0.0	70.9	0.0	80.9	0.0	83.7	0.0	83.6	0.0	69.3	0.0	63.6	0.0
03/24/2010	65.6	0.0	65.9	0.0	71.8	0.0	73.2	0.0	78.4	0.0	68.3	0.0	63.6	0.0
03/25/2010	58.5	0.0	58.7	0.0	57.3	0.0	54.1	0.0	55.1	0.0	65.3	0.0	63.5	0.0
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

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
03/19/2010	1.3	0.0	15.9	16.6	25.5	0.0	27.6	0.0	29.9	0.0	31.2	0.0
03/20/2010	1.2	0.0	15.2	17.5	25.3	0.0	23.1	0.0	23.3	0.0	21.2	0.0
03/21/2010	1.2	0.0	14.7	13.5	27.8	0.0	24.5	0.0	25.5	0.0	24.0	0.0
03/22/2010	1.2	0.0	14.4	17.4	28.6	0.0	29.8	0.0	30.5	0.0	31.7	0.0
03/23/2010	1.2	0.0	14.1	17.4	34.6	0.0	34.2	0.0	38.6	0.0	36.4	0.0
03/24/2010	1.3	0.0	14.4	13.3	26.7	0.0	33.4	0.0	34.0	0.0	37.5	0.0
03/25/2010	1.3	0.0	14.9	18.1	26.8	0.0	25.9	0.0	26.1	0.0	25.9	0.0
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

**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		
03/19/2010	95.7	0.0	103.2	0.0	104.4	0.0	115.2	0.0	1.5	102.8
03/20/2010	94.2	0.0	101.4	0.0	104.3	0.0	115.6	0.0	0.0	104.7
03/21/2010	84.5	0.0	87.6	0.0	87.4	0.0	110.9	0.0	0.0	99.7
03/22/2010	111.1	0.0	90.5	0.0	91.7	0.0	90.5	0.0	0.0	79.2
03/23/2010	86.0	0.0	98.2	0.0	99.8	0.0	102.1	0.0	2.5	90.6
03/24/2010	92.1	0.0	95.6	0.0	96.3	0.0	103.7	0.6	10.7	85.6
03/25/2010	98.0	0.0	100.2	0.0	102.7	0.0	107.0	0.1	3.5	93.2
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

## 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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High	High	High	hr
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg				
3/19	95.9	96.2	96.5	23	102.2	103.2	104.1	21	101.8	102.3	102.6	24	100.2	100.5	100.8	21	---	---	---	0		
3/20	96.4	96.8	97.2	24	102.8	103.9	104.1	23	102.9	103.5	103.9	24	100.7	101.5	102.0	23	---	---	---	0		
3/21	97.0	97.3	97.6	23	103.6	104.4	104.8	22	103.7	103.8	104.0	24	102.3	103.0	104.0	22	---	---	---	0		
3/22	96.8	97.1	97.2	24	103.7	104.3	105.0	22	103.3	103.6	103.7	24	102.1	102.5	103.1	22	---	---	---	0		
3/23	96.1	96.4	97.1	23	103.1	104.0	104.8	20	102.9	103.1	103.3	24	101.2	101.7	102.0	20	---	---	---	0		
3/24	95.8	96.2	96.6	23	103.9	104.8	105.5	21	104.2	105.2	105.9	24	101.1	101.4	101.9	21	---	---	---	0		
3/25	96.9	97.5	98.2	24	105.0	106.1	106.7	24	105.6	105.9	106.1	24	105.3	106.3	106.9	24	---	---	---	0		
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		

### 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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High	High	High	hr
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg				
3/19	---	---	---	0	---	---	---	0	93.3	93.5	94.0	18	---	---	---	0	---	---	---	0		
3/20	---	---	---	0	---	---	---	0	93.8	94.3	94.5	24	---	---	---	0	---	---	---	0		
3/21	---	---	---	0	---	---	---	0	94.4	94.7	94.9	24	---	---	---	0	---	---	---	0		
3/22	---	---	---	0	---	---	---	0	94.1	94.4	95.1	24	---	---	---	0	---	---	---	0		
3/23	---	---	---	0	---	---	---	0	93.5	93.8	94.0	24	---	---	---	0	---	---	---	0		
3/24	---	---	---	0	---	---	---	0	94.3	94.8	94.9	24	---	---	---	0	---	---	---	0		
3/25	---	---	---	0	---	---	---	0	95.3	95.6	96.3	24	---	---	---	0	---	---	---	0		
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		

### 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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High	High	High	hr
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg				
3/19	---	---	---	0	---	---	---	0	104.4	105.4	106.5	24	103.6	104.1	104.4	24	104.8	105.5	106.4	24		
3/20	---	---	---	0	---	---	---	0	105.6	106.6	107.2	24	104.8	105.4	105.5	24	105.4	105.9	106.2	24		
3/21	---	---	---	0	---	---	---	0	106.6	106.8	107.2	24	105.6	105.8	106.2	24	105.8	106.1	106.4	24		
3/22	---	---	---	0	---	---	---	0	105.1	105.4	106.0	24	104.8	105.1	105.5	24	104.6	104.9	105.4	24		
3/23	---	---	---	0	---	---	---	0	104.7	105.2	105.9	24	104.4	104.8	105.1	24	104.0	104.3	105.0	24		
3/24	---	---	---	0	---	---	---	0	106.8	108.1	109.1	24	105.6	106.4	106.7	24	105.8	106.5	107.4	24		
3/25	---	---	---	0	---	---	---	0	107.7	108.0	108.3	24	106.7	107.0	107.3	24	107.3	107.6	107.9	24		
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	---	---	---	0	---	---	---	0	---	---	---	0		
3/31	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0		
4/1	100.5	100.5	100.7	9	106.0	106.0	106.5	9	---	---	---	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			Clwrtr-Peck			Anatone							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
3/19	103.2	103.7	104.1	24	---	---	---	0	106.0	107.5	109.8	24	103.1	104.1	105.5	24	102.4	103.7	105.3	24
3/20	104.2	104.9	105.2	24	---	---	---	0	106.7	107.6	109.5	24	102.8	104.3	106.0	24	102.7	103.9	105.3	24
3/21	104.8	105.0	105.1	24	---	---	---	0	106.9	107.7	108.9	24	102.3	103.1	104.1	24	102.1	102.6	103.0	24
3/22	104.3	104.6	104.9	24	104.5	104.6	105.6	13	107.1	107.8	109.3	24	102.5	104.0	105.8	24	101.7	102.5	103.4	24
3/23	103.7	104.1	104.4	24	104.2	105.3	105.8	24	106.4	107.9	110.2	24	102.0	103.7	105.4	23	102.3	103.5	105.0	24
3/24	105.0	105.8	106.1	24	105.6	106.6	107.2	24	106.4	107.7	110.2	24	102.7	104.2	106.1	21	102.7	104.0	105.3	24
3/25	105.9	106.2	106.3	24	105.4	106.0	106.8	24	107.0	108.1	109.4	24	101.6	102.2	102.9	24	101.9	102.3	102.7	24
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	---	---	---	0	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	---	---	---	0	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	---	---	---	0	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

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

Date	Clwrtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
3/19	102.4	104.7	106.8	23	100.4	100.4	100.5	11	99.8	99.8	100.1	11	101.4	101.6	102.0	17	100.3	100.6	101.1	17
3/20	102.5	104.7	106.5	23	102.6	103.1	103.5	24	101.8	102.3	102.8	24	102.8	103.3	104.0	24	101.3	101.9	102.1	24
3/21	100.9	101.6	102.1	24	103.8	104.2	104.3	24	102.7	103.0	103.4	24	103.2	103.5	103.7	24	101.7	101.9	102.1	24
3/22	101.3	102.9	103.9	24	103.2	103.5	104.2	24	102.6	102.8	103.1	24	102.0	102.2	102.5	24	101.0	101.3	101.9	24
3/23	101.8	103.9	105.2	23	103.3	103.5	103.6	24	102.6	103.0	103.3	24	101.0	101.1	101.3	24	100.7	101.2	101.8	24
3/24	101.7	103.4	104.4	23	104.2	104.6	105.0	24	103.6	104.0	104.3	24	102.3	102.6	103.6	24	101.8	102.3	102.5	24
3/25	99.6	100.3	102.3	24	104.3	104.7	105.0	24	103.7	103.9	104.2	24	103.7	104.4	104.8	24	102.3	102.7	102.9	24
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

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

Date	Lower Mon.			L. Mon. Tlwr			Ice Harbor			Ice Harbor Tlwr			McNary-Oregon							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
3/19	101.1	101.4	101.7	17	100.7	100.9	101.6	17	102.0	102.4	102.7	24	102.7	103.2	103.6	24	---	---	---	0
3/20	102.6	103.1	103.6	24	102.4	103.1	103.5	24	102.8	103.2	103.6	24	103.7	104.3	104.8	24	---	---	---	0
3/21	103.2	103.4	103.9	24	102.9	103.3	104.2	24	103.0	103.1	103.4	24	104.1	104.2	104.4	24	---	---	---	0
3/22	102.7	102.9	103.1	24	102.0	102.3	102.5	24	102.6	102.6	102.8	24	103.6	103.7	103.9	24	---	---	---	0
3/23	102.3	102.5	102.8	24	101.7	102.1	102.4	24	102.4	102.7	103.1	24	103.2	103.4	103.4	24	---	---	---	0
3/24	103.1	103.7	104.3	24	103.0	103.8	104.1	24	103.5	104.1	104.5	24	104.2	104.7	105.1	24	---	---	---	0
3/25	103.8	104.1	104.4	24	103.3	103.7	104.0	24	104.5	104.7	105.0	24	105.0	105.2	105.4	24	---	---	---	0
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

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

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

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/19	104.7	105.6	106.4	24	103.7	104.6	104.8	24	100.0	100.5	102.4	17	103.4	103.6	103.8	17	103.0	103.2	103.9	17
3/20	105.8	106.3	106.9	24	104.9	105.3	105.7	24	100.8	101.5	103.3	24	103.9	104.4	104.9	24	104.0	104.7	105.0	24
3/21	105.8	106.0	106.3	24	104.8	105.1	105.5	24	101.2	101.7	102.9	24	104.2	104.5	105.3	24	104.5	104.7	105.0	24
3/22	104.5	104.7	105.1	24	104.2	104.5	104.8	24	100.6	101.0	101.3	24	103.0	103.2	103.5	24	103.7	104.0	104.3	24
3/23	104.1	104.3	104.5	24	104.1	104.6	105.3	24	100.0	100.8	102.0	24	103.0	103.6	103.8	24	103.4	103.8	104.1	24
3/24	106.3	107.3	108.0	24	105.5	106.5	107.0	24	102.7	104.2	105.3	24	104.4	105.4	106.0	24	104.8	105.7	106.1	24
3/25	105.6	106.4	107.2	24	105.0	105.5	106.1	24	102.6	103.1	104.1	24	104.5	104.8	104.9	24	105.4	105.7	106.0	24
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

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

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>Camas\Washougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
3/19	104.2	104.3	105.1	17	104.2	104.5	104.6	24	107.4	107.8	108.2	24	105.7	106.2	106.9	24	117.7	117.9	118.1	24
3/20	104.8	105.3	105.8	24	104.3	104.7	104.9	24	107.9	108.8	109.6	24	104.4	105.4	106.0	24	118.0	118.4	118.8	24
3/21	105.2	105.4	105.5	24	105.2	105.4	105.7	24	108.9	109.4	110.1	24	107.1	107.9	108.5	24	118.4	118.6	118.9	24
3/22	104.8	105.0	105.2	24	105.0	105.2	105.6	24	109.4	110.3	111.1	24	107.4	108.5	109.4	24	118.6	119.0	120.3	24
3/23	104.3	104.7	105.1	24	105.2	105.6	105.8	24	109.8	111.2	112.8	24	109.1	110.1	111.1	24	119.3	120.5	121.1	24
3/24	105.3	106.1	106.5	24	105.7	105.9	106.1	24	106.0	107.2	107.5	24	106.5	107.3	109.0	24	117.0	119.7	120.7	24
3/25	105.7	106.0	106.1	24	106.0	106.1	106.2	24	108.4	109.9	111.1	24	106.0	106.4	106.6	24	115.6	116.3	117.3	24
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

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 4/2/2010 9:55

### Two-Week Summary of Passage Indices

\* One or more of the sites on this date had an incomplete or biased sample.

See Sampling Comments: <http://www.fpc.org/currentDaily/smpcomments.htm>

For clip information see: <http://www.fpc.org/CurrentDaily/catch.htm>

For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmppsubmitdata.asp>

<b>COMBINED YEARLING CHINOOK</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/19/2010	1,314	470	2	0	---	---	---	---	---	---	603
03/20/2010	889	279	0	0	---	---	---	---	---	---	370
03/21/2010 *	2,542	169	5	1	---	---	---	---	---	---	193
03/22/2010	1,045	104	18	0	---	---	---	---	---	---	219
03/23/2010	980	125	38	1	---	---	---	---	---	---	149
03/24/2010	830	150	34	0	---	---	---	---	---	---	117
03/25/2010 *	843	71	29	0	---	---	---	---	---	---	91
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	---	463	0	40	---	5	3	---	20	205
04/02/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>13,307</b>	<b>3,441</b>	<b>1,074</b>	<b>12</b>	<b>60</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>20</b>	<b>3,051</b>
<b># Days:</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>14</b>
<b>Average:</b>	<b>951</b>	<b>265</b>	<b>77</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>20</b>	<b>218</b>
<b>YTD</b>	<b>15,364</b>	<b>3,922</b>	<b>1,077</b>	<b>12</b>	<b>60</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>20</b>	<b>7,333</b>

<b>COMBINED SUBYEARLING CHINOOK</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/19/2010	0	0	0	0	---	---	---	---	---	---	549
03/20/2010	0	0	0	3	---	---	---	---	---	---	833
03/21/2010 *	0	0	0	2	---	---	---	---	---	---	738
03/22/2010	0	0	0	7	---	---	---	---	---	---	560
03/23/2010	0	0	0	1	---	---	---	---	---	---	494
03/24/2010	0	0	0	0	---	---	---	---	---	---	570
03/25/2010 *	0	0	0	8	---	---	---	---	---	---	618
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	1	0	---	0	12	---	0	1,702
04/02/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>11,894</b>
<b># Days:</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>850</b>
<b>YTD</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>52</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>18,998</b>

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)
03/19/2010	0	0	0	0	---	---	---	---	---	---	38
03/20/2010	0	0	0	0	---	---	---	---	---	---	68
03/21/2010 *	0	0	0	0	---	---	---	---	---	---	143
03/22/2010	0	0	0	0	---	---	---	---	---	---	101
03/23/2010	0	0	0	0	---	---	---	---	---	---	55
03/24/2010	0	0	0	0	---	---	---	---	---	---	83
03/25/2010 *	0	0	0	0	---	---	---	---	---	---	123
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	420
04/02/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,375</b>
<b># Days:</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>241</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,787</b>

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)
03/19/2010	0	2	0	2	---	---	---	---	---	---	4
03/20/2010	0	1	0	1	---	---	---	---	---	---	4
03/21/2010 *	0	2	0	0	---	---	---	---	---	---	0
03/22/2010	0	1	0	0	---	---	---	---	---	---	0
03/23/2010	0	1	0	0	---	---	---	---	---	---	9
03/24/2010	1	4	0	0	---	---	---	---	---	---	8
03/25/2010 *	0	1	0	0	---	---	---	---	---	---	9
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	---	0	6	40	---	0	0	---	4	72
04/02/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>8</b>	<b>110</b>	<b>1</b>	<b>20</b>	<b>115</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>196</b>
<b># Days:</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>14</b>
<b>Average:</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>14</b>
<b>YTD</b>	<b>8</b>	<b>122</b>	<b>1</b>	<b>22</b>	<b>115</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>236</b>

## 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)
03/19/2010	0	0	0	0	---	---	---	---	---	---	0
03/20/2010	0	0	0	0	---	---	---	---	---	---	0
03/21/2010 *	0	0	0	0	---	---	---	---	---	---	0
03/22/2010	0	0	0	0	---	---	---	---	---	---	0
03/23/2010	0	0	0	0	---	---	---	---	---	---	0
03/24/2010	0	0	0	0	---	---	---	---	---	---	0
03/25/2010 *	0	0	0	0	---	---	---	---	---	---	0
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	---	4	10
04/02/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>10</b>
<b># Days:</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>14</b>

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

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's), subyearling chinook (chinook 0's), steelhead, coho, and sockeye. Two classes of fish counts are shown in these tables: collection counts, which account for sample rates but are not adjusted for flow; and passage indices, which are collection counts divided by the proportion of water passing through the sampled powerhouse. Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations. The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

### Definitions for Smolt Index Counts

- WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts
- IMN (Collection) = Imnaha River Trap : Collection Counts
- GRN (Collection) = Grande Ronde River Trap : Collection Counts
- LEW (Collection) = Snake River Trap at Lewiston : Collection Counts
- LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts  
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:

4/2/10 9:55 AM

		03/19/10	TO	04/02/10	
		Species			
Site	Data	CH0	CH1	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	10	60	115	185
	Sum of NumberBarged	0	0	0	0
	Sum of NumberBypassed	10	60	114	184
	Sum of Numbertrucked	0	0	0	0
	Sum of SampleMorts	0	0	1	1
	Sum of FacilityMorts	0	0	0	0
	Sum of ResearchMorts	0	0	0	0
	Sum of TotalProjectMorts	0	0	1	1
<b>LMN</b>	Sum of NumberCollected		5		5
	Sum of NumberBarged		0		0
	Sum of NumberBypassed		5		5
	Sum of Numbertrucked		0		0
	Sum of SampleMorts		0		0
	Sum of FacilityMorts		0		0
	Sum of ResearchMorts		0		0
	Sum of TotalProjectMorts		0		0
Total Sum of NumberCollected		10	65	115	190
Total Sum of NumberBarged		0	0	0	0
Total Sum of NumberBypassed		10	65	114	189
Total Sum of Numbertrucked		0	0	0	0
Total Sum of SampleMorts		0	0	1	1
Total Sum of FacilityMorts		0	0	0	0
Total Sum of ResearchMorts		0	0	0	0
Total Sum of TotalProjectMorts		0	0	1	1

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

4/2/10 9:55 AM

TO: 04/02/10

		Species			
Site	Data	CH0	CH1	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	10	60	115	185
	Sum of NumberBarged	0	0	0	0
	Sum of NumberBypassed	10	60	114	184
	Sum of NumberTrucked	0	0	0	0
	Sum of SampleMorts	0	0	1	1
	Sum of FacilityMorts	0	0	0	0
	Sum of ResearchMorts	0	0	0	0
	Sum of TotalProjectMorts	0	0	1	1
<b>LMN</b>	Sum of NumberCollected			5	5
	Sum of NumberBarged			0	0
	Sum of NumberBypassed			5	5
	Sum of NumberTrucked			0	0
	Sum of SampleMorts			0	0
	Sum of FacilityMorts			0	0
	Sum of ResearchMorts			0	0
	Sum of TotalProjectMorts			0	0
Total Sum of NumberCollected		10	65	115	190
Total Sum of NumberBarged		0	0	0	0
Total Sum of NumberBypassed		10	65	114	189
Total Sum of NumberTrucked		0	0	0	0
Total Sum of SampleMorts		0	0	1	1
Total Sum of FacilityMorts		0	0	0	0
Total Sum of ResearchMorts		0	0	0	0
Total Sum of TotalProjectMorts		0	0	1	1

Cumulative Adult Passage at Mainstem Dams Through: 04/01

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	04/01	578	14	151	0	3719	6	0	0	0	0	0	0	0	0	0	0	0	0
TDA	04/01	42	0	10	0	322	2	0	0	0	0	0	0	0	0	0	0	0	0
JDA	04/01	48	0	-2	0	154	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	04/01	8	0	4	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	04/01	9	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	04/01	2	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	04/01	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
LGR	04/01	1	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	03/27	263	0	14	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	1705	578	784	502
TDA	0	0	0	0	0	0	0	0	0	122	44	71	42
JDA	0	0	0	0	0	0	0	0	0	126	95	123	60
MCN	0	0	0	0	0	0	0	0	0	104	98	111	52
IHR	0	0	0	0	0	0	0	0	0	135	90	112	50
LMN	0	0	0	0	0	0	0	0	0	102	172	140	53
LGS	0	0	0	0	0	0	0	0	0	190	257	148	66
LGR	0	0	0	0	0	0	0	0	0	6230	4622	5061	1925
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	-	-	-	-	-	2775	1866	-	-

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: 04/02/10

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