Fish Passage Center

Weekly Report #10 - 10

May 21, 2010

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 37% and 101% of average at individual sub-basins over May. Precipitation above The Dalles has been 79% of average over May. Over the 2010 water year, precipitation has ranged between 73% and 87% of average.

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

Location	Water Year 2010 May 1-16		Water Year 2010 October 1, 2009 to May 16, 2010	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.87	76	13.52	79
Snake River Above Ice Harbor	0.70	71	10.87	85
Columbia Above The Dalles	0.80	79	14.27	84
Kootenai	0.93	81	14.14	81
Clark Fork	0.66	63	8.28	73
Flathead	1.18	93	13.05	87
Pend Oreille/ Spokane	1.08	80	19.25	81
Central Washington	0.15	37	5.85	84
Snake River Plain	0.46	61	6.55	83
Salmon/Boise/ Payette	0.62	68	13.17	86
Clearwater	1.37	88	18.75	82
SW Washington Cascades/Cowlitz	1.98	101	52.08	86
Willamette Valley	1.59	87	44.76	86

Table 2 displays the May Final and May Mid-Month runoff volume forecasts for multiple reservoirs. The current forecast at The Dalles between January and July is 71200 Kaf (66% of average).

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

Location	May Final		May Mid-Month	
	% Average (1971 -2000)	Probable Runoff Volume (Kaf)	% Average (1971 -2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	66	70900	66	71200
Grand Coulee (Jan-July)	74	46400	73	46200
Libby Res. Inflow, MT (Apr-Aug)	69 77*	4310 4887*	69	4340
Hungry Horse Res. Inflow, MT (Jan-July)	74	1640	72	1600
Lower Granite Res. Inflow (Apr- July)	58	12400	60	12900
Brownlee Res. Inflow (Apr-July)	44	2780	46	2910
Dworshak Res. Inflow (Apr-July)	55 57*	1460 1526*	58	1530

* 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 objective this spring is 85 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 49.9 Kcfs from April 3 to May 20 and 73.2 Kcfs last week.

The Biological Opinion flow period began on April 10th in the mid and lower Columbia River (Priest Rapids and McNary Dams). According to the April Final Water Supply Forecast, the flow objective this spring is 220 Kcfs at McNary and 135 Kcfs at Priest Rapids. Flows from April 10 to May 20 have averaged 158.6 Kcfs at McNary Dam and 101.1 Kcfs at Priest Rapids Dam. Over the last week, flows have averaged 200.7 Kcfs at McNary Dam and 127.1 Kcfs at Priest Rapids Dam. Outflows from Grand Coulee have been increased in attempt to achieve flows of 125-135 Kcfs at Priest Rapids Dam.

Grand Coulee Reservoir is at 1261.4 feet (5-20-10) and refilled 0.7 feet over the last week. Outflows at Grand Coulee have ranged between 83.1 and 112.6 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2415.5 feet (5-20-10) and has refilled 5.2 feet last week. Outflows at Libby are currently 6.0 Kcfs. At the 4-28-10 TMT Meeting, a decision was made to reduce VARQ outflows in early May to provide a higher reservoir elevation at Libby Dam in Late May/Early June. The higher reservoir elevation at Libby Dam will provide an increased likelihood that a spill test can be conducted this year for sturgeon operations. Outflows from Libby will be increased later in the spring period in an effort to have no impact on the spring volume of flow augmentation from Libby Dam. The COE released its May Final forecast at Libby Dam on May 7th, 2010 which was 4887 Kaf (April-August) which puts Libby in a Tier 2 sturgeon operation in 2010. Inflows to Libby have increased over the last week from 8.2 Kcfs to 37.9 Kcfs.

Hungry Horse is currently at an elevation of 3535.7 feet (5-20-10) and has refilled 5.6 feet last week. Outflows at Hungry Horse have been approximately 4.0 Kcfs last week. Inflows to Hungry Horse Dam have increased from 4.5 Kcfs to 19.6 Kcfs over the last week.

Dworshak is currently at an elevation of 1570.2 feet (5-20-10) and has refilled approximately 6.6 feet last week. Outflows from Dworshak have increased over the last two days to approximately 9.8 Kcfs in response to SOR 2010-02 submitted by the Salmon Mangers on May 11, 2010. Outflows from Dworshak will stay at 9.8 Kcfs through 5-21-10, and then will be decreased to minimum outflow. Inflows to Dworshak have increased over the last week from 8.6 to 14.3 Kcfs.

The Brownlee Reservoir was at an elevation of 2071.3 feet on May 20, 2010 refilling 4.6 feet last week. Over the last week, outflows at Brownlee have ranged between 13.5-19.5 Kcfs. Inflows to Brownlee have increased from 17.9 Kcfs to 23.1 Kcfs over the last week.

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 spring 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 29-June 20: 30%/30% vs. 45 Kcfs/Gas Cap

Spill at Lower Granite Dam met the 20 Kcfs instantaneous level until May 18th at about 3 p.m., when spill was decreased to 17 Kcfs in response to TDG levels in the Little Goose forebay that exceeded 115%. Spill returned to the 20 Kcfs by noon on May 19th when the TDG decreased as flows increased. Spill at Little Goose Dam achieved the 30% of instantaneous flow and has ranged from a daily average of 15.3 Kcfs to 30.1 Kcfs. Spill at Lower Monumental Dam varied over the past week as gas caps were lowered from 27 Kcfs at the beginning of the week, to 14 Kcfs by midweek. The reductions were made in an attempt to decrease the total dissolved gas at the downstream forebay monitor at Ice Harbor Dam. Spill was increased to the 27 Kcfs on May 18th as flow increased and TDG at the Ice Harbor forebay decreased. The Ice Harbor simulated test of 30% spill versus 45 Kcfs during daytime hours and gas cap spill during nighttime hours began on April 29. Spill at Ice Harbor Dam occurred as 45 Kcfs during daytime hours, and all flow in excess of that required to operate one turbine unit during nighttime hours, or as 30% spill, in two day blocks. BPA is currently experiencing transmission limitations in the region and as a result generation must be reduced in specific

areas to maintain transmission stability. To address this situation Ice Harbor will spill to the 45 Kcfs/ gas cap spill level per the 2010 Spring FOP.

The 2010 spill program at the lower Columbia River projects began at 0001 hours on April 10th. The following table shows the planned operations for spring 2010.

Project	Day/Night Spill
McNary	40%/40%
John Day	**Pre-test:** 30%/30% **Testing:** 30%/30% vs. 40%/40%
The Dalles	40%/40%
Bonneville	100 Kcfs/100 Kcfs

The planned spill levels have been met at McNary Dam. At John Day Dam the testing of 30% spill versus 40% spill occurred in two day blocks. To address the transmission limitations BPA also requested that rather than switching to the 30% spill level on Thursday, the project stay at 40% for another two day block. This represents a change in the scheduled blocks, but will not affect the study. The planned spill levels were met at The Dalles over the past week. At Bonneville Dam spill was progressively reduced and increased to address TDG at the Camas/Washougal monitor. Spill decreased from 90 Kcfs on May 14th to 75 Kcfs on May 18th, increased to 90 Kcfs by the 20th of May, and returned to 100 on the 21st.

At present, GBT monitoring is being implemented at Lower Granite, Little Goose, Lower Monumental, McNary, Bonneville and Rock Island dams. Three fish were reported with Rank 1 signs of fin GBT this past week at Lower Monumental Dam. This level of incidence (3%) is well below the action criteria of 15%.

All of the tailrace TDG monitors are reporting TDGS levels well below the State Waiver limits. Some exceedences, which are resulting in the limiting spill levels, are being reported at various forebay monitors. These exceedences are less of a direct result of spill levels at upstream projects, but more a response to temperature and local biological processes in the vicinity of the forebay monitors.

Smolt Monitoring:

Juvenile salmon collections at Snake River dams increased over the past three days as flows from the Snake River tributaries have risen, while collections at dams on the Columbia River remained steady or decreased over the past week. The spring migration appears to have restarted in the Snake River and in Columbia River migrants appear to be passing relatively well. At Bonneville Dam and Rock Island Dam smolt collections have been near normal or above normal for the past few weeks. At the SMP traps large numbers of steelhead smolts have been collected over the last week at the Imnaha River, Grande Ronde River and Snake River traps.

The Salmon River Trap, located at River km 103, and operated by Idaho Department of Fish and Game, has collected decreasing numbers of yearling Chinook and steelhead over the over the past week, as passage begins to wind down. Small numbers of sockeye smolts were collected over the past week. Collections of sockeye appeared to peak on May 14 when 23 smolts were collected. Typically, sockeye passage distribution is very short. Flows in the Salmon River likely reached their peak at 34 Kcfs this past week and with that peak the trap has been pulled out of the channel due to high debris and floating logs. Flows are projected to stay at that level for another day and the slowly decrease over the next week.

Collections at the Grande Ronde Trap, operated by the Oregon Department of Fish and Wildlife, have remained relatively high over the past week. Based on collections over the past ten years, yearling Chinook numbers typically decrease rapidly at this point. Flows in the Grande Ronde River have increased over the past week, with flows reaching normal historic median. Flows on May 21 were 7,700 cfs which is about 104% of historic median. According the USGS forecast, flows peaked on May 19, and are likely to decline for at least the next week if not for the season.

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 steelhead over the past two weeks. Steelhead collection rose to over 2,200 on May 16. Steelhead collections typically peak during this period of May 13 to May 20. Flows in the Imnaha were above normal on May 21 at 1800 cfs--which was 110% of historic median. Similar to other Snake River tributaries flows are projected to begin to decline May 22 or May 23. The Imnaha Trap has been unable to sample over the past few days due to high flow and debris in the river.

Collections of steelhead at the Lewiston Trap, operated by IDFG, increased quickly over the past few days as flows increased. Steelhead collection increased to 1,200 fish on May 20. Yearling Chinook collections have remained relatively low over the past week but jumped to nearly 250 on May 19. Collections of sockeye smolts began on May 15 and increased to a collection of 20 smolts on May 20. Flows have reached normal levels for the time being with a season high 64 Kcfs on May 21. Flows are forecast to begin tapering off by May 22.

Passage indices for yearling Chinook and steelhead at Lower Granite Dam have increased over the past two days as flows in the Snake River reached 100 Kcfs. For the week though passage indices were flat despite the increase. Passage indices averaged 51,000 per day this week compared to over 53,000 last week for yearling Chinook , while steelhead passage indices averaged 30,000 per day this week compared to about 32,000 per day last week. Sockeye were sampled at Lower Granite and Little Goose dams the past few days, indicating that the run has begun arriving from the Salmon River.

Passage at Rock Island Dam appears to be near normal for spring migrants. Steelhead now predominate in the sample with the average daily collection over 1,000. There have been unusual mortalities in the sample at the project. A fluctuating numbers of hatchery coho, and now Chinook and steelhead mortalities have been collected. The morts have had unusually high degree of fungus and the fish appear to have arrived at the facility dead. The percentage of the total sample has fluctuated between 0 and 4% of the total sample in the past week. It is the opinion of SMP crew at the site that the morts were dead prior to arriving at the facility. Mortality rates of other species have remained relatively low.

At John Day Dam the cause of unusual smolt mortalities in the sample appears to have been identified. A metal panel near the tainter gate that diverts flow into the elevated bypass flume was bulging out a few inches when the flume was watered up. The COE discovered the problem on May 19. The bypass flume was shut down for repairs for several hours on May 19. The mortality rate for all species appears to have dropped well below 1% over the past day of sampling indicating that the problem was identified and fixed.

At Bonneville Dam the largest collections over the past week have been subyearling Chinook. A recent release from Spring Creek NFH of subyearling fall Chinook began arriving on May 12, with index of passage peaking at 427,000 on May 12. For yearling Chinook the average passage index was 47,000 per day this week compared to 64,000 last week. The average index for steelhead was 20,000 per day compared to 35,000 per day last week. Increasing numbers of coho and sockeye were captured over the past week. Sockeye indices continued to increase this past week with a peak index of over 33,000 fish on May 20. The coho passage index also reached a peak for the season on May 12 at nearly 23,000.

Hatchery Release:

Snake River Zone: The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. Releases of subyearling fall Chinook surrogates to the Snake River that were scheduled to begin last week continued this week. In all, approximately 230,000 fall Chinook surrogates are scheduled for release into the Snake River, near Captain John's Rapids. These surrogates are 100% unmarked, but do have PIT-tags. In addition, 500,000 subyearling fall Chinook juveniles were scheduled to be released into Lapwai Creek this week. Approximately 40% of these subyearlings are unmarked. There were no other releases of juvenile salmonids scheduled to begin this week in this zone.

Approximately 2.3 million subyearling fall Chinook are scheduled to be released in this zone over the next two weeks. Of these, about 1.0 million will be released into the Clearwater River, from the Big Canyon Acclimation Facility (500,000) or from the Nez Perce Tribal Hatchery (500,000). Approximately 50% of the subyearling fall Chinook juveniles being released into the Clearwater River over the next two weeks are unmarked. Approximately 1.1 million of the subyearlings scheduled for release in this zone over the next two weeks are to be released into the Snake River, above Lower Granite Dam. Approximately 45% of the subyearling fall Chinook juveniles being released into the Snake River over the next two weeks (above Lower Granite Dam) are unmarked. Finally, about 200,000 of the subyearlings scheduled for release over the next two weeks are being released from Lyons Ferry Hatchery, which is below Little Goose Dam. This Lyons Ferry Hatchery release is scheduled to occur on or around June 1st and these juveniles are 100% adipose clipped.

Mid-Columbia Zone: The Mid-Columbia Zone

encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. There were no releases of juvenile salmonids scheduled to begin this week in this zone. However, there were a few releases from past weeks that were scheduled to end this week. The first of these is a release of approximately 484,000 subyearling summer Chinook from Wells Hatchery. In addition, a volitional release of about 610,000 yearling spring Chinook from Chiwawa Hatchery to the Chiwawa River was scheduled to end this week. This release began on or around April 15th. Finally, many of the Yakama Tribal volitional releases of juvenile coho to the Yakima and Wenatchee rivers continued this week. These releases are expected to run through late May or early June.

There are no new releases of juvenile salmonids scheduled to begin over the next two weeks. However, several volitional releases of summer Chinook and coho that began weeks ago are scheduled to end over the next two weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. On May 18th, approximately 600,000 subyearling fall Chinook were released into the Umatilla River. This is the only release of juvenile salmonids to this zone that was scheduled for this week.

There are no new releases of juvenile salmonids scheduled to begin over the next two weeks. However, a volitional release of 212,760 yearling spring Chinook to the Deschutes River that began weeks ago is scheduled to end on or around June 1st.

Adult Fish Passage:

Adult counts at Bonneville Dam have been updated through May 20th. Daily adult spring Chinook counts at Bonneville Dam ranged from 709 to 4998 adult salmon per day. Between March 15th and May 20th, 226624 spring Chinook have been counted at Bonneville Dam. In 2009, 95110 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2010 adult spring Chinook count at Bonneville Dam is about 2.38 times greater than the 2009 count. The Bonneville spring Chinook adult count is about 1.48 times greater than the 10 year average of 153037. The 2010 Bonneville Dam spring Chinook jack count of 10500 is about 18.5% of the 2009 count of 56657 and about 72.9% of the 10 year average of 14399. The 2010 Willamette Falls Dam adult spring Chinook count of 33923 is about 4.9 times greater than the 2009 count of 6847. At The Dalles Dam the 2010 adult spring Chinook count is 166909 and at McNary Dam 124051 adult spring Chinook have been counted. The McNary Dam 2010 adult spring Chinook count is about 2.9 times greater than the 2009 count of 42869 and is about 1.6 times greater than the 10 year average of 74831. The 2010 McNary Dam jack spring Chinook count of 5787 is 23.9% of the 2009 count and 87.1% of the 10 year average count.

At Little Goose Dam the high crest spill bay weir (SW) was taken out of service on 5/13 (with a uniform spill pattern implemented) 8:30 a.m. from through 4:30 p.m. Also on 5/13, 9,572 adult Chinook were counted at Little Goose. This more than doubled the previous season high at Little Goose. From 5/13 through 5/17, adult Chinook numbers have ranged between 751 and 1831. This season over 20,000 more adult Chinook have been counted passing Lower Monumental when compared to Little Goose. The COE reported that these developments indicated that adult fish passage conditions at Little Goose were less than ideal. Juvenile fish passage through SW was interrupted during the closure of the SW. However, other spill bays were in operation and the juvenile fish facility operations were not affected. Additionally, the COE removed the Little Goose Dam SW from service on Tuesday morning 5/18 and implemented a uniform spill pattern. The objective of this operation was to improve adult passage conditions at Little Goose Dam. The SW returned to service on the afternoon of May 19, 2010. The daily adult spring Chinook count at LGS on 5/17 was 1831, on 5/18 it was 9863 and on 5/19 it was 5090.

As of 5/20 at Lower Granite Dam, the cumulative 2010 adult spring Chinook count of 62053 is about 3.1 times greater than the 2009 count of 20081 and about 1.64 times greater than the 10 year average count of 37789.

The Bonneville Dam 2010 steelhead count of 6481 is about 1.9 times greater than the 2009 count of 3407. The 2010 steelhead count is about 1.9 times greater than the 10-year average of 3342. 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 8 to 18 adults per day last week. This year's Lower Granite steelhead count of 10396 is about 96.7% of the 2009 count of 10753 and 1.22 times greater than the 10 year average of 8512. The 2010 Lower Granite wild steelhead count as of May 20th was 4120. At Rock Island Dam, as of May 19th, 110 adult steelhead have been counted and

at Rocky Reach Dam, 331 adult steelhead have been counted so far this season. At Willamette Falls Dam, the 2010 count for steelhead was 14641, as of May 15th. This year's steelhead count is about 2.64 times greater than the 2009 count of 5543 at Willamette Falls Dam for the same date range.

Hatchery Releases Last Two Weeks

Hatchery Release Summary
From: 5/7/2010 to 05/20/10

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2010	230,000	05-11-10	05-29-10	Couse Creek	Snake River
National Marine Fisheries Service Total					**230,000**				
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2010	500,000	05-15-10	05-15-10	Lapwai Creek	Clearwater River M F
Nez Perce Tribe Total					**500,000**				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2010	138,206	04-27-10	05-10-10	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2010	212,760	04-13-10	06-01-10	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	CH0	FA	2010	600,000	05-18-10	05-18-10	Umatilla River	Umatilla River
Oregon Dept. of Fish and Wildlife Total					**950,966**				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2010	209,362	05-05-10	05-12-10	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2010	218,078	05-05-10	05-12-10	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2010	4,551,265	05-10-10	05-10-10	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service Total					**4,978,705**				
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2010	12,500	05-14-10	05-14-10	Parkdale Acclim Pond	Hood River
Warm Springs Tribe Total					**12,500**				
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	343,628	04-19-10	05-14-10	Similkameen Acclim Pd	Okanogan 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	CH0	SU	2010	484,000	05-10-10	05-20-10	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					**1,822,628**				
Yakama Tribe	Cascade Hatchery	CO	UN	2010	58,635	05-07-10	05-14-10	Rolfings Acclim Pond	Wenatchee River
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	04-07-10	06-01-10	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	37,806	04-12-10	06-01-10	Boone Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	45,060	04-12-10	06-01-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	134,850	04-12-10	06-01-10	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	135,086	04-12-10	06-01-10	Naches River	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	205,926	04-12-10	06-01-10	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	38,159	04-12-10	06-01-10	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,342	04-07-10	06-01-10	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,438	04-12-10	06-01-10	Naches River	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	137,659	04-12-10	06-01-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2010	26,999	05-07-10	05-14-10	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe Total					**1,836,119**				
Grand Total					**10,330,918**				

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 5/21/2010 to 6/3/2010

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2010	230,000	05-11-10	05-29-10	Couse Creek	Snake River
National Marine Fisheries Service Total					**230,000**				
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2010	400,000	05-25-10	06-01-10	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2010	500,000	05-26-10	05-26-10	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2010	500,000	05-27-10	05-27-10	Big Canyon (Clearwater River)	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2010	500,000	06-01-10	06-15-10	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe Total					**1,900,000**				
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2010	212,760	04-13-10	06-01-10	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					**212,760**				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2010	200,000	05-25-10	06-01-10	Couse Creek	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2010	200,000	06-01-10	06-05-10	Lyons Ferry Hatchery	Snake 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 Total					**735,000**				
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	15,846	04-07-10	06-01-10	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	37,806	04-12-10	06-01-10	Boone Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	45,060	04-12-10	06-01-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	134,850	04-12-10	06-01-10	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	135,086	04-12-10	06-01-10	Naches River	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	205,926	04-12-10	06-01-10	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	38,159	04-12-10	06-01-10	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,342	04-07-10	06-01-10	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,438	04-12-10	06-01-10	Naches River	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	137,659	04-12-10	06-01-10	Prosser Acclim Pond	Yakima River
Yakama Tribe Total					**899,172**				
Grand Total					**3,976,932**				

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

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

	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/07/2010	97.3	0.0	99.1	0.0	117.0	8.1	118.6	0.0	125.6	11.5	123.6	18.2	119.2	24.3
05/08/2010	98.1	0.2	93.9	0.0	102.1	7.6	99.5	0.0	104.7	9.4	108.6	18.2	109.4	27.1
05/09/2010	79.0	0.0	85.2	0.0	89.4	6.6	86.9	0.0	94.1	9.4	109.3	17.6	117.6	24.8
05/10/2010	114.6	0.0	118.5	0.0	123.3	8.1	118.4	0.0	121.9	12.9	120.0	17.0	122.6	22.2
05/11/2010	128.9	0.0	123.7	0.0	127.5	8.5	125.3	0.0	130.9	13.9	125.1	17.5	124.0	24.8
05/12/2010	120.7	0.0	129.7	0.0	138.6	8.8	135.8	0.0	143.0	13.9	138.3	18.4	132.8	24.2
05/13/2010	126.8	0.0	117.8	0.0	131.7	8.7	127.7	0.0	132.3	13.6	145.4	18.5	148.3	24.8
05/14/2010	112.6	0.0	117.0	0.0	122.4	8.6	123.0	0.0	129.6	12.6	136.7	18.7	136.0	23.8
05/15/2010	85.3	0.0	86.6	0.0	98.0	7.2	98.9	0.0	107.8	11.5	116.1	18.5	113.6	23.6
05/16/2010	97.6	0.0	97.0	0.0	107.4	8.2	101.7	0.0	111.7	11.5	109.6	18.4	112.3	24.6
05/17/2010	106.3	0.0	108.4	0.0	123.9	8.8	126.4	0.0	139.6	13.0	139.9	19.3	135.4	24.0
05/18/2010	83.1	0.0	89.1	0.0	110.2	7.5	107.5	0.0	123.2	13.5	127.3	19.0	134.6	23.9
05/19/2010	97.5	0.0	95.7	0.0	115.8	8.0	112.8	0.0	130.7	13.2	136.2	19.5	125.9	24.7
05/20/2010	92.5	0.0	95.6	0.0	118.4	8.4	121.4	0.0	136.8	12.6	137.5	25.6	131.9	25.2

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/07/2010	1.1	0.0	15.1	19.3	52.5	20.6	50.6	15.1	50.8	36.6	52.3	41.8
05/08/2010	1.1	0.0	16.0	19.4	51.1	20.5	51.5	15.4	51.8	37.2	54.7	20.5
05/09/2010	1.2	0.0	16.7	18.9	49.8	20.6	46.3	13.9	45.4	32.7	45.2	13.5
05/10/2010	1.2	0.0	16.2	22.4	50.2	20.5	48.8	14.6	49.3	33.6	51.1	15.3
05/11/2010	1.1	0.0	16.4	22.4	50.5	20.5	49.4	14.8	48.2	31.4	48.2	14.4
05/12/2010	1.4	0.0	17.3	14.2	47.6	20.5	46.0	13.8	47.2	33.4	48.4	34.0
05/13/2010	1.2	0.0	16.3	17.5	51.4	20.4	49.4	14.8	49.1	30.1	50.9	40.3
05/14/2010	1.2	0.0	17.9	17.3	52.5	20.3	51.1	15.3	51.8	25.7	52.8	21.7
05/15/2010	1.2	0.0	17.9	20.2	56.4	20.7	55.9	16.6	56.0	25.1	57.2	17.0
05/16/2010	1.3	0.0	18.2	18.8	60.5	20.5	57.4	17.2	57.3	21.4	59.0	42.5
05/17/2010	1.3	0.0	18.5	14.6	65.8	20.6	64.6	19.4	62.9	15.7	64.0	51.3
05/18/2010	1.2	0.0	20.0	18.7	77.4	19.0	76.3	22.8	76.5	14.4	79.4	55.5
05/19/2010	9.3	0.0	22.3	15.2	93.5	19.0	90.1	27.0	89.0	17.1	90.4	62.0
05/20/2010	9.8	0.0	---	---	106.0	20.6	100.4	30.1	101.3	20.5	105.4	68.0

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

	McNary		John Day		The Dalles		Bonneville			
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
05/07/2010	190.2	76.3	194.3	77.6	182.8	73.0	198.0	94.2	4.7	86.8
05/08/2010	159.0	63.8	163.6	52.7	155.0	62.0	170.6	89.1	0.0	69.1
05/09/2010	175.1	70.3	175.6	52.7	163.6	65.4	182.5	82.8	0.0	87.3
05/10/2010	180.8	72.6	181.0	54.5	169.2	67.7	183.9	77.3	10.3	83.9
05/11/2010	164.2	65.9	153.9	46.1	143.0	57.3	159.8	74.4	0.0	73.0
05/12/2010	187.9	75.7	198.8	75.9	186.6	74.5	195.5	81.3	11.2	90.6
05/13/2010	208.6	84.1	206.0	82.6	196.1	78.6	209.1	89.5	18.3	88.9
05/14/2010	182.8	73.6	189.1	75.8	177.7	71.1	199.5	89.4	10.2	87.5
05/15/2010	172.9	69.5	173.5	69.4	160.5	64.5	173.2	87.0	0.0	73.9
05/16/2010	174.2	70.0	182.0	58.5	170.6	68.0	184.9	84.4	0.0	88.1
05/17/2010	202.4	81.3	204.1	61.4	196.7	77.2	210.9	80.6	26.6	91.2
05/18/2010	209.4	84.4	197.8	75.6	185.8	73.3	214.7	74.6	35.4	92.3
05/19/2010	228.7	92.4	246.2	98.2	229.3	89.6	245.6	80.0	59.1	94.1
05/20/2010	234.5	94.2	221.3	88.4	209.1	83.4	219.8	90.8	21.2	95.4

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

	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/7	95.4	95.7	96.1	24	104.6	105.7	106.8	23	104.7	105.2	105.3	24	103.2	103.7	103.9	23	102.8	103.1	103.3	24
5/8	95.9	96.1	96.3	24	105.2	105.8	105.9	22	105.4	105.5	105.8	19	103.7	104.1	104.2	22	103.8	104.5	104.6	24
5/9	96.4	96.7	96.8	24	105.1	106.0	106.5	23	106.0	106.2	106.6	19	103.7	104.3	104.6	23	104.8	105.2	105.4	24
5/10	97.1	97.5	97.9	24	106.1	106.9	107.8	23	107.3	107.6	107.8	21	104.6	105.0	105.5	23	105.3	105.4	105.6	24
5/11	96.8	97.1	97.4	24	106.0	107.0	107.9	24	106.4	106.7	107.0	24	103.7	104.1	104.5	24	104.2	104.6	104.8	24
5/12	96.3	96.6	96.8	24	106.5	107.7	109.0	23	105.8	106.0	106.3	24	103.2	103.7	104.1	23	104.4	104.9	105.1	24
5/13	96.8	97.0	97.4	24	106.8	107.6	108.3	22	106.0	106.5	106.7	24	103.8	104.2	104.5	22	104.4	105.0	105.2	24
5/14	97.2	97.4	97.8	24	106.6	107.3	107.9	24	107.2	107.6	108.1	24	104.1	104.7	105.2	24	104.6	105.0	105.3	24
5/15	97.0	97.2	97.7	24	106.8	107.8	109.3	23	107.2	107.6	108.5	24	104.1	104.8	105.3	23	104.9	105.4	105.7	24
5/16	96.8	97.3	97.5	24	107.2	108.0	109.3	20	107.9	108.2	108.9	24	104.8	105.3	106.0	20	105.0	105.6	105.8	24
5/17	97.3	97.6	97.9	24	107.9	108.6	110.2	21	107.6	107.9	108.9	24	105.1	105.4	105.6	21	105.7	106.2	106.3	24
5/18	97.6	97.9	98.5	24	107.9	108.3	109.0	24	106.7	107.1	107.6	24	104.4	104.7	105.1	24	105.5	105.9	106.0	24
5/19	97.9	98.1	98.4	24	108.5	110.4	114.9	22	106.6	107.4	109.0	24	104.5	105.1	106.1	22	105.5	106.0	106.3	24
5/20	97.4	97.7	98.1	24	107.3	108.3	111.6	24	106.2	106.4	106.6	24	103.9	104.3	105.1	24	104.4	104.6	104.8	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/7	103.0	103.6	104.2	24	102.3	102.4	103.2	15	103.9	104.2	105.1	15	105.0	105.2	105.4	24	104.4	104.6	104.8	24
5/8	104.0	104.4	105.4	24	103.7	104.0	104.9	18	105.2	105.8	106.5	18	105.8	106.1	106.4	24	105.3	105.6	105.9	24
5/9	104.7	106.0	106.6	24	104.4	105.4	105.7	24	105.4	106.3	106.9	24	106.3	106.7	107.1	24	105.7	106.1	106.5	24
5/10	104.6	104.9	105.5	24	105.1	105.7	106.1	24	106.4	107.3	107.8	24	106.5	106.6	106.8	24	106.0	106.2	106.4	24
5/11	104.1	104.3	104.5	24	104.4	104.9	105.7	24	105.9	106.6	107.3	24	106.0	106.2	106.3	24	105.4	105.6	105.8	24
5/12	103.9	104.2	104.5	24	104.7	105.3	105.6	24	106.2	107.1	107.5	24	106.4	106.9	107.1	24	105.8	106.2	106.6	24
5/13	104.0	104.4	104.6	24	105.1	105.7	106.1	24	106.8	107.6	108.0	24	107.0	107.5	107.8	24	106.3	106.8	107.2	24
5/14	103.6	104.1	104.4	24	105.2	106.0	106.6	23	106.7	107.6	108.3	23	107.7	108.1	108.4	24	106.9	107.2	107.4	24
5/15	104.3	105.3	105.8	24	105.4	106.2	106.8	24	106.6	107.4	107.8	24	107.9	108.1	108.3	24	107.1	107.3	107.5	24
5/16	105.5	105.8	106.3	24	105.9	106.6	107.0	24	106.7	107.4	107.8	24	108.4	108.7	109.1	24	107.5	108.0	108.3	24
5/17	106.0	106.1	106.2	24	105.8	106.1	106.7	24	107.4	108.0	109.1	24	108.0	108.1	108.3	24	107.2	107.4	107.9	24
5/18	105.9	106.5	106.6	24	105.3	105.7	105.9	24	106.5	106.8	107.1	24	107.2	107.5	107.8	24	106.4	106.7	107.1	24
5/19	105.2	106.1	107.1	24	105.1	106.0	106.4	24	106.6	107.6	108.2	24	106.8	107.1	107.5	24	106.0	106.4	107.1	24
5/20	104.4	104.9	105.6	24	103.9	104.2	104.5	24	105.5	105.9	106.3	24	105.4	105.7	106.2	24	104.8	105.0	105.5	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/7	104.4	104.9	105.0	24	107.8	108.3	109.2	24	105.6	106.6	107.1	24	109.2	109.5	109.9	24	107.5	108.1	108.7	24
5/8	105.4	105.6	105.7	24	109.1	109.7	111.3	24	106.6	107.3	107.5	24	110.3	110.6	111.0	24	109.2	109.7	110.2	24
5/9	102.2	105.8	106.1	21	109.8	110.2	112.0	24	107.9	109.2	109.9	24	110.7	111.1	111.6	24	110.2	110.7	111.2	24
5/10	---	---	---	0	109.6	110.9	112.9	24	108.3	108.7	109.3	24	110.6	110.9	111.6	24	110.5	110.8	111.0	24
5/11	98.2	98.2	106.7	10	108.9	109.6	111.6	24	107.4	107.9	108.4	24	110.0	110.7	111.1	24	108.4	108.9	109.4	24
5/12	106.1	107.0	107.4	24	108.9	109.5	111.0	24	107.5	108.2	109.3	24	109.9	110.2	110.7	24	109.1	109.9	111.6	24
5/13	108.2	111.7	116.9	24	111.1	115.0	120.0	24	107.7	108.2	108.5	24	110.2	110.6	111.1	24	110.2	110.4	110.8	24
5/14	108.7	112.4	116.4	24	111.8	115.9	123.2	24	108.9	109.6	110.0	24	111.3	111.6	112.2	24	110.5	111.0	111.9	24
5/15	106.9	107.5	108.1	24	110.4	111.4	114.3	24	109.8	110.5	111.0	24	112.3	112.7	113.4	24	111.4	111.9	112.3	24
5/16	107.1	107.5	108.0	24	110.7	111.5	113.3	24	110.8	112.2	113.3	24	112.9	113.4	113.7	24	112.2	112.7	114.2	24
5/17	107.3	107.7	108.1	24	109.5	110.4	112.4	24	110.8	111.0	111.4	24	112.9	113.1	113.8	24	112.4	112.6	113.3	24
5/18	106.2	106.6	107.4	24	109.3	109.9	110.9	24	109.0	110.1	111.1	24	112.0	112.4	113.0	24	110.9	111.6	112.2	24
5/19	106.2	106.6	107.1	24	109.1	109.6	110.4	24	---	---	---	0	---	---	---	0	---	---	---	0
5/20	105.5	105.6	106.0	24	107.8	108.3	109.4	24	---	---	---	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

	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/7	110.7	111.2	111.7	24	107.7	108.6	109.0	24	105.1	105.8	106.2	24	102.5	103.8	104.7	24	102.1	103.0	103.5	24
5/8	111.6	112.2	112.6	24	109.4	110.1	110.5	24	106.1	106.5	107.0	24	102.2	102.8	103.4	24	102.1	102.5	103.0	24
5/9	112.7	113.0	113.2	24	109.8	110.9	111.3	24	106.4	107.3	108.5	24	102.6	104.0	105.2	24	102.4	103.5	104.3	24
5/10	112.6	113.1	113.4	24	109.4	109.8	110.3	24	105.9	107.3	108.5	24	102.2	103.1	103.9	24	102.1	102.7	103.3	24
5/11	111.0	111.5	112.0	24	109.0	110.1	111.0	24	105.4	106.5	107.3	24	102.1	103.4	104.5	24	102.0	102.9	103.7	24
5/12	111.0	111.5	112.0	24	109.5	110.5	111.0	24	105.3	105.7	105.9	24	102.2	103.3	104.3	23	101.9	103.1	104.0	24
5/13	112.1	112.6	113.0	24	110.1	111.1	111.7	24	106.8	108.0	109.4	24	102.5	103.8	105.0	24	102.1	103.3	104.2	24
5/14	112.9	113.4	114.1	24	110.7	111.6	112.1	24	106.7	108.0	109.4	23	102.6	103.8	104.8	23	102.1	103.0	103.7	24
5/15	113.1	113.4	113.7	24	111.1	111.9	112.4	24	106.6	107.6	109.1	24	102.5	103.4	104.4	24	102.4	103.5	104.4	24
5/16	114.1	114.4	114.8	24	111.8	112.3	112.6	24	106.6	107.6	108.9	24	102.5	103.4	103.9	24	102.4	103.1	104.0	24
5/17	114.3	114.6	115.0	24	111.5	112.0	112.8	24	106.8	107.9	108.9	24	102.7	103.5	104.2	24	102.4	103.2	103.9	24
5/18	112.7	113.3	114.1	24	109.7	110.1	110.9	24	105.8	106.3	106.6	24	101.9	102.2	102.7	24	101.6	101.8	102.0	24
5/19	---	---	---	0	109.5	110.6	111.9	24	97.3	98.6	105.2	24	102.0	103.1	103.9	24	102.8	103.9	104.8	24
5/20	---	---	---	0	106.2	106.7	107.5	24	95.3	95.5	96.3	24	100.9	101.3	101.6	21	102.8	103.4	103.7	24

Total Dissolved Gas Saturation Data at Snake River Sites

	Clrwtr-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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/7	101.9	103.5	104.5	23	99.9	100.4	101.3	24	110.0	110.4	110.9	24	104.7	105.5	105.8	24	109.4	109.7	110.0	24
5/8	101.7	102.5	103.4	24	101.5	101.7	101.8	24	110.8	111.1	111.9	24	106.7	107.2	107.5	24	110.4	110.5	110.6	24
5/9	102.2	104.2	105.6	23	102.0	102.4	102.9	24	110.9	111.3	111.9	24	108.4	109.3	109.7	24	111.5	112.2	112.4	24
5/10	101.2	102.4	103.6	23	102.8	102.9	103.0	24	111.0	111.3	111.7	24	110.1	110.3	110.5	24	112.2	112.4	112.5	24
5/11	100.9	102.9	104.0	24	102.4	102.6	103.1	24	110.8	111.1	111.8	24	109.8	109.9	110.0	24	112.3	112.8	115.7	24
5/12	101.2	103.1	104.2	23	101.8	102.1	102.4	24	111.1	111.6	112.2	24	109.6	109.9	110.1	24	112.2	112.4	112.6	24
5/13	101.4	103.9	105.4	24	102.1	102.3	102.6	24	110.6	110.8	111.2	24	110.7	111.4	112.2	24	112.6	114.4	116.3	24
5/14	102.1	104.2	105.7	23	102.5	102.9	103.2	24	110.8	111.1	111.9	24	112.1	112.5	113.0	23	116.2	116.5	117.0	23
5/15	102.0	103.6	104.9	23	102.8	103.0	103.3	24	111.2	111.8	113.4	24	113.5	114.1	115.3	24	116.1	116.3	116.5	24
5/16	101.3	102.6	103.7	22	103.5	103.9	104.1	24	110.3	110.7	111.2	24	115.5	116.2	116.9	24	116.6	116.9	117.3	24
5/17	101.1	102.3	103.1	23	103.7	103.8	104.0	24	110.2	110.4	110.7	24	116.1	116.6	117.3	24	115.8	116.4	116.8	24
5/18	99.4	100.0	100.8	22	103.1	103.6	104.0	24	109.2	109.9	110.8	24	113.2	114.5	116.1	24	112.8	113.9	115.8	24
5/19	101.3	102.6	103.4	24	102.4	102.8	103.9	24	109.0	109.7	110.1	24	110.2	110.7	111.3	24	112.4	113.1	113.6	24
5/20	100.5	100.7	101.6	20	101.2	101.5	102.1	24	109.3	109.4	109.6	24	107.0	107.5	108.5	24	112.7	113.1	113.3	24

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

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/7	107.0	107.8	108.0	24	115.4	116.1	118.3	24	112.7	113.8	114.1	24	114.3	114.8	115.1	24	---	---	---	0
5/8	108.5	108.6	109.0	24	115.3	116.3	117.9	24	114.4	114.8	115.1	24	113.5	114.6	115.3	24	---	---	---	0
5/9	109.5	109.8	110.4	24	116.1	117.2	119.3	24	115.3	115.7	116.3	24	112.4	112.9	113.3	24	---	---	---	0
5/10	110.5	110.7	110.9	24	116.2	116.5	116.7	24	116.4	116.5	116.7	24	112.4	112.6	113.1	24	---	---	---	0
5/11	110.0	110.1	110.3	24	115.4	116.0	116.3	24	115.8	116.0	116.3	24	112.1	112.5	112.7	24	---	---	---	0
5/12	110.2	110.6	110.8	24	115.3	115.8	116.6	24	115.5	115.6	115.9	24	113.4	114.0	114.8	24	---	---	---	0
5/13	111.1	111.4	112.0	24	117.2	118.2	119.3	24	116.3	116.7	117.3	24	113.5	114.1	115.0	24	---	---	---	0
5/14	112.1	112.4	112.5	23	118.0	118.7	119.4	23	117.7	117.9	118.0	24	113.4	113.8	114.7	24	---	---	---	0
5/15	112.8	113.4	113.8	24	118.3	119.0	119.5	24	118.5	118.9	119.2	24	113.8	114.6	117.5	24	---	---	---	0
5/16	113.9	114.8	115.4	24	116.9	118.6	119.5	24	119.5	119.7	120.1	24	115.0	115.7	116.1	24	---	---	---	0
5/17	116.0	116.6	117.0	24	114.3	115.3	116.5	24	119.4	119.6	119.8	24	115.6	115.9	116.4	24	---	---	---	0
5/18	116.0	116.6	117.0	24	115.2	115.9	116.8	24	117.2	118.3	119.0	24	116.1	116.3	116.7	24	---	---	---	0
5/19	114.0	114.4	114.9	24	114.1	114.8	115.3	24	114.2	114.5	115.2	24	116.7	117.5	119.7	24	---	---	---	0
5/20	110.7	111.1	112.6	24	115.3	116.9	118.9	24	112.0	112.3	112.8	24	117.8	119.4	119.8	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

	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
5/7	105.0	105.9	106.6	24	115.3	115.9	116.4	24	102.3	103.1	103.8	24	112.6	114.0	115.5	24	108.9	110.2	110.4	24
5/8	106.9	107.5	108.9	24	116.2	116.9	117.5	24	103.3	103.7	104.1	24	111.7	112.2	112.4	24	110.8	111.1	111.4	24
5/9	110.3	111.0	111.8	24	116.5	116.7	116.9	24	104.0	104.4	105.1	24	112.1	112.6	112.9	24	109.5	109.8	110.0	24
5/10	111.7	111.9	112.1	24	115.0	115.9	116.5	24	105.1	105.5	106.0	24	112.5	113.0	113.3	24	108.7	109.0	109.3	24
5/11	111.2	111.4	112.0	24	115.6	116.2	117.1	24	105.5	105.9	106.1	24	112.8	113.3	113.7	24	107.1	107.6	108.1	24
5/12	110.4	110.6	110.8	24	114.4	114.8	115.6	24	105.8	106.7	107.3	24	114.1	115.1	116.1	24	106.8	107.9	109.2	24
5/13	110.5	110.6	111.5	24	114.6	115.0	115.9	24	106.8	107.2	108.1	24	114.4	115.7	117.2	24	111.3	112.3	112.8	24
5/14	111.4	111.8	112.1	24	115.7	116.5	117.2	24	107.3	108.0	109.0	24	112.4	113.2	114.2	24	113.1	113.3	113.6	24
5/15	112.7	113.1	113.4	24	117.2	118.2	118.7	24	108.8	110.4	110.8	24	112.7	113.1	114.1	24	112.8	112.9	113.1	24
5/16	113.7	114.1	114.5	24	117.7	118.6	118.9	24	111.2	111.8	112.3	24	114.2	114.8	115.0	24	113.2	113.6	113.8	24
5/17	114.3	115.0	116.6	24	116.6	117.8	118.9	24	112.2	113.0	113.7	24	113.2	114.1	114.7	24	113.0	113.2	113.3	24
5/18	112.5	113.3	114.0	24	115.5	116.2	118.0	24	112.3	112.7	113.0	24	113.6	114.4	115.7	24	110.6	111.4	112.2	24
5/19	110.6	111.2	112.4	24	114.8	115.5	115.9	24	111.6	112.0	112.7	24	115.0	115.7	116.1	24	111.8	113.0	113.6	24
5/20	108.1	108.4	109.0	24	114.5	115.0	115.3	24	110.3	110.5	110.8	24	114.2	116.2	116.8	24	110.1	110.6	111.3	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/7	113.6	115.1	115.7	24	109.6	110.2	111.0	24	114.9	115.4	116.1	24	113.4	114.2	115.8	24	116.4	116.7	116.9	24
5/8	114.3	114.8	115.5	24	112.9	113.7	114.1	24	115.8	116.8	117.3	24	113.7	116.0	117.1	24	115.7	115.8	115.9	24
5/9	113.9	114.4	114.9	24	115.0	115.8	116.4	24	116.3	117.1	118.2	24	115.8	117.2	118.2	24	115.4	115.7	115.8	24
5/10	112.3	113.1	113.7	24	114.5	115.0	115.2	24	116.0	116.8	117.7	24	115.4	116.3	117.3	24	114.9	115.1	115.3	24
5/11	110.7	111.2	111.9	24	110.0	111.0	112.6	24	114.3	114.7	114.9	24	112.2	112.9	114.2	24	114.3	114.5	114.8	24
5/12	111.6	112.6	113.1	24	108.0	108.3	108.5	24	113.6	113.8	114.5	24	112.9	114.4	115.1	24	115.2	116.0	116.3	24
5/13	114.8	116.1	116.9	24	110.0	111.5	112.0	24	114.4	115.3	115.7	24	113.0	114.9	115.9	24	116.2	116.5	117.0	24
5/14	115.5	116.1	116.6	24	113.9	115.0	115.3	24	115.6	116.6	117.1	24	114.3	116.2	117.1	24	116.4	116.5	117.0	24
5/15	114.7	115.2	115.6	24	115.6	116.1	116.5	24	116.7	117.2	117.6	24	115.9	117.8	118.8	24	115.6	116.1	116.4	24
5/16	115.1	115.8	116.6	24	115.6	116.0	116.3	24	116.4	116.8	117.2	24	116.6	117.5	118.3	24	115.2	115.3	115.4	24
5/17	115.5	116.3	116.9	24	115.7	116.0	116.5	24	116.3	116.9	117.6	24	116.0	117.3	118.8	24	115.6	115.8	116.0	24
5/18	113.3	114.1	114.4	24	113.2	113.9	114.9	24	114.4	114.8	115.2	24	113.8	114.4	114.8	24	115.2	115.5	116.0	24
5/19	115.4	116.3	117.3	24	111.9	112.2	112.5	24	113.1	113.5	113.9	24	111.6	112.0	112.5	24	116.1	116.3	116.7	24
5/20	114.2	114.6	114.9	24	110.9	111.9	112.5	24	113.6	114.6	115.6	24	109.6	110.7	111.4	24	116.1	117.2	117.8	24

Two-Week Summary of Passage Indices

				COMBINED YEARLING CHINOOK								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/07/2010	*	62	258	323	40	92,131	20,164	7,509	214	149,890	27,843	56,649
05/08/2010	*	36	171	196	36	40,217	14,761	7,332	262	---	22,955	74,575
05/09/2010	*	9	227	180	64	44,462	26,444	3,219	221	78,155	19,562	49,734
05/10/2010	*	12	185	229	36	26,723	24,872	4,280	348	---	18,506	66,370
05/11/2010		26	196	571	57	56,837	34,462	5,903	390	155,989	30,077	66,514
05/12/2010	*	29	227	301	7	54,038	19,670	1,341	486	---	38,491	61,677
05/13/2010	*	31	357	455	298	55,166	17,870	1,322	567	65,964	24,638	75,639
05/14/2010	*	32	194	422	45	59,096	37,005	1,035	482	---	27,672	65,956
05/15/2010	*	44	172	262	69	60,049	30,305	3,164	215	108,450	17,737	48,269
05/16/2010	*	56	157	228	42	41,714	26,720	1,366	179	---	15,988	35,938
05/17/2010	*	30	79	202	29	28,945	32,840	11,236	209	80,434	16,661	41,139
05/18/2010	*	25	87	518	164	40,741	20,507	29,024	321	---	29,387	36,604
05/19/2010	*	---	---	344	246	56,446	68,725	60,950	430	273,940	45,843	40,089
05/20/2010	*	---	---	75	142	71,125	127,501	45,333	326	---	26,820	62,737
05/21/2010		---	---	---	---	---	---	---	---	---	---	---
Total:		**392**	**2,310**	**4,306**	**1,275**	**727,690**	**501,846**	**183,014**	**4,650**	**912,822**	**362,180**	**781,890**
# Days:		**12**	**12**	**14**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**33**	**193**	**308**	**91**	**51,978**	**35,846**	**13,072**	**332**	**130,403**	**25,870**	**55,849**
YTD		**55,990**	**79,839**	**27,579**	**5,180**	**2,175,044**	**916,691**	**201,610**	**7,736**	**1,325,889**	**594,861**	**1,487,921**

				COMBINED SUBYEARLING CHINOOK								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/07/2010	*	0	0	0	0	323	0	0	5	511	0	1,059
05/08/2010	*	0	0	0	0	0	0	74	1	---	0	1,496
05/09/2010	*	0	0	0	1	0	0	0	1	341	0	719
05/10/2010	*	0	0	1	2	345	0	68	11	---	0	824
05/11/2010		0	0	1	2	335	72	0	16	255	0	1,814
05/12/2010	*	0	0	3	5	0	0	0	17	---	0	150,924
05/13/2010	*	0	0	3	5	0	0	0	18	175	0	427,190
05/14/2010	*	0	0	1	28	0	0	0	15	---	0	162,815
05/15/2010	*	0	0	5	25	161	0	0	13	0	0	23,696
05/16/2010	*	0	0	4	27	158	0	0	7	---	0	9,093
05/17/2010	*	0	3	1	20	0	0	0	5	170	0	6,462
05/18/2010	*	0	0	6	41	288	0	24	13	---	29	5,649
05/19/2010	*	---	---	0	87	0	0	0	23	2,465	30	5,439
05/20/2010	*	---	---	0	78	1,252	0	0	32	---	95	7,480
05/21/2010		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**3**	**25**	**321**	**2,862**	**72**	**166**	**177**	**3,917**	**154**	**804,660**
# Days:		**12**	**12**	**14**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**2**	**23**	**204**	**5**	**12**	**13**	**560**	**11**	**57,476**
YTD		**0**	**41**	**28**	**516**	**13,335**	**72**	**166**	**1,537**	**4,798**	**212**	**1,771,572**

Two-Week Summary of Passage Indices

				COMBINED COHO								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/07/2010	*	0	0	0	5	647	429	0	75	2,046	920	6,353
05/08/2010	*	0	0	0	2	0	430	222	82	---	1,663	4,915
05/09/2010	*	0	0	0	5	0	788	72	148	682	1,505	9,300
05/10/2010	*	0	0	0	1	0	215	136	132	---	668	8,863
05/11/2010		0	0	0	0	585	72	124	177	3,149	2,351	9,272
05/12/2010	*	0	0	0	3	358	215	67	272	---	2,959	11,978
05/13/2010	*	0	0	0	0	167	287	0	305	1,619	2,468	22,778
05/14/2010	*	0	0	0	2	842	717	21	255	---	3,300	18,449
05/15/2010	*	0	0	0	1	482	1,719	134	111	1,194	1,138	10,093
05/16/2010	*	0	0	0	1	158	572	72	111	---	1,728	10,825
05/17/2010	*	0	0	0	0	754	859	149	125	852	2,299	12,241
05/18/2010	*	0	0	0	2	1,582	287	293	109	---	3,057	11,072
05/19/2010	*	---	---	0	0	2,572	4,009	886	391	1,954	2,529	9,904
05/20/2010	*	---	---	0	1	6,011	7,012	0	430	---	1,342	16,408
05/21/2010		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**23**	**14,158**	**17,611**	**2,176**	**2,723**	**11,496**	**27,927**	**162,451**
# Days:		**12**	**12**	**14**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**2**	**1,011**	**1,258**	**155**	**195**	**1,642**	**1,995**	**11,604**
YTD		**0**	**0**	**0**	**102**	**18,837**	**19,334**	**2,281**	**3,201**	**17,096**	**36,236**	**338,057**

				COMBINED STEELHEAD								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/07/2010	*	44	597	149	389	54,309	14,730	16,779	202	49,483	31,857	29,383
05/08/2010	*	60	552	71	521	26,133	17,413	13,628	181	---	27,745	17,522
05/09/2010	*	48	691	60	405	26,610	25,871	9,585	153	19,115	21,496	36,773
05/10/2010	*	54	681	59	296	42,929	19,949	8,900	133	---	16,599	43,697
05/11/2010		21	827	111	186	35,335	11,487	9,259	282	40,218	22,163	54,622
05/12/2010	*	61	1,189	66	494	17,894	12,850	5,097	285	---	24,621	28,732
05/13/2010	*	63	1,473	153	72	19,726	9,544	2,820	262	13,125	11,787	36,960
05/14/2010	*	39	1,478	151	223	22,561	25,883	2,630	241	---	13,560	24,907
05/15/2010	*	110	1,636	81	328	20,552	16,976	3,778	212	9,220	10,481	26,768
05/16/2010	*	103	2,237	57	132	22,595	12,717	2,913	261	---	7,150	23,814
05/17/2010	*	111	1,892	89	204	19,146	23,711	5,841	453	19,454	6,817	24,563
05/18/2010	*	83	1,332	243	570	20,947	14,626	8,763	832	---	6,316	15,139
05/19/2010	*	---	---	253	758	38,959	27,775	14,084	1,173	18,015	6,464	15,580
05/20/2010	*	---	---	36	1,211	65,490	180,876	7,394	1,052	---	7,393	11,823
05/21/2010		---	---	---	---	---	---	---	---	---	---	---
Total:		**797**	**14,585**	**1,579**	**5,789**	**433,186**	**414,408**	**111,471**	**5,722**	**168,630**	**214,449**	**390,283**
# Days:		**12**	**12**	**14**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**66**	**1,215**	**113**	**414**	**30,942**	**29,601**	**7,962**	**409**	**24,090**	**15,318**	**27,877**
YTD		**3,742**	**24,740**	**3,757**	**10,937**	**1,282,183**	**750,888**	**157,597**	**8,545**	**322,270**	**379,293**	**524,454**

Two-Week Summary of Passage Indices

				COMBINED SOCKEYE								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/07/2010	*	0	0	0	0	0	0	0	67	14,311	7,358	1,059
05/08/2010	*	0	0	0	0	0	0	0	227	---	9,847	1,496
05/09/2010	*	0	0	0	0	0	0	0	388	24,912	6,162	2,696
05/10/2010	*	0	0	0	0	0	0	0	210	---	11,590	7,832
05/11/2010		0	0	0	0	0	0	0	391	36,259	17,433	5,039
05/12/2010	*	3	0	0	0	0	0	0	186	---	15,997	5,917
05/13/2010	*	4	0	0	0	0	0	0	196	28,283	15,964	15,472
05/14/2010	*	23	0	0	0	0	0	0	161	---	19,109	5,535
05/15/2010	*	2	0	0	3	0	0	0	73	63,851	7,292	6,582
05/16/2010	*	2	0	0	4	0	0	0	64	---	13,711	9,526
05/17/2010	*	0	0	0	4	0	0	0	65	36,475	21,503	3,612
05/18/2010	*	1	0	0	3	575	0	0	121	---	41,212	10,846
05/19/2010	*	---	---	0	5	257	716	0	349	50,217	21,558	21,926
05/20/2010	*	---	---	0	20	376	3,148	0	501	---	24,021	33,540
05/21/2010		---	---	---	---	---	---	---	---	---	---	---
Total:		**35**	**0**	**0**	**39**	**1,208**	**3,864**	**0**	**2,999**	**254,308**	**232,757**	**131,078**
# Days:		**12**	**12**	**14**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**3**	**0**	**0**	**3**	**86**	**276**	**0**	**214**	**36,330**	**16,626**	**9,363**
YTD		**35**	**0**	**0**	**39**	**1,225**	**3,864**	**0**	**8,268**	**341,041**	**246,607**	**135,104**

* 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: 5/21/10 10:05 AM

05/07/10 TO 05/21/10

		Species					
Site	Data	**CH0**	**CH1**	CO	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	2,000	466,910	10,350	282,990	900	763,150
	Sum of NumberBarged	1,991	412,040	10,349	272,877	900	698,157
	Sum of NumberBypassed	0	54,255	0	10,035	0	64,290
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	12	0	4	0	16
	Sum of FacilityMorts	9	366	1	70	0	446
	Sum of ResearchMorts	0	237	0	4	0	241
	Sum of TotalProjectMorts	9	615	1	78	0	703
LGS	Sum of NumberCollected	50	350,373	12,300	289,393	2,700	654,816
	Sum of NumberBarged	49	350,311	12,300	289,350	2,700	654,710
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	1	11	0	5	0	17
	Sum of FacilityMorts	0	51	0	38	0	89
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1	62	0	43	0	106
LMN	Sum of NumberCollected	60	129,005	1,345	52,139		182,549
	Sum of NumberBarged	59	129,001	1,345	52,083		182,488
	Sum of NumberBypassed	0	104	0	96		200
	Sum of Numbertrucked	0	0	0	0		0
	Sum of SampleMorts	0	8	0	6		14
	Sum of FacilityMorts	0	92	1	54		147
	Sum of ResearchMorts	0	0	0	0		0
	Sum of TotalProjectMorts	0	100	1	60		161
MCN	Sum of NumberCollected	2,304	536,292	6,752	99,013	149,365	793,726
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	2,300	536,152	6,749	98,978	149,331	793,510
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	52	1	5	14	72
	Sum of FacilityMorts	4	88	2	30	20	144
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	4	140	3	35	34	216
Total Sum of NumberCollected		4,414	1,482,580	30,747	723,535	152,965	2,394,241
Total Sum of NumberBarged		2,099	891,352	23,994	614,310	3,600	1,535,355
Total Sum of NumberBypassed		2,300	590,511	6,749	109,109	149,331	858,000
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		1	83	1	20	14	119
Total Sum of FacilityMorts		13	597	4	192	20	826
Total Sum of ResearchMorts		0	237	0	4	0	241
Total Sum of TotalProjectMorts		14	917	5	216	34	1,186

YTD Transportation Summary

Source: Fish Passage Center Updated: 5/21/10 10:05 AM

TO: 05/21/10

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	8,758	1,415,609	13,350	910	836,696	2,275,323
	Sum of NumberBarged	8,030	1,224,545	13,346	900	796,554	2,043,375
	Sum of NumberBypassed	700	189,569	0	10	40,010	230,289
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	2	43	0	0	7	52
	Sum of FacilityMorts	26	1,081	4	0	113	1,224
	Sum of ResearchMorts	0	371	0	0	12	383
	Sum of TotalProjectMorts	28	1,495	4	0	132	1,659
LGS	Sum of NumberCollected	50	639,684	13,500	2,700	524,087	1,180,021
	Sum of NumberBarged	49	558,206	13,500	2,700	464,559	1,039,014
	Sum of NumberBypassed	0	81,373	0	0	59,473	140,846
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	1	22	0	0	5	28
	Sum of FacilityMorts	0	83	0	0	50	133
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1	105	0	0	55	161
LMN	Sum of NumberCollected	60	134,655	1,375		66,191	202,281
	Sum of NumberBarged	59	133,347	1,375		61,479	196,260
	Sum of NumberBypassed	0	1,404	0		4,745	6,149
	Sum of NumberTrucked	0	0	0		0	0
	Sum of SampleMorts	0	8	0		6	14
	Sum of FacilityMorts	0	94	1		60	155
	Sum of ResearchMorts	0	0	0		0	0
	Sum of TotalProjectMorts	0	102	1		66	169
MCN	Sum of NumberCollected	2,824	778,447	10,033	200,206	189,119	1,180,629
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	2,820	778,224	10,028	200,156	189,040	1,180,268
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	87	2	23	14	126
	Sum of FacilityMorts	4	136	3	27	65	235
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	4	223	5	50	79	361
Total Sum of NumberCollected		11,692	2,968,395	38,258	203,816	1,616,093	4,838,254
Total Sum of NumberBarged		8,138	1,916,098	28,221	3,600	1,322,592	3,278,649
Total Sum of NumberBypassed		3,520	1,050,570	10,028	200,166	293,268	1,557,552
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		3	160	2	23	32	220
Total Sum of FacilityMorts		30	1,394	8	27	288	1,747
Total Sum of ResearchMorts		0	371	0	0	12	383
Total Sum of TotalProjectMorts		33	1,925	10	50	332	2,350

Cumulative Adult Passage at Mainstem Dams Through: 05/20

		Spring Chinook						Summer Chinook						Fall Chinook					
		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.	
DAM	EndDate	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	**05/20**	**226624**	**10500**	**95110**	**56657**	**153037**	**14399**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TDA	**05/20**	**166909**	**8947**	**67847**	**40685**	**105485**	**10420**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
JDA	**05/20**	**154439**	**9087**	**53536**	**34945**	**85928**	**8626**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MCN	**05/20**	**124051**	**5787**	**42869**	**24232**	**74831**	**6645**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IHR	**05/20**	**82072**	**3922**	**31574**	**14785**	**48252**	**3862**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
LMN	**05/20**	**74993**	**2955**	**34857**	**7384**	**44751**	**2801**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
LGS	**05/20**	**67066**	**2343**	**23581**	**8518**	**39506**	**2627**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
LGR	**05/20**	**62053**	**2094**	**20081**	**8896**	**37789**	**2611**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PRD	**05/19**	**22978**	**242**	**5550**	**982**	**14534**	**265**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RIS	**05/19**	**20549**	**378**	**4074**	**1007**	**9912**	**322**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RRH	**05/19**	**6077**	**89**	**1240**	**84**	**3458**	**54**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WEL	**05/19**	**3933**	**164**	**219**	**51**	**1548**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WFA	**05/15**	**33923**	**587**	**6847**	**185**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**0**	**-**	**-**

	Coho						Sockeye			Steelhead			
	2010		2009		10-Yr Avg.				10-Yr			10-Yr	Wild
DAM	Adult	Jack	Adult	Jack	Adult	Jack	2010	2009	Avg.	2010	2009	Avg.	2010
BON	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**6481**	**3407**	**3342**	**1769**
TDA	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2272**	**1147**	**1187**	**1120**
JDA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2476**	**2865**	**2790**	**1422**
MCN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2231**	**2347**	**1942**	**1205**
IHR	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3023**	**3065**	**2251**	**1257**
LMN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3988**	**4694**	**2570**	**2150**
LGS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3068**	**5350**	**2673**	**1547**
LGR	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10396**	**10753**	**8512**	**4120**
PRD	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**81**	**48**	**11**	**0**
RIS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**110**	**87**	**59**	**75**
RRH	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**331**	**378**	**192**	**251**
WEL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**64**	**52**	**37**	**52**
WFA	**0**	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**14641**	**5543**	**-**	**0**

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: 05/14/10

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

Gas Bubble Trauma Monitoring Results from Representative Sites on the Snake River and Columbia River

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank: Rank 1	Rank 2	Rank 3	Rank 4
Lower Granite Dam											
	05/17/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	05/17/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	05/12/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/19/10	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0
McNary Dam											
	05/14/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/16/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	05/11/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/16/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/18/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	05/11/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/18/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/20/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0