



Fish Passage Center

Weekly Report #13 - 05

April 19, 2013

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 112% and 242% of average at individual sub-basins over the first portion of April. Precipitation above The Dalles has been 165% of average over April. Over the 2013 water year, precipitation has ranged between 80% and 119% of average.

Table 1. Summary of April precipitation and cumulative October through April 8, 2013 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2013		Water Year 2013	
	April 1-8, 2013		October 1, 2012 to April 8, 2013	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.67	151	16.72	114
SNAKE RIVER ABOVE ICE HARBOR	0.60	155	10.22	96
Columbia Above The Dalles	0.72	165	15.02	102
Kootenai	0.75	161	17.94	119
Clark Fork	0.37	112	9.87	106
Flathead	0.47	112	14.52	115
Pend Oreille/Spokane	1.00	165	20.95	101
Central Washington	0.41	242	6.19	102
SNAKE RIVER PLAIN	0.34	122	5.12	80
Salmon/Boise/Payette	0.70	163	11.82	90
Clearwater	1.07	151	19.27	100
SW Washington Cascades/Cowlitz	3.06	215	54.25	99
Willamette Valley	2.47	191	47.96	103

Snowpack within the Columbia Basin has generally been slightly below average. Average snowpack in the Columbia River for basins above the Snake River confluence is 98% of average, for Snake River Basins the average snowpack is 81% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 91% of average.

Table 2 displays the April 7th and April 17th ESP runoff volume forecasts for multiple reservoirs. The April 17th forecast at The Dalles between January and July is 93,424 Kaf (92% of average).

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

Location	April 7, 2013 ESP		April 17, 2013 ESP	
	% Average (1971-2000)	Runoff Volume (Kaf)	% Average (1971-2000)	Runoff Volume (Kaf)
The Dalles (Jan-July)	93	94287	92	93424
Grand Coulee (Jan-July)	101	60415	101	60427
Libby Res. Inflow, MT (Apr-Aug)	102	6001 *6189	100	5900 *6189
Hungry Horse Res. Inflow, MT (Jan-July)	99	2084	97	2043
Lower Granite Res. Inflow (Apr- July)	83	16485	76	15104
Brownlee Res. Inflow (Apr-July)	62	3376	59	3223
Dworshak Res. Inflow (Apr-July)	96	2319 *2036	94	2280 *2036

* Denotes COE Forecast

Grand Coulee Reservoir is at 1268.8 feet (4-17-13) and drafted 7.9 feet over the last week. The current April 30th FC Elevation at Grand Coulee is 1258.5 feet. Outflows at Grand Coulee have ranged between 156.3 and 177.7 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2400.4 feet (4-17-13) and has refilled 1.3 feet last week. The current April 30th FC Elevation at Libby is 2411.8 feet. Outflows at Libby Dam have been 4.0 Kcfs last week.

Hungry Horse is currently at an elevation of 3531.9 feet (4-17-13) and has drafted 3.7 feet last week. The current April 30th FC Elevation at Hungry Horse is 3532.6 feet. Outflows at Hungry Horse have ranged between 10.5 and 10.7 Kcfs last week.

Dworshak is currently at an elevation of 1565.6 feet (4-17-13) and has drafted 0.6 feet last week. The current April 30th Flood Control Elevation is 1568.5 feet. Outflows from Dworshak have been 9.9 Kcfs over past week.

The Brownlee Reservoir was at an elevation of 2056.2 feet on April 18th, 2013 drafting 1.5 feet over the last week. The current April 30th FC Elevation at Brownlee is 2071.2 feet. Over the last week, inflows at Brownlee have ranged between 10.2 and 12.5 Kcfs.

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 61.3 Kcfs from April 3-18 and 54.6 Kcfs over the last week.

Based on the April Final Water Supply Forecast, the Spring Biological Opinion Flow Objectives will be 226 Kcfs at McNary Dam (began April 10th) and 135 Kcfs at Priest Rapids Dam (began April 10th). Flows at McNary Dam have averaged 264.0 Kcfs between April 10-18. Flows at Priest Rapids Dam have averaged 198.1 Kcfs between April 10-18.

Spill: Spill for fish passage began on April 3rd at the lower Snake River projects.

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

At Lower Granite Dam, spill to the Court Order began on April 3rd and has been approximately 20 Kcfs. At Little Goose Dam spill has been provided to the 30% of instantaneous flow level as specified in the Court Order. At Lower Monumental Dam the Court Order calls for spill to the gas cap. The COE increased spill to 30 Kcfs, which has resulted in total dissolved gas (TDG) levels less than the gas cap of 120% TDG in the tailrace, and less than 115% at the Ice Harbor forebay. Spill was interrupted at Lower Monumental between 1300 and 1400 hours on April 17th to address bypass outfall hydro cannon repairs below the project. At Ice

Harbor Dam the Court Order calls for 45 Kcfs spill during the day and gas cap spill at night. At present, due to low flows the project is either providing 45 Kcfs spill during daylight hours and spill as flow in excess of one turbine unit during nighttime hours, or spill as all water in excess of the operation of one turbine unit. TDG levels have remained far below the gas cap in the Ice Harbor tailrace.

Spill for fish passage at the Lower Columbia projects began on April 10th.

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

At times spill has exceeded the Court Order of 40% of instantaneous flow at McNary Dam over the past week as a result of unit outages and flow in excess of hydraulic capacity. At John Day Dam spill met the Court Order. At The Dalles and Bonneville dams, spill also met the Court Order.

There have been no TDG measurements that exceeded the limits this past week. One fish on 4/12 and one fish on 4/14 were detected with minor signs of gas bubble trauma (GBT) in the samples at McNary Dam.

Smolt Monitoring: Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, and LGR) and all four SMP traps (SNK, GRN, IMN, WTB). However, SMP sampling at LMN and LGS is limited and sampling at MCN is every-other-day.

This week's bypass samples at BON were dominated by subyearling Chinook. On the morning of April 11th, Spring Creek NFH and Little White Salmon NFH released a total of 8.3 million subyearling fall Chinook tules. According to SMP personnel at BON, these subyearling Chinook tules began arriving at BON at about 0100 on Friday, April 12th. Passage of these subyearling Chinook tules peaked with the April 12th sample, which had a passage index of nearly 772,000. Since April 12th, the passage index for subyearling Chinook has steadily decreased. Overall, the daily

average passage index for subyearling Chinook this week was about 172,000 per day. There were no issues with descaling or mortality with these subyearling Chinook tules. Passage of yearling Chinook and coho also increased this week. This week's daily average passage indices at BON for yearling Chinook and coho were about 4,000 and 12,700 per day, respectively. The daily average passage indices from last week were 1,440 and nearly 2,900 per day. Sockeye passage also increased this week. This week's daily average passage index for sockeye at BON was about 800 per day, whereas last week's average was about 350 per day. Although relatively low, passage of steelhead at BON also increased this week. This week's daily average passage index for steelhead at BON was about 170 per day. Finally, only pacific lamprey macrophthalmia were collected at BON this week. The daily average collection for pacific lamprey macrophthalmia was about 140 per day this week, which is an increase from last week's daily average collection of about 50 per day.

Yearling Chinook continued to dominate the bypass sample at JDA this week. This week's daily average passage index for yearling Chinook was about 4,775 per day, which is an increase over last week's daily average passage index of about 1,225 per day. Steelhead and coho passage also increased this week. This week's daily average passage indices for steelhead and coho were about 1,550 and 250 per day, respectively. Last week's daily average passage indices were about 710 and 14 per day, respectively. As with previous weeks, only a few sockeye and Chinook fry were sampled this week at JDA. Both pacific lamprey ammocoetes and macrophthalmia were sampled at JDA this week. However, the majority of the lamprey that were sampled this week were pacific macrophthalmia. In fact, passage of pacific lamprey macrophthalmia increased again this week. The daily average collection for pacific lamprey macrophthalmia this week was about 1,330. Last week's daily average collection was about 840 per day.

Sampling at MCN will occur every-other-day until transportation begins in the summer. This week's bypass sample was dominated by yearling Chinook. This week's daily average passage index for yearling Chinook at MCN was about 7,100 per day. This was an increase in passage when compared to last week's daily average passage index of about 1,520 per day. Passage of coho, sockeye, and steelhead also increased this week when compared to last weeks. This week's

passage indices for coho, sockeye, and steelhead were about 580, 1,660, and 1,800 per day. All subyearling Chinook juveniles that were collected at MCN this week were fry. This week's daily average passage index for Chinook fry was about 500 per day, which is an increase from last week's average of about 60 per day. Finally, the only juvenile lamprey that have been collected at MCN this year have been pacific lamprey macrophthalmia. This week's daily average collection for pacific lamprey macrophthalmia was about 590 per day.

Steelhead dominated the bypass samples at LGR this week. This week's daily average passage index for steelhead at LGR was about 23,300 per day, which is an increase from last week's average of about 4,300 per day. Approximately 88% of the steelhead in the bypass sample this week were of known hatchery origin, which means that they either had clipped fins or had eroded fins, which is indicative of hatchery rearing practices. Although yearling Chinook are were no longer the dominant species, passage did increase this week. This week's daily average passage index for yearling Chinook at LGR was nearly 18,000 per day. Last week's daily average passage index was about 15,000 per day. Approximately 66% of the yearling Chinook juveniles sampled at LGR this week were of known hatchery origin, which means that they either had fin clips or were unclipped but had coded-wire-tags. Chinook fry and coho passed LGR in relatively low numbers this week and no sockeye/kokanee were sampled at LGR this week. Finally, only pacific lamprey macrophthalmia were sampled at LGR this week. These pacific lamprey macrophthalmia were sampled on April 12th and 13th.

Sampling at LMN and LGS remains limited until transportation begins. This limited sampling is every three days at LMN (for condition subsample only) and every five days at LGS (full 24-hour sample). At both sites, yearling Chinook and steelhead continued to dominate the samples this week. Finally, both sites had pacific lamprey macrophthalmia in their samples this week. In addition, LGS collected pacific lamprey ammocoetes in their April 13th sample.

Passage at RIS continued to be relatively low this week. Of the salmonids that were collected at RIS this week, yearling Chinook tended to dominate. This week's daily average passage index for yearling Chinook at RIS was about 60 per day. This represented an increase over last week's daily average of only 8 per

day. Although still relatively low, sockeye passage also increased this week. This week's passage index for sockeye at RIS was 32 per day, compared to last week's average of 12 per day. In addition to yearling Chinook and sockeye, at least a few subyearling Chinook, coho, and steelhead were also collected this week. Finally, only pacific lamprey macropthalmia were collected this week, but in small numbers.

The Grande Ronde Trap continued to collect mostly yearling Chinook this week. This week's daily average collections for yearling Chinook at GRN were very similar to last week's, with a daily average collection of nearly 450 per day. Of the yearling Chinook that were collected at this trap this week, approximately 89% were of known hatchery origin, which means that they either had fin clips or were unclipped but had coded-wire-tags. Collections of steelhead also remained relatively steady this week, when compared to last week. This week's daily average collection for steelhead at GRN was about 40 per day. Finally, a few subyearling Chinook juveniles were collected this week.

As in past weeks, the Salmon River Trap collected mostly yearling Chinook this week. However, yearling Chinook collections decreased this week, when compared to last week. The daily average collection for yearling Chinook this week was about 815 per day. Last week's daily average collection for yearling Chinook was nearly 2,000 per day. Steelhead collections at the Salmon River Trap remained relatively steady this week, when compared to last week. The daily average collection for steelhead this week was 52 per day.

Although still relatively low, collections at the Snake River Trap were dominated by steelhead this week. The daily average collection for steelhead this week was 48 per day. This week's daily average collection for yearling Chinook at the Snake River Trap was about 13 per day. The daily average collections for steelhead and yearling Chinook this week represented decreases for both species, when compared to last week. A few Chinook fry and coho were also collected at the Snake River Trap this week.

At this time, data from the Imnaha Trap are only available through April 15th. Passage of steelhead and Yearling Chinook since April 12th has decreased, when compared to the period of April 5-11. The daily average collections for steelhead and yearling Chinook since April 12th were 237 and 10 per day, respectively.

These averages for the April 5-11 period were 446 and 250, respectively. No pacific lamprey juveniles were collected in this week's samples (through April 15th).

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. Approximately 150,000 yearling fall Chinook were scheduled for release into the Clearwater River this week. No new releases of yearling spring or summer Chinook were scheduled to begin this week. However, several earlier volitional releases of spring and summer Chinook were scheduled to end this week. Finally, just over 2.0 million summer steelhead juveniles were scheduled for release into this zone this week. These steelhead releases were scheduled throughout the Snake River Zone, including: 1) the Clearwater River and its tributaries (69%), 2) the Salmon River (21%), 3) the Snake River (at Lyons Ferry Hatchery) (7%), and 4) the Tucannon River (3%).

The only new releases that are scheduled for this zone over the next two weeks are of summer steelhead. In all, about 1.6 million summer steelhead are scheduled to be released in this zone over the next two weeks. These releases are scheduled to take place on the Salmon River (74%), the Imnaha River (14%), and the Pahsimeroi River (12%).

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 several releases of juvenile salmonids scheduled for this zone this week. First, nearly 651,000 yearling spring Chinook juveniles were scheduled for release this week. Of these, about 58% were scheduled for release into the Methow River while the remaining 42% were scheduled for release into the Wenatchee River. In addition, nearly 1.9 million yearling summer Chinook were scheduled for release into the Columbia River above Rocky Reach Dam (49%), the Okanogan River (32%), and the Entiat River (19%). Releases for the Yakama Tribal Program to reintroduce coho to the Yakima, Methow, and Wenatchee rivers continued this week. In all, several releases totaling nearly 1.5 million coho juveniles were scheduled to begin this week. Of these, approximately 47% were scheduled for release into the Yakima River, 36% were scheduled for release into the Wenatchee River, and 17% were scheduled for release into the Methow River. Finally, nearly 420,000 summer steelhead juveniles were scheduled for release

into this zone this week. These steelhead releases were scheduled for the Methow River (49%), the Walla Walla (43%), and the Okanogan River (8%).

There are several releases of juvenile salmonids scheduled for this zone over the next two weeks. First, nearly 350,000 subyearling fall Chinook are scheduled for release into this zone over the next two weeks. The vast majority (99%) are scheduled for release into the Yakima River. The remaining 1% are scheduled for release by WDFW Cooperatives into the Columbia (above McNary Dam) and Wenatchee rivers. In addition, nearly 1.8 million yearling spring Chinook are scheduled for release into the Wenatchee (72%) and Methow (28%) rivers. The yearling Chinook that are scheduled for release into the Methow River are 100% unclipped but are tagged with coded-wire-tags. WDFW cooperatives are also scheduled to release about 450 subyearling summer Chinook into the Methow (50%) and Okanogan (50%) rivers. There are also a couple releases of yearling summer Chinook that are scheduled for this zone over the next two weeks. In all, these releases are expected to total about 1.2 million yearling summer Chinook. Of these, about 64% will be released into the Wenatchee River while the remaining 36% will be released into the Methow River.

Several volitional releases of coho are scheduled to begin over the next two weeks. In all, these volitional releases are expected to total nearly 560,000 coho juveniles. Of these, approximately 43% are scheduled for release into the Wenatchee River, 39% are scheduled for release into the Methow River, and 18% are scheduled for direct release into the Columbia River at Wells Hatchery. Finally, approximately 521,000 summer steelhead are scheduled for release into this zone over the next two weeks. These releases are scheduled to take place throughout this river zone, including: 1) the Wenatchee River (47%), 2) the Methow River (28%), 3) the Okanogan River (17%), and 4) the Touchet River (7%).

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Just over 2.19 million yearling spring Chinook were scheduled for release into this zone this week. These yearling spring Chinook were released into the Wind (53%) and Little White Salmon (47%) rivers. In addition, about 13,500 summer steelhead were scheduled for release to the Deschutes River this week.

There are several releases of juvenile salmonids

scheduled for this zone over the next two weeks.

Approximately 4.5 million subyearling fall Chinook tules are scheduled for release from Spring Creek NFH on May 2nd. In addition, nearly 1.1 million coho juveniles are scheduled for release into the Klickitat River on or around May 1st. Finally, about 280,500 steelhead juveniles are scheduled for release into this zone over the next two weeks. Of these, approximately 87% are summer steelhead and 13% are winter steelhead. Of the summer steelhead that are scheduled for release into this zone, about 62% are scheduled for release into the Umatilla River. The remaining 38% are scheduled for release into the Klickitat (37%) and Little White Salmon (1%) rivers. All of the winter steelhead that are scheduled for release into this zone are scheduled for release into Hood River.

Adult Fish Passage:

Adult counts at Bonneville Dam have been updated through April 18th. Daily adult spring Chinook counts at Bonneville Dam ranged from 80 to 262 adult salmon per day. As of April 18th, a total of 2,256 spring Chinook have been counted at Bonneville Dam. In 2012, 1,079 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2013 adult spring Chinook count at Bonneville Dam is about 2.1 times greater than the 2012 count, while being only about 12% of the 10 year average count. At Willamette Falls Dam 623 adult spring Chinook has been counted so far this year. In 2012, 236 adult spring Chinook were counted at Willamette. This year's count has 387 more fish than last year. However, the 2013 Willamette Falls adult spring Chinook count is only 32.2% of the 10 year average count of 1,932.

The 2013 Bonneville Dam adult steelhead count of 2,402 is about 64.8% of the 2012 count of 3,708 and 70.7% of the 10 year average count of 3,399. The 2013 Bonneville Dam adult wild steelhead count of 751 is about 64.2% of the 2012 count of 1,170 and 85.4% of the 10 year average count of 879. This year's Lower Granite steelhead count of 6,689 is about 89.7% of the 2012 count of 7,457 and 79.1% of the 10 year average count of 8,454. The 2013 Lower Granite Dam adult wild steelhead count of 2,781 is about 93.9% of the 2012 count of 2,960, while being about 1.1 times greater than the 10 year average count of 2,483. At Willamette Falls Dam, the 2013 count for steelhead was 5,727 as of April 17th. This year's steelhead count is about 72.9% of the 2012 count of 7,855 and about 83% of the 10 year average count of 6,896.

Based on video counts, the criteria (2 fish for 2 days) to open the Corner Collector at Bonneville Dam was met on March 20, 2013. The Corner Collector was opened early in the afternoon on March 22, 2013.

Hatchery Releases Last Two Weeks

Hatchery Release Summary									
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Wells Hatchery	ST	SU	2013	9,189	04-13-13	04-27-13	Omak Creek	Okanogan River
Colville Tribe Total					9,189				
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2013	72,367	04-09-13	04-09-13	Meadow Creek - CLES	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2013	121,863	04-12-13	04-12-13	Newsome Creek	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2013	143,982	04-11-13	04-11-13	Meadow Creek - CLES	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2013	153,360	04-10-13	04-11-13	Meadow Creek - CLES Redhouse (SFk	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2013	208,845	03-28-13	04-10-13	ClearH20 R)	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2013	258,399	04-09-13	04-10-13	Meadow Creek - CLES	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	93,563	04-09-13	04-10-13	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	93,908	04-08-13	04-09-13	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	94,360	04-10-13	04-11-13	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	218,909	04-16-13	04-19-13	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2013	319,252	03-21-13	04-08-13	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2013	431,392	04-08-13	04-12-13	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2013	168,595	04-01-13	04-18-13	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2013	847,203	04-01-13	04-18-13	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2013	2,500,000	03-11-13	04-26-13	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game Total					5,725,998				
Nez Perce Tribe	Dworshak NFH	ST	SU	2013	65,770	04-16-13	04-16-13	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	ST	SU	2013	140,000	04-16-13	04-16-13	Meadow Creek - CLES	S Fk Clearwater River
Nez Perce Tribe	Kooskia NFH	CO	UN	2013	323,000	04-01-13	04-07-13	Clear Creek	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2013	130,500	04-12-13	04-22-13	Lostine Accim Pond Pittsburg Landing	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2013	150,000	04-12-13	04-12-13	Acclim Pond Big Canyon	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2013	150,000	04-14-13	04-14-13	(Clearwater River) Nez Perce Tribal	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH1	SP	2013	205,000	04-01-13	04-13-13	Hatchery	Clearwater River M F
Nez Perce Tribe Total					1,164,270				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2013	320,000	04-11-13	05-08-13	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2013	360,000	04-10-13	04-10-13	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2013	250,000	03-14-13	04-14-13	Lookingglass Creek	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Opal Springs Hatchery	ST	SU	2013	5,500	04-15-13	04-15-13	Wychus Creek	Deschutes River
Oregon Dept. of Fish and Wildlife	Opal Springs Hatchery	ST	SU	2013	8,000	04-15-13	04-15-13	Crooked River (OR)	Deschutes River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2013	162,000	04-08-13	04-08-13	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					1,105,500				
U.S. Fish and Wildlife Service	Carson NFH	CH1	SP	2013	1,170,000	04-17-13	04-17-13	Carson Hatchery	Wind River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2013	307,902	04-08-13	04-17-13	Clear Creek Redhouse (SFk	Clearwater River M F
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2013	400,400	04-08-13	04-17-13	ClearH20 R)	S Fk Clearwater River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2013	1,248,146	04-15-13	04-19-13	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Entiat Hatchery	CH1	SU	2013	356,500	04-17-13	04-17-13	Entiat Hatchery	Entiat River
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2013	843,890	04-11-13	04-25-13	S Fk Salmon River Little White Salmon	Salmon River (ID) Little White Salmon
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2013	1,863,113	04-11-13	04-11-13	Hatchery Little White Salmon	River Little White Salmon
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2013	724,810	04-18-13	04-18-13	Hatchery	River L Col R (D/s McN
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2013	6,441,575	04-11-13	04-11-13	Spring Creek Hatchery Warm Springs	Dam)
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2013	772,000	04-02-13	04-11-13	Hatchery	Deschutes River Little White Salmon
U.S. Fish and Wildlife Service	Willard Hatchery	CH1	SP	2013	296,000	04-18-13	04-18-13	Willard Hatchery	River
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2013	375,800	04-15-13	04-26-13	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2013	55,500	04-15-13	05-24-13	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2013	59,300	04-15-13	05-24-13	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service Total					14,914,936				
Umatilla Tribe	Cascade Hatchery	CO	UN	2013	1,000,000	03-25-13	04-22-13	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2013	134,519	03-21-13	04-14-13	Catherine Cr Acclim Pond	Grande Ronde River

Hatchery Releases Last Two Weeks, continued

Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2013	135,308	04-06-13	04-14-13	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2013	178,400	04-08-13	04-15-13	Imeques Acclim Pond Thornhollow Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2013	195,500	04-08-13	04-15-13	Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2013	225,000	04-08-13	04-15-13	Imeques Acclim Pond	Umatilla River
Umatilla Tribe Total					1,868,727				
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2013	75,000	04-09-13	04-24-13	W Fk Hood River	Hood River
Warm Springs Tribe Total					75,000				
Washington Dept. of Fish and Wildlife	Chelan Hatchery	CH1	SU	2013	645,000	04-15-13	04-15-13	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2013	275,000	04-15-13	05-01-13	Chiwawa Hatchery Similkameen Acclim Pd	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2013	600,000	04-15-13	05-10-13	Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2013	489,000	04-10-13	04-15-13	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	84,000	04-10-13	04-20-13	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	100,000	04-15-13	04-20-13	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	145,000	04-15-13	05-20-13	Lyons Ferry Hatchery Cottonwood Acclim Pond	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	206,000	04-10-13	04-30-13	Pond Ringold Springs Hatchery	Grande Ronde River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2013	186,153	04-12-13	04-18-13	Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2013	260,000	04-01-13	04-27-13	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2013	58,000	04-15-13	04-20-13	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2013	2,550,000	04-01-13	04-07-13	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2013	290,000	04-15-13	04-25-13	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2013	9,500	04-15-13	04-15-13	Omak Creek	Okanogan River
Washington Dept. of Fish and Wildlife Total					5,897,653				
Yakama Tribe	Cascade Hatchery	CO	UN	2013	130,867	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2013	306,946	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2013	249,305	03-15-13	05-15-13	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2013	255,745	03-15-13	05-15-13	Clark Flat Acclim Pond Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2013	266,311	03-15-13	05-15-13	Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2013	102,975	04-15-13	07-01-13	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2013	104,059	04-15-13	07-01-13	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2013	237,043	04-15-13	07-01-13	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH1	FA	2013	25,000	04-12-13	04-12-13	Prosser Acclim Pond Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2013	124,425	04-15-13	07-01-13	Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2013	131,858	04-15-13	07-01-13	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2013	322,100	04-01-13	07-01-13	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2013	30,343	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2013	73,036	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Winthrop NFH	CO	UN	2013	253,485	04-15-13	06-15-13	Winthrop Hatchery	Methow River
Yakama Tribe Total					2,613,498				
Grand Total					33,374,771				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
From:	4/19/2013	to	5/2/2013						
Colville Tribe	Wells Hatchery	ST	SU	2013	9,189	04-13-13	04-27-13	Omak Creek	Okanogan River
Colville Tribe Total					9,189				
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	63,298	05-01-13	05-02-13	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	124,875	05-02-13	05-03-13	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	188,145	04-26-13	05-01-13	Squaw Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	218,909	04-16-13	04-19-13	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	219,739	04-19-13	04-23-13	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2013	465,286	04-23-13	04-26-13	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2013	2,500,000	03-11-13	04-26-13	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game Total					3,780,252				
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2013	130,500	04-12-13	04-22-13	Lostine Accim Pond	Wallowa River
Nez Perce Tribe Total					130,500				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2013	50,000	04-29-13	04-29-13	Big Sheep Creek	Imnaha River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2013	165,000	04-29-13	04-29-13	L Sheep Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2013	320,000	04-11-13	05-08-13	Big Canyon Acclim. Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2013	300,000	05-01-13	05-01-13	Crooked River (OR)	Deschutes River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	ST	SU	2013	50,000	04-22-13	04-29-13	Meacham Creek	Umatilla River
Oregon Dept. of Fish and Wildlife Total					885,000				
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2013	1,248,146	04-15-13	04-19-13	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2013	127,363	05-01-13	05-10-13	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2013	155,941	04-25-13	04-30-13	East Fk Salmon River	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2013	215,523	05-01-13	05-10-13	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2013	843,890	04-11-13	04-25-13	S Fk Salmon River	Salmon River (ID)
U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2013	1,280,000	04-20-13	04-20-13	Leavenworth Hatchery	Wenatchee River L Col R (D/s McN)
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2013	4,500,000	05-02-13	05-02-13	Spring Creek Hatchery	Spring Creek Hatchery
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2013	375,800	04-15-13	04-26-13	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2013	55,500	04-15-13	05-24-13	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2013	59,300	04-15-13	05-24-13	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service Total					8,861,463				
Umatilla Tribe	Cascade Hatchery	CO	UN	2013	1,000,000	03-25-13	04-22-13	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2013	50,000	04-22-13	04-29-13	Minthorn Acclimation Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2013	50,000	04-22-13	04-29-13	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe Total					1,100,000				
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2013	25,000	04-30-13	04-30-13	E Fk Irrig Dist Sand Trap	Hood River
Warm Springs Tribe	Parkdale Acclim. Pond	ST	WI	2013	12,500	04-30-13	04-30-13	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2013	75,000	04-09-13	04-24-13	W Fk Hood River	Hood River
Warm Springs Tribe Total					112,500				
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2013	275,000	04-15-13	05-01-13	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	ST	SU	2013	223,000	04-25-13	05-05-13	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	COOP	CH0	FA	2013	175	05-01-13	05-31-13	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	COOP	CH0	FA	2013	225	05-01-13	05-31-13	Above McNary Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife	COOP	CH0	FA	2013	4,500	05-01-13	05-31-13	Above McNary Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife	COOP	CH0	FA	2013	18,975	05-01-13	05-31-13	Yakama River	Yakama River
Washington Dept. of Fish and Wildlife	COOP	CH0	SU	2013	225	05-01-13	05-31-13	Methow River	Methow River
Washington Dept. of Fish and Wildlife	COOP	CH0	SU	2013	225	05-01-13	05-31-13	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2013	600,000	04-15-13	05-10-13	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2013	771,000	04-20-13	04-25-13	Dryden Acclim Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2013	24,000	04-25-13	06-20-13	Blackbird Island Acc Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	39,000	04-20-13	04-30-13	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	84,000	04-10-13	04-20-13	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	100,000	04-15-13	04-20-13	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	145,000	04-15-13	05-20-13	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2013	206,000	04-10-13	04-30-13	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2013	18,200	04-20-13	04-30-13	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2013	93,400	04-20-13	04-25-13	Chewuch Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2013	397,100	04-20-13	04-25-13	Methow Hatchery	Methow River

Hatchery Releases Next Two Weeks, continued

Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2013	435,000	04-20-13	04-30-13	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2013	50,000	04-20-13	04-30-13	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2013	95,000	04-25-13	05-05-13	Methow Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2013	3,000	05-01-13	05-10-13	Drano Lake	Little White Salmon River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2013	90,000	04-25-13	05-05-13	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2013	260,000	04-01-13	04-27-13	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2013	58,000	04-15-13	04-20-13	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2013	290,000	04-15-13	04-25-13	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2013	90,000	04-20-13	05-20-13	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife Total					4,371,025				
Yakama Tribe	Cascade Hatchery	CO	UN	2013	130,722	04-22-13	06-15-13	Nason Wetlands	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2013	130,867	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2013	306,946	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2013	249,305	03-15-13	05-15-13	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2013	255,745	03-15-13	05-15-13	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2013	266,311	03-15-13	05-15-13	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2013	102,975	04-15-13	07-01-13	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2013	104,059	04-15-13	07-01-13	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2013	237,043	04-15-13	07-01-13	Easton Pond	Yakima River
Yakama Tribe	Klickitat Hatchery	CO	NO	2013	1,080,000	05-01-13	05-01-13	Klickitat Hatchery	Klickitat River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2013	25,000	04-26-13	04-26-13	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2013	300,000	04-27-13	04-27-13	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2013	124,425	04-15-13	07-01-13	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2013	131,858	04-15-13	07-01-13	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2013	322,100	04-01-13	07-01-13	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2013	30,343	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2013	35,838	05-01-13	06-15-13	Methow River	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2013	40,957	04-22-13	06-15-13	Winthrop Hatchery	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2013	66,881	05-01-13	06-15-13	Biddle Pond	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2013	72,764	05-01-13	06-15-13	Twisp Acclim Pond	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2013	73,036	04-15-13	06-15-13	Icicle Creek	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2013	101,818	05-01-13	06-15-13	Wells Hatchery	Mid-Columbia River
Yakama Tribe	Willard Hatchery	CO	UN	2013	109,826	05-01-13	06-15-13	Wenatchee River	Wenatchee River
Yakama Tribe	Winthrop NFH	CO	UN	2013	253,485	04-15-13	06-15-13	Winthrop Hatchery	Methow River
Yakama Tribe Total					4,552,304				
Grand Total					23,802,233				

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
04/05/2013	120.3	0.0	120.9	0.0	125.8	4.0	125.3	3.2	134.8	1.4	142.6	6.7	141.5	8.6
04/06/2013	107.3	0.0	103.5	0.0	112.1	1.1	118.1	3.3	131.2	2.1	144.6	6.3	138.4	5.5
04/07/2013	101.2	0.0	108.8	0.0	114.3	1.0	113.0	0.8	125.5	0.0	128.1	1.9	127.0	0.0
04/08/2013	135.1	0.0	136.7	9.2	142.4	22.2	142.4	18.4	148.0	15.4	156.3	34.0	143.7	26.6
04/09/2013	156.1	0.0	158.9	14.0	168.3	31.1	167.3	32.4	169.9	32.2	185.7	62.9	186.9	72.1
04/10/2013	169.0	6.3	164.1	14.4	174.8	40.4	176.5	43.8	177.9	44.1	194.2	61.5	195.3	83.5
04/11/2013	176.5	19.7	173.0	25.1	186.2	52.3	189.1	47.9	190.4	52.7	212.0	87.7	216.2	108.2
04/12/2013	167.3	8.5	172.0	9.2	183.3	31.9	181.2	26.2	185.6	19.3	194.0	65.0	195.8	91.1
04/13/2013	163.8	1.6	171.3	5.0	178.9	32.4	175.6	29.2	179.1	20.2	195.0	54.4	192.7	94.1
04/14/2013	166.0	10.1	158.7	12.5	171.9	39.3	177.1	29.4	178.3	26.5	199.7	65.5	204.2	79.7
04/15/2013	177.7	16.4	175.7	21.6	187.3	36.5	180.2	24.7	180.4	29.9	199.4	72.8	200.4	84.4
04/16/2013	170.0	9.9	172.3	18.1	191.9	44.6	188.8	27.3	190.0	29.9	205.3	80.5	206.9	99.8
04/17/2013	164.3	0.0	166.0	15.4	176.6	34.8	179.1	26.9	181.4	30.1	189.6	63.3	190.9	92.7
04/18/2013	156.3	0.0	157.9	8.0	167.9	25.9	160.8	17.9	165.1	26.8	173.3	52.4	180.4	69.6

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
04/05/2013	10.0	0.0	---	---	64.6	20.3	63.6	19.1	67.5	28.0	67.8	51.0
04/06/2013	9.9	0.0	---	---	72.3	20.4	74.0	22.2	75.9	27.9	76.7	54.4
04/07/2013	9.9	0.0	---	---	75.3	20.3	72.9	22.0	74.9	27.9	75.3	54.4
04/08/2013	9.9	0.0	---	---	75.8	23.8	77.0	25.8	80.1	28.7	81.9	58.0
04/09/2013	9.9	0.0	---	---	71.6	23.7	70.4	23.9	72.1	30.0	72.0	51.6
04/10/2013	9.9	0.0	---	---	62.7	20.3	59.0	17.7	61.0	29.9	63.1	45.5
04/11/2013	9.9	0.0	---	---	62.7	20.4	62.3	18.8	66.4	29.9	67.2	48.4
04/12/2013	9.9	0.0	---	---	59.7	20.3	59.9	17.9	61.9	30.1	62.4	46.9
04/13/2013	9.9	0.0	---	---	59.1	20.3	56.9	17.0	58.2	30.0	57.4	46.5
04/14/2013	9.9	0.0	---	---	60.5	20.3	61.7	18.6	65.7	30.6	66.2	49.6
04/15/2013	9.9	0.0	---	---	55.4	20.0	55.9	16.7	59.2	31.0	61.1	47.2
04/16/2013	9.9	0.0	---	---	52.0	20.0	50.3	15.0	52.4	29.7	52.7	41.2
04/17/2013	9.9	0.0	---	---	50.2	20.2	53.3	16.0	54.5	30.5	53.6	43.5
04/18/2013	9.9	0.0	---	---	45.2	20.2	44.2	13.2	47.1	31.0	47.5	37.4

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
04/05/2013	218.7	99.6	211.2	0.0	206.4	0.0	222.4	1.4	84.4	124.2
04/06/2013	225.4	86.7	217.9	0.0	211.4	0.0	219.9	1.3	83.6	122.6
04/07/2013	219.9	81.2	228.2	0.0	226.0	0.0	251.4	17.7	84.4	136.9
04/08/2013	224.9	116.8	232.8	28.5	226.1	23.3	247.0	33.8	84.5	116.3
04/09/2013	268.7	142.3	279.7	92.5	269.1	95.7	286.5	75.0	84.7	114.4
04/10/2013	264.6	128.8	269.8	88.0	248.0	100.2	287.1	100.0	75.0	99.6
04/11/2013	277.4	138.0	289.3	86.7	271.8	108.4	284.3	99.7	70.0	102.2
04/12/2013	281.5	147.1	302.1	90.7	284.8	113.7	306.2	100.1	84.1	109.7
04/13/2013	242.7	98.4	241.8	72.7	223.3	89.3	256.9	99.9	43.5	101.1
04/14/2013	259.7	115.4	265.4	79.9	248.1	98.9	262.4	100.0	46.6	103.4
04/15/2013	269.3	141.0	283.9	85.3	265.9	106.5	283.2	100.8	66.5	103.5
04/16/2013	276.6	151.3	288.1	86.5	266.5	106.4	292.6	100.4	77.4	102.4
04/17/2013	265.2	138.1	247.7	74.2	233.1	93.0	261.7	100.0	48.4	100.9
04/18/2013	238.8	106.0	247.3	73.9	230.1	91.8	244.2	99.6	32.8	99.3

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											
	04/09/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/16/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	04/07/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/12/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/17/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	04/13/13	Chinook + Steelhead	56	0	0	0.00%	0.00%	0	0	0	0
	04/16/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	04/08/13	Chinook + Steelhead	18	0	0	0.00%	0.00%	0	0	0	0
	04/12/13	Chinook + Steelhead	52	2	1	1.92%	0.00%	1	0	0	0
	04/14/13	Chinook + Steelhead	52	1	1	1.92%	0.00%	1	0	0	0
	04/18/13	Chinook + Steelhead	99	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
Rock Island Dam											
	04/15/13	Chinook + Steelhead	78	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>				
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>hr</u>	
4/5	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103.4	103.6	103.9	24
4/6	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103.1	103.2	103.6	24
4/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103.5	103.8	104.0	24
4/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	102.6	102.9	103.2	24
4/9	---	---	---	0	---	---	---	0	96.6	96.9	97.5	24	98.8	99.2	99.5	24	101.9	102.2	102.5	24
4/10	---	---	---	0	---	---	---	0	96.1	96.4	96.8	24	97.5	98.1	98.4	24	102.9	103.2	103.8	24
4/11	---	---	---	0	---	---	---	0	96.5	96.7	96.8	24	96.1	96.5	96.8	23	102.3	102.4	102.6	24
4/12	---	---	---	0	---	---	---	0	104.4	105.5	105.9	24	103.3	104.3	104.5	24	103.6	104.8	105.8	24
4/13	---	---	---	0	---	---	---	0	104.9	105.2	105.7	24	103.5	103.8	104.1	24	105.6	105.9	106.2	24
4/14	---	---	---	0	---	---	---	0	104.3	104.5	104.8	24	103.4	103.8	104.1	24	103.3	103.7	104.1	24
4/15	---	---	---	0	---	---	---	0	104.1	104.4	105.1	24	104.3	105.2	105.6	24	102.3	102.3	102.4	24
4/16	---	---	---	0	---	---	---	0	103.3	103.7	104.1	24	103.5	104.4	104.9	24	102.3	102.4	102.5	24
4/17	---	---	---	0	---	---	---	0	103.4	104.1	104.9	24	101.6	101.8	102.0	24	103.8	104.5	104.6	24
4/18	---	---	---	0	---	---	---	0	103.4	103.7	104.7	23	101.8	102.1	102.4	23	103.5	104.1	104.5	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>				
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>hr</u>	
4/5	103.4	103.8	104.4	24	103.9	104.0	104.5	19	105.2	105.8	111.0	19	105.1	105.3	105.4	22	105.7	107.2	112.9	22
4/6	103.6	104.1	104.9	24	103.5	103.7	103.9	20	104.5	105.1	109.1	20	106.1	106.5	107.0	24	107.5	109.0	112.8	24
4/7	103.7	104.0	104.5	24	103.5	103.8	104.5	21	103.7	104.1	104.7	21	106.2	106.4	107.0	24	105.9	106.2	106.9	24
4/8	105.3	108.0	109.1	24	102.3	102.6	103.0	23	107.3	111.7	125.2	23	103.8	104.6	105.6	24	108.2	112.3	116.1	24
4/9	106.6	108.5	109.2	24	102.3	102.7	102.8	20	109.0	110.5	111.7	20	104.0	105.8	114.1	24	114.2	115.8	121.3	24
4/10	106.8	109.4	110.2	24	103.5	103.9	104.4	20	111.0	112.3	115.0	20	110.4	111.5	113.8	24	118.8	121.0	123.2	24
4/11	109.9	110.2	110.5	24	102.9	103.1	103.4	19	114.3	115.7	126.1	19	110.3	110.4	110.5	24	119.0	120.1	121.6	24
4/12	106.4	107.3	109.6	24	103.8	104.1	104.4	20	109.9	110.6	112.0	20	113.2	113.8	114.1	24	119.1	120.1	121.5	24
4/13	106.3	106.8	107.6	24	104.2	104.4	104.5	23	110.0	110.5	110.9	23	111.0	112.3	113.1	24	118.6	119.3	120.1	24
4/14	106.2	107.1	107.4	24	104.0	104.3	105.2	19	112.6	115.7	119.2	19	108.6	109.1	109.3	24	117.3	118.7	119.2	24
4/15	108.6	109.9	110.2	24	102.4	102.8	103.4	23	109.4	110.5	111.4	23	111.5	113.1	114.4	24	117.7	119.1	122.1	24
4/16	107.4	109.2	109.9	24	102.3	102.8	102.9	24	111.1	111.6	111.9	24	108.2	108.8	108.9	24	116.5	117.2	117.6	24
4/17	106.7	107.0	107.2	24	102.6	102.9	103.9	20	109.1	109.5	110.0	20	109.8	110.5	110.7	24	117.2	117.5	117.9	24
4/18	105.0	106.6	107.1	23	104.6	104.9	105.0	23	109.0	109.5	110.1	23	109.5	110.2	110.7	23	115.0	116.1	116.4	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>				
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>hr</u>	
4/5	105.1	105.4	106.3	22	105.2	105.4	107.3	21	106.4	106.5	106.7	24	106.6	107.3	109.3	24	106.2	106.4	106.7	24
4/6	105.4	106.1	106.3	24	106.1	106.8	108.2	24	105.6	105.9	106.1	24	105.8	106.6	108.9	24	105.8	106.2	107.0	24
4/7	105.3	106.0	106.5	24	105.4	106.1	106.8	24	105.9	106.2	106.4	24	105.9	106.4	107.5	24	106.1	106.8	107.1	24
4/8	103.9	104.4	104.7	24	106.1	107.9	111.2	24	104.6	104.9	105.4	24	109.5	114.4	122.9	24	104.2	104.5	105.1	24
4/9	106.3	106.8	107.0	24	110.7	112.5	114.2	24	103.7	103.9	104.1	24	113.3	115.5	118.8	24	113.1	116.8	118.5	24
4/10	112.3	115.4	116.1	24	117.5	119.5	121.8	24	105.9	107.0	107.3	24	112.4	114.0	115.1	24	111.9	113.1	115.7	24
4/11	111.7	113.3	113.9	24	117.8	119.3	119.6	24	107.6	108.4	109.9	24	114.8	115.3	116.0	24	111.0	112.8	114.0	24
4/12	113.5	114.8	115.6	24	114.7	115.9	116.7	24	112.9	115.0	115.9	24	114.6	115.3	116.4	24	115.0	116.2	117.1	24
4/13	111.7	112.5	113.6	24	113.4	114.0	114.8	24	114.0	115.4	116.0	24	113.3	114.3	114.9	24	112.6	113.3	114.4	24
4/14	110.3	111.0	111.7	24	112.5	113.6	114.2	24	111.0	111.2	111.6	24	112.1	112.7	114.3	24	111.7	112.5	113.5	24
4/15	111.3	113.3	115.5	24	113.8	115.4	117.5	24	110.4	110.6	110.8	24	113.3	114.4	115.6	24	111.3	111.9	112.8	24
4/16	109.8	110.7	112.1	24	112.4	113.2	114.0	24	109.6	109.7	109.8	24	114.3	114.9	115.9	24	113.2	113.8	114.7	24
4/17	110.3	111.5	111.8	24	113.5	114.5	114.7	24	110.6	111.1	111.2	24	112.2	112.4	112.9	24	112.9	113.2	114.2	24
4/18	110.7	111.3	111.5	23	113.8	114.0	114.2	22	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwr-Peck</u>			<u>Anatone</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/5	106.9	107.8	108.9	24	---	---	---	0	95.7	95.8	96.0	24	98.0	98.6	99.1	24	102.0	102.5	103.1	24
4/6	106.2	106.8	107.4	24	---	---	---	0	95.6	95.7	95.8	24	98.4	98.8	99.2	24	101.9	102.3	102.6	24
4/7	105.5	106.0	106.1	24	---	---	---	0	95.9	96.2	96.4	24	96.1	97.0	97.4	24	102.1	102.4	102.7	24
4/8	104.8	106.3	110.2	24	---	---	---	0	94.9	95.2	95.5	24	93.6	94.0	94.6	24	101.2	101.6	102.1	24
4/9	114.4	116.3	116.8	24	---	---	---	0	94.2	94.5	94.9	24	94.2	95.8	97.0	24	101.9	102.9	103.8	24
4/10	115.5	116.2	117.1	24	---	---	---	0	94.7	95.1	95.4	24	92.2	92.7	93.7	24	102.1	102.5	103.0	24
4/11	116.0	117.0	117.7	24	---	---	---	0	94.6	94.8	95.0	24	91.1	91.1	92.0	11	101.9	102.6	103.0	24
4/12	117.4	118.0	118.5	24	---	---	---	0	95.3	95.9	96.1	23	91.3	91.3	92.4	10	102.5	103.6	104.3	24
4/13	116.3	116.8	117.2	24	---	---	---	0	95.6	95.8	96.0	24	---	---	---	0	102.1	102.6	103.3	24
4/14	115.5	115.6	116.0	24	---	---	---	0	95.2	95.5	95.6	24	91.1	91.2	91.7	13	101.8	102.6	103.5	24
4/15	115.3	115.7	116.1	24	---	---	---	0	95.3	95.6	96.0	24	90.3	90.3	90.6	5	101.8	102.6	103.4	24
4/16	116.3	116.5	117.2	24	---	---	---	0	95.1	95.5	95.7	24	---	---	---	0	101.6	102.5	103.4	24
4/17	116.4	116.6	117.1	24	---	---	---	0	95.1	95.3	95.6	24	90.3	90.3	90.4	5	102.0	103.3	105.6	24
4/18	---	---	---	0	---	---	---	0	95.3	95.5	95.8	23	97.8	97.8	98.8	12	101.9	102.7	103.4	23

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/5	100.2	101.1	101.9	24	103.2	103.4	104.1	24	111.4	111.8	112.5	24	105.8	105.9	106.1	24	109.5	109.7	109.9	24
4/6	100.1	100.6	101.2	24	102.6	102.8	103.1	24	110.5	110.8	110.9	24	106.0	106.3	106.7	24	109.5	109.8	110.3	24
4/7	100.5	101.1	101.9	24	102.2	102.5	102.7	24	109.8	110.1	110.6	24	107.9	108.2	108.3	24	110.3	110.4	110.6	24
4/8	99.5	100.0	100.8	24	100.8	101.2	101.7	24	110.9	112.1	116.1	24	107.2	107.5	108.0	24	111.2	112.1	115.4	24
4/9	100.1	101.6	102.6	24	99.8	100.0	100.1	24	110.6	111.9	115.8	24	106.2	106.4	106.6	24	110.9	112.1	115.6	24
4/10	100.3	101.0	101.7	24	100.7	100.9	101.1	24	109.6	110.1	110.6	24	106.8	107.1	107.4	24	110.0	110.2	110.6	24
4/11	99.9	100.8	101.9	24	100.4	100.6	100.9	24	110.0	110.6	111.2	24	106.3	106.6	106.9	24	109.9	110.2	110.3	24
4/12	100.5	101.8	102.9	23	101.9	102.8	103.3	24	110.8	111.2	111.8	24	108.2	108.9	109.5	22	110.8	111.3	112.3	22
4/13	100.0	100.6	101.2	24	102.7	103.1	103.5	24	110.6	110.9	111.3	24	108.6	109.0	109.5	24	110.8	110.9	111.1	24
4/14	99.9	101.0	102.2	24	101.6	101.7	101.9	24	110.9	111.2	111.6	24	107.3	107.4	107.6	24	110.3	110.5	110.8	24
4/15	100.1	101.2	102.1	24	101.3	101.4	101.7	24	111.1	111.4	111.8	24	106.9	107.0	107.2	24	110.1	110.3	110.4	24
4/16	99.7	101.0	102.0	24	99.8	100.1	100.8	24	110.8	111.4	112.2	24	106.0	106.1	106.4	24	110.0	110.3	110.5	24
4/17	99.9	101.6	102.9	24	99.2	99.4	99.8	24	111.8	112.6	113.4	24	105.8	106.4	107.0	24	110.3	110.4	110.6	24
4/18	99.2	100.0	101.4	23	100.0	100.3	100.8	23	112.0	112.4	112.9	23	107.7	108.7	109.1	23	111.2	111.5	111.6	23

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/5	104.7	105.4	107.2	24	116.9	117.1	117.4	20	107.4	109.3	111.0	24	115.3	115.7	116.1	24	---	---	---	0
4/6	108.6	108.9	109.3	24	117.4	117.6	117.8	24	111.6	112.0	112.1	24	115.5	115.9	116.2	24	---	---	---	0
4/7	109.0	109.4	109.7	24	117.7	118.0	118.6	22	111.9	112.5	112.8	24	115.4	116.1	116.5	24	---	---	---	0
4/8	107.0	107.3	108.0	24	118.4	119.5	121.1	24	109.5	109.8	110.5	24	115.6	115.8	115.9	24	---	---	---	0
4/9	106.8	107.1	107.4	24	119.4	119.6	119.8	24	109.1	109.7	110.4	24	115.3	115.6	115.8	24	---	---	---	0
4/10	109.6	110.4	111.2	24	118.9	119.4	119.8	24	111.8	112.4	112.9	24	114.7	115.5	115.8	24	---	---	---	0
4/11	110.6	110.8	111.1	24	119.2	119.4	119.8	24	112.0	112.4	112.6	24	115.3	115.6	115.9	24	---	---	---	0
4/12	109.1	109.5	109.9	24	119.4	119.6	120.0	22	112.8	113.3	113.8	24	115.1	115.5	115.9	24	---	---	---	0
4/13	108.7	108.9	109.3	24	118.9	119.2	119.6	24	112.8	113.1	113.8	24	114.4	114.8	115.7	24	---	---	---	0
4/14	108.3	108.6	108.8	24	119.5	119.9	120.3	24	111.7	111.8	111.9	24	115.4	115.7	115.8	24	---	---	---	0
4/15	108.0	108.3	108.7	24	119.3	119.9	120.2	24	111.1	111.2	111.5	24	114.7	115.2	115.4	24	---	---	---	0
4/16	107.4	107.7	107.8	24	118.9	119.6	120.1	24	111.1	111.4	111.6	24	113.7	114.5	115.1	24	---	---	---	0
4/17	107.7	108.0	108.3	24	119.0	119.5	120.0	24	111.8	112.2	112.6	24	113.9	114.6	114.9	24	---	---	---	0
4/18	108.6	108.8	109.1	23	119.5	119.8	120.3	23	113.0	113.5	114.1	23	113.3	113.7	114.1	23	---	---	---	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	
4/5	106.3	106.7	106.9	24	116.0	118.2	120.5	24	108.2	108.3	108.4	24	107.1	107.2	107.3	24	107.1	107.3	107.4	24
4/6	106.5	107.1	107.3	24	116.1	116.9	120.0	24	107.6	107.8	108.1	24	106.4	106.5	106.8	24	106.9	107.2	107.7	24
4/7	105.7	105.8	105.9	24	116.0	116.3	116.7	24	107.7	107.9	108.1	24	106.8	107.0	107.4	24	106.7	107.1	107.5	24
4/8	104.3	104.7	105.4	24	116.3	117.8	121.4	24	106.2	106.5	107.1	24	109.6	113.7	117.7	24	104.8	105.1	105.7	24
4/9	103.4	103.9	104.4	24	121.3	121.5	121.6	24	105.4	106.0	106.5	24	116.2	119.5	120.1	24	106.9	108.7	114.7	24
4/10	104.4	104.8	105.2	24	118.6	120.0	121.2	24	106.5	106.8	107.2	24	115.9	117.9	119.4	24	113.0	114.3	115.2	24
4/11	105.7	107.4	109.1	24	117.6	117.8	118.1	24	105.0	105.2	105.4	24	115.6	116.1	117.3	24	107.0	107.6	108.1	24
4/12	109.5	110.5	111.3	24	118.3	118.5	118.6	24	107.3	109.1	110.2	24	116.5	117.2	117.9	24	108.8	110.1	110.7	24
4/13	109.9	110.4	111.1	24	116.5	117.6	118.8	24	108.6	109.3	110.2	24	113.5	114.2	115.2	24	108.3	109.1	110.4	24
4/14	108.2	108.7	109.0	24	116.4	117.0	117.6	24	106.7	106.9	106.9	24	115.1	116.0	117.1	24	108.0	108.6	109.1	24
4/15	108.5	108.9	109.2	24	117.4	117.7	118.3	24	106.7	106.9	107.1	24	115.3	116.1	116.4	24	108.7	109.0	109.4	24
4/16	109.5	109.9	110.2	24	117.8	118.0	118.2	24	106.6	106.9	107.0	24	115.4	116.1	117.6	24	108.7	109.0	109.4	24
4/17	109.6	110.3	111.1	24	117.2	117.8	118.1	24	105.6	105.8	106.0	24	113.5	113.8	115.3	24	108.2	108.6	109.1	24
4/18	111.2	111.8	112.7	23	116.8	117.1	117.9	23	106.6	107.2	107.5	23	114.0	114.5	115.3	23	108.4	108.7	109.0	23

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	
4/5	106.9	107.0	107.0	24	106.8	107.0	107.4	24	106.8	107.1	107.3	24	106.4	106.8	107.0	24	111.1	111.6	111.8	24
4/6	106.6	106.8	107.2	24	106.7	107.0	107.4	24	106.9	107.1	107.3	24	106.2	106.5	106.8	24	111.0	111.3	111.7	24
4/7	106.5	106.9	107.2	24	106.6	107.1	107.8	24	106.7	107.1	107.9	24	105.5	105.8	106.5	24	110.5	110.8	111.7	24
4/8	106.3	107.7	108.4	24	104.6	104.8	105.4	24	105.3	105.5	105.8	24	104.6	105.1	105.5	24	109.2	109.9	110.3	24
4/9	111.4	115.8	117.1	24	104.9	106.0	107.7	24	107.2	108.5	109.9	24	105.2	106.4	107.0	24	115.9	118.4	119.2	24
4/10	117.7	118.6	119.5	24	109.6	112.3	113.4	24	111.3	112.3	113.8	24	108.5	109.3	109.8	24	118.4	118.9	119.6	24
4/11	114.3	114.8	115.6	24	112.6	113.0	113.7	24	114.3	114.4	114.6	24	112.0	113.9	114.5	24	118.7	119.3	122.0	24
4/12	115.2	115.7	116.1	24	112.8	113.4	113.8	24	114.6	115.0	115.3	24	113.6	114.2	114.5	24	119.8	120.2	120.5	24
4/13	114.6	115.1	115.5	24	111.3	112.1	112.7	24	114.2	114.5	114.8	24	111.7	112.1	113.0	24	118.5	118.7	119.0	24
4/14	114.6	115.3	115.6	24	109.7	110.4	110.9	24	113.9	114.4	114.8	24	111.7	112.7	113.6	24	118.3	118.4	118.6	24
4/15	115.2	115.5	115.9	24	111.7	112.1	112.3	24	114.3	114.5	114.6	24	112.3	113.2	113.8	24	118.7	118.8	118.9	24
4/16	115.0	115.2	115.4	24	112.5	113.0	113.2	24	114.5	114.8	115.0	24	112.7	113.4	114.2	24	118.7	118.8	118.8	24
4/17	114.8	115.1	115.3	24	113.2	113.5	113.9	24	115.6	116.0	116.3	24	113.5	114.9	115.8	24	118.3	118.4	118.5	24
4/18	114.5	114.9	115.3	23	112.5	112.7	113.1	23	115.5	115.8	116.1	23	114.1	114.7	115.5	23	118.2	118.5	118.8	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 4/19/2013 8:15

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/currentsmptsubmitdata.asp>

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)	(INDEX)
04/05/2013	*	2,955	869	491	14	4,339	---	---	8	---	308	456
04/06/2013	*	3,114	---	354	23	6,433	---	---	4	---	528	702
04/07/2013	*	1,919	137	146	21	19,053	---	34	4	1,234	764	945
04/08/2013	*	3,047	148	214	14	15,093	1,668	---	10	---	1,080	1,525
04/09/2013	*	474	136	311	15	25,114	---	---	9	1,473	1,827	1,414
04/10/2013	*	919	109	958	41	17,900	---	39	15	---	1,657	2,440
04/11/2013	*	1,338	98	695	15	16,175	---	---	9	1,856	1,716	2,615
04/12/2013	*	1,356	88	515	17	13,421	---	---	23	---	4,855	5,092
04/13/2013	*	878	101	743	11	20,595	6,792	239	25	4,057	3,428	3,494
04/14/2013	*	966	89	411	20	17,498	---	---	111	---	6,686	2,925
04/15/2013	*	664	161	589	4	16,586	---	---	136	3,851	5,518	3,064
04/16/2013	*	731	---	407	5	22,383	---	265	52	---	3,236	5,454
04/17/2013	*	653	---	381	17	14,737	---	---	58	13,390	4,037	4,910
04/18/2013	*	453	---	82	16	19,788	16,108	---	20	---	5,669	3,134
04/19/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		19,467	1,936	6,297	233	229,115	24,568	577	484	25,861	41,309	38,170
# Days:		14	10	14	14	14	3	4	14	6	14	14
Average:		1,391	194	450	17	16,365	8,189	144	35	4,310	2,951	2,726
YTD		40,563	52,237	18,027	436	259,673	24,787	642	517	25,861	41,701	45,646

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)	(INDEX)
04/05/2013	*	0	3	1	17	0	---	---	8	---	4	442
04/06/2013	*	0	---	0	12	29	---	---	12	---	8	565
04/07/2013	*	0	0	0	7	55	---	0	0	33	8	614
04/08/2013	*	0	3	0	0	274	0	---	7	---	5	616
04/09/2013	*	0	1	0	1	0	---	---	23	23	6	651
04/10/2013	*	0	1	2	7	426	---	2	39	---	42	1,049
04/11/2013	*	0	0	0	17	151	---	---	58	122	0	1,143
04/12/2013	*	0	0	2	0	147	---	---	72	---	0	771,897
04/13/2013	*	0	0	0	0	128	0	8	31	402	11	269,748
04/14/2013	*	0	0	0	0	310	---	---	31	---	0	63,431
04/15/2013	*	0	0	2	0	0	---	---	2	247	29	27,663
04/16/2013	*	0	---	2	0	0	---	5	11	---	0	38,001
04/17/2013	*	0	---	2	3	0	---	---	17	870	29	17,096
04/18/2013	*	0	---	0	0	0	0	---	8	---	0	12,695
04/19/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		0	8	11	64	1,520	0	15	319	1,697	142	1,205,611
# Days:		14	10	14	14	14	3	4	14	6	14	14
Average:		0	1	1	5	109	0	4	23	283	10	86,115
YTD		2	16	27	98	1,583	0	15	339	1,697	146	1,212,489

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)
04/05/2013 *	0	0	0	1	31	---	---	3	---	8	442
04/06/2013 *	0	---	0	1	0	---	---	0	---	8	792
04/07/2013 *	0	0	0	0	0	---	0	3	250	8	1,213
04/08/2013 *	0	0	0	1	0	0	---	7	---	5	2,250
04/09/2013 *	0	0	0	0	0	---	---	2	23	6	3,735
04/10/2013 *	0	0	0	0	0	---	0	6	---	27	6,302
04/11/2013 *	0	0	0	0	0	---	---	15	305	36	5,482
04/12/2013 *	0	0	0	1	147	---	---	2	---	59	12,853
04/13/2013 *	0	0	0	2	0	0	0	4	321	63	12,419
04/14/2013 *	0	0	0	0	0	---	---	10	---	192	10,857
04/15/2013 *	0	0	0	0	0	---	---	2	875	315	12,852
04/16/2013 *	0	---	0	0	0	---	0	4	---	229	16,999
04/17/2013 *	0	---	0	0	0	---	---	0	544	429	10,459
04/18/2013 *	0	---	0	0	0	0	0	4	---	453	12,448
04/19/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	6	178	0	0	62	2,318	1,838	109,103
# Days:	14	10	14	14	14	3	4	14	6	14	14
Average:	0	0	0	0	13	0	0	4	386	131	7,793
YTD	0	0	0	7	218	0	0	70	2,318	1,842	110,263

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)
04/05/2013 *	54	669	0	17	2,263	---	---	9	---	316	70
04/06/2013 *	56	---	2	14	1,096	---	---	17	---	292	28
04/07/2013 *	112	540	1	26	3,926	---	19	20	233	400	219
04/08/2013 *	112	389	2	69	3,019	1,208	---	10	---	705	550
04/09/2013 *	32	565	14	56	8,947	---	---	45	553	881	668
04/10/2013 *	21	312	174	58	5,269	---	100	19	---	1,224	405
04/11/2013 *	36	201	77	226	5,744	---	---	28	632	1,164	505
04/12/2013 *	41	189	31	36	10,323	---	---	16	---	1,610	839
04/13/2013 *	56	215	30	46	17,520	5,907	107	22	729	1,682	0
04/14/2013 *	41	183	35	64	18,427	---	---	23	---	1,036	1,278
04/15/2013 *	59	360	18	31	19,903	---	---	27	1,820	1,417	511
04/16/2013 *	76	---	57	78	25,693	---	152	6	---	1,289	453
04/17/2013 *	47	---	112	55	23,160	---	---	21	2,830	1,231	1,181
04/18/2013 *	43	---	14	29	47,414	42,888	---	12	---	2,573	1,402
04/19/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	786	3,623	567	805	192,704	50,003	378	275	6,797	15,820	8,109
# Days:	14	10	14	14	14	3	4	14	6	14	14
Average:	56	362	41	58	13,765	16,668	95	20	1,133	1,130	579
YTD	826	7,522	592	865	197,325	50,040	385	280	6,797	16,212	8,364

Two-Week Summary of Passage Indices

COMBINED SOCKEYE											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/05/2013 *	0	0	0	0	0	---	---	2	---	0	28
04/06/2013 *	0	---	0	0	0	---	---	4	---	16	48
04/07/2013 *	0	0	0	0	0	---	3	7	0	20	49
04/08/2013 *	0	0	0	0	0	0	---	27	---	10	88
04/09/2013 *	0	0	0	0	0	---	---	9	0	0	94
04/10/2013 *	0	0	0	0	0	---	0	9	---	0	218
04/11/2013 *	0	0	0	0	0	---	---	26	0	0	88
04/12/2013 *	0	0	0	0	0	---	---	67	---	0	446
04/13/2013 *	0	0	0	0	0	0	0	33	181	16	0
04/14/2013 *	0	0	0	0	0	---	---	49	---	32	471
04/15/2013 *	0	0	0	0	0	---	---	37	1,198	29	0
04/16/2013 *	0	---	0	0	0	---	0	21	---	57	183
04/17/2013 *	0	---	0	0	0	---	---	6	3,589	57	0
04/18/2013 *	0	---	0	0	0	0	---	8	---	47	82
04/19/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	0	3	305	4,968	284	1,795
# Days:	14	10	14	14	14	3	4	14	6	14	14
Average:	0	0	0	0	0	0	1	22	828	20	128
YTD	0	0	0	0	30	0	3	306	4,968	292	1,844

COMBINED LAMPREY JUVENILES											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR [†] (Coll)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)
04/05/2013 *	0	1	0	0	0	---	---	0	---	604	36
04/06/2013 *	0	---	0	0	0	---	---	3	---	836	28
04/07/2013 *	0	0	0	0	40	---	---	2	5	20	924
04/08/2013 *	0	2	0	0	0	60	---	1	---	720	84
04/09/2013 *	0	0	0	0	0	---	---	4	50	1,095	60
04/10/2013 *	0	0	0	0	0	---	4	3	---	942	56
04/11/2013 *	0	0	0	0	300	---	---	7	80	833	60
04/12/2013 *	0	0	0	0	300	---	---	2	---	600	155
04/13/2013 *	0	0	0	0	42	420	7	2	210	1,095	429
04/14/2013 *	0	0	0	0	0	---	---	1	---	1,789	243
04/15/2013 *	0	0	0	0	0	---	---	0	350	1,816	67
04/16/2013 *	0	---	0	0	0	---	5	0	---	1,480	67
04/17/2013 *	0	---	0	0	0	---	---	0	1,200	1,160	33
04/18/2013 *	0	---	0	0	0	100	---	1	---	1,417	0
04/19/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	3	0	0	682	580	18	29	1,910	15,311	1,346
# Days:	14	10	14	14	14	3	4	14	6	14	14
Average:	0	0	0	0	49	193	5	2	318	1,094	96
YTD	0	7	0	0	692	613	20	31	1,910	16,427	2,434

Two-Week Summary of Passage Indices

* 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, sockeye, and lamprey juveniles. Two classes of fish counts are shown in these tables:

Two classes of fish counts are shown in these tables:

Collection counts (Coll), which account for sample rates but are not adjusted for flow;

Passage indices (INDEX), 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.

Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, pacific lamprey macrophthalmia, and unidentified lamprey species.

† Caution should be used with interpreting lamprey juvenile collection counts at LGR because of the possibility that lamprey may escape the sample tank before being sampled

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 = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD.

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.

Fall (post SMP season) trapping at the Imnaha River Fish Trap (IMN) is funded by the Lower Snake River Compensation Program (LSRCP)

WTB and LEW data collected for the FPC by Idaho Dept. of Fish and Game.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

4/19/13 8:15 AM

04/05/13 TO 04/19/13

Site	Data	Species					Grand Total
		CH0	CH1	CO	ST	SO	
LGR	Sum of NumberCollected	1,045	151,078	120	122,090		274,333
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1,042	151,034	120	122,082		274,278
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	3	33	0	5		41
	Sum of FacilityMorts	0	12	0	1		13
	Sum of ResearchMorts	0	1	0	1		2
	Sum of TotalProjectMorts	3	46	0	7		56
LGS	Sum of NumberCollected		17,123		34,842		51,965
	Sum of NumberBarged		0		0		0
	Sum of NumberBypassed		17,122		34,840		51,962
	Sum of Numbertrucked		0		0		0
	Sum of SampleMorts		1		2		3
	Sum of FacilityMorts		0		0		0
	Sum of ResearchMorts		0		0		0
	Sum of TotalProjectMorts		1		2		3
LMN	Sum of NumberCollected	7	273		185	2	467
	Sum of NumberBarged	0	0		0	0	0
	Sum of NumberBypassed	7	273		185	2	467
	Sum of Numbertrucked	0	0		0	0	0
	Sum of SampleMorts	0	0		0	0	0
	Sum of FacilityMorts	0	0		0	0	0
	Sum of ResearchMorts	0	0		0	0	0
	Sum of TotalProjectMorts	0	0		0	0	0
MCN	Sum of NumberCollected	820	12,487	1,180	3,309	2,370	20,166
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	818	12,466	1,180	3,304	2,370	20,138
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	2	5	0	3	0	10
	Sum of FacilityMorts	0	16	0	2	0	18
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2	21	0	5	0	28
Total Sum of NumberCollected		1,872	180,961	1,300	160,426	2,372	346,931
Total Sum of NumberBarged		0	0	0	0	0	0
Total Sum of NumberBypassed		1,867	180,895	1,300	160,411	2,372	346,845
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		5	39	0	10	0	54
Total Sum of FacilityMorts		0	28	0	3	0	31
Total Sum of ResearchMorts		0	1	0	1	0	2
Total Sum of TotalProjectMorts		5	68	0	14	0	87

YTD Transportation Summary

Source: Fish Passage Center

Updated:

4/19/13 8:15 AM

TO: 04/19/13

		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	1,095	179,548		160	30	125,930	306,763
	Sum of NumberBarged	0	0		0	0	0	0
	Sum of NumberBypassed	1,092	179,480		160	30	125,921	306,683
	Sum of NumberTrucked	0	0		0	0	0	0
	Sum of SampleMorts	3	57		0	0	6	66
	Sum of FacilityMorts	0	12		0	0	1	13
	Sum of ResearchMorts	0	1		0	0	1	2
	Sum of TotalProjectMorts	3	70		0	0	8	81
LGS	Sum of NumberCollected		17,324				34,876	52,200
	Sum of NumberBarged		0				0	0
	Sum of NumberBypassed		17,321				34,874	52,195
	Sum of NumberTrucked		0				0	0
	Sum of SampleMorts		2				2	4
	Sum of FacilityMorts		1				0	1
	Sum of ResearchMorts		0				0	0
	Sum of TotalProjectMorts		3				2	5
LMN	Sum of NumberCollected	7	330			2	192	531
	Sum of NumberBarged	0	0			0	0	0
	Sum of NumberBypassed	7	330			2	192	531
	Sum of NumberTrucked	0	0			0	0	0
	Sum of SampleMorts	0	0			0	0	0
	Sum of FacilityMorts	0	0			0	0	0
	Sum of ResearchMorts	0	0			0	0	0
	Sum of TotalProjectMorts	0	0			0	0	0
MCN	Sum of NumberCollected	820	12,487	1,180	2,370		3,309	20,166
	Sum of NumberBarged	0	0	0	0		0	0
	Sum of NumberBypassed	818	12,466	1,180	2,370		3,304	20,138
	Sum of NumberTrucked	0	0	0	0		0	0
	Sum of SampleMorts	2	5	0	0		3	10
	Sum of FacilityMorts	0	16	0	0		2	18
	Sum of ResearchMorts	0	0	0	0		0	0
	Sum of TotalProjectMorts	2	21	0	0		5	28
Total Sum of NumberCollected		1,922	209,689	1,340	2,402		164,307	379,660
Total Sum of NumberBarged		0	0	0	0		0	0
Total Sum of NumberBypassed		1,917	209,597	1,340	2,402		164,291	379,547
Total Sum of NumberTrucked		0	0	0	0		0	0
Total Sum of SampleMorts		5	64	0	0		11	80
Total Sum of FacilityMorts		0	29	0	0		3	32
Total Sum of ResearchMorts		0	1	0	0		1	2
Total Sum of TotalProjectMorts		5	94	0	0		15	114

Cumulative Adult Passage at Mainstem Dams Through:

04/19

DAM	ENDDATE	Spring Chinook						Summer Chinook						Fall Chinook					
		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	04/18	2256	33	1079	13	18704	58	0	0	0	0	0	0	0	0	0	0	0	0
TDA	04/18	989	26	266	5	11381	21	0	0	0	0	0	0	0	0	0	0	0	0
JDA	04/18	675	21	73	4	7337	11	0	0	0	0	0	0	0	0	0	0	0	0
MCN	04/18	258	5	23	1	4358	11	0	0	0	0	0	0	0	0	0	0	0	0
IHR	04/18	193	5	13	0	2682	4	0	0	0	0	0	0	0	0	0	0	0	0
LMN	04/18	99	4	0	0	1579	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	04/17	61	2	3	1	783	0	0	0	0	0	0	0	0	0	0	0	0	0
LGR	04/18	31	2	1	0	488	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	04/17	1	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0
WAN	04/17	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	04/16	3	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	04/16	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/17	623	5	236	4	1932	0	0	0	0	0	0	0	0	0	0	0	0	0

DAM	ENDDATE	Coho						Sockeye			Steelhead						Lamprey		
		2013		2012		10-Yr Avg.		2013	2012	10-Yr Avg.	2013	2012	10-Yr Avg.	Wild 2013	Wild 2012	10-Yr Avg.	2013	2012	10-Yr Avg.
		Adult	Jack	Adult	Jack	Adult	Jack												
BON	04/18	0	0	0	0	0	0	0	0	0	2402	3708	3399	751	1170	879	-1	0	0
TDA	04/18	0	0	0	0	0	0	0	0	0	527	1429	2287	262	818	761	0	0	0
JDA	04/18	0	0	0	0	0	0	0	0	0	633	1170	5658	357	786	1645	0	0	0
MCN	04/18	1	0	-1	0	0	0	0	0	0	1143	4075	5709	564	1840	1814	0	1	0
IHR	04/18	0	0	0	0	0	0	0	0	0	3408	1463	4691	1353	635	1257	3	0	0
LMN	04/18	0	0	0	0	0	0	-1	0	0	1994	2298	8861	1123	1127	2490	0	1	0
LGS	04/17	0	0	0	0	0	0	0	0	0	1644	2346	8461	855	1319	2437	0	0	0
LGR	04/18	0	0	0	0	0	0	0	0	0	6689	7457	8454	2781	2960	2483	0	0	0
PRD	04/17	0	0	0	0	0	0	0	0	0	5	12	5	0	0	0	0	0	0
WAN	04/17	0	0	0	0	0	0	0	0	0	6	29	21	0	0	0	0	0	0
RIS	04/16	0	0	0	0	0	0	0	0	0	11	18	12	10	11	8	0	0	0
RRH	04/16	0	0	0	0	0	0	0	0	0	18	116	57	17	102	43	0	0	0
WEL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/17	2	0	0	0	0	0	0	0	0	5727	7855	6896	0	0	0	0	0	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.