



# Fish Passage Center

## Weekly Report #15-7

May 1, 2015

### Summary of Events

#### Water Supply

Precipitation throughout the Columbia Basin has varied between 32% and 68% of average at individual sub-basins over April. Precipitation above The Dalles has been 51% of average over April. Over the 2015 water year, precipitation has ranged between 64% and 107% of average.

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

Location	Water Year 2015 April 1–30, 2015		Water Year 2015 October 1, 2014 to April 30, 2015	
	Observed (inches)	% Average	Observed (inches)	% Average
	Columbia Above Coulee	1.44	55	26.2
Snake River Above Ice Harbor	1.04	53	12.2	77
Columbia Above The Dalles	1.07	51	17.0	87
Kootenai	1.43	54	27.1	107
Clark Fork	0.76	32	14.7	81
Flathead	0.92	32	24.0	99
Pend Oreille River Basin above Waneta Dam	0.88	33	20.2	91
Salmon River Basin	1.41	56	15.9	80
Upper Snake Tributaries	1.64	68	12.1	64
Clearwater	1.37	39	26.2	88
Willamette River above Portland	3.13	60	45.9	84

Snowpack within the Columbia Basin has been below average. Average snowpack in the Columbia River for basins above the Snake River confluence is 49% of average. For Snake River Basins the average snowpack is 30% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 2% of average.

Table 2 displays the April 30<sup>th</sup> ESP runoff volume forecasts for multiple reservoirs along with the April COE forecasts at Libby and Dworshak. The April 30<sup>th</sup> ESP forecast at The Dalles between April and August is 64,906 Kaf (74% of average).

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

Location	April 30, 2015 5-day QPF ESP	
	% Average (1981–2010)	Runoff Volume (Kaf)
The Dalles (Apr–Aug)	74	64,906
Grand Coulee (Apr–Aug)	83	47,180
Libby Res. Inflow, MT (Apr–Aug)	85 99*	4,987 5,808*
Hungry Horse Res. Inflow, MT (Apr–Aug)	82	1,586
Lower Granite Res. Inflow (Apr–July)	56	11,106
Brownlee Res. Inflow (Apr–July)	45	2,459
Dworshak Res. Inflow (Apr–July)	59 70*	1,418 1,709*

\* Denotes COE April Forecast

Grand Coulee Reservoir is at 1,251.5 feet (4-30-15) and has refilled 0.2 feet over the last week. Outflows at Grand Coulee have ranged between 71.1 and 94.7 Kcfs over the last week. The April 30<sup>th</sup> FC Elevation was 1,281.8 feet at Grand Coulee. Grand Coulee is drafted below flood control for drum gate maintenance (1,255 feet).

The Libby Reservoir is currently at elevation 2,420.9 feet (4-30-15) and has refilled 1.0 foot over the previous week. Daily average outflows at Libby Dam have been 7.9 Kcfs over the last week. The April 30<sup>th</sup> FC Elevation at Libby was 2,428.6 feet.

Hungry Horse is currently at an elevation of 3,538.5 feet (4-30-15) and held steady over the last week.

Outflows at Hungry Horse have increased from 5.7 to 7.2 Kcfs over the last week. The April 30<sup>th</sup> FC Elevation at Hungry Horse was 3,548.4 feet.

Dworshak is currently at an elevation of 1,586.3 feet (4-30-15) and drafted 0.7 feet over the last week. Outflows have been 7.5 Kcfs over the last week. The April 30<sup>th</sup> FC elevation at Dworshak was 1,590.7 feet.

The Brownlee Reservoir was at an elevation of 2,054.8 feet on April 30, 2015, and has held steady over the last week. The April 30<sup>th</sup> FC Elevation was 2,077 feet at Brownlee. Outflow from Hells Canyon have ranged between 8.1 and 8.8 Kcfs.

The Biological Opinion flow period began on April 3<sup>rd</sup> in the lower Snake River (Lower Granite). According to the April Final Water Supply Forecast (April 8, 2015), the flow objective this spring will be 85 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 51.8 Kcfs over the last week and 48.9 Kcfs between April 3 and April 30, 2015.

Based on the April Final Water Supply Forecast, the Spring Biological Opinion Flow Objectives (which began April 10<sup>th</sup>) will be 220 Kcfs at McNary Dam and 135 Kcfs at Priest Rapids Dam. Over the last week, flows at McNary Dam averaged 154.9 Kcfs and Priest Rapids Dam flows were 99.3 Kcfs. Between April 10 and April 30, flows at McNary Dam averaged 162.6 Kcfs and Priest Rapids Dam flows were 108.5 Kcfs.

**Spill**

The 2015 fish spill program was implemented at the lower Snake River projects beginning on April 3<sup>rd</sup>, and beginning April 10<sup>th</sup> at the middle Columbia River projects.

All of the lower Snake River projects have spilled at the 2015 Fish Operations Plan (FOP) levels over the past week. The gas cap at Lower Monumental Dam decreased over the past week in response to the TDG levels measured at the Ice Harbor forebay. On April 28<sup>th</sup> the “test-like” conditions, where spill alternates between 30% instantaneous and 45 Kcfs/Gas Cap, were initiated at Ice Harbor Dam. The net effect of this operation is a decrease in spill levels during the “test-like” period.

Project	Spill Level Day/Night
Lower Granite	20 Kcfs/20 Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	<b>April 3-27:</b> 45 Kcfs/Gas Cap <b>April 28–June 20:</b> 30%/30% vs. 45 kcfs/Gas Cap

Since spill began on April 10<sup>th</sup>, spill for fish passage at the middle Columbia River projects occurred at the following amounts described in the 2015 FOP. The testing of two spill levels at John Day Dam began on April 28<sup>th</sup>.

Project	Spill Level Day/Night
McNary	40%/40%
John Day	<b>April 10-April 28:</b> 30%/30% <b>April 28–June 15:</b> 30%/30% and 40%/40%
The Dalles	40%/40%
Bonneville	100 Kcfs/100 Kcfs

Total dissolved gas (TDG) measurements exceeded the waiver limits (115%) at the Ice Harbor Dam forebay monitor. At Ice Harbor Dam, the forebay gage often reads higher than the upstream gage and higher than the downstream gage at the project, and it is unlikely that these occurrences are related to spill. However, in response spill was reduced from 28 Kcfs to 26 Kcfs at Lower Monumental Dam. **Note:** The State of Oregon and the State of Washington use different methodologies to estimate the 12-hour average TDG. For Oregon, the 12-hour average is based on the 12 highest hourly TDG measurements in a single calendar day (not necessarily consecutive). For Washington, the 12-hour average is based on 12-hour rolling averages. The highest of the rolling averages is what is reported as the 12-hour average for a given day. The location of a TDG monitor will dictate which of these methodologies is used for compliance monitoring. The Washington methodology will apply to all the lower Snake River projects, as well as the middle Columbia River forebay monitors. On any given day the compliance of the tailrace monitors at the middle Columbia River projects will be determined using either the Washington or Oregon methodology, whichever is the most restrictive, and spill will be decreased if needed.

Monitoring for signs of gas bubble trauma (GBT) occurred at Lower Granite, Little Goose, Lower Monumental, McNary, Bonneville and Rock Island dams over the past week. There was one fish observed with minor signs of GBT at McNary Dam on April 28<sup>th</sup>.

### Smolt Monitoring

All Smolt Monitoring Program sites continued sampling for 2015 this week.

This week's samples at Bonneville Dam (BON) were dominated by subyearling Chinook juveniles. On the morning of April 27<sup>th</sup>, Spring Creek NFH released just over 4 million subyearling fall Chinook tules into Bonneville pool. According to SMP personnel at BON, these subyearling Chinook tules began arriving at the project at about 0020 on Wednesday, April 29<sup>th</sup>. The passage indices for subyearling Chinook at BON on April 29<sup>th</sup> and 30<sup>th</sup> were about 167,000 and 164,000, respectively. It is likely that the passage index for subyearling Chinook will decrease over the next few days, as fish from this release pass the project. Yearling Chinook passage increased again this week when compared to the previous week. This week's daily average passage index for yearling Chinook at BON was nearly 27,000 per day, whereas that for last week was only about 19,000 per day. Coho and steelhead passage also increased this week at BON. This week's daily average passage indices were about 9,500 for coho and 8,800 for steelhead. Last week's daily average passage indices were about 8,000 and 1,900 per day, respectively. Very few sockeye were collected in this week's samples. Finally, no Pacific lamprey juveniles were encountered at BON this week.

Yearling Chinook continued to dominate this week's salmonid collections at John Day Dam (JDA). The daily average passage index for yearling Chinook this week was about 13,400 fish per day, which is an increase over last week's daily average passage index of about 6,300. Steelhead passage also increased this week, when compared to the previous week. This week's daily average passage index for steelhead was about 2,500 per day, whereas that for last week was only about 1,100 per day. Coho passage this week was very similar to last week, with a daily average passage index of about 530 per day. Sockeye passage remained low this week. No subyearling Chinook fry

were encountered in this week's samples. Finally, Pacific lamprey macrophthalmia were encountered in five of this week's seven samples, with a daily average collection of about 50 per day. This is a decrease over last week's daily average collection of almost 90 macrophthalmia per day.

Since McNary Dam (MCN) is no longer a transportation site, sampling takes place every other day for the entire SMP season. This week's samples at MCN were dominated by yearling Chinook, with a daily average passage index of about 40,400 fish per day. This is an increase over last week's daily average passage index of about 10,200 per day. Steelhead and sockeye passage also increased this week, when compared to the previous week. This week's daily average passage indices for steelhead and sockeye were about 8,900 and 6,500 per day, respectively. Last week's daily average passage indices for these two species were about 5,100 and 1,100 per day, respectively. Subyearling Chinook fry and coho were also encountered in this week's samples but in relatively low numbers. Finally, no lamprey juveniles were encountered in this week's samples.

Yearling Chinook dominated the collections at Lower Granite Dam (LGR) this week followed closely by steelhead. This week's daily average passage indices for yearling Chinook and steelhead at LGR were about 68,500 and 60,250 per day, respectively. The daily average passage indices for this week are both increases over last week's daily average indices of about 44,500 for yearling Chinook and 21,000 for steelhead. The increase in daily average numbers is due to the high passage numbers on April 25<sup>th</sup>, 26<sup>th</sup>, and 27<sup>th</sup>, which coincided with a small spike in flows at LGR during these days. Subsequently, flows at LGR have decreased in recent days and the passage indices for yearling Chinook and steelhead have also decreased substantially. These decreases in flows and passage numbers coincide with decreased outflows from Dworshak and Hells Canyon dams that began several days earlier. Passage of subyearling Chinook fry decreased this week. This week's daily average passage index for subyearling Chinook fry was about 140 per day. Coho passage at LGR increased this week, with a daily average passage index of about 650 per day. Finally, no sockeye or lamprey juveniles were encountered in this week's samples. At 0700 this

morning LGR began collecting fish for transportation. The first barge is scheduled to depart LGR tomorrow, May 2<sup>nd</sup>.

Sampling at Little Goose Dam (LGS) was limited to a 24-hour sample every other day from April 2<sup>nd</sup> to April 30<sup>th</sup>. Little Goose Dam began collecting fish for transportation today and, therefore, collections at LGS will be every day for the rest of the season. The first barge is scheduled to depart LGS tomorrow, May 2<sup>nd</sup>. Yearling Chinook continued to dominate the samples at LGS this week. The daily average passage index for yearling Chinook at LGS was nearly 66,000 fish per day this week, which is a large increase over last week's daily average of nearly 16,000 per day. Steelhead passage also increased this week, when compared to the previous week. This week's daily average passage index for steelhead at LGS was about 56,250 fish per day whereas that of last week was about 12,275 per day. Coho passage increased this week, with a daily average passage index of nearly 600 fish per day. Finally, no subyearling Chinook, sockeye, or lamprey juveniles were encountered in this week's samples.

Sampling at Lower Monumental Dam (LMN) was limited to a 24-hour sample every third day from April 4<sup>th</sup> to April 13<sup>th</sup> and every other day from April 15<sup>th</sup> to May 1<sup>st</sup>. At 1500 this afternoon, LMN will begin collecting fish for transportation and, therefore, collections at LMN will be every day for the rest of the season. This week's samples at LMN were dominated by yearling Chinook, with a daily average passage index of nearly 25,000 fish per day, which is an increase over last week's daily average passage index of about 8,900 yearling Chinook per day. Steelhead passage at LMN also increased this week when compared to last week. This week's daily average passage index for steelhead at LMN was nearly 14,000 per day, whereas that for last week was about 3,300 per day. Lower Monumental collected its first and only coho of the 2015 SMP season in the April 25<sup>th</sup> sample. Finally, no subyearling Chinook, sockeye, or lamprey juveniles were encountered in this week's samples at LMN.

This week's samples at Rock Island Dam (RIS) continued to be dominated by yearling Chinook, with a daily average passage index of about 450 fish per day. This is an increase over last week's daily average passage index of only nearly 300 yearling Chinook

per day. Steelhead passage also increased this week, when compared to last week. This week's daily average passage index for steelhead at RIS was about 125 per day, whereas that for last week was only about 20 per day. Passage of subyearling Chinook fry decreased again this week. This week's daily average passage indices for subyearling Chinook fry at RIS was only 12 per day. Coho passage remained very low this week and the daily average passage index for sockeye this week was very similar to last week. Finally, no lamprey juveniles were encountered in this week's samples at RIS.

The Grande Ronde Trap (GRN) is operated by the Oregon Department of Fish and Wildlife and is located at river kilometer 2 in the Grande Ronde River. Due to increased collections of subyearling Chinook fry (presumably fall Chinook), sampling at GRN was suspended from April 22<sup>nd</sup> through April 29<sup>th</sup>. The SMP requested increased handling quotas for subyearling Chinook at GRN, which NOAA granted earlier this week. With the increased handling quotas, sampling resumed on the morning of April 29<sup>th</sup> for the April 30<sup>th</sup> sample. The April 30<sup>th</sup> collections for yearling Chinook, steelhead, and subyearling Chinook were very low. However, the trap was positioned in a location where it is less efficient at catching fish, which explains the low samples for the April 30<sup>th</sup> sample. Collections over the next few days will be assessed to determine when/if to move the trap to a more efficient location.

The Salmon River Trap at Whitebird (WTB) is located at river kilometer 103 and operated by Idaho Department of Fish and Game. Sampling at WTB in 2015 has been modified to weekdays only. Due to continued high numbers of hatchery yearling Chinook collections, trapping efforts remained modified this week in an effort to reduce handling of listed hatchery stocks. This reduction in effort involved suspending sampling from April 24 to April 26, fishing in an area of the river where the trap is less efficient, and reducing the sample period to 8–12 hours per day, instead of the intended 24 hours. Yearling Chinook dominated the collections at WTB this week, with a daily average collection of about 260 per day. Of all the yearling Chinook that were collected this week, approximately 92% were of known hatchery origin. The daily average collection for steelhead this week was about 150 per day. This trap will likely maintain some level of reduced

effort over the next week or so.

The Snake River Trap at Lewiston (LEW) is located at river kilometer 225 and operated by Idaho Department of Fish and Game. In an effort to reduce handling of listed stocks, the samples for April 23<sup>rd</sup> and 24<sup>th</sup> were from a limited duration of trapping and the samples for April 25<sup>th</sup> and 26<sup>th</sup> were suspended. Normal sampling (i.e., 24 hours) was resumed for the April 27<sup>th</sup> sample. Steelhead dominated this week's samples at LEW. This week's daily average collection for steelhead was about 730 per day. The daily average collection for yearling Chinook at LEW was about 50 fish per day. A few subyearling Chinook were encountered in each of this week's samples, as well as some coho and one sockeye.

The Imnaha River Trap (IMN) is located at river kilometer 7 and is operated by the Nez Perce Tribe. Sampling at IMN is year-round however the FPC typically receives data only from early March through June. Due to the remote nature of the trap, the Nez Perce Tribe is able to send collection data to the FPC only periodically. Therefore, data for IMN may be several days behind. To date, we have received data through April 28<sup>th</sup>. Over the last week of available data (April 22–28), collections at IMN have been dominated by yearling Chinook, with a daily average collection of about 1,160 fish per day. This is a decrease over the daily average collection from the previous week of data (April 15–21), which was about 3,300 per day. Since April 22<sup>nd</sup>, approximately 80% of the yearling Chinook collected at IMN has been of known hatchery origin. Steelhead passage increased over the April 22 to April 28 period, when compared to the previous 7-day period. The average daily collection for steelhead during this time was nearly 500 per day. The average collection for the previous week (April 15–21) was nearly 100 fish per day. Since April 22<sup>nd</sup>, approximately 74% of the steelhead collection at IMN has been of known hatchery origin.

### 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. To date, the Fish Passage Center has not received complete preliminary hatchery release data from the Nez Perce Tribe for 2015 releases. Therefore,

release estimates discussed for this zone are likely underestimates, as they do not include all releases conducted by the tribe. Release data from the Nez Perce Tribe will be entered into our database as soon as we receive them.

Several volitional releases of summer steelhead that began in previous weeks were scheduled to end this week. In addition to these older releases, 61,357 summer steelhead juveniles were released into the East Fork Salmon River on April 30<sup>th</sup>. No other new releases were scheduled for this zone this week.

Approximately 1.42 million subyearling fall Chinook juveniles are scheduled for release into the Snake River, above Lower Granite Dam, on or around May 11<sup>th</sup>. These fall Chinook juveniles were originally planned to be released in late May but the low flow conditions on the Snake River have facilitated the need for earlier releases. In addition, about 420,000 sockeye smolts are scheduled for release into Redfish Lake Creek beginning on or around May 4<sup>th</sup> through May 7<sup>th</sup>. Finally, about 280,000 summer steelhead juveniles are scheduled to be released into the Grande Ronde River over the next 2 weeks.

**Mid-Columbia Zone:** The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. To date, the Fish Passage Center has not received complete preliminary hatchery release data from the Colville Tribe for 2015 releases. Therefore, release estimates discussed for this zone are likely underestimates, as they do not include all releases conducted by the tribe, including releases from the new Chief Joseph Hatchery. Release data from the Colville Tribe will be entered into our database as soon as we receive them.

Approximately 2.94 million subyearling fall Chinook juveniles were scheduled for release into the Yakima River this week. Of these, about 42% were scheduled to be unclipped. Two new releases of yearling spring Chinook juveniles were scheduled for this zone this week. These two releases were expected to total about 540,000 juveniles and both were scheduled to take place on the Wenatchee River and its tributaries. Two new releases of coho to the Wenatchee River were scheduled to begin this week. These two new releases

were expected to total nearly 157,000 coho juveniles. These new coho releases were in addition to many volitional releases that began in past weeks, which are expected to continue into May and June. Finally, three new releases of summer steelhead were scheduled for this week. These three releases were expected to total about 493,000 summer steelhead throughout this river zone, including the Wenatchee River (48%), the Mid-Columbia River at Wells Hatchery (32%), and the Methow River (19%).

The only new releases that are scheduled for this zone over the next 2 weeks are of coho. In all, just over 404,000 coho juveniles are scheduled to be released into the Wenatchee (57%) and Methow (43%) rivers over the next 2 weeks.

**Lower Columbia Zone:** The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Spring Creek NFH released just over 4.0 million subyearling fall Chinook tules on April 27<sup>th</sup>. This release was originally planned for May 4<sup>th</sup> but was rescheduled to one week earlier due to an outbreak of *Hexamita*. Fish from this release began arriving at Bonneville Dam at about 00:20 on Wednesday, April 29<sup>th</sup>. Klickitat Hatchery was scheduled to release approximately 1.0 million coho juveniles into the Klickitat River on or around May 1<sup>st</sup>. Finally, about 90,000 summer steelhead and 37,500 winter steelhead juveniles are scheduled to be released into this zone this week. The summer steelhead were scheduled to be released into the Klickitat River while the winter steelhead were scheduled to be released into Hood River.

There are only two new releases scheduled for this zone over the next 2 weeks. The first of these releases is a release of about 600,000 subyearling fall Chinook to the Umatilla River that is scheduled to begin on or around May 14<sup>th</sup>. The other release is of about 12,500 winter steelhead to Hood River. This winter steelhead release is also scheduled to begin on or around May 14<sup>th</sup>.

### Adult Passage

Adult counts at Bonneville Dam have been updated through April 30<sup>th</sup>. Daily adult spring Chinook counts at Bonneville Dam ranged from 4,462 to 17,045 adult salmon per day. As of April 30<sup>th</sup>, a total of 139,142

spring Chinook have been counted at Bonneville Dam. In 2014, 78,662 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2015 adult spring Chinook count at Bonneville Dam is about 1.8 times greater than the 2014 count and 3.2 times greater than the 10-year average count of 43,116. The 2015 spring Chinook jack count of 1,890 is about 1.6 times greater than the 2014 count of 1,212 and 2.3 times greater than the 10-year average count of 828. At Willamette Falls, 14,134 adult spring Chinook have been counted so far this year. In 2014, 3,067 adult spring Chinook were counted at Willamette Falls. This year's count is about 4.3 times greater than the 2014 count and 2.9 times greater than the 10-year average count of 4,813. As of April 30<sup>th</sup>, a total of 102,632 adult spring Chinook have been counted at The Dalles Dam and 54,136 have been counted at McNary Dam. The Dalles Dam 2015 adult spring Chinook count is 3 times greater than 2014 and 4.7 times greater than the 10-year average count. The 2015 McNary Dam adult spring Chinook count is about 5.4 times greater than the 2014 count and 6.2 times greater than the 10-year average count.

The 2015 Bonneville Dam adult steelhead count of 4,139 has 272 more fish than the 2014 count of 3,867 and has 672 more fish than the 10-year average count of 3,467. The 2015 Bonneville Dam adult wild steelhead count of 2,243 is about 1.9 times greater than the 2014 count of 1,169 and 2.2 times greater than the 10-year average count of 1,027. 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 24 to 43 adults per day last week. This year's Lower Granite steelhead count of 8,916 is 1.3 times greater than the 2014 count of 7,084 and has 551 more fish than the 10-year average count of 8,365. The 2015 Lower Granite Dam adult wild steelhead count of 4,142 is 1.3 times greater than the 2014 count of 3,204 and is about 1.4 times greater than the 10-year average count of 2,948. At Willamette Falls, the 2015 count for steelhead was 4,407 as of April 30<sup>th</sup>. This year's steelhead count is about 76.3% of the 2014 count of 5,777 and about 64% of the 10-year average count of 6,885.

## Hatchery Releases Last Two Weeks

<b>Hatchery Release Summary</b>									
<b>From:</b>	<b>4/18/2015</b>	<b>to</b>	<b>05/01/15</b>						
<b>Agency</b>	<b>Hatchery</b>	<b>Species</b>	<b>Race</b>	<b>MigYr</b>	<b>NumRel</b>	<b>RelStart</b>	<b>RelEnd</b>	<b>RelSite</b>	<b>RelRiver</b>
Colville Tribe	Wells Hatchery	ST	SU	2015	2,000	04-15-15	04-20-15	Aneas Creek	Okanogan River
Colville Tribe	Wells Hatchery	ST	SU	2015	19,984	04-15-15	04-20-15	Omak Creek	Okanogan River
Colville Tribe	Wells Hatchery	ST	SU	2015	24,000	04-15-15	04-20-15	Omak Creek	Okanogan River
Colville Tribe	Wells Hatchery	ST	SU	2015	30,000	04-15-15	04-20-15	Similkameen Acclim Pd	Okanogan River
Colville Tribe	Wells Hatchery	ST	SU	2015	40,000	04-15-15	04-20-15	Salmon Creek (Okanogan)	Okanogan River
<b>Colville Tribe Total</b>					<b>115,984</b>				
Grant County PUD	Little White Salmon NFH	CH1	SP	2015	65,000	05-01-15	05-07-15	White River	Wenatchee River
<b>Grant County PUD Total</b>					<b>65,000</b>				
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	94,313	04-21-15	04-22-15	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	94,647	04-20-15	04-22-15	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	189,423	04-22-15	04-28-15	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	288,569	04-23-15	04-29-15	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	376,531	04-14-15	04-20-15	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2015	77,520	04-24-15	04-24-15	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2015	111,518	04-22-15	04-23-15	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2015	824,777	04-02-15	04-21-15	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2015	2,500,000	03-16-15	04-24-15	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2015	183,379	04-20-15	04-20-15	Yankee Fk (Salmon R)	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>4,740,677</b>				
Nez Perce Tribe	Dworshak NFH	ST	SU	2015	252,000	04-17-15	04-21-15	Lolo Creek	Clearwater River M F
<b>Nez Perce Tribe Total</b>					<b>252,000</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2015	215,000	03-31-15	04-30-15	L Sheep Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	ST	SU	2015	50,000	04-16-15	04-29-15	Thornhollow Acclim Pond	Umatilla River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>265,000</b>				
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2015	1,423,000	04-22-15	04-23-15	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2015	61,357	04-30-15	04-30-15	East Fk Salmon River	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2015	1,342,274	04-06-15	04-30-15	Sawtooth Hatchery	Salmon River (ID)
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2015	4,036,472	04-27-15	04-27-15	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2015	403,000	04-15-15	04-21-15	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2015	20,000	04-15-15	05-15-15	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2015	80,000	04-15-15	05-15-15	Winthrop Hatchery	Methow River
<b>U.S. Fish and Wildlife Service Total</b>					<b>7,366,103</b>				
Umatilla Tribe	Umatilla Hatchery	ST	SU	2015	50,000	04-16-15	04-20-15	Minthorn Acclimation Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2015	50,000	04-16-15	04-20-15	Pendelton Acclim Pond	Umatilla River
<b>Umatilla Tribe Total</b>					<b>100,000</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2015	12,500	04-30-15	04-30-15	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2015	25,000	04-30-15	04-30-15	E Fk Irrig Dist Sand Trap	Hood River
<b>Warm Springs Tribe Total</b>					<b>37,500</b>				

## Hatchery Releases Last Two Weeks

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2015	42,000	04-20-15	05-20-15	Nason Creek	Wenatchee River
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2015	144,000	04-15-15	04-30-15	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SP	2015	475,000	04-30-15	04-30-15	Dryden Acclim Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2015	238,000	04-25-15	05-01-15	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2015	48,000	04-20-15	04-20-15	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2015	50,000	04-20-15	04-20-15	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2015	85,000	04-20-15	05-31-15	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2015	205,000	04-05-15	04-20-15	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2015	30,000	04-20-15	04-30-15	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2015	145,000	04-15-15	04-25-15	Methow Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2015	185,000	04-05-15	05-15-15	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2015	48,000	04-01-15	04-30-15	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2015	95,000	04-30-15	05-05-15	Methow Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2015	197,744	04-09-15	04-20-15	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Similkameen Hatchery	CH1	SU	2015	205,892	04-15-15	05-01-15	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2015	90,000	04-25-15	05-01-15	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2015	46,000	04-20-15	04-20-15	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2015	320,000	04-15-15	05-15-15	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2015	160,000	05-01-15	05-31-15	Wells Hatchery	Mid-Columbia River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>2,809,636</b>				
Yakama Tribe	Cascade Hatchery	CO	UN	2015	55,432	05-01-15	05-01-15	Coulter Creek	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2015	101,376	05-01-15	05-01-15	Wenatchee River	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2015	215,311	03-15-15	05-15-15	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2015	216,338	03-15-15	05-15-15	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2015	217,163	03-15-15	05-15-15	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2015	98,105	04-15-15	06-01-15	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2015	143,770	04-15-15	06-01-15	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2015	236,749	04-15-15	06-01-15	Easton Pond	Yakima River
Yakama Tribe	Klickitat Hatchery	CO	NO	2015	1,000,000	05-01-15	05-01-15	Klickitat Hatchery	Klickitat River
Yakama Tribe	Marion Drain Hatchery	CH0	FA	2015	53,000	04-25-15	04-25-15	Roza Acclim Pond	Yakima River
Yakama Tribe	Marion Drain Hatchery	CH0	FA	2015	111,000	04-30-15	04-30-15	Nelson Springs	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2015	480,000	04-30-15	04-30-15	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2015	600,000	05-01-15	05-01-15	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2015	1,700,000	04-25-15	04-25-15	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2015	71,382	04-15-15	06-01-15	Yakama River	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2015	90,000	04-15-15	06-01-15	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2015	100,210	04-15-15	06-01-15	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2015	103,375	04-15-15	06-01-15	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2015	250,000	04-15-15	06-01-15	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2015	88,999	04-20-15	04-20-15	Winthrop Hatchery	Methow River
Yakama Tribe	Winthrop NFH	CO	NO	2015	265,922	04-20-15	04-20-15	Winthrop Hatchery	Methow River
<b>Yakama Tribe Total</b>					<b>6,198,132</b>				
<b>Grand Total</b>					<b>21,950,032</b>				



## Hatchery Releases Next Two Weeks

<b>Hatchery Release Summary</b>									
<b>From:</b>	<b>5/2/2015</b>		<b>to</b>		<b>5/14/2015</b>				
<b>Agency</b>	<b>Hatchery</b>	<b>Species</b>	<b>Race</b>	<b>MigYr</b>	<b>NumRel</b>	<b>RelStart</b>	<b>RelEnd</b>	<b>RelSite</b>	<b>RelRiver</b>
Grant County PUD	Little White Salmon NFH	CH1	SP	2015	65,000	05-01-15	05-07-15	White River	Wenatchee River
<b>Grant County PUD Total</b>					<b>65,000</b>				
Idaho Dept. of Fish and Game	Oxbow-Oregon	SO	UN	2015	76,000	05-07-15	05-07-15	Redfish Lake Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	SO	UN	2015	134,000	05-07-15	05-07-15	Redfish Lake Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Springfield Hatchery	SO	UN	2015	210,000	05-04-15	05-08-15	Redfish Lake Creek	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>420,000</b>				
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2015	420,000	05-11-15	05-11-15	Pittsburg Landing Acclim Pond	Snake River
<b>Nez Perce Tribe Total</b>					<b>420,000</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	CH0	FA	2015	1,000,000	05-11-15	05-11-15	Hells Canyon Dam	Snake River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2015	120,000	05-04-15	05-04-15	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2015	160,000	05-08-15	05-08-15	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>1,280,000</b>				
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2015	600,000	05-14-15	05-19-15	Reith Bridge	Umatilla River
<b>Umatilla Tribe Total</b>					<b>600,000</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2015	12,500	05-14-15	05-14-15	Parkdale Acclim Pond	Hood River
<b>Warm Springs Tribe Total</b>					<b>12,500</b>				
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2015	95,000	04-30-15	05-05-15	Methow Hatchery	Methow River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>95,000</b>				
Yakama Tribe	Cascade Hatchery	CO	UN	2015	131,335	05-06-15	05-06-15	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2015	42,184	05-06-15	05-06-15	Methow River	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2015	48,824	05-06-15	05-06-15	Methow River	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2015	82,777	05-06-15	05-06-15	Twisp Acclim Pond	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2015	99,123	05-06-15	05-06-15	Rolfings Acclim Pond	Wenatchee River
<b>Yakama Tribe Total</b>					<b>404,243</b>				
<b>Grand Total</b>					<b>3,296,743</b>				

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

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
04/17/2015	96.2	0.0	92.8	0.0	110.0	8.8	110.6	0.0	116.8	11.5	120.3	0.0	116.1	0.0
04/18/2015	87.5	0.0	85.8	0.0	84.8	6.9	79.7	0.0	83.6	9.8	96.3	0.0	110.1	0.0
04/19/2015	81.6	0.0	84.8	0.0	90.4	7.7	90.5	0.0	95.0	9.8	108.4	10.1	105.8	11.7
04/20/2015	97.0	0.0	98.2	0.0	115.9	8.3	116.2	0.0	121.8	11.6	104.9	18.1	100.2	14.6
04/21/2015	88.7	0.0	88.3	0.0	99.1	7.2	97.3	0.0	104.3	11.3	116.3	18.8	118.4	26.7
04/22/2015	80.1	0.0	80.9	0.0	90.9	7.9	86.3	0.0	90.6	11.4	90.2	18.3	92.2	23.6
04/23/2015	95.2	0.0	95.8	0.0	104.3	7.3	100.0	0.0	104.5	11.0	99.8	18.5	99.8	26.5
04/24/2015	89.7	0.0	93.3	0.0	104.0	8.8	101.2	0.0	108.9	9.8	108.1	19.3	106.1	28.0
04/25/2015	74.6	0.0	74.1	0.0	86.6	7.6	85.2	0.0	90.2	9.8	98.9	19.4	99.9	27.7
04/26/2015	71.1	0.0	62.6	0.0	79.2	6.1	79.8	0.0	86.1	9.0	99.4	18.6	102.6	27.2
04/27/2015	85.3	0.0	88.7	0.0	98.8	7.4	94.1	0.0	97.3	9.8	105.0	17.7	105.7	25.1
04/28/2015	84.1	0.0	85.7	0.0	95.6	7.8	95.9	0.0	103.1	10.1	110.8	17.9	108.6	26.5
04/29/2015	78.3	0.0	77.6	0.0	78.3	5.5	76.7	0.0	80.1	9.5	77.1	14.8	82.7	23.5
04/30/2015	94.7	0.0	95.4	0.0	102.7	8.3	95.2	0.0	100.6	9.5	95.9	9.8	89.5	23.6

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

Date	Dworshak		Brownlee Inflow	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill		Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
04/17/2015	9.6	0.0	---	9.3	43.0	20.2	40.8	12.2	41.1	29.2	43.5	33.4
04/18/2015	9.6	0.0	---	9.3	45.2	20.2	42.3	12.7	44.2	31.0	45.0	35.0
04/19/2015	9.6	0.0	---	9.3	43.2	20.2	43.1	12.9	44.4	29.4	46.0	35.7
04/20/2015	9.6	0.0	---	9.3	47.1	20.2	47.1	14.1	49.0	28.1	50.9	40.7
04/21/2015	9.6	0.0	---	9.3	47.3	20.3	43.5	13.0	45.1	28.0	47.7	37.5
04/22/2015	9.6	0.0	---	9.0	50.8	20.3	48.7	14.6	50.7	28.1	51.0	40.2
04/23/2015	9.6	0.0	---	8.3	56.1	20.4	54.9	16.4	57.1	28.0	58.0	46.2
04/24/2015	7.5	0.0	---	8.2	53.7	20.3	52.1	15.6	54.2	28.0	55.8	43.6
04/25/2015	7.5	0.0	---	8.2	56.2	20.4	54.8	16.4	54.6	27.9	55.7	45.2
04/26/2015	7.5	0.0	---	8.2	53.8	20.3	52.7	15.7	53.3	28.0	54.1	43.6
04/27/2015	7.5	0.0	---	8.5	50.2	20.3	45.4	13.6	47.4	28.0	48.5	38.2
04/28/2015	7.5	0.0	---	8.6	50.0	20.3	50.5	15.1	53.4	27.2	54.7	43.0
04/29/2015	7.5	0.0	---	8.6	47.7	20.2	45.0	13.4	47.0	26.1	47.0	36.9
04/30/2015	7.5	0.0	---	8.6	51.0	20.4	50.3	15.0	52.2	26.2	51.2	41.0

**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
04/17/2015	148.7	59.7	146.2	43.8	130.0	52.3	148.8	99.7	0.0	36.6
04/18/2015	151.7	60.8	145.6	43.7	131.8	52.8	146.7	100.5	0.0	33.7
04/19/2015	152.7	61.2	153.0	45.7	137.9	55.2	158.3	100.2	0.0	45.8
04/20/2015	162.8	65.4	166.5	50.0	154.1	61.5	185.2	99.5	0.0	73.3
04/21/2015	161.1	64.4	158.6	47.4	148.4	59.2	174.8	99.6	0.0	62.7
04/22/2015	162.3	65.0	159.0	47.8	141.9	56.7	155.7	99.9	0.0	43.4
04/23/2015	166.5	66.4	168.6	50.6	153.6	61.5	164.0	100.6	0.0	51.0
04/24/2015	159.8	63.9	157.9	47.4	143.4	57.4	146.3	100.3	0.0	33.6
04/25/2015	157.4	63.3	150.7	45.2	139.4	55.8	154.7	100.1	0.0	42.1
04/26/2015	159.4	64.0	156.3	46.9	141.4	56.6	158.5	100.2	0.0	46.0
04/27/2015	167.6	67.1	179.7	53.7	166.8	67.0	186.7	99.7	0.0	74.6
04/28/2015	165.5	66.4	160.4	48.1	146.9	58.6	161.1	99.0	0.0	49.7
04/29/2015	145.9	58.5	150.1	47.4	136.3	54.5	155.9	99.4	0.0	44.1
04/30/2015	128.7	51.5	135.0	54.1	119.8	48.1	146.5	99.2	0.0	34.8

## 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
<b>Lower Granite Dam</b>											
	04/23/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/30/15	Chinook + Steelhead	99*	0	0			0	0	0	0
<b>Little Goose Dam</b>											
	04/19/15	Chinook + Steelhead	99*	1	1			0	1	0	0
	04/27/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	04/22/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/30/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	04/20/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/23/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/28/15	Chinook + Steelhead	100	1	1	1.00%	1.00%	1	0	0	0
	04/30/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	04/21/15	Chinook + Steelhead	59*	0	0			0	0	0	0
	04/25/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/28/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	04/21/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/23/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/29/15	Chinook + Steelhead	100	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
4/17	100.0	100.4	100.6	24	---	---	---	0	105.5	106.1	107.0	24	103.5	104.0	104.2	24	104.3	105.0	105.4	24
4/18	100.2	100.5	100.9	24	---	---	---	0	104.8	105.0	105.3	24	103.5	103.8	104.1	24	104.4	104.8	105.0	24
4/19	100.4	100.6	100.7	24	---	---	---	0	105.5	106.0	106.3	24	103.9	104.6	105.0	24	105.2	105.7	106.0	24
4/20	100.5	100.7	101.0	24	---	---	---	0	106.6	106.9	107.1	24	105.0	105.5	105.8	24	106.3	107.0	107.5	24
4/21	101.1	101.6	102.1	24	---	---	---	0	107.3	107.7	108.5	24	105.7	106.3	106.6	24	107.1	107.4	107.6	24
4/22	101.6	102.3	102.8	24	---	---	---	0	107.3	107.6	108.0	24	105.5	105.8	106.3	24	106.8	107.0	107.3	24
4/23	101.7	102.6	103.7	24	---	---	---	0	107.5	108.0	108.8	24	106.1	107.0	108.1	24	106.8	107.0	107.4	24
4/24	101.6	102.1	103.0	24	---	---	---	0	108.3	108.6	109.7	24	106.8	107.0	107.1	24	106.9	107.1	107.3	24
4/25	101.1	101.3	101.8	24	---	---	---	0	108.0	108.4	109.3	24	106.5	106.8	107.0	24	106.6	106.8	106.9	24
4/26	99.7	100.2	101.0	24	---	---	---	0	106.6	106.8	107.0	24	105.5	105.7	106.1	24	105.5	105.8	106.0	24
4/27	100.2	100.4	100.9	24	---	---	---	0	107.0	107.5	107.9	24	105.8	106.3	106.9	24	105.4	106.0	106.1	24
4/28	100.8	101.5	102.5	24	---	---	---	0	107.9	108.4	109.3	24	106.6	107.3	107.7	24	107.0	107.7	108.0	24
4/29	101.2	101.5	101.8	24	---	---	---	0	107.1	107.5	108.0	24	105.9	106.1	106.5	24	107.2	107.5	107.8	24
4/30	101.3	101.9	102.5	23	---	---	---	0	106.4	106.7	106.9	23	105.0	105.3	105.6	23	107.0	107.2	107.4	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
4/17	104.4	104.9	105.4	24	104.2	105.0	105.5	24	106.1	106.8	107.4	24	105.7	106.1	106.3	24	105.9	106.2	106.5	24
4/18	104.3	104.8	105.1	24	104.2	104.9	105.4	22	105.8	106.3	107.3	22	106.0	106.3	106.4	24	106.3	106.5	106.8	24
4/19	104.9	105.6	106.7	24	105.5	106.3	106.8	24	107.1	107.6	107.9	24	106.8	107.4	107.7	24	106.8	107.5	107.8	24
4/20	105.6	106.2	106.4	24	106.4	107.1	107.7	24	108.2	108.7	109.3	24	107.9	108.5	108.8	24	108.2	108.8	109.4	24
4/21	106.6	107.2	107.8	24	106.8	107.4	107.8	24	107.9	108.5	108.9	24	108.8	109.0	109.3	24	108.7	109.0	109.1	24
4/22	106.7	107.1	107.7	21	106.1	106.4	106.6	23	107.3	107.5	107.9	23	107.7	108.0	108.5	24	107.7	107.9	108.1	24
4/23	106.5	107.1	107.8	24	106.2	106.8	107.1	22	107.6	108.1	108.3	22	107.5	107.7	107.9	24	107.7	107.9	108.2	24
4/24	106.8	107.0	107.4	24	106.3	106.4	106.7	22	107.7	107.9	108.6	22	107.2	107.3	107.5	24	107.4	107.5	107.8	24
4/25	106.3	106.7	107.0	24	105.7	106.1	106.7	24	107.1	107.6	108.0	24	106.7	106.9	107.2	24	106.9	107.0	107.2	24
4/26	105.6	106.3	107.1	24	105.0	105.5	106.2	24	105.8	106.2	106.6	24	105.8	105.9	106.1	24	105.9	106.1	106.3	24
4/27	105.0	105.4	105.7	24	105.4	106.2	106.6	24	106.5	107.2	107.6	24	105.9	106.4	106.6	24	106.3	106.7	107.0	24
4/28	106.8	107.8	108.5	24	106.9	107.6	108.3	24	107.9	108.7	109.5	24	107.1	107.5	107.6	24	107.3	107.6	107.9	24
4/29	107.3	107.7	108.0	24	106.3	106.7	107.0	24	107.1	107.6	108.0	24	106.9	107.1	107.4	24	106.7	106.9	107.2	24
4/30	106.7	107.0	107.4	23	106.6	107.2	107.4	23	108.0	108.8	109.0	23	107.0	107.3	107.7	23	107.1	107.7	108.0	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
4/17	105.1	105.7	106.2	24	107.7	108.6	109.5	24	105.1	105.8	106.9	24	104.6	105.1	105.5	24	104.9	106.3	108.0	24
4/18	105.3	105.9	106.4	24	109.6	111.3	112.7	24	105.8	107.3	108.7	24	104.7	105.4	105.7	24	104.2	105.0	105.4	24
4/19	106.4	106.8	107.1	24	110.1	111.4	113.4	24	108.5	109.8	111.5	24	107.7	109.3	109.7	24	106.0	107.0	107.6	24
4/20	107.2	107.8	108.1	24	110.0	111.0	111.8	24	109.2	110.3	110.6	24	110.5	110.6	110.8	24	108.3	109.6	110.4	24
4/21	107.8	108.3	108.8	24	110.7	111.8	114.7	24	110.2	110.9	111.8	24	111.3	111.6	112.1	24	110.0	110.2	110.4	24
4/22	106.5	106.8	107.4	24	110.9	112.8	115.0	24	106.1	106.6	107.9	24	109.9	110.5	111.2	24	107.1	107.6	109.0	24
4/23	106.8	107.2	107.3	24	110.2	111.5	113.4	24	106.9	107.5	108.1	24	109.7	110.1	110.4	24	107.5	108.0	108.4	24
4/24	106.2	106.5	106.9	24	109.2	110.4	112.0	24	107.7	108.0	108.3	24	110.6	110.9	112.5	24	108.0	108.2	108.4	24
4/25	105.6	105.8	106.2	24	109.4	110.5	111.3	24	107.1	107.3	107.5	24	110.7	111.1	111.8	24	108.0	108.3	108.6	24
4/26	104.9	105.1	105.2	24	107.8	109.0	110.4	24	106.4	106.8	107.1	24	109.2	109.4	109.7	24	107.2	107.3	107.7	24
4/27	105.5	106.0	106.3	24	109.1	110.4	112.7	24	107.7	109.3	110.6	24	108.8	109.1	109.5	24	108.7	109.3	109.7	24
4/28	106.5	107.0	107.3	24	109.7	110.7	111.9	24	108.7	109.7	111.4	24	109.8	110.0	110.3	24	109.6	109.9	110.5	24
4/29	105.8	106.0	106.4	24	109.8	111.3	113.3	24	105.2	105.7	106.6	24	108.3	109.1	110.7	24	107.1	107.5	108.5	24
4/30	106.3	106.8	107.6	23	110.1	112.2	115.6	23	---	---	---	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
4/17	104.4	105.1	105.3	24	---	---	---	0	95.2	95.6	95.9	24	99.3	100.1	100.6	24	103.1	104.2	107.9	20
4/18	104.3	104.8	105.1	24	---	---	---	0	94.8	95.1	95.5	24	98.7	99.5	100.3	24	103.2	105.0	106.9	24
4/19	107.4	109.0	111.8	24	---	---	---	0	95.0	95.5	95.9	24	99.0	100.0	100.7	24	103.1	105.0	106.6	24
4/20	109.5	112.0	112.3	24	---	---	---	0	96.0	96.5	96.8	24	99.4	100.3	101.1	24	103.3	104.8	106.1	23
4/21	112.4	112.7	113.3	24	---	---	---	0	96.7	97.1	97.6	24	99.6	100.5	101.3	24	101.5	101.5	103.5	12
4/22	110.8	111.2	111.5	24	---	---	---	0	96.3	96.6	96.9	24	98.4	99.0	99.4	24	102.9	103.1	104.3	14
4/23	111.4	112.0	112.4	24	---	---	---	0	97.2	97.8	98.2	24	99.6	100.9	101.3	24	104.1	106.7	108.8	24
4/24	111.8	112.1	112.3	24	---	---	---	0	97.8	98.1	98.6	24	100.3	100.7	101.3	24	109.9	110.8	110.9	24
4/25	111.8	112.1	112.6	24	---	---	---	0	97.7	98.0	98.4	24	100.1	100.7	101.2	24	111.4	111.8	112.0	24
4/26	111.2	111.5	112.0	24	---	---	---	0	97.0	97.3	97.6	24	99.8	100.6	101.3	24	111.4	111.6	111.9	24
4/27	111.5	112.0	112.5	24	---	---	---	0	96.4	96.8	97.2	24	99.9	101.1	101.9	24	111.2	111.5	111.8	24
4/28	112.3	112.8	113.4	24	---	---	---	0	96.8	97.3	97.8	24	99.4	99.4	99.9	7	110.7	111.0	111.3	24
4/29	111.1	111.8	112.3	24	---	---	---	0	96.5	96.8	97.4	24	---	---	---	0	110.1	110.3	110.6	24
4/30	---	---	---	0	---	---	---	0	96.2	96.7	97.0	23	---	---	---	0	107.1	108.9	110.3	19

### 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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
4/17	101.6	103.0	104.2	24	102.0	102.4	103.1	24	111.4	111.6	112.1	24	106.9	107.2	107.4	21	111.3	111.8	112.3	21
4/18	100.8	102.4	103.7	24	101.5	101.7	102.6	24	110.7	111.0	111.3	24	107.0	107.3	107.7	24	111.6	112.0	112.3	24
4/19	100.9	102.6	104.0	24	102.7	103.2	104.0	24	111.2	111.7	112.1	24	109.4	111.3	112.1	24	112.3	112.8	113.2	24
4/20	101.2	102.8	104.2	24	105.4	106.2	106.8	24	111.4	111.6	112.2	24	113.7	114.9	115.1	24	113.2	113.8	114.1	24
4/21	101.3	102.9	104.3	24	105.4	105.7	106.2	24	111.4	111.7	112.2	24	115.8	116.9	118.4	24	113.7	114.2	114.6	24
4/22	100.3	101.4	102.6	24	103.4	103.7	104.2	24	110.8	111.2	111.5	24	113.6	113.8	114.2	24	112.5	113.0	113.4	24
4/23	100.7	102.1	103.2	24	103.6	103.7	103.9	24	110.4	110.7	111.7	24	113.2	113.4	113.6	24	112.0	112.2	112.4	24
4/24	101.1	102.2	103.0	24	102.9	103.2	103.9	24	110.5	110.8	111.2	24	112.3	112.6	113.1	24	112.0	112.1	112.3	24
4/25	100.6	101.8	102.6	24	101.9	102.1	102.6	24	110.3	110.7	111.0	24	111.1	111.4	111.8	24	111.4	111.8	112.1	24
4/26	100.9	102.6	103.9	24	100.7	100.9	101.6	24	110.2	110.8	111.2	24	109.5	110.0	110.4	24	111.0	111.4	111.8	24
4/27	101.4	103.2	104.5	24	100.8	101.4	101.9	24	110.8	111.4	112.7	24	109.2	110.0	110.9	24	111.7	112.2	112.5	24
4/28	102.3	104.2	105.6	24	101.9	102.3	102.7	24	111.2	111.6	112.4	24	111.0	111.4	111.9	24	112.0	112.2	112.6	24
4/29	100.9	102.0	103.0	24	101.2	101.4	101.6	24	111.3	111.5	111.8	24	109.5	109.7	110.5	22	111.5	111.8	112.1	24
4/30	101.1	102.9	104.2	23	102.1	102.5	102.8	23	111.4	111.7	112.2	23	109.1	109.7	110.4	23	111.4	111.8	112.5	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
4/17	108.7	108.9	109.1	24	117.4	119.4	119.7	24	113.0	113.6	114.1	24	113.1	113.5	113.8	24	---	---	---	0
4/18	108.7	109.2	109.8	24	119.0	119.2	119.4	24	114.7	115.5	116.2	24	112.8	113.3	113.7	24	---	---	---	0
4/19	111.2	112.1	112.5	24	118.4	118.9	119.3	24	117.3	118.3	118.6	24	113.3	113.7	114.2	24	---	---	---	0
4/20	112.8	113.0	113.1	24	118.0	118.5	119.1	24	119.0	119.4	119.7	24	113.4	113.9	114.2	24	---	---	---	0
4/21	113.4	113.6	113.8	24	118.4	118.7	119.0	24	120.1	120.3	120.6	24	114.0	114.3	114.9	24	---	---	---	0
4/22	113.3	113.5	113.7	24	118.0	118.2	118.6	24	118.7	119.1	119.7	24	114.0	114.7	115.5	24	---	---	---	0
4/23	114.0	114.2	114.3	24	118.3	118.7	119.3	24	117.7	117.8	118.0	24	114.9	115.6	116.4	24	---	---	---	0
4/24	113.4	113.8	114.2	24	118.2	118.7	119.1	24	115.8	116.1	117.1	24	113.9	114.7	115.2	24	---	---	---	0
4/25	112.0	112.4	112.7	24	118.2	118.6	119.0	24	114.8	115.0	115.4	24	114.4	114.8	115.2	24	---	---	---	0
4/26	110.2	110.6	111.3	24	117.7	117.9	118.4	24	113.7	113.8	114.1	24	114.3	114.8	115.6	24	---	---	---	0
4/27	110.5	111.3	112.0	24	117.8	118.0	118.5	24	114.9	116.1	118.2	24	113.7	114.1	114.4	24	---	---	---	0
4/28	111.7	112.0	112.3	24	117.9	118.5	119.3	24	117.2	117.7	118.8	24	114.3	115.3	116.2	24	---	---	---	0
4/29	111.1	111.9	112.0	24	116.4	116.8	117.2	24	117.6	117.9	118.5	24	113.0	113.6	113.9	24	---	---	---	0
4/30	112.1	112.3	112.6	23	117.2	117.8	119.5	23	117.6	117.9	118.2	23	113.3	113.8	114.2	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>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
4/17	105.5	106.3	107.4	24	115.0	115.3	115.5	24	105.4	105.6	106.0	24	112.5	113.5	114.0	24	109.6	110.1	110.6	24
4/18	107.7	108.3	109.3	24	115.7	116.2	116.5	24	105.8	106.6	107.3	24	112.5	112.7	113.1	24	109.0	109.3	109.6	24
4/19	108.6	109.2	110.6	24	116.3	116.5	116.8	24	107.5	107.9	108.4	24	113.5	114.1	114.4	24	110.5	111.4	111.9	24
4/20	109.7	110.1	110.9	24	116.4	116.6	116.8	24	109.0	109.9	111.1	24	113.6	113.9	114.2	24	111.6	112.0	112.4	24
4/21	110.5	110.9	111.5	24	116.3	116.7	117.0	24	110.0	110.5	111.1	24	113.5	113.9	114.4	24	110.7	111.4	111.6	24
4/22	108.7	109.1	109.5	24	115.8	116.3	116.6	24	108.5	108.9	109.2	24	113.3	114.0	114.4	24	107.1	107.4	108.3	24
4/23	109.1	109.3	109.5	24	115.8	116.4	116.6	24	109.4	109.9	110.1	24	113.7	114.0	114.4	24	108.6	109.5	110.0	24
4/24	107.8	108.3	108.7	24	115.3	115.7	116.1	24	109.3	109.5	109.7	24	113.7	114.1	114.5	24	110.0	110.2	110.4	24
4/25	107.7	107.9	108.1	24	115.9	116.2	116.4	24	108.5	108.7	108.9	24	113.3	113.8	114.1	24	109.6	109.8	109.9	24
4/26	106.6	106.9	107.2	24	115.9	116.1	116.3	24	107.2	107.4	107.5	24	113.0	113.7	114.1	24	108.8	109.1	109.3	24
4/27	108.4	109.6	111.6	24	115.3	115.7	116.1	24	107.4	108.3	109.5	24	112.5	112.8	113.3	24	110.4	111.2	111.6	24
4/28	111.2	112.1	113.0	24	115.2	115.7	116.2	24	107.4	107.9	109.0	24	111.8	112.5	113.1	24	110.8	111.4	111.5	24
4/29	110.5	110.9	111.3	24	116.0	116.4	116.7	24	105.6	105.8	105.9	24	111.2	112.0	112.2	24	107.6	108.0	108.7	24
4/30	111.2	111.5	112.2	23	116.9	117.2	117.5	23	105.8	106.6	107.7	23	111.9	113.0	113.9	23	107.8	108.6	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>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
4/17	114.7	115.5	116.1	24	111.6	112.5	112.8	24	116.6	117.2	117.8	24	114.1	115.9	116.9	24	117.2	117.4	117.5	24
4/18	114.5	114.9	115.3	24	113.0	113.9	114.4	24	117.2	117.9	118.5	24	116.5	118.3	119.1	24	117.2	117.4	117.5	24
4/19	115.3	116.2	116.6	24	113.8	114.5	114.8	24	117.5	118.1	118.7	24	118.2	119.4	120.0	24	117.2	117.4	117.5	24
4/20	116.2	116.8	117.2	24	115.3	115.9	116.4	24	117.1	117.7	118.2	24	117.7	118.6	119.0	24	117.0	117.2	117.4	24
4/21	115.7	116.2	116.8	24	114.3	115.3	115.6	24	115.9	116.3	116.6	24	114.4	115.3	117.0	24	116.6	116.7	116.9	24
4/22	113.6	114.1	114.5	24	109.4	109.8	110.7	24	115.1	115.6	116.1	24	112.6	114.2	115.2	24	116.6	116.9	117.2	24
4/23	114.4	115.3	115.8	24	108.6	109.0	109.3	24	115.3	115.5	115.7	24	113.4	114.3	115.2	24	116.6	117.1	117.3	24
4/24	115.0	115.4	115.8	24	109.9	110.4	110.7	24	116.2	116.6	116.9	24	111.9	112.9	113.3	24	117.1	117.2	117.3	24
4/25	114.3	114.9	115.3	24	111.1	111.6	112.0	24	116.8	117.2	117.5	24	114.8	116.7	117.7	24	117.2	117.5	117.6	24
4/26	113.9	114.4	114.8	24	111.0	111.2	111.5	24	116.7	117.1	117.4	24	114.7	115.9	116.5	24	116.9	117.2	117.4	24
4/27	115.3	116.1	116.6	24	111.7	112.6	113.0	24	116.7	117.0	117.5	24	115.4	116.0	116.8	24	116.8	116.9	117.2	24
4/28	115.3	116.0	116.5	24	112.7	113.1	113.5	24	116.6	117.1	118.2	24	112.9	113.6	114.1	24	117.0	117.3	117.5	24
4/29	113.4	113.8	114.1	24	111.1	111.3	111.6	24	116.9	117.5	118.0	24	114.7	116.2	117.2	24	116.9	117.1	117.4	24
4/30	113.5	114.4	115.0	23	110.3	111.0	111.4	23	117.0	117.7	118.2	23	116.1	117.3	118.1	23	117.0	117.1	117.3	23

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 5/1/2015 7:13

\* 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>

<b>COMBINED YEARLING CHINOOK</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/17/2015 *	257	9,112	59	5	17,328	---	1,880	179	3,955	3,661	3,110
04/18/2015 *	---	2,161	11	2	30,687	11,691	---	75	---	4,861	15,677
04/19/2015 *	---	1,541	3	12	29,498	---	870	216	6,942	4,638	12,090
04/20/2015 *	721	1,519	6	9	40,625	16,528	---	179	---	5,438	23,332
04/21/2015 *	870	1,132	11	15	49,113	---	12,250	298	15,489	5,847	29,730
04/22/2015 *	1,114	1,169	0	15	49,100	19,380	---	613	---	9,568	21,631
04/23/2015 *	1,165	1,720	0	4	95,570	---	20,437	504	14,426	10,217	28,485
04/24/2015 *	---	1,880	0	81	68,619	73,211	---	541	---	22,227	16,921
04/25/2015 *	---	974	0	---	152,216	---	25,072	361	33,166	14,926	18,504
04/26/2015 *	---	1,407	0	---	129,394	42,983	---	567	---	10,219	18,053
04/27/2015 *	177	613	0	116	49,254	---	28,489	343	35,781	11,288	26,093
04/28/2015 *	321	375	0	44	32,983	97,368	---	267	---	12,019	22,363
04/29/2015 *	330	---	0	40	23,153	---	21,154	571	52,269	13,036	44,904
04/30/2015 *	207	---	10	23	23,618	49,831	---	531	---	10,205	41,736
05/01/2015	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>5,162</b>	<b>23,603</b>	<b>100</b>	<b>366</b>	<b>791,158</b>	<b>310,992</b>	<b>110,152</b>	<b>5,245</b>	<b>162,028</b>	<b>138,150</b>	<b>322,629</b>
<b># Days:</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>574</b>	<b>1,967</b>	<b>7</b>	<b>31</b>	<b>56,511</b>	<b>44,427</b>	<b>15,736</b>	<b>375</b>	<b>23,147</b>	<b>9,868</b>	<b>23,045</b>
<b>YTD</b>	<b>38,738</b>	<b>60,735</b>	<b>6,857</b>	<b>636</b>	<b>1,084,629</b>	<b>375,013</b>	<b>118,396</b>	<b>5,579</b>	<b>179,415</b>	<b>189,514</b>	<b>383,751</b>

<b>COMBINED SUBYEARLING CHINOOK</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/17/2015 *	0	3	57	3	608	---	31	51	717	0	50,268
04/18/2015 *	---	0	67	0	365	0	---	81	---	0	16,082
04/19/2015 *	---	1	123	3	540	---	0	22	238	0	9,787
04/20/2015 *	0	0	27	3	378	0	---	34	---	0	4,319
04/21/2015 *	0	0	94	4	177	---	233	50	307	0	3,833
04/22/2015 *	0	1	0	3	1,573	0	---	108	---	0	1,805
04/23/2015 *	0	0	0	2	652	---	0	124	204	0	1,759
04/24/2015 *	---	0	0	0	317	0	---	29	---	0	2,224
04/25/2015 *	---	0	0	---	0	---	0	13	0	0	1,384
04/26/2015 *	---	0	0	---	313	0	---	15	---	0	1,615
04/27/2015 *	0	0	0	5	328	---	0	7	0	0	995
04/28/2015 *	0	0	0	8	0	0	---	7	---	0	486
04/29/2015 *	0	---	0	8	0	---	0	8	340	0	167,220
04/30/2015 *	0	---	12	11	0	0	---	2	---	0	164,101
05/01/2015	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>5</b>	<b>380</b>	<b>50</b>	<b>5,251</b>	<b>0</b>	<b>264</b>	<b>551</b>	<b>1,806</b>	<b>0</b>	<b>425,878</b>
<b># Days:</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>4</b>	<b>375</b>	<b>0</b>	<b>38</b>	<b>39</b>	<b>258</b>	<b>0</b>	<b>30,420</b>
<b>YTD</b>	<b>1</b>	<b>36</b>	<b>488</b>	<b>323</b>	<b>11,442</b>	<b>20</b>	<b>264</b>	<b>4,359</b>	<b>2,958</b>	<b>11</b>	<b>1,332,025</b>

## Two-Week Summary of Passage Indices

<b>COMBINED COHO</b>												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
04/17/2015 *	0	0	0	0	0	---	0	3	171	413	6,630	
04/18/2015 *	---	0	0	0	0	143	---	1	---	444	3,071	
04/19/2015 *	---	0	0	0	0	---	0	6	306	472	2,467	
04/20/2015 *	0	0	0	0	378	0	---	2	---	698	4,762	
04/21/2015 *	0	0	0	1	177	---	0	1	341	538	10,102	
04/22/2015 *	0	0	0	0	524	0	---	6	---	574	16,585	
04/23/2015 *	0	0	0	0	326	---	0	2	289	459	12,148	
04/24/2015 *	---	0	0	0	1,268	860	---	5	---	673	10,566	
04/25/2015 *	---	0	0	---	322	---	202	1	256	479	7,665	
04/26/2015 *	---	0	0	---	1,253	1,146	---	10	---	191	4,874	
04/27/2015 *	0	0	0	1	328	---	0	6	0	108	6,275	
04/28/2015 *	0	0	0	2	340	287	---	8	---	858	10,634	
04/29/2015 *	0	---	0	0	681	---	0	16	0	752	8,212	
04/30/2015 *	0	---	0	4	347	0	---	17	---	647	18,024	
05/01/2015	---	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>5,944</b>	<b>2,436</b>	<b>202</b>	<b>84</b>	<b>1,363</b>	<b>7,306</b>	<b>122,015</b>	
<b># Days:</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>425</b>	<b>348</b>	<b>29</b>	<b>6</b>	<b>195</b>	<b>522</b>	<b>8,715</b>	
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>5,944</b>	<b>2,465</b>	<b>202</b>	<b>105</b>	<b>3,047</b>	<b>11,111</b>	<b>215,564</b>	

<b>COMBINED STEELHEAD</b>												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
04/17/2015 *	70	55	1	121	13,416	---	1,915	13	1,814	485	206	
04/18/2015 *	---	44	1	35	8,768	12,695	---	10	---	903	970	
04/19/2015 *	---	100	0	271	8,813	---	1,914	24	4,968	859	493	
04/20/2015 *	166	105	0	146	11,337	9,202	---	22	---	1,127	1,273	
04/21/2015 *	141	140	2	126	25,793	---	6,300	21	7,323	898	1,838	
04/22/2015 *	94	230	0	275	32,675	14,929	---	18	---	1,861	3,423	
04/23/2015 *	126	382	0	48	46,317	---	3,027	21	6,403	1,550	5,027	
04/24/2015 *	---	476	0	788	77,706	33,237	---	36	---	2,628	2,542	
04/25/2015 *	---	447	0	---	55,995	---	4,044	42	9,037	2,104	3,866	
04/26/2015 *	---	851	0	---	105,270	33,812	---	70	---	2,149	696	
04/27/2015 *	103	615	0	1,242	73,552	---	9,423	76	8,690	3,189	13,314	
04/28/2015 *	175	465	0	420	62,565	98,412	---	179	---	3,112	8,508	
04/29/2015 *	135	---	0	409	29,281	---	28,419	307	8,850	2,650	16,747	
04/30/2015 *	197	---	1	843	17,366	59,568	---	158	---	2,132	16,125	
05/01/2015	---	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>	<b>1,207</b>	<b>3,910</b>	<b>5</b>	<b>4,724</b>	<b>568,854</b>	<b>261,855</b>	<b>55,042</b>	<b>997</b>	<b>47,085</b>	<b>25,647</b>	<b>75,028</b>	
<b># Days:</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>134</b>	<b>326</b>	<b>0</b>	<b>394</b>	<b>40,632</b>	<b>37,408</b>	<b>7,863</b>	<b>71</b>	<b>6,726</b>	<b>1,832</b>	<b>5,359</b>	
<b>YTD</b>	<b>1,553</b>	<b>16,190</b>	<b>409</b>	<b>6,228</b>	<b>729,706</b>	<b>305,292</b>	<b>58,414</b>	<b>1,057</b>	<b>52,975</b>	<b>30,763</b>	<b>80,137</b>	



## Two-Week Summary of Passage Indices

<b>COMBINED SOCKEYE</b>												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
04/17/2015	*	0	0	0	0	0	---	31	83	239	19	0
04/18/2015	*	---	0	0	0	0	---	66	---	---	0	0
04/19/2015	*	---	0	0	0	0	---	0	91	306	29	82
04/20/2015	*	0	0	0	0	0	---	105	---	---	54	0
04/21/2015	*	0	0	0	0	0	---	0	43	1,125	19	59
04/22/2015	*	0	0	0	0	0	---	49	---	---	19	23
04/23/2015	*	0	0	0	0	0	---	0	70	2,602	0	84
04/24/2015	*	---	0	0	0	0	---	199	---	---	72	0
04/25/2015	*	---	0	0	---	0	---	0	75	7,332	47	0
04/26/2015	*	---	0	0	---	0	---	61	---	---	0	14
04/27/2015	*	0	0	0	0	0	---	0	18	9,030	0	0
04/28/2015	*	0	0	0	0	0	---	33	---	---	107	0
04/29/2015	*	0	---	0	0	0	---	0	23	3,056	72	0
04/30/2015	*	0	---	0	1	0	---	13	---	---	76	0
05/01/2015		---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>929</b>	<b>23,690</b>	<b>514</b>	<b>262</b>
<b># Days:</b>		<b>9</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>66</b>	<b>3,384</b>	<b>37</b>	<b>19</b>
<b>YTD</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>199</b>	<b>41</b>	<b>76</b>	<b>2,163</b>	<b>23,967</b>	<b>597</b>	<b>1,430</b>

<b>COMBINED LAMPREY JUVENILES</b>												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR <sup>†</sup> (Samp)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)	
04/17/2015	*	0	0	0	0	0	---	10	0	20	125	0
04/18/2015	*	---	0	0	0	0	---	0	0	---	70	0
04/19/2015	*	---	0	0	0	0	---	0	0	0	40	0
04/20/2015	*	0	0	0	0	0	---	0	---	---	100	0
04/21/2015	*	0	0	0	0	0	---	0	0	0	100	0
04/22/2015	*	0	0	0	0	0	---	0	---	---	25	0
04/23/2015	*	0	0	0	0	0	---	0	1	100	160	0
04/24/2015	*	---	0	0	0	0	---	0	---	---	0	0
04/25/2015	*	---	0	0	---	0	---	0	0	0	33	0
04/26/2015	*	---	0	0	---	0	---	0	---	---	100	0
04/27/2015	*	0	0	0	0	0	---	0	0	0	25	0
04/28/2015	*	0	0	0	0	0	---	0	---	---	100	0
04/29/2015	*	0	---	0	0	0	---	0	0	0	0	0
04/30/2015	*	0	---	0	0	0	---	0	---	---	100	0
05/01/2015		---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>120</b>	<b>978</b>	<b>0</b>
<b># Days:</b>		<b>9</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>17</b>	<b>70</b>	<b>0</b>
<b>YTD</b>		<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>3,080</b>	<b>140</b>	<b>5</b>	<b>315</b>	<b>3,505</b>	<b>2,793</b>

## 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:

Sample counts (Samp) are provided for juvenile lamprey at LGR. See note below for details †.

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.

† In 2013 it was confirmed that juvenile lamprey can escape the sample tank at LGR which would lead to unreliable estimates of collection. Therefore, only sample counts are provided in this report.

### 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.

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:

5/1/15 7:11 AM

		04/17/15	TO	05/01/15			
		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
<b>LGR</b>	Sum of NumberCollected	3,000	474,837	3,600	343,838		825,275
	Sum of NumberBarged	318	16,671	124	10,032		27,145
	Sum of NumberBypassed	2,680	450,217	3,360	327,974		784,231
	Sum of Numbertrucked	0	0	0	0		0
	Sum of SampleMorts	2	13	0	6		21
	Sum of FacilityMorts	0	20	0	5		25
	Sum of ResearchMorts	0	0	0	0		0
	Sum of TotalProjectMorts	2	33	0	11		46
<b>LGS</b>	Sum of NumberCollected		216,985	1,700	182,694		401,379
	Sum of NumberBarged		0	0	0		0
	Sum of NumberBypassed		216,957	1,700	182,684		401,341
	Sum of Numbertrucked		0	0	0		0
	Sum of SampleMorts		5	0	3		8
	Sum of FacilityMorts		23	0	7		30
	Sum of ResearchMorts		0	0	0		0
	Sum of TotalProjectMorts		28	0	10		38
<b>LMN</b>	Sum of NumberCollected	110	50,978	100	24,877	10	76,075
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	110	50,974	100	24,875	10	76,069
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	4	0	2	0	6
	Sum of FacilityMorts	0	0	0	0	0	0
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	4	0	2	0	6
Total Sum of NumberCollected		3,110	742,800	5,400	551,409	10	1,302,729
Total Sum of NumberBarged		318	16,671	124	10,032	0	27,145
Total Sum of NumberBypassed		2,790	718,148	5,160	535,533	10	1,261,641
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		2	22	0	11	0	35
Total Sum of FacilityMorts		0	43	0	12	0	55
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		2	65	0	23	0	90

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

5/1/15 7:11 AM

TO: 05/01/15

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	8,290	700,792	3,600	160	454,108	1,166,950
	Sum of NumberBarged	392	27,182	124	0	17,362	45,060
	Sum of NumberBypassed	7,885	665,622	3,360	160	430,908	1,107,935
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	13	33	0	0	10	56
	Sum of FacilityMorts	0	39	0	0	7	46
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	13	72	0	0	17	102
<b>LGS</b>	Sum of NumberCollected	20	262,007	1,720	41	213,239	477,027
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	20	261,969	1,720	41	213,221	476,971
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	10	0	0	3	13
	Sum of FacilityMorts	0	28	0	0	15	43
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	38	0	0	18	56
<b>LMN</b>	Sum of NumberCollected	110	53,938	100	30	26,147	80,325
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	110	53,922	100	30	26,145	80,307
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	5	0	0	2	7
	Sum of FacilityMorts	0	1	0	0	0	1
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	6	0	0	2	8
Total Sum of NumberCollected		8,420	1,016,737	5,420	231	693,494	1,724,302
Total Sum of NumberBarged		392	27,182	124	0	17,362	45,060
Total Sum of NumberBypassed		8,015	981,513	5,180	231	670,274	1,665,213
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		13	48	0	0	15	76
Total Sum of FacilityMorts		0	68	0	0	22	90
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		13	116	0	0	37	166

**Cumulative Adult Passage at Mainstem Dams Through: 04/30**

DAM	END DATE	Spring Chinook						Summer Chinook						Fall Chinook					
		2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	04/30	139142	1890	78662	1212	43116	828	0	0	0	0	0	0	0	0	0	0	0	0
TDA	04/30	102632	1097	34372	425	21984	386	0	0	0	0	0	0	0	0	0	0	0	0
JDA	04/30	72454	727	23476	363	15758	316	0	0	0	0	0	0	0	0	0	0	0	0
MCN	04/30	54316	579	9979	112	8680	116	0	0	0	0	0	0	0	0	0	0	0	0
IHR	04/30	36038	161	5571	70	5079	67	0	0	0	0	0	0	0	0	0	0	0	0
LMN	04/30	29589	369	3995	49	3477	34	0	0	0	0	0	0	0	0	0	0	0	0
LGS	04/30	20905	283	2273	48	2060	45	0	0	0	0	0	0	0	0	0	0	0	0
LGR	04/30	13726	147	1131	18	1265	12	0	0	0	0	0	0	0	0	0	0	0	0
PRD	04/29	5077	35	378	0	737	0	0	0	0	0	0	0	0	0	0	0	0	0
WAN	04/29	3121	10	0	0	651	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	04/27	636	0	18	0	145	1	0	0	0	0	0	0	0	0	0	0	0	0
RRH	04/27	165	0	6	0	18	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	04/28	14134	324	3067	18	4813	49	0	0	0	0	0	0	0	0	0	0	0	0

DAM	END DATE	Coho						Sockeye			Steelhead						Lamprey		
		2015		2014		10-Yr Avg.		2015	2014	10-Yr Avg.	2015	2014	10-Yr Avg.	Wild 2015	Wild 2014	10-Yr Avg.	2015	2014	10-Yr Avg.
		Adult	Jack	Adult	Jack	Adult	Jack												
BON	04/30	0	0	5	-2	0	0	1	4	0	4139	3867	3467	2243	1169	1027	0	2	1
TDA	04/30	0	0	0	0	0	0	0	0	0	280	361	2140	150	142	863	0	0	0
JDA	04/30	0	0	0	1	0	1	-1	0	0	421	2761	4570	290	1094	1618	7	-1	-1
MCN	04/30	0	0	0	0	1	0	-1	0	0	589	519	5050	382	318	1693	5	3	2
IHR	04/30	0	0	0	0	0	0	0	0	0	942	1409	4754	602	682	1440	2	0	0
LMN	04/30	0	0	0	0	0	0	0	1	0	3238	4782	6305	1725	1438	1962	0	0	0
LGS	04/30	0	0	0	0	0	0	0	0	0	1308	1175	2727	865	795	1236	0	0	0
LGR	04/30	0	0	0	0	0	0	0	0	0	8916	7084	8365	4142	3204	2948	0	0	0
PRD	04/29	0	0	0	0	0	0	0	0	0	22	58	26	0	0	0	4	0	0
WAN	04/29	0	0	0	0	0	0	0	0	0	36	0	69	0	0	0	2	0	0
RIS	04/27	0	0	0	0	0	0	0	0	0	63	171	68	44	95	38	0	0	0
RRH	04/27	0	0	0	0	0	0	0	0	0	68	147	218	48	98	157	0	0	0
WEL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/28	1	0	9	0	0	0	0	0	0	4407	5777	6885	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.