



## Fish Passage Center

# Weekly Report #15-4

April 10, 2015

### Summary of Events

#### Water Supply:

Precipitation throughout the Columbia Basin has varied between 31% and 86% of average at individual sub-basins over the first week of April. Precipitation above The Dalles has been 71% of average over the first week of April. Over the 2015 water year, precipitation has ranged between 64% and 111% 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		Water Year 2015	
	April 1-8, 2015		October 1, 2014 to April 8, 2015	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.41	58	25.2	108
Snake River Above Ice Harbor	0.45	86	11.6	80
Columbia Above The Dalles	0.39	71	16.3	91
Kootenai	0.44	63	26.1	111
Clark Fork	0.20	31	14.1	87
Flathead	0.52	67	23.6	107
Pend Oreille River Basin above Waneta Dam	0.37	53	19.7	97
Salmon River Basin	0.58	86	15.1	84
Upper Snake Tributaries	0.47	74	10.9	64
Clearwater	0.57	60	25.4	94
Willamette River above Portland	1.12	81	43.9	87

Snowpack within the Columbia Basin has been below average. Average snowpack in the Columbia River for basins above the Snake River confluence is 57% of average, for Snake River Basins the average snowpack is 54% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 14% of average.

Table 2 displays the April 8<sup>th</sup> ESP runoff volume forecasts for multiple reservoirs along with the April COE forecasts at Libby and Dworshak. The April 8<sup>th</sup> ESP forecast at The Dalles between April and August is 72,233 Kaf (83% of average).

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

Location	April 8, 2015 5-day QPF ESP	
	% Average (1981-2010)	Runoff Volume (Kaf)
The Dalles (Apr-Aug)	83	72233
Grand Coulee (Apr-Aug)	90	51165
Libby Res. Inflow, MT (Apr-Aug)	92 99*	5415 5808*
Hungry Horse Res. Inflow, MT (Apr-Aug)	89	1719
Lower Granite Res. Inflow (Apr- July)	68	13593
Brownlee Res. Inflow (Apr-July)	56	3052
Dworshak Res. Inflow (Apr-July)	75 70*	1807 1709*

\* Denotes COE March Forecast

Grand Coulee Reservoir is at 1253.3 feet (4-8-15) and has drafted 0.8 feet over the last week. Outflows at Grand Coulee have ranged between 98.1 and 124.2 Kcfs over the last week. The April 15<sup>th</sup> FC Elevation is 1283.3 feet at Grand Coulee. Grand Coulee has drafted below flood control for drum gate maintenance (1255 ft).

The Libby Reservoir is currently at elevation 2421.8 feet (4-8-15) and has refilled 1.8 feet over the previous week. Daily average outflows at Libby Dam have been 4.1 Kcfs over the last week. The April 15<sup>th</sup> FC Elevation at Libby is 2433.8 feet.

Hungry Horse is currently at an elevation of 3540.3 feet (4-8-15) and refilled 0.2 feet over the last week. Outflows at Hungry Horse have been 5.2 Kcfs

over the last week. The end of April 15<sup>th</sup> FC Elevation at Hungry Horse is 3539.0 feet.

Dworshak is currently at an elevation of 1588.1 feet (4-8-15) and refilled 1.7 feet over the last week. Outflows have been reduced to 6.0 Kcfs over the last week. The end of April 15<sup>th</sup> System FC elevation at Dworshak (based on March forecast) was 1583.9 feet.

The Brownlee Reservoir was at an elevation of 2058.0 feet on April 8, 2015, and has refilled 0.4 feet over the last week. The end of April 15<sup>th</sup> FC Elevation is 2074.4 feet at Brownlee. Outflow from Hells Canyon is being managed to a minimum of 9.2 Kcfs for fall Chinook spawning (with daily fluctuations to meet energy demand). Over the last four days flows have ranged between 9.9 and 15.8 Kcfs.

**Spill:**

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

All of the lower Snake River projects have spilled at the 2015 Fish Operations Plan (FOP) levels over the past week.

Project	Spill Level Day/Night
Lower Granite	20 Kcfs/20 Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	45 Kcfs/Gas Cap

Spill for fish passage at the lower Columbia River projects will occur at the following amounts described in the 2015 Fish Operations Plan. Over the past week some levels of uncontrolled spill have occurred at McNary, John Day and The Dalles dams.

Project	Spill Level Day/Night
McNary	40%/40%
John Day	30%/30%
The Dalles	40%/40%
Bonneville	100 Kcfs/100 Kcfs

**Smolt Monitoring:**

As of this week, all Smolt Monitoring Program sites are sampling for 2015.

Coho dominated the samples at Bonneville Dam (BON) this week. The daily average passage index for coho at BON was about 2,570 fish per day, which is a substantial increase from last week's daily average passage index of only 245 fish per day. This increase is largely due to recent hatchery releases above BON, as about 98% of the coho juveniles in this week's samples were clipped. Yearling Chinook were the second most dominant species in this week's samples at BON. This week's daily average passage index for yearling Chinook was about 1,730 fish per day. This is also an increase in passage when compared to last week's daily average passage index of only 400 yearling Chinook per day. Passage of subyearling Chinook decreased this week when compared to last week. This week's daily average passage index for subyearling Chinook was about 370 per day. Of all the subyearling Chinook sampled this week, approximately 99.3% were fry. Passage of sockeye and steelhead at BON remained low this week with daily average passage indices of 113 and 242 fish per day, respectively. Both pacific lamprey ammocoetes and macrophthalmia were encountered at BON this week. Pacific lamprey ammocoetes were encountered in the sample on April 4<sup>th</sup>, with an estimated collection of five fish. Pacific lamprey macrophthalmia were collected every day this week with a daily average collection of 35 fish per day.

Yearling Chinook dominated this week's salmonid collections at John Day Dam (JDA). The daily average passage index for yearling Chinook this week was about 2,500 fish per day. The daily average passage indices for steelhead and coho were about 350 and 215 fish per day, respectively. Sockeye passage remained low this week, with daily average passage index of less than 10 fish per day. Finally, pacific lamprey macrophthalmia were encountered every day this week, with a daily average collection of 110 fish per day.

Sampling at McNary Dam (MCN) began on April 8<sup>th</sup>, with the first sample worked up on April 9<sup>th</sup>. Since MCN is no longer a transportation site, sampling at MCN is every-other-day for the entire SMP season. So far, only one days' worth of data has been collected from MCN. Yearling Chinook dominated this single sample with a passage index of about 1,900.

Subyearling Chinook were the second most dominant species, with a passage index of about 540 fish. All subyearling Chinook in this single sample were fry. Coho and steelhead had passage indices of about 365 and 300, respectively and a small number of sockeye were encountered in this single sample. Finally, Pacific lamprey macrophthalmia were encountered, with an estimated collection of 20 fish.

This week's samples at Lower Granite Dam (LGR) have been dominated by yearling Chinook. The daily average passage index for yearling Chinook this week was nearly 15,000 per day, which is very similar to last week's daily average passage index of about 14,800 per day. Steelhead passage increased this week, when compared to the previous week. This week's daily average passage index for steelhead was about 8,400 fish per day. Last week's daily average steelhead passage index was about 4,350 per day. Passage of subyearling Chinook and sockeye remained low this week and all subyearling Chinook have been fry. No coho juveniles have been collected so far this year. Finally, only one Pacific lamprey ammocoete and no Pacific lamprey macrophthalmia were encountered in this week's samples at LGR.

Sampling at Little Goose Dam (LGS) is limited to a 24-hour sample every-other-day until transportation begins. Yearling Chinook dominated the samples at LGS this week. The daily average passage index for yearling Chinook at LGS was about 7,300 fish per day this week and appears to be increasing. Steelhead passage also seems to be increasing. This week's daily average passage index for steelhead at LGS was about 4,550 fish per day. The only other species of salmonid that was encountered in this week's samples was coho, but in very small numbers. Finally, both Pacific lamprey and macrophthalmia were encountered in the April 4<sup>th</sup> sample. The estimated collections for these two life-stages were 10 ammocoetes and 3,020 macrophthalmia.

Sampling at Lower Monumental Dam (LMN) began on April 3<sup>rd</sup>, with the first sample being worked up on April 4<sup>th</sup>. Sampling at LMN is limited to a 24-hour sample every-third-day until transportation begins. So far, only two samples have been conducted at LMN. These two samples were dominated by yearling Chinook and steelhead, with passage indices ranging from about 530 to 580 for yearling Chinook and 450 to 700 for steelhead. The only other species of salmonid that was encountered in this week's samples was

sockeye, but in very small numbers. Finally, Pacific lamprey macrophthalmia were encountered in the April 4<sup>th</sup> sample, with an estimated collection of 130 fish.

This week's samples at Rock Island Dam (RIS) were dominated by subyearling Chinook, with a daily average passage index of about 160 fish per day. All of the subyearling Chinook juveniles in this week's samples were fry. Only a few yearling Chinook, sockeye, coho, and steelhead have been sampled so far this year. Finally, one Pacific lamprey macrophthalmia was sampled on April 5<sup>th</sup> and two were sampled on April 9<sup>th</sup>.

The Grande Ronde Trap (GRN) is operated by the Oregon Department of Fish and Wildlife and is located at river kilometer two in the Grande Ronde River. Yearling Chinook continued to dominate the collections at GRN this week, with a daily average collection of about 325 per day. After a spike in collections on April 3<sup>rd</sup>, yearling Chinook collections at GRN seem to be decreasing in recent days. This is likely due to the passage of earlier hatchery releases. Over the past week, about 96% of the yearling Chinook collected at the trap have been of known hatchery origin. Steelhead collections this week have average about 20 fish per day, nearly all of which have been of known hatchery origin. Finally, two subyearling Chinook fry were encountered in this week's samples.

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. Yearling Chinook continued to dominate the collections at the Salmon River Trap this week. After substantial increases in yearling Chinook collections on Monday and Tuesday, the trap was moved to a less efficient location, in an effort to reduce handling of listed hatchery stocks. Subsequent to this move, average collections of yearling Chinook decreased from about 6,000 per day on Monday and Tuesday to about 2,800 per day on Wednesday and Thursday. The trap will remain in this new location for the rest of this week and evaluated prior to next week's sampling. Of all the yearling Chinook that have been collected so far this week, approximately 97% were of known hatchery origin. As with previous weeks, only a few steelhead were sampled at the Salmon River Trap this week and no juvenile lamprey were sampled this week.

The Snake River Trap at Lewiston (LEW) is located at river kilometer 225 and operated by Idaho

Department of Fish and Game. Steelhead dominated the collections at the Snake River Trap this week. The daily average collection for steelhead this week was about 40 fish per day, which is a decrease from last week's daily average collection of about 120 fish per day. Collections of yearling Chinook at this trap remained relatively low this week, with a maximum of 22 in the sample from April 5<sup>th</sup>. A few subyearling Chinook were also encountered in this week's samples at this trap, most of which were fry.

The Imnaha River Trap (IMN) is located at river kilometer seven and is operated by the Nez Perce Tribe. Sampling at IMN is year-round however the FPC typically only receives data from early March through June. Due to the remote nature of the trap, the Nez Perce Tribe is only able to send collection data to the FPC periodically. Therefore, data for IMN may be several days behind. To date, we have received data through April 8<sup>th</sup>. Over the last week of available data (April 2-8), collections at IMN have been dominated by yearling Chinook. In fact, yearling Chinook passage has increased substantially over the past week, when compared to the previous week. The average daily collection for yearling Chinook over the April 2-8 period was about 2,440 per day. The average collection for the previous week was only about 70 fish per day. This increase in yearling Chinook passage is largely due to hatchery releases above the trap. Hatchery yearling Chinook first began arriving at the trap on April 3<sup>rd</sup>. Since April 3<sup>rd</sup>, approximately 97.6% of the yearling Chinook collection at IMN has been of known hatchery origin. Steelhead passage has also increased substantially over the past week. The average daily collection for steelhead over the April 2-8 period was about 1,580 per day. The average collection for the previous week was less than 10 fish per day. This increase in steelhead passage is also largely due to hatchery releases above the trap. Over the past week of available data, approximately 99.5% of the steelhead collection 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.

Approximately 762,000 yearling fall Chinook juveniles were scheduled for release into this zone this week. Of these, nearly 60% were scheduled to be released directly from Lyons Ferry Hatchery, which is located on the Snake River below Little Goose Dam. The remaining 40% were scheduled to be released from Captain Johns Rapids Acclimation Facility on the Snake River and Big Canyon Creek Acclimation Facility on the Clearwater River. Approximately 52% of the yearling fall Chinook that were scheduled for release to this zone this week are unclipped but are tagged with coded-wire tags. In addition, approximately 240,000 yearling spring Chinook juveniles were scheduled to be released into the Tucannon River this week. These spring Chinook were 100% unclipped but tagged with coded-wire-tags. Finally, about 2.1 million summer steelhead were scheduled to be released into this zone this week. These steelhead releases were scheduled to take place in the Salmon River and its tributaries (73%) and the Grande Ronde River and its tributaries (27%).

There are two new releases of yearling spring Chinook juveniles scheduled to take place in this zone over the next two weeks. These two releases are expected to total nearly 434,000 spring Chinook juveniles to the Salmon (42%) and Wallowa (58%) rivers. Just over 4.6 million summer steelhead juveniles are scheduled for release to this zone over the next two weeks. These steelhead releases are scheduled to take place both above and below Lower Granite Dam. The releases above Lower Granite Dam are scheduled to take place on the Clearwater River and its tributaries (74%), the Salmon River and its tributaries (19%), and the Grande Ronde River (3%). The releases below Lower Granite Dam are scheduled to occur in the Tucannon River (2%) and directly from Lyons Ferry Hatchery (2%).

**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 185,000 yearling spring Chinook juveniles were scheduled to be released into the Methow River this week. The only other release that was scheduled for this zone this week was a release of about 180,000 summer steelhead juveniles from Ringold Springs Hatchery that were released directly into the Mid-Columbia River.

Approximately 1.9 million yearling spring Chinook juveniles are scheduled for release into this zone over the next two weeks. Of these, approximately 70% are scheduled to be released into the Methow River while the remaining 30% are scheduled to be released into the Wenatchee River and its tributaries. Several releases of yearling summer Chinook juveniles are scheduled to take place throughout this river zone over the next two weeks. These summer Chinook releases are expected to total just over 1.35 million smolts. Just over 1.7 million coho juveniles are scheduled to be released into this zone over the next two weeks. These coho juveniles are part of the Yakama Tribal Program to reintroduce coho to the Yakima, Methow, and Wenatchee rivers. This tribal program is expected to release approximately 2.3 million coho juveniles in 2015. Finally, nearly 440,000 summer steelhead juveniles are scheduled to be released throughout this zone over the next two weeks.

**Lower Columbia Zone:** The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Approximately 75,000 yearling spring Chinook juveniles were scheduled to be released into Hood River this week. The only other release that was scheduled for this zone this week was a release of about 162,000 summer steelhead juveniles into the Deschutes River. Approximately 6.5 million subyearling fall Chinook tules are scheduled for release from Spring Creek National Fish Hatchery on or around April 13<sup>th</sup>. In addition, several releases of yearling spring Chinook are scheduled for this zone over the next two weeks. In all, these spring Chinook releases are expected to total nearly 2.5 million juveniles. Of these, approximately 48% are scheduled to be released from Carson National Fish Hatchery into the Wind River and 41% are scheduled for release from Little White Salmon National Fish Hatchery into the Little White Salmon River. The remaining 11% are scheduled for release into the Deschutes River and its tributaries. Approximately 574,000 coho juveniles are scheduled

to be released into the Umatilla River in mid-April. Finally, about 163,500 summer steelhead juveniles are scheduled for release into this zone over the next two weeks. These steelhead juveniles are to be released into the Umatilla (92%) and Deschutes (8%) rivers.

#### **Adult Passage:**

Adult counts at Bonneville Dam have been updated through 4/8/15. The 2015 adult spring Chinook count at Bonneville Dam of 3,875 is 2.3 times greater than the 2014 count of 1717. The 2015 Bonneville Dam adult spring Chinook count is about 5.3 times greater than the 10-year average count of 731. At Willamette Falls 623 adult spring Chinook have been counted so far this year.

The 2015 Bonneville Dam adult steelhead count of 3,444 is about 1.2 times greater than the 2014 count of 2,929 and 1.4 times greater than the 10-year average count of 2,535. This year's Lower Granite steelhead count of 8,040 is about 1.3 times greater than the 2014 count of 6,163 and about 1.3 times greater than the 10-year average count of 6,212. At Willamette Falls, the 2015 count for steelhead was 3,476 as of April 7<sup>th</sup>. This year's steelhead count has 532 fewer fish than the 2014 count of 4,008, while being 76% of the 10-year average count of 4,580.

Between March 1<sup>st</sup> and April 8<sup>th</sup>, a total of 102 steelhead, 2 salmon, and 2 other salmonid species were observed over the separator at the Bonneville Juvenile Monitoring Facility (JMF). 2015 Kelt passage at the Bonneville JMF can be found at: <http://www.fpc.org/adultsalmon/bonkeltcounts.htm>.

## Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:		3/28/2015		to		04/10/15			
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	160,352	04-01-15	04-03-15	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	160,502	04-03-15	04-07-15	Shoup Br (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	192,588	04-08-15	04-10-15	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2015	254,900	04-01-15	04-04-15	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2015	868,400	04-01-15	04-04-15	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2015	97,536	04-02-15	04-03-15	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2015	572,077	03-23-15	04-03-15	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2015	199,520	04-01-15	04-14-15	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2015	631,100	04-01-15	04-14-15	Pahsimeroi Hatchery	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	197,690	04-03-15	04-03-15	Sawtooth Hatchery	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2015	1,348,380	04-01-15	04-01-15	Sawtooth Hatchery	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>7,183,045</b>				
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2015	153,000	04-01-15	04-01-15	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2015	155,000			Pittsburg Landing	
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2015	155,000	04-09-15	04-09-15	Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2015		04-10-15	04-10-15	Big Canyon (Clearwater River)	Clearwater River M F
Nez Perce Tribe	McCall Hatchery	CH1	SU	2015	118,100				South Fork Salmon River
Nez Perce Tribe	McCall Hatchery	CH1	SU	2015		03-30-15	03-31-15	Johnson Cr Idaho	River
<b>Nez Perce Tribe Total</b>					<b>581,100</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	Irrigon Hatchery Complex	ST	SU	2015	360,000	04-10-15	04-10-15	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2015	176,440	03-23-15	03-30-15	Lookingglass Creek	Grande Ronde
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2015	420,000	03-31-15	04-15-15	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2015	162,000	04-08-15	04-08-15	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	CH1	SP	2015	150,000			Corporation Guard Station	Umatilla River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	CH1	SP	2015		04-01-15	04-01-15		Umatilla River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>1,483,440</b>				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2015	128,900	03-31-15	04-03-15	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2015	1,347,000	04-06-15	04-30-15	Sawtooth Hatchery	Salmon River (ID)
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2015	370,000			Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2015		03-30-15	03-31-15		Deschutes River
<b>U.S. Fish and Wildlife Service Total</b>					<b>1,845,900</b>				
Umatilla Tribe	Carson NFH	CH1	SP	2015	250,443	04-01-15	04-01-15	Walla Walla River	Walla Walla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2015	106,100			Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2015	118,357	04-02-15	04-15-15	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2015	146,316	03-18-15	03-30-15	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2015		03-19-15	04-15-15	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2015	225,000			Thornhollow Acclim Pond	
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2015		04-01-15	04-01-15		Umatilla River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2015	435,000	04-01-15	04-01-15	Imeques Acclim Pond	Umatilla River
<b>Umatilla Tribe Total</b>					<b>1,281,216</b>				
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2015	75,000	04-09-15	04-09-15	W Fk Hood River	Hood River
<b>Warm Springs Tribe Total</b>					<b>75,000</b>				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2015	452,000	04-06-15	04-08-15	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2015	205,000			Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2015	185,000	04-05-15	04-20-15	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	Ringold Springs Hatchery	ST	SU	2015	180,000			Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2015		04-10-15	04-20-15		Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2015	240,000				
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2015		04-10-15	04-10-15	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2015	2,500,000	03-20-15	03-31-15	Klickitat River	Klickitat River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>3,810,000</b>				
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				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2015		03-15-15	05-15-15	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2015	217,163			Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2015		03-15-15	05-15-15		Yakima River
<b>Yakama Tribe Total</b>					<b>648,812</b>				
<b>Grand Total</b>					<b>16,908,513</b>				

## Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	4/11/2015		to		4/23/2015				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
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 Salmon Creek	Okanogan River
Colville Tribe	Wells Hatchery	ST	SU	2015	40,000	04-15-15	04-20-15	(Okanogan)	Okanogan River
<b>Colville Tribe Total</b>					<b>115,984</b>				
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2015	151,670	04-14-15	04-16-15	Meadow Creek - CLES	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2015	155,007	04-20-15	04-20-15	Newsome Creek	S Fk Clearwater
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2015	224,300	04-13-15	04-13-15	Redhouse (SFk ClearH2O R)	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2015	396,092	04-14-15	04-16-15	Meadow Creek - CLES	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	34,249	04-21-15	04-21-15	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	96,177	04-23-15	04-24-15	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	96,347	04-21-15	04-22-15	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2015	383,059	04-13-15	04-20-15	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2015	250,000	04-21-15	04-27-15	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2015	199,520	04-01-15	04-14-15	Pahsimeroi	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2015	631,100	04-01-15	04-14-15	Pahsimeroi Yankee Fk (Salmon R)	Pahsimeroi River Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2015	183,800	04-20-15	04-20-15		
<b>Idaho Dept. of Fish and Game Total</b>					<b>2,801,321</b>				
Nez Perce Tribe	Dworshak NFH	ST	SU	2015	252,000	04-17-15	04-21-15	Lolo Creek	Clearwater River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2015	250,000	04-15-15	04-15-15	Lostine Accim	Wallowa River
<b>Nez Perce Tribe Total</b>					<b>502,000</b>				
Oregon Dept. of Fish and	Lookingglass Hatchery	CH1	SP	2015	420,000	03-31-15	04-15-15	Imnaha Acclim	Imnaha River
Oregon Dept. of Fish and	Opal Springs Hatchery	ST	SU	2015	5,500	04-15-15	04-15-15	Crooked River	Deschutes River
Oregon Dept. of Fish and	Opal Springs Hatchery	ST	SU	2015	8,000	04-15-15	04-15-15	Crooked River	Deschutes River
Oregon Dept. of Fish and	Round Butte Hatchery	CH1	SP	2015	240,000	04-15-15	04-15-15	Deschutes River Thornhollow	Deschutes River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	ST	SU	2015	50,000	04-16-15	04-29-15	Acclim Pond	Umatilla River
Oregon Dept. of Fish and	Wizard Falls Hatchery	CH1	SP	2015	5,000	04-15-15	04-15-15	Wychus Creek	Deschutes River
Oregon Dept. of Fish and	Wizard Falls Hatchery	CH1	SP	2015	7,000	04-15-15	04-15-15	Metolius River	Deschutes River
Oregon Dept. of Fish and	Wizard Falls Hatchery	CH1	SP	2015	7,500	04-15-15	04-15-15	Crooked River	Deschutes River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>743,000</b>				
U.S. Fish and Wildlife Service	Carson NFH	CH1	SP	2015	1,179,871	04-15-15	04-15-15	Carson Hatchery	Wind River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2015	320,000	04-13-15	04-17-15	Clear Creek Redhouse (SFk ClearH2O R)	Clearwater River S Fk Clearwater River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2015	484,000	04-14-15	04-18-15	Dworshak	Clearwater River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2015	1,423,000	04-22-15	04-23-15	Entiat Hatchery	Entiat River
U.S. Fish and Wildlife Service	Entiat Hatchery	CH1	SU	2015	419,000	04-16-15	04-16-15	Entiat Hatchery	Entiat River
U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2015	1,140,000	04-18-15	04-18-15	Icicle Creek Little White	Wenatchee River Little White
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2015	1,000,000	04-16-15	04-16-15	Salmon Hatchery Spring Creek	Salmon River L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2015	6,500,000	04-13-15	04-13-15	Hatchery	
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>12,968,871</b>				
Umatilla Tribe	Cascade Hatchery	CO	UN	2015	574,000	04-15-15	04-15-15	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2015	106,100	04-02-15	04-15-15	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2015	146,316	03-19-15	04-15-15	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2015	50,000	04-16-15	04-20-15	Minthorn Acclimation Pond	Umatilla River

## Hatchery Releases Next Two Weeks

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>926,416</b>				
Washington Dept. of Fish and	Chelan Hatchery	CH1	SU	2015	146,000	04-15-15	04-15-15	Chelan Falls	Mid-Columbia
Washington Dept. of Fish and	Chelan Hatchery	CH1	SU	2015	148,000	04-15-15	04-15-15	Chelan Falls	Mid-Columbia
Washington Dept. of Fish and	Chelan Hatchery	CH1	SU	2015	148,000	04-15-15	04-15-15	Chelan Falls	Mid-Columbia
Washington Dept. of Fish and	Chelan Hatchery	CH1	SU	2015	150,000	04-15-15	04-15-15	Chelan Falls	Mid-Columbia
Washington Dept. of Fish and	Chiwawa Hatchery	CH1	SP	2015	42,000	04-20-15	05-20-15	Nason Creek	Wenatchee River
Washington Dept. of Fish and	Chiwawa Hatchery	CH1	SP	2015	144,000	04-15-15	04-30-15	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and	Lyons Ferry Hatchery	ST	SU	2015	48,000	04-20-15	04-20-15	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and	Lyons Ferry Hatchery	ST	SU	2015	50,000	04-20-15	04-20-15	Tucannon River	Tucannon River
Washington Dept. of Fish and	Lyons Ferry Hatchery	ST	SU	2015	85,000	04-20-15	05-31-15	Dayton Acclim	Touchet River
Washington Dept. of Fish and	Lyons Ferry Hatchery	ST	SU	2015	90,000	04-15-15	04-15-15	Walla Walla River	Walla Walla River
Washington Dept. of Fish and	Lyons Ferry Hatchery	ST	SU	2015	100,000	04-15-15	04-15-15	Lyons Ferry	Snake River
Washington Dept. of Fish and								Cottonwood	Grande Ronde
Wildlife	Lyons Ferry Hatchery	ST	SU	2015	205,000	04-05-15	04-20-15	Acclim Pond	River
Washington Dept. of Fish and	Methow Hatchery	CH1	SP	2015	30,000	04-20-15	04-30-15	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and	Methow Hatchery	CH1	SP	2015	145,000	04-15-15	04-25-15	Methow Hatchery	Methow River
Washington Dept. of Fish and								Ringold Springs	Mid-Columbia
Wildlife	Ringold Springs Hatchery	ST	SU	2015	180,000	04-10-15	04-20-15	Hatchery	River
Washington Dept. of Fish and								Similkameen	
Wildlife	Similkameen Hatchery	CH1	SU	2015	20,000	04-15-15	05-15-15	Acclim Pd	Okanogan River
Washington Dept. of Fish and	Tucannon Hatchery	ST	SU	2015	46,000	04-20-15	04-20-15	Tucannon River	Tucannon River
Washington Dept. of Fish and	Wells Hatchery	CH1	SU	2015	320,000	04-15-15	05-15-15	Wells Hatchery	Mid-Columbia
<b>Washington Dept. of Fish and</b>									
<b>Wildlife Total</b>					<b>2,097,000</b>				
Yakama Tribe	Cascade Hatchery	CO	UN	2015	92,760	04-15-15	04-15-15	Leavenworth	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2015	105,152	04-15-15	04-15-15	Leavenworth	Wenatchee 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	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	Yakima River
								Lost Creek Acclim	
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2015	100,210	04-15-15	06-01-15	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	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2015	88,999	04-20-15	04-20-15	Winthrop Hatchery	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2015	91,639	04-16-15	04-16-15	Leavenworth	Wenatchee 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>1,738,063</b>				
<b>Grand Total</b>					<b>21,892,655</b>				

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



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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
03/27/2015	135.3	0.0	135.8	0.0	142.3	0.0	137.3	2.4	144.7	0.0	149.4	0.0	150.0	0.0
03/28/2015	122.3	0.0	124.4	0.0	132.2	2.6	130.0	5.7	139.0	0.0	138.5	5.2	140.8	13.9
03/29/2015	141.1	0.0	139.9	0.0	146.7	0.0	146.1	10.8	155.0	0.0	159.6	0.4	161.3	15.4
03/30/2015	125.0	0.0	131.7	8.7	143.2	6.3	141.8	14.9	150.8	0.0	153.8	0.0	156.3	24.6
03/31/2015	116.0	0.0	111.4	11.4	121.8	0.2	118.1	0.4	128.8	0.0	135.4	0.0	143.4	2.2
04/01/2015	122.6	0.0	123.9	3.5	133.8	2.6	132.8	11.8	142.0	0.0	143.1	0.1	140.2	25.5
04/02/2015	124.2	0.0	123.6	7.2	133.9	0.5	134.7	1.3	144.3	0.0	148.6	1.3	153.2	7.1
04/03/2015	120.7	0.0	124.7	5.1	137.8	0.0	137.9	0.0	147.3	0.0	152.6	0.0	154.7	0.0
04/04/2015	121.6	0.0	126.4	3.9	135.6	0.0	132.9	0.0	142.0	0.0	155.4	0.0	157.4	0.0
04/05/2015	123.1	0.0	123.9	0.0	131.9	0.0	131.5	0.0	141.3	0.0	146.2	0.0	153.0	0.0
04/06/2015	118.7	0.0	123.4	0.0	130.5	0.0	129.7	0.0	138.3	0.0	147.7	0.0	145.0	0.0
04/07/2015	98.1	0.0	98.1	0.0	111.8	0.0	113.1	0.0	122.1	0.0	137.3	0.0	142.4	0.0
04/08/2015	107.7	0.0	112.4	0.0	119.2	0.0	114.3	0.0	119.1	0.0	119.6	0.0	118.2	0.0
04/09/2015	113.5	0.0	119.5	0.0	129.0	9.2	124.2	0.0	130.5	0.0	130.1	0.0	129.5	0.0

**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	
03/27/2015	10.9	1.3	---	13.0	59.8	0.0	51.8	0.0	57.4	0.0	57.8	0.0	0.0
03/28/2015	12.0	2.4	---	10.6	59.6	0.0	59.6	0.0	63.9	0.0	65.2	0.0	0.0
03/29/2015	12.1	2.4	---	11.5	63.1	0.0	57.4	0.0	58.6	0.0	62.2	0.0	0.0
03/30/2015	11.3	1.7	---	11.7	64.7	0.0	62.6	0.0	67.6	0.0	66.3	0.0	0.0
03/31/2015	9.6	0.0	---	10.8	59.6	0.0	59.6	0.0	64.3	0.0	64.0	0.0	0.0
04/01/2015	9.7	0.0	---	10.9	61.5	0.0	49.3	0.0	53.6	0.0	57.6	6.5	0.0
04/02/2015	9.6	0.0	---	10.9	69.3	0.0	80.3	2.6	84.1	0.0	89.6	15.0	0.0
04/03/2015	9.6	0.0	---	11.2	59.6	20.2	57.1	17.0	58.9	27.9	61.0	46.4	0.0
04/04/2015	6.0	0.0	---	11.4	56.2	20.2	55.1	16.5	56.9	27.9	59.9	47.4	0.0
04/05/2015	6.1	0.0	---	11.4	54.2	20.1	52.8	15.9	50.9	27.9	57.2	43.8	0.0
04/06/2015	6.0	0.0	---	11.9	50.7	20.2	47.7	14.4	49.2	28.0	50.1	40.0	0.0
04/07/2015	6.0	0.0	---	11.3	50.3	20.2	47.4	14.2	50.9	28.0	52.7	41.9	0.0
04/08/2015	6.0	0.0	---	11.4	48.2	20.2	47.7	14.3	49.0	28.0	50.0	38.9	0.0
04/09/2015	6.0	0.0	---	12.0	46.1	20.2	43.0	12.8	44.8	26.1	46.7	36.4	0.0

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
03/27/2015	208.1	0.0	216.0	0.0	211.9	0.0	241.0	1.2	108.7	118.7
03/28/2015	207.8	0.0	202.6	0.0	200.1	0.0	217.9	4.0	84.2	117.3
03/29/2015	232.7	22.7	220.7	0.0	221.6	0.0	230.7	1.2	94.4	122.7
03/30/2015	241.7	29.1	226.8	11.2	223.9	0.0	243.4	1.2	102.7	127.1
03/31/2015	229.9	18.8	226.6	11.2	220.5	21.4	239.2	1.3	99.9	125.6
04/01/2015	193.7	37.0	195.2	8.0	192.4	4.8	220.4	1.2	87.2	119.6
04/02/2015	242.6	85.8	234.7	43.2	218.6	38.5	224.3	1.2	89.3	121.4
04/03/2015	224.7	62.3	225.2	19.1	216.7	15.7	224.3	1.4	89.6	121.0
04/04/2015	224.5	61.4	224.1	0.0	223.2	0.0	232.1	1.4	93.1	125.2
04/05/2015	227.7	65.1	221.0	0.0	215.7	0.0	233.8	1.4	94.2	125.7
04/06/2015	216.8	58.9	213.0	0.0	207.9	0.0	232.6	1.4	93.8	125.0
04/07/2015	197.0	40.9	212.3	0.0	208.2	0.0	216.8	1.4	82.9	120.0
04/08/2015	190.9	38.3	194.5	0.0	192.8	0.0	208.4	1.4	76.4	118.2
04/09/2015	173.4	16.2	177.9	0.0	175.4	0.0	181.2	1.4	50.3	117.0

## 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>#</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>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>			
3/27	97.9	98.3	98.5	24	---	---	---	0	106.2	106.9	107.2	24	105.0	105.5	105.7	24	105.8	106.3	106.5	24
3/28	98.1	98.6	98.7	24	---	---	---	0	105.3	106.0	106.9	24	104.8	105.4	105.8	24	105.5	106.0	106.6	24
3/29	97.5	97.7	98.0	24	---	---	---	0	104.8	105.3	106.0	24	103.8	104.1	104.3	24	104.9	105.2	105.3	24
3/30	98.0	98.3	98.4	24	---	---	---	0	105.8	106.4	106.9	24	104.3	104.8	104.9	24	105.5	105.9	106.1	24
3/31	98.9	99.0	99.3	24	---	---	---	0	105.6	106.0	106.4	24	104.7	105.1	105.6	24	105.5	105.7	105.9	24
4/1	98.4	98.6	99.0	24	---	---	---	0	104.3	104.5	104.5	24	103.4	103.7	104.1	24	104.6	104.8	104.9	24
4/2	97.9	98.1	98.2	24	---	---	---	0	103.7	103.8	104.0	24	102.7	103.0	103.2	24	103.9	104.1	104.3	21
4/3	98.9	99.3	99.4	24	---	---	---	0	104.5	105.1	105.4	24	103.1	103.6	103.8	24	104.0	104.5	104.6	24
4/4	99.7	99.8	100.0	24	---	---	---	0	104.9	105.2	105.5	24	103.7	103.9	104.1	24	104.6	104.9	105.3	20
4/5	100.2	100.4	100.7	24	---	---	---	0	106.0	106.7	107.0	24	104.3	104.9	105.0	24	105.3	105.5	105.6	16
4/6	100.4	100.6	100.6	24	---	---	---	0	105.5	106.0	106.3	24	104.1	104.4	104.7	24	105.0	105.1	105.3	24
4/7	100.2	100.4	100.6	24	---	---	---	0	105.0	105.3	105.5	24	103.7	104.0	104.2	24	104.4	104.6	104.8	24
4/8	100.4	100.5	100.7	24	---	---	---	0	104.5	104.6	104.8	24	103.2	103.4	103.6	24	104.2	104.3	104.5	24
4/9	100.0	100.3	100.6	23	---	---	---	0	104.8	105.5	106.0	23	103.8	104.9	106.4	23	104.0	104.3	105.3	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>#</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>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>			
3/27	105.5	106.1	106.4	24	105.7	106.3	106.5	24	105.7	106.4	106.7	24	106.3	106.8	107.1	24	107.3	108.1	111.0	23
3/28	105.4	105.9	106.9	24	105.2	105.8	106.4	24	105.7	106.3	107.2	24	105.7	106.1	107.1	24	107.7	109.0	111.6	24
3/29	104.6	104.9	105.1	24	104.7	104.9	105.1	24	104.7	105.0	105.4	24	105.2	105.5	105.8	24	110.1	111.7	112.9	24
3/30	106.6	108.3	109.0	24	105.4	105.7	105.8	24	106.5	107.8	109.8	24	106.0	106.4	106.6	24	113.0	113.4	114.2	24
3/31	107.4	108.3	108.6	24	105.8	106.1	106.2	24	106.0	106.5	107.9	24	106.1	106.3	106.5	24	107.6	108.8	114.9	24
4/1	105.1	105.8	106.5	24	104.5	104.8	105.1	24	105.3	106.1	108.8	24	105.8	106.0	106.3	24	109.6	112.0	114.1	24
4/2	105.3	106.1	106.4	24	103.8	104.0	104.2	23	103.9	104.3	104.9	23	104.9	105.3	105.6	24	106.5	107.6	111.6	24
4/3	105.2	105.7	106.4	24	104.2	104.6	105.1	24	104.2	104.8	105.4	24	104.8	105.2	105.4	24	105.1	105.4	105.7	24
4/4	105.2	106.2	108.3	24	104.2	104.5	105.0	22	104.3	104.7	105.3	22	104.9	105.2	105.4	24	105.2	105.5	105.8	24
4/5	105.2	105.9	106.5	24	105.0	105.5	105.9	24	105.0	105.7	106.1	24	105.4	105.7	105.9	24	105.7	106.0	106.3	24
4/6	105.4	105.9	106.4	24	104.3	104.6	104.9	24	104.3	104.6	104.8	24	105.0	105.3	105.7	24	105.4	105.6	106.1	24
4/7	105.0	105.5	105.9	24	103.8	104.0	104.5	22	103.7	104.1	104.6	22	104.4	104.5	104.7	24	104.8	104.9	105.0	24
4/8	104.6	104.9	105.6	24	103.7	104.0	104.6	24	103.7	104.1	104.7	24	103.9	104.1	104.3	24	104.4	104.6	104.7	24
4/9	103.8	104.1	104.7	23	103.9	104.2	104.5	23	105.4	106.2	106.5	23	103.8	104.0	104.2	23	104.3	104.5	104.9	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>#</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>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>					
3/27	106.1	107.0	108.4	24	106.1	106.8	108.4	24	107.6	108.2	108.7	24	107.0	107.5	107.6	24	107.0	107.9	108.6	24
3/28	105.3	105.8	106.6	24	105.4	105.9	106.9	24	106.3	106.8	107.3	24	106.8	107.4	108.8	24	105.9	106.3	107.2	24
3/29	105.8	106.3	106.8	24	105.7	106.2	106.8	24	105.9	106.2	106.7	24	105.7	106.0	106.3	24	106.3	106.7	107.1	24
3/30	107.5	108.2	108.3	24	107.5	108.1	108.2	24	106.7	107.4	107.7	24	106.5	107.1	107.4	24	106.5	106.9	107.2	24
3/31	106.4	107.5	107.8	24	106.5	107.5	108.0	24	106.5	107.1	107.9	24	106.6	107.1	107.6	24	106.2	106.7	107.3	24
4/1	105.6	106.6	108.4	24	105.6	106.6	108.1	24	105.5	105.7	105.9	24	105.5	105.7	105.8	24	104.6	104.7	104.8	24
4/2	105.3	105.9	106.5	24	105.3	105.9	106.5	24	104.9	105.1	105.5	24	104.8	104.9	105.3	24	104.3	104.6	104.9	24
4/3	104.6	104.8	104.9	24	104.6	104.8	104.9	24	105.8	106.5	106.8	24	105.6	106.3	106.5	24	104.9	105.2	105.5	24
4/4	104.4	104.8	105.0	24	104.5	104.8	105.0	24	106.3	106.7	107.2	24	106.2	106.3	106.5	24	105.8	106.4	106.8	24
4/5	104.9	105.2	105.4	24	104.9	105.2	105.3	24	106.5	106.7	107.2	24	106.3	106.4	106.5	24	106.6	106.7	107.0	24
4/6	104.5	104.7	105.1	24	104.5	104.8	105.1	24	105.9	106.2	106.9	24	105.7	105.9	106.4	24	105.8	106.0	106.4	24
4/7	104.0	104.2	104.4	24	104.0	104.2	104.3	24	105.0	105.2	105.6	24	104.9	105.1	105.3	24	104.9	105.0	105.2	24
4/8	103.6	103.9	104.0	24	103.6	103.8	103.9	24	104.5	104.9	105.2	24	104.3	104.4	104.5	24	104.6	104.9	105.6	24
4/9	103.4	103.9	104.3	23	103.4	103.8	104.1	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>Clrwtr-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					
3/27	106.6	107.4	107.7	24	---	---	---	0	98.4	101.5	101.9	24	100.8	102.0	102.4	24	---	---	---	0
3/28	107.0	108.1	111.8	24	---	---	---	0	100.8	101.3	102.0	24	100.8	101.2	102.2	24	---	---	---	0
3/29	107.2	108.6	109.9	24	---	---	---	0	100.6	100.8	101.4	24	100.7	101.5	101.8	24	---	---	---	0
3/30	108.5	110.8	112.4	24	---	---	---	0	99.4	100.9	101.7	24	101.3	101.8	102.3	24	---	---	---	0
3/31	106.2	106.8	108.0	24	---	---	---	0	95.6	95.7	95.8	24	99.6	100.2	101.4	24	---	---	---	0
4/1	107.2	109.1	111.1	24	---	---	---	0	94.8	95.0	95.3	24	98.9	99.5	100.1	24	102.8	103.0	104.2	14
4/2	104.9	105.9	108.7	24	---	---	---	0	94.4	94.6	94.8	24	98.9	99.3	99.9	24	102.3	103.0	103.5	24
4/3	104.8	105.1	105.3	24	---	---	---	0	94.7	95.1	95.3	24	99.5	100.3	100.7	24	103.0	104.1	105.2	24
4/4	105.5	106.0	106.3	24	---	---	---	0	99.0	99.4	99.8	24	100.7	101.2	101.7	24	103.1	104.0	104.9	24
4/5	106.3	106.4	106.5	24	---	---	---	0	99.9	100.4	100.8	24	100.9	101.5	102.0	24	102.9	103.7	104.8	24
4/6	105.6	105.8	106.1	24	---	---	---	0	100.0	100.3	100.6	24	100.5	100.9	101.2	24	102.6	103.4	104.5	24
4/7	104.9	105.1	105.4	24	---	---	---	0	99.7	100.0	100.5	24	101.0	102.1	102.8	24	103.1	104.5	106.2	23
4/8	104.3	104.5	104.7	24	---	---	---	0	99.7	100.2	100.7	24	100.9	101.6	102.3	24	102.7	103.8	105.2	24
4/9	---	---	---	0	---	---	---	0	99.4	99.8	100.4	23	100.9	101.5	102.3	23	102.7	103.8	105.6	23

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

Date	<u>Clrwtr-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					
3/27	101.1	102.4	103.2	24	101.3	101.6	101.9	24	101.1	101.4	101.6	24	101.7	102.1	102.4	24	101.4	101.9	102.1	24
3/28	100.9	101.5	102.4	24	101.1	101.3	101.6	24	100.9	101.1	101.4	24	101.1	101.3	101.8	24	100.7	100.9	101.5	24
3/29	100.9	102.1	103.1	24	102.0	102.4	102.9	24	101.8	102.5	102.7	24	101.2	101.7	103.0	24	100.8	101.1	101.3	24
3/30	101.5	102.6	103.4	24	103.0	103.4	103.6	24	102.8	103.2	103.4	24	101.7	102.1	102.3	24	101.8	102.3	102.5	24
3/31	100.0	100.4	101.0	24	102.8	103.0	103.3	24	102.4	102.7	103.1	24	102.3	102.7	103.8	24	101.6	101.9	102.1	24
4/1	99.5	100.4	101.3	24	101.9	102.1	102.3	24	101.5	101.7	102.2	24	101.4	101.7	101.8	24	100.9	101.2	101.4	24
4/2	99.5	100.5	101.2	24	101.1	101.4	101.7	24	100.8	101.0	101.4	24	101.2	101.4	101.6	24	101.9	103.1	104.5	24
4/3	100.1	101.4	102.3	24	100.6	100.9	101.1	24	109.3	110.1	110.5	24	101.6	102.2	102.7	24	108.2	108.8	109.1	24
4/4	100.8	102.0	103.0	24	101.3	101.6	101.9	24	110.3	110.6	110.8	24	102.2	102.5	102.8	24	108.8	109.1	109.3	24
4/5	101.0	102.1	103.3	24	102.8	103.2	103.6	24	110.4	110.7	111.0	24	102.8	103.2	103.4	24	109.6	109.9	110.0	24
4/6	101.0	102.0	103.0	24	103.0	103.2	103.6	24	110.7	111.0	111.4	24	102.8	103.1	103.2	24	109.8	110.0	110.3	24
4/7	101.4	103.1	104.4	24	103.0	103.1	103.3	24	110.6	110.9	111.5	24	105.0	105.8	106.2	24	110.8	111.2	111.4	24
4/8	101.3	102.6	104.0	24	102.2	102.7	103.2	24	110.8	111.0	111.3	24	107.1	107.6	108.0	24	111.2	111.3	111.5	24
4/9	101.4	102.6	103.9	23	101.5	101.6	101.8	23	111.3	111.7	112.2	23	107.4	107.7	108.4	23	111.0	111.4	111.9	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					
3/27	---	---	---	0	101.3	101.6	102.2	24	103.5	103.8	103.9	24	103.4	103.9	104.1	24	---	---	---	0
3/28	---	---	---	0	100.5	100.6	101.2	24	102.6	102.9	103.6	24	102.2	102.5	103.3	24	---	---	---	0
3/29	---	---	---	0	100.8	101.1	101.2	24	102.0	102.1	102.3	24	101.9	102.2	102.6	24	---	---	---	0
3/30	102.3	102.3	102.5	12	101.7	102.1	102.2	24	102.3	102.6	102.7	24	102.4	103.0	105.4	24	---	---	---	0
3/31	102.1	102.4	102.7	24	101.8	102.0	102.4	24	102.3	102.6	102.9	24	102.0	102.3	102.4	24	---	---	---	0
4/1	101.3	101.4	101.6	24	101.0	101.2	102.2	24	101.4	101.6	101.7	24	103.8	106.7	108.1	24	---	---	---	0
4/2	100.6	100.8	101.1	24	100.3	100.5	100.8	24	100.7	100.9	101.2	24	107.1	107.2	107.5	24	---	---	---	0
4/3	100.9	101.3	101.5	24	116.4	117.2	117.8	24	101.2	101.4	101.5	24	114.5	115.3	115.6	24	---	---	---	0
4/4	101.6	101.8	102.3	24	118.1	119.3	129.5	24	101.6	101.8	102.0	24	115.1	115.6	116.1	24	---	---	---	0
4/5	104.2	105.1	105.6	24	121.2	125.1	129.8	24	105.1	107.2	108.5	24	114.4	114.7	114.9	24	---	---	---	0
4/6	107.0	107.2	107.4	24	117.5	117.7	118.4	24	110.3	111.3	112.1	24	113.6	114.2	114.5	24	---	---	---	0
4/7	107.7	107.9	108.2	24	117.7	118.1	118.9	24	113.0	113.9	114.5	24	113.8	114.7	115.0	24	---	---	---	0
4/8	107.4	107.6	107.9	24	117.6	117.8	118.2	24	112.9	113.2	113.8	24	113.0	113.3	113.7	24	---	---	---	0
4/9	107.2	107.6	108.0	23	117.1	118.2	118.8	23	112.8	113.2	114.0	23	113.2	114.2	114.9	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>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>	
3/27	106.9	107.7	109.0	24	106.2	107.0	107.3	24	105.1	105.3	105.9	24	104.6	104.9	105.2	24	105.1	105.3	105.6	24
3/28	105.5	105.9	106.7	24	104.9	105.3	106.3	24	103.4	103.7	104.4	24	103.0	103.2	103.8	24	103.5	103.9	104.6	24
3/29	105.3	105.5	105.7	24	110.1	111.4	111.9	24	103.7	104.3	104.5	24	103.6	104.2	104.3	24	103.8	104.2	104.5	24
3/30	106.1	106.6	107.0	24	110.7	111.5	112.6	24	105.4	106.2	106.8	24	108.4	111.2	111.6	24	105.1	105.8	106.4	24
3/31	106.5	107.0	107.3	24	108.9	109.6	110.6	24	105.4	105.9	106.8	24	108.3	110.5	110.8	24	105.3	106.1	106.6	24
4/1	104.6	104.9	105.2	24	109.9	111.5	113.0	24	104.0	104.2	104.5	24	105.8	108.3	111.0	24	103.9	104.2	104.5	24
4/2	103.9	104.1	104.6	24	115.2	116.5	116.7	24	103.5	103.8	103.9	24	111.0	114.3	114.4	24	103.5	103.8	104.5	24
4/3	104.1	104.4	104.8	24	113.1	113.2	113.7	24	104.4	104.8	104.9	24	108.9	112.6	114.5	24	106.3	106.6	107.1	24
4/4	105.8	106.6	107.9	24	113.2	113.4	113.7	24	104.8	105.0	105.3	24	103.8	104.1	104.4	24	104.9	105.3	105.7	24
4/5	107.5	107.6	107.7	24	113.6	113.7	113.9	24	105.6	106.0	106.3	24	104.5	104.9	105.2	24	105.2	105.3	105.5	24
4/6	107.2	107.4	107.5	24	112.9	113.7	113.9	24	105.6	105.8	106.4	24	104.7	105.1	105.6	24	104.9	105.2	105.3	24
4/7	106.9	107.0	107.2	24	111.2	111.4	111.6	24	108.0	109.0	110.0	24	107.2	108.2	108.7	24	106.1	106.4	106.8	24
4/8	105.7	106.0	106.4	24	110.3	110.6	110.9	24	107.7	108.1	108.8	24	107.0	107.4	108.1	24	106.5	106.7	107.3	24
4/9	106.2	106.6	107.1	23	108.3	109.2	109.9	23	107.0	107.4	108.0	23	106.6	107.2	107.5	23	106.1	106.6	107.0	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>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>	
3/27	105.2	105.4	105.7	24	105.7	106.1	106.6	24	106.5	106.9	107.5	24	106.7	107.6	108.7	24	110.8	111.2	111.4	24
3/28	103.8	104.2	104.7	24	103.9	104.3	105.4	24	105.1	105.4	106.0	24	105.3	105.9	106.2	24	111.6	113.1	116.9	24
3/29	103.9	104.3	104.5	24	104.1	104.8	105.2	24	105.2	105.9	106.3	24	105.5	106.6	107.3	24	110.0	110.6	111.4	24
3/30	105.1	105.6	106.0	24	105.0	105.7	106.1	24	105.8	106.6	107.0	24	106.3	107.3	108.2	24	110.3	111.0	111.5	24
3/31	106.9	107.5	108.1	24	104.3	104.7	105.4	24	105.2	105.7	106.2	24	105.1	105.5	106.2	24	110.2	110.8	111.1	24
4/1	104.6	105.0	105.5	24	103.7	104.4	105.1	24	104.3	104.9	105.2	24	104.0	104.4	104.8	24	109.8	110.4	110.8	24
4/2	106.2	108.1	108.7	24	104.7	105.2	105.5	24	105.6	105.9	106.2	24	105.3	107.0	107.8	24	110.4	110.6	110.9	24
4/3	108.0	108.4	108.7	24	104.5	105.0	106.5	24	105.5	105.9	106.3	24	105.3	105.8	106.2	24	110.5	111.0	111.5	24
4/4	105.5	105.9	106.8	24	108.1	108.8	109.4	24	108.9	109.8	110.1	24	107.2	109.4	110.5	24	112.2	112.6	113.4	24
4/5	105.4	105.6	105.7	24	107.4	107.9	108.2	24	108.5	109.0	109.3	24	109.0	109.6	110.6	24	112.6	112.9	113.2	24
4/6	105.2	105.3	105.4	24	105.3	105.6	106.0	24	106.3	106.6	106.9	24	106.9	107.4	107.8	24	111.5	111.8	112.2	24
4/7	106.1	106.4	106.5	24	105.1	105.4	105.6	24	106.2	106.5	106.7	24	105.7	106.2	106.7	24	111.1	111.4	111.7	24
4/8	106.5	106.7	106.8	24	104.5	104.7	104.9	24	105.7	106.0	106.4	24	105.2	105.7	106.3	24	110.0	110.8	111.5	24
4/9	106.3	106.7	107.0	23	105.2	105.9	106.5	23	105.9	105.9	106.4	10	106.4	107.8	108.9	23	111.4	111.8	112.5	23

## 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>											
	04/09/15	Chinook + Steelhead	35*	0	0			0	0	0	0
<b>Little Goose Dam</b>											
<b>Lower Monumental Dam</b>											
<b>McNary Dam</b>											
<b>Bonneville Dam</b>											
<b>Rock Island Dam</b>											

\* Due to low fish numbers, sample size criteria were not met. Therefore, % fish with GBT not estimated for this sampe da

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 4/10/2015 8:14

### 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/currentsmpsubmitdata.asp>

COMBINED YEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
03/27/2015	*	2,337	97	796	0	5,200	---	---	---	---	834	
03/28/2015	*	---	86	900	5	8,560	---	---	---	---	367	
03/29/2015	*	---	61	499	9	10,050	---	---	---	---	331	
03/30/2015	*	398	79	235	24	12,650	---	---	---	---	411	
03/31/2015	*	366	34	77	10	13,800	---	---	---	---	388	
04/01/2015	*	384	54	26	6	16,400	---	---	8	---	1,071	
04/02/2015	*	907	138	271	9	37,000	1,361	---	10	---	1,267	
04/03/2015	*	340	5,461	1,310	15	30,236	---	---	7	---	1,938	
04/04/2015	*	---	1,872	235	11	26,043	5,792	585	6	---	1,284	
04/05/2015	*	---	2,561	117	22	13,218	---	---	6	---	2,225	
04/06/2015	*	5,659	1,271	94	6	11,560	5,956	---	2	---	2,320	
04/07/2015	*	6,373	3,162	137	19	10,078	---	534	4	---	2,720	
04/08/2015	*	2,525	2,636	252	6	8,378	10,101	---	7	---	2,490	
04/09/2015	*	3,107	---	125	13	5,187	---	---	4	1,880	4,580	
04/10/2015	*	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>		<b>22,396</b>	<b>17,512</b>	<b>5,074</b>	<b>155</b>	<b>208,360</b>	<b>23,210</b>	<b>1,119</b>	<b>54</b>	<b>1,880</b>	<b>19,895</b>	<b>14,926</b>
<b># Days:</b>		<b>10</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>14</b>
<b>Average:</b>		<b>2,240</b>	<b>1,347</b>	<b>362</b>	<b>11</b>	<b>14,883</b>	<b>5,803</b>	<b>560</b>	<b>6</b>	<b>1,880</b>	<b>2,211</b>	<b>1,066</b>
<b>YTD</b>		<b>28,017</b>	<b>19,384</b>	<b>6,344</b>	<b>178</b>	<b>214,180</b>	<b>23,210</b>	<b>1,119</b>	<b>54</b>	<b>1,880</b>	<b>19,895</b>	<b>36,550</b>

COMBINED SUBYEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
03/27/2015	*	0	0	1	0	320	---	---	---	---	866	
03/28/2015	*	---	0	1	6	500	---	---	---	---	1,354	
03/29/2015	*	---	0	2	2	1,500	---	---	---	---	786	
03/30/2015	*	0	0	0	3	650	---	---	---	---	785	
03/31/2015	*	0	0	0	4	500	---	---	---	---	785	
04/01/2015	*	1	0	0	2	600	---	---	168	---	0	
04/02/2015	*	0	0	0	2	0	20	---	208	---	0	
04/03/2015	*	0	0	0	0	0	---	---	113	---	0	
04/04/2015	*	---	2	0	0	0	0	93	---	---	0	
04/05/2015	*	---	0	1	1	315	---	---	229	---	0	
04/06/2015	*	0	6	0	4	326	0	---	169	---	0	
04/07/2015	*	0	7	0	2	0	---	0	124	---	0	
04/08/2015	*	0	1	1	0	171	0	---	147	---	0	
04/09/2015	*	0	---	0	3	89	---	---	261	539	0	
04/10/2015	*	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>		<b>1</b>	<b>16</b>	<b>6</b>	<b>29</b>	<b>4,971</b>	<b>20</b>	<b>0</b>	<b>1,512</b>	<b>539</b>	<b>0</b>	<b>8,268</b>
<b># Days:</b>		<b>10</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>355</b>	<b>5</b>	<b>0</b>	<b>168</b>	<b>539</b>	<b>0</b>	<b>591</b>
<b>YTD</b>		<b>1</b>	<b>18</b>	<b>40</b>	<b>262</b>	<b>4,991</b>	<b>20</b>	<b>0</b>	<b>1,512</b>	<b>539</b>	<b>0</b>	<b>32,646</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)	
03/27/2015 *	0	0	0	0	0	---	---	---	---	---	---	16
03/28/2015 *	---	0	0	0	0	---	---	---	---	---	---	115
03/29/2015 *	---	0	0	0	0	---	---	---	---	---	---	197
03/30/2015	0	0	0	0	0	---	---	---	---	---	---	137
03/31/2015 *	0	0	0	0	0	---	---	---	---	---	---	185
04/01/2015 *	0	0	0	0	0	---	---	0	---	38	---	420
04/02/2015 *	0	0	0	0	0	---	---	0	---	8	---	646
04/03/2015 *	0	0	0	0	0	---	---	1	---	36	---	1,161
04/04/2015 *	---	0	0	0	0	---	0	2	---	56	---	851
04/05/2015 *	---	0	0	0	0	---	---	0	---	140	---	1,375
04/06/2015 *	0	0	0	0	0	---	---	0	---	360	---	2,133
04/07/2015 *	0	0	0	0	0	---	0	2	---	300	---	3,432
04/08/2015 *	0	0	0	0	0	29	---	1	---	340	---	4,000
04/09/2015 *	0	---	0	0	0	---	---	0	365	280	---	5,044
04/10/2015	---	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>6</b>	<b>365</b>	<b>1,558</b>	<b>19,712</b>	
<b># Days:</b>	<b>10</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>14</b>	
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>365</b>	<b>173</b>	<b>1,408</b>	
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>6</b>	<b>365</b>	<b>1,558</b>	<b>21,179</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)	
03/27/2015 *	0	2	0	1	380	---	---	---	---	---	---	16
03/28/2015 *	---	3	0	11	480	---	---	---	---	---	---	48
03/29/2015 *	---	8	0	12	600	---	---	---	---	---	---	9
03/30/2015	0	11	1	74	1,650	---	---	---	---	---	---	9
03/31/2015 *	0	4	75	9	2,300	---	---	---	---	---	---	0
04/01/2015 *	2	10	38	533	4,300	---	---	1	---	139	---	47
04/02/2015 *	7	12	43	178	20,700	942	---	6	---	185	---	35
04/03/2015 *	1	539	72	60	13,339	---	---	0	---	358	---	63
04/04/2015 *	---	2,213	6	93	27,254	3,270	453	1	---	247	---	63
04/05/2015 *	---	2,825	17	49	4,091	---	---	6	---	230	---	117
04/06/2015 *	24	2,631	2	12	3,908	5,352	---	1	---	360	---	219
04/07/2015 *	12	2,002	5	26	4,367	---	704	0	---	420	---	434
04/08/2015 *	12	852	35	19	2,736	7,725	---	0	---	510	---	437
04/09/2015 *	14	---	11	41	3,309	---	---	3	305	350	---	358
04/10/2015	---	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>72</b>	<b>11,112</b>	<b>305</b>	<b>1,118</b>	<b>89,414</b>	<b>17,289</b>	<b>1,157</b>	<b>18</b>	<b>305</b>	<b>2,799</b>	<b>1,855</b>	
<b># Days:</b>	<b>10</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>14</b>	
<b>Average:</b>	<b>7</b>	<b>855</b>	<b>22</b>	<b>80</b>	<b>6,387</b>	<b>4,322</b>	<b>579</b>	<b>2</b>	<b>305</b>	<b>311</b>	<b>133</b>	
<b>YTD</b>	<b>77</b>	<b>11,136</b>	<b>305</b>	<b>1,130</b>	<b>89,714</b>	<b>17,289</b>	<b>1,157</b>	<b>18</b>	<b>305</b>	<b>2,799</b>	<b>1,993</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)
03/27/2015 *	0	0	0	0	60	---	---	---	---	---	0
03/28/2015 *	---	0	0	0	0	---	---	---	---	---	0
03/29/2015 *	---	0	0	0	0	---	---	---	---	---	0
03/30/2015	0	0	0	0	0	---	---	---	---	---	9
03/31/2015 *	0	0	0	0	0	---	---	---	---	---	9
04/01/2015 *	0	0	0	0	0	---	---	15	---	4	47
04/02/2015 *	0	0	0	0	0	40	---	15	---	0	26
04/03/2015 *	0	0	0	0	0	---	---	22	---	5	72
04/04/2015 *	---	0	0	0	0	0	19	19	---	0	134
04/05/2015 *	---	0	0	0	0	---	---	27	---	10	216
04/06/2015 *	0	0	0	0	0	0	---	13	---	8	121
04/07/2015 *	0	0	0	0	0	---	0	11	---	0	107
04/08/2015 *	0	0	0	0	0	0	---	9	---	20	70
04/09/2015 *	0	---	0	0	89	---	---	12	30	0	71
04/10/2015	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>40</b>	<b>19</b>	<b>143</b>	<b>30</b>	<b>47</b>	<b>882</b>
<b># Days:</b>	<b>10</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>16</b>	<b>30</b>	<b>5</b>	<b>63</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>199</b>	<b>40</b>	<b>19</b>	<b>143</b>	<b>30</b>	<b>47</b>	<b>905</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)
03/27/2015 *	0	0	0	0	5	---	---	---	---	---	24
03/28/2015 *	---	0	0	0	2	---	---	---	---	---	30
03/29/2015 *	---	0	0	0	2	---	---	---	---	---	45
03/30/2015	0	0	0	0	0	---	---	---	---	---	55
03/31/2015 *	0	0	0	0	0	---	---	---	---	---	60
04/01/2015 *	0	0	0	0	0	---	---	0	---	216	50
04/02/2015 *	0	0	0	0	0	0	---	1	---	180	40
04/03/2015 *	0	0	0	0	0	---	---	0	---	80	45
04/04/2015 *	---	0	0	0	0	3,030	130	0	---	130	70
04/05/2015 *	---	0	0	0	1	---	---	1	---	140	20
04/06/2015 *	0	0	0	0	0	0	---	0	---	80	38
04/07/2015 *	0	0	0	0	0	---	0	0	---	110	10
04/08/2015 *	0	0	0	0	0	0	---	0	---	120	20
04/09/2015 *	0	---	0	0	0	---	---	2	20	110	44
04/10/2015	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>3,030</b>	<b>130</b>	<b>4</b>	<b>20</b>	<b>1,166</b>	<b>551</b>
<b># Days:</b>	<b>10</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>758</b>	<b>65</b>	<b>0</b>	<b>20</b>	<b>130</b>	<b>39</b>
<b>YTD</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>3,030</b>	<b>130</b>	<b>4</b>	<b>20</b>	<b>1,166</b>	<b>2,394</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 =  $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

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:

4/10/15 8:12 AM

		03/27/15	TO	04/10/15			
Site	Data	Species					Grand Total
		CH0	CH1	CO	ST	SO	
<b>LGR</b>	Sum of NumberCollected	4,620	177,360		71,460	110	253,550
	Sum of NumberBarged	0	0		0	0	0
	Sum of NumberBypassed	4,611	177,347		71,457	110	253,525
	Sum of Numbertrucked	0	0		0	0	0
	Sum of SampleMorts	9	12		3	0	24
	Sum of FacilityMorts	0	1		0	0	1
	Sum of ResearchMorts	0	0		0	0	0
	Sum of TotalProjectMorts	9	13		3	0	25
<b>LGS</b>	Sum of NumberCollected	20	16,581	20	12,327	40	28,988
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	20	16,577	20	12,320	40	28,977
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	3	0	0	0	3
	Sum of FacilityMorts	0	1	0	7	0	8
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	4	0	7	0	11
<b>LMN</b>	Sum of NumberCollected		530		530	10	1,070
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		519		530	10	1,059
	Sum of Numbertrucked		0		0	0	0
	Sum of SampleMorts		0		0	0	0
	Sum of FacilityMorts		1		0	0	1
	Sum of ResearchMorts		0		0	0	0
	Sum of TotalProjectMorts		1		0	0	1
<b>Total Sum of NumberCollected</b>		4,640	194,471	20	84,317	160	283,608
<b>Total Sum of NumberBarged</b>		0	0	0	0	0	0
<b>Total Sum of NumberBypassed</b>		4,631	194,443	20	84,307	160	283,561
<b>Total Sum of Numbertrucked</b>		0	0	0	0	0	0
<b>Total Sum of SampleMorts</b>		9	15	0	3	0	27
<b>Total Sum of FacilityMorts</b>		0	3	0	7	0	10
<b>Total Sum of ResearchMorts</b>		0	0	0	0	0	0
<b>Total Sum of TotalProjectMorts</b>		9	18	0	10	0	37

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

4/10/15 8:12 AM

TO: 04/10/15

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	4,640	183,180		160	71,760	259,740
	Sum of NumberBarged	0	0		0	0	0
	Sum of NumberBypassed	4,630	183,160		160	71,757	259,707
	Sum of NumberTrucked	0	0		0	0	0
	Sum of SampleMorts	10	19		0	3	32
	Sum of FacilityMorts	0	1		0	0	1
	Sum of ResearchMorts	0	0		0	0	0
	Sum of TotalProjectMorts	10	20		0	3	33
<b>LGS</b>	Sum of NumberCollected	20	16,581	20	40	12,327	28,988
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	20	16,577	20	40	12,320	28,977
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	3	0	0	0	3
	Sum of FacilityMorts	0	1	0	0	7	8
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	4	0	0	7	11
<b>LMN</b>	Sum of NumberCollected		530		10	530	1,070
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		519		10	530	1,059
	Sum of NumberTrucked		0		0	0	0
	Sum of SampleMorts		0		0	0	0
	Sum of FacilityMorts		1		0	0	1
	Sum of ResearchMorts		0		0	0	0
	Sum of TotalProjectMorts		1		0	0	1
<b>Total Sum of NumberCollected</b>		<b>4,660</b>	<b>200,291</b>	<b>20</b>	<b>210</b>	<b>84,617</b>	<b>289,798</b>
<b>Total Sum of NumberBarged</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Sum of NumberBypassed</b>		<b>4,650</b>	<b>200,256</b>	<b>20</b>	<b>210</b>	<b>84,607</b>	<b>289,743</b>
<b>Total Sum of NumberTrucked</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Sum of SampleMorts</b>		<b>10</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>35</b>
<b>Total Sum of FacilityMorts</b>		<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>10</b>
<b>Total Sum of ResearchMorts</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Sum of TotalProjectMorts</b>		<b>10</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>45</b>

**Cumulative Adult Passage at Mainstem Dams Through: 04/09**

DAM	ENDDATE	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	04/08	3875	11	1717	16	731	0	0	0	0	0	0	0	0	0	0	0	0	0
TDA	04/08	954	15	544	2	254	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	04/08	668	5	310	15	135	5	0	0	0	0	0	0	0	0	0	0	0	0
MCN	04/08	173	1	42	1	42	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	04/08	60	1	9	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	04/08	56	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	04/08	43	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LGR	04/08	26	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WAN		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/07	623	0	24	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0

DAM	ENDDATE	Coho						Sockeye			Steelhead						Lamprey		
		2015		2014		10-Yr Avg.		2015	2014	10-Yr Avg.	10-Yr	Wild	Wild	10-Yr	2015	2014	10-Yr		
		Adult	Jack	Adult	Jack	Adult	Jack	2015	2014	Avg.	2015	2014	Avg.	2015	2014	Avg.	2015	2014	Avg.
BON	04/08	0	0	5	-2	0	0	1	3	0	3444	2929	2535	1877	939	731	0	1	0
TDA	04/08	0	0	0	0	0	0	0	0	0	86	100	1622	52	37	614	0	0	0
JDA	04/08	0	0	0	1	0	1	0	0	0	155	2490	3590	119	930	1040	0	-1	-1
MCN	04/08	0	0	0	0	1	0	0	0	0	175	159	4116	91	94	1204	0	1	0
IHR	04/08	0	0	0	0	0	0	0	0	0	424	795	3437	258	318	902	1	0	0
LMN	04/08	0	0	0	0	0	0	0	0	0	2370	3986	4543	1094	909	1053	0	0	0
LGS	04/08	0	0	0	0	0	0	0	0	0	585	444	918	355	293	362	0	0	0
LGR	04/08	0	0	0	0	0	0	0	0	0	8040	6163	6212	3570	2612	1895	0	0	0
PRD		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WAN		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/07	1	0	9	0	0	0	0	0	0	3476	4008	4580	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.