

# Fish Passage Center Weekly Report #06 - 11

May 19, 2006

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#### **Summary of Events:**

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 3% and 46 % of average at individual sub-basins over May. Precipitation above The Dalles over May has been 29% of average. Over the entire water year, precipitation has been average or above average at all list locations.

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

	Water Yea May 1		Water Year 2006 October 1, 2005 to May 15			
Location	Observed	%	Observed	%		
	(inches)	Average	(inches)	Average		
Columbia Above	0.38	36	18.25	107		
Coulee						
Snake River	0.20	22	15.95	126		
Above Ice Harbor						
Columbia Above	0.27	29	18.56	110		
The Dalles						
Kootenai	0.50	46	19.51	112		
Clark Fork	0.16	17	13.40	119		
Flathead	0.33	28	17.42	117		
Pend	0.39	31	25.90	109		
Oreille/Spokane						
Central	0.01	3	8.81	127		
Washington						
Snake River Plain	0.14	20	9.90	126		
Salmon/Boise/	0.18	20	20.90	137		
Payette						
Clearwater	0.30	21	24.13	106		
SW Washington	0.23	13	60.66	100		
Cascades/Cowlitz						
Willamette	0.33	19	56.02	108		
Valley						

Table 2 displays the April Final, May Final, and May Mid Month (May 18, 2006) runoff volume forecasts for multiple reservoirs. The May Mid Month forecast at The Dalles between January and July is 109000 Kaf (102% of average).

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

		pril inal		1ay nal		Lay Vibnth
Location	% Average (1971- 2000)	Probable Runoff Volume (Kat)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	100	107000	103	110000	102	109000
Grand Coulee (Jan-July)	96	60600	98	61900	98	61600
Libby Res. Inflow, MT (Jan-July)	96	6030	98	6160	96	6070
Hungry Horse Res. Inflow, MT (Jan-July)	99	2210	101	2250	102	2270
Lower Granite Res. Inflow (Apr- July)	118	25500	126	27100	127	27400
Brownlee Res. Inflow (Apr-July)	133	8380	143	9020	152	9590
Dworshak Res. Inflow (Apr-July)	96	2540	101	2670	102	2690

Grand Coulee Reservoir is at 1238.1 feet (5-18-06) and has refilled 7 feet over the last week. Inflow has ranged from 137 to 197 Kcfs, while outflow has ranged from 89 to 134 Kcfs.

The Libby Reservoir is currently at elevation 2431.04 feet (5-18-06) and refilled 6.44 feet last week. Outflows have increased from 4 to 24.52 Kcfs over the last week for sturgeon flow operations. Inflow over the same period ranged from 20 to 62.7 Kcfs.

Hungry Horse is currently at an elevation of 3524.49 feet (5-18-06) and refilled 7.12 feet last week. Outflows at Hungry Horse have decreased from 6.9 to 3.14 Kcfs over the last week, while inflow increased from 6.9 to 28.55 Kcfs.

Dworshak is currently at an elevation of 1557.81 feet (5-18-06) and refilled 11.24 feet last week; outflows at Dworshak have been between 4.5 and 9.7 Kcfs over the last week. Inflows increased from 12.7 to 26.6 Kcfs over the same period.

The Brownlee Reservoir was at an elevation of 2058.36 feet on May 18th, 2006 (refilled 13.53 feet last week). Outflows at Hells Canyon have been as high as 40.58 Kcfs over the last week.

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite) and on April 10th in the mid (Priest Rapids) and lower (McNary) Columbia River. According to the Water Supply Forecast (April Final), the flow objectives this spring will be 100 Kcfs at Lower Granite, 260 Kcfs at McNary, and 135 Kcfs at Priest Rapids. Flows at Lower Granite have averaged 125.5 Kcfs over the season and 125.2 Kcfs last week; flows at McNary have averaged 313.4 Kcfs over the season and 291.7 Kcfs last week; and flows at Priest Rapids have averaged 169.5 Kcfs over the season and 155.3 Kcfs last week.

**Spill:** No spill occurred at Dworshak Dam over the past week, as outflow was decreased to less than powerhouse capacity on May 1. Spill operations for fish passage at the Lower Snake River projects began on April 3, 2006 in accordance with the December 29, 2005 District Court Order and Opinion. Spill at Lower Granite, Little Goose,

Lower Monumental and Ice Harbor dams averaged 33%, 29%, 23% and 44% of average daily flow over the past week, respectively. Spill at Lower Granite is exceeding the objective of the Court Order of 20 Kcfs for 24 hours due to limitations of powerhouse capacity. Spill at Little Goose Dam is less than the Court's Order of 30% of instantaneous flow for 24 hours on average, and continues to be limited because total dissolved gas in the Lower Monumental forebay exceeded the waiver criteria. However, as spill increased due to higher flows the percentage of spill at Little Goose Dam the percentage exceeded the Court Order on 5-18-06. Spill at Lower Monumental Dam is also on average less than the 40 Kcfs for 24 hours specified in the Order and was restricted for TDG exceedences in Ice Harbor forebay. It too increased late in the week to exceed the Court Order due to higher flows. Ice Harbor Dam spill has been meeting the Court Order.

Spill for fish passage began on April 10 at Lower Columbia River projects. Spill for fish passage McNary, John Day, The Dalles and Bonneville dams was 44%, 36%, 38% and 29% of average daily flow, respectively. McNary Dam has been meeting the requirements of the Court's Order. John Day Dam is being operated with a limited hydraulic capacity. Spill at The Dalles Dam is less than called for in the Court's Order. Spill at Bonneville Dam has been below the Court Order over most of the past week to address TDG levels downstream.

Recent higher flows have resulted in total dissolved gas levels that have exceeded the TDG waiver limits at many locations over the past week. Biological monitoring has not shown that criteria levels have been exceeded. However, a few more fish have been showing minor (Rank 1, or less than 5% of an unpaired fin affected) signs of GBT at the projects sampled.

**Smolt Monitoring:** Relatively large numbers of migrant yearling Chinook and steelhead continue to be collected at Smolt Monitoring Dams in the Snake River and Lower Columbia River. The indices for yearling Chinook and steelhead decreased at Snake River dams. Sockeye, coho and

subyearling Chinook indices increased at most SMP dams over the past week. With increasing flows in the Snake River daily indices for yearling Chinook and steelhead could move upward again over the next several days in response.

Due to high flows the Salmon River Trap was pulled out of the main channel and sampling operations ceased May 15. The hot weather this past week has triggered the snowmelt freshet from the Salmon River basin, as well as other areas of the Snake River Basin. Sampling at the Imnaha Trap was also curtailed on May 14 due to high flows and debris, while the Lewiston Trap continued to collect fish up through May 17. Flows on May 19 were 125,000 Kcfs in the Snake River, as measured at the Anatone USGS gage. At the Grande Ronde Trap yearling Chinook and steelhead numbers increased in the sample this past week as flows increased. Yearling Chinook catch averaged 200 per day compared to around 90 per day last week, while steelhead capture increased from 120 fish per day last week to 210 this week.

At Lower Granite Dam, yearling Chinook indices averaged roughly 70,000 per day over the past week compared to 170,000 per day the previous week. Steelhead indices averaged 90,000 per day this week compared to 125,000 per day last week. Sockeye, coho and subyearling Chinook indices all increased over the past week at Lower Granite Dam. Little Goose and Lower Monumental dams show similar trends in their passage indices over the past week with decreasing Chinook and steelhead numbers, but increasing sockeye, coho and subyearling Chinook indices.

At Rock Island Dam and the Lower Columbia SMP sites, indices for all spring migrants continued to increase over the past two weeks, with the exception of steelhead indices which were down at all Lower Columbia sites. Subyearling Chinook indices also declined at Lower Columbia sites over the past week, especially at Bonneville Dam, where the decrease in part, reflects the large hatchery release May 6 from Spring Creek NFH, that affected indices two weeks ago.

Adult Fish Passage: Adult Chinook counts at Bonneville Dam have decreased over the past week, from 5649 at the beginning of the week to 1935 adult spring Chinook yesterday. Adult spring Chinook counts to-date this year (88,676) have surpassed the 2005 average of 60,322 but are still only 64% of the ten-year average. Spring Chinook jack counts have also increased at Bonneville Dam last week and are nearing the number observed at this project to-date in 2005. Daily adult steelhead passage numbers at Bonneville Dam have ranged between 47 and 106 over the last week.

Counts at the upriver projects have increased considerably over the past week. A total of 12,761 spring Chinook were observed at Ice Harbor Dam, representing 80% and 31% of the 2005 count and ten year average, respectively. A total of 3,149 adult spring Chinook have been detected at Priest Rapids Dam. This is 41% and 24% of the 2005 and ten year average count todate, respectively.

Hatchery Releases: Snake River- Releases of yearling Chinook and steelhead are complete for 2006 migration year. Subyearling Chinook releases will be ongoing for the next month or more. A release of 280,000 from the North Lapwai Valley Hatchery were released yesterday, five days early, due to rising temperatures at the facility.

Mid-Columbia - Releases of upper Mid-Columbia spring Chinook and steelhead are mostly in-river with steelhead releases either ongoing (Yakima River) or completed (Wenatchee River) during the past week. The large yearling summer chinook releases from Dryden, Similkameen, and Carlton ponds as well as Wells H should be in-river. Acclimation releases of coho from Leavenworth NFH were scheduled to be completed May 15 at sites in the Wenatchee River.

Lower Columbia - In the Lower Columbia River, releases of yearling Chinook and steelhead are basically completed for 2006, while Spring Creek NFH release of 3.3 million subyearling fall Chinook took place on May 8. No releases are scheduled for the next two weeks.

Daily Average Flow and Spill (in kcfs) at Mid-Columbia Proje
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	Gr	and	Chi	ef		. `	Ŕ	cky	Ro	ck			Pri	iest
	Co	ulee	Jose	ph	We	ells	Re	ach	Isla	nd	Wan	apum	Ra	pids
Date	Flow	Spill												
05/05/06	153.0	0.0	160.2	0.0	171.0	27.4	164.9	43.1	165.8	36.2	170.2	38.5	155.8	12.2
05/06/06	147.4	0.0	152.1	0.0	167.9	23.0	169.6	40.3	174.1	31.7	195.1	68.7	182.2	32.8
05/07/06	136.4	0.0	135.8	0.0	146.0	9.4	144.2	36.1	150.2	29.7	168.1	32.6	172.7	14.3
05/08/06	145.9	0.0	156.2	0.0	170.7	29.2	164.3	10.9	167.0	31.5	170.3	46.6	155.8	17.9
05/09/06	137.8	0.0	135.1	0.0	151.6	22.9	152.5	2.1	157.6	29.1	172.0	41.7	169.0	27.4
05/10/06	127.9	0.0	128.6	0.0	140.2	10.5	136.7	0.0	147.3	26.2	161.8	28.8	157.5	13.1
05/11/06	145.6	0.0	145.6	0.0	157.7	13.6	148.1	9.2	149.7	26.1	153.3	20.2	149.4	12.4
05/12/06	134.4	0.0	142.6	0.0	161.1	10.0	162.0	36.4	167.4	28.1	188.8	51.7	176.1	16.2
05/13/06	121.1	0.0	124.7	0.0	141.2	10.0	150.7	33.1	156.1	28.1	161.7	30.8	163.9	12.9
05/14/06	89.2	0.0	94.9	0.0	103.8	19.9	97.9	24.2	106.2	20.4	158.1	30.8	161.4	11.0
05/15/06	134.1	0.0	131.4	0.0	149.2	11.6	145.3	34.0	147.3	29.2	132.8	14.0	130.8	10.2
05/16/06	116.8	0.0	119.5	0.0	132.3	20.4	133.9	0.1	142.2	28.5	129.5	9.4	122.7	11.0
05/17/06	105.5	0.0	114.0	0.0	149.0	29.2	141.5	0.0	155.2	28.0	158.9	34.5	140.4	22.0
05/18/06	119.0	0.0	121.5	0.0	172.7	70.6	170.7	41.0	184.9	38.9	204.7	74.8	192.1	41.0

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

				Hells	Lov	wer	Li	ttle	Lov	ver	ŀ	ce
	Dwo	rshak	Brownlee	Canyon	Gra	nite	Go	ose	Monum	ental	Hai	rbor
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/05/06	4.6	0.0	60.9	55.5	117.4	35.9	115.0	23.2	118.1	22.1	117.0	35.5
05/06/06	4.6	0.0	58.9	55.5	119.9	38.4	116.2	22.1	118.2	21.0	118.7	35.3
05/07/06	4.6	0.0	58.2	55.4	121.0	39.6	118.5	22.0	122.5	20.6	125.0	54.2
05/08/06	7.3	0.0	58.2	52.4	124.4	40.5	121.9	25.1	122.5	22.3	126.1	67.9
05/09/06	7.9	0.0	54.8	47.0	116.3	31.8	113.3	30.2	115.0	25.1	115.3	66.0
05/10/06	7.9	0.0	52.0	42.0	107.6	24.7	107.1	31.4	108.9	27.7	114.2	67.7
05/11/06	7.7	0.0	49.2	42.0	99.8	20.3	97.1	29.3	97.6	26.0	98.3	42.5
05/12/06	4.5	0.0	46.8	40.6	101.4	20.3	100.9	30.3	102.5	23.4	102.4	30.6
05/13/06	4.5	0.0	46.2	40.0	100.1	20.4	96.2	28.2	96.9	22.6	99.5	51.1
05/14/06	4.5	0.0	44.5	40.0	105.4	24.9	102.6	29.4	105.5	21.5	107.7	67.8
05/15/06	7.2	0.0	44.3	36.9	120.4	40.4	117.9	29.4	118.2	20.2	119.4	48.0
05/16/06	9.4	0.0	44.5	31.4	131.6	52.5	129.0	38.2	130.0	25.1	130.1	39.6
05/17/06	9.7	0.0	45.3	31.2	151.5	66.7	149.7	40.3	149.7	38.2	152.1	66.7
05/18/06	4.5	0.0			165.7	80.7	168.9	56.2	169.4	54.6	172.9	88.9

Daily Average Flow and Sp	oill (in kcfs) at Lower	Columbia Projects
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				)ay	The Da			Во		
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
05/05/06	298.4	120.3	304.3	106.9	299.7	117.7	316.0	99.4	79.7	125.4
05/06/06	303.2	125.7	270.7	91.2	262.9	103.5	296.6	95.0	74.3	115.8
05/07/06	320.4	146.1	323.0	108.8	316.0	119.6	317.3	95.6	82.7	127.6
05/08/06	307.5	131.4	314.9	118.6	307.9	119.6	318.8	96.3	83.6	127.4
05/09/06	296.3	117.6	282.9	99.0	279.8	110.9	320.8	92.6	85.1	131.6
05/10/06	308.5	139.7	298.0	109.4	294.6	115.4	315.2	94.6	82.2	127.0
05/11/06	269.6	99.4	266.2	109.9	255.6	100.8	296.7	90.5	76.2	118.5
05/12/06	276.7	127.2	288.3	118.0	279.1	106.5	284.2	85.1	68.9	118.7
05/13/06	294.1	144.4	295.7	116.2	295.1	115.8	302.7	84.4	81.2	125.6
05/14/06	271.1	121.5	255.1	100.1	246.5	98.0	274.0	84.2	66.9	111.3
05/15/06	274.3	108.5	264.6	84.8	261.7	103.5	291.5	82.3	78.2	119.5
05/16/06	281.2	109.6	266.4	79.8	272.0	99.8	276.1	79.6	69.6	115.4
05/17/06	292.4	118.6	303.5	107.4	300.0	100.8	301.6	77.4	82.9	129.8
05/18/06	352.4	174.4	345.8	133.1	343.3	129.5	345.8	120.9	83.1	130.3

### HATCHERY RELEASE LAST TWO WEEKS

Hatchery Release Summary

		ry Keleas		•					
	From:	5/5/2006	6	to	05/18/06				
Agency National Marine Fisheries Service National Marine Fisheries Service Total	<b>Hatchery</b> Lyons Ferry Hatchery	Species CH0	<b>Race</b> FA	MigYr 2006		05-15-06	<b>RelEnd</b> 06-02-06	RelSite Cpt John Acclim Pond	RelRiver Snake River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2006	100,000	05-02-06	05-12-06	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife Oregon Dept. of Fish and Wildlife Oregon Dept. of Fish and Wildlife Total	Irrigon Hatchery Complex Umatilla Hatchery	ST CH0	SU FA	2006 2006		05-08-06		Wallowa Acclim Pond Hells Canyon Dam	Wallowa River Snake River
U.S. Fish and Wildlife Service U.S. Fish and Wildlife Service	Hagerman NFH Hagerman NFH	ST ST	SU SU	2006 2006				East Fk Salmon River Yankee Fk (Salmon R)	Salmon River (ID) Salmon River (ID)
U.S. Fish and Wildlife Service Total					340,000				
Umatilla Tribe Umatilla Tribe	Umatilla Hatchery Umatilla Hatchery	ST ST	SU SU	2006 2006				Bonifer Acclim Pond Pendelton Acclim Pond	Umatilla River Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2006	45,000	04-30-06	05-15-06	Thornhollow Acclim	Umatilla River
Umatilla Tribe Total					135,000				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2006			05-11-06	Hood River	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2006				W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006				Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006				Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006				W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006				W Fk Hood River	Hood River
Warm Springs Tribe Total	Round Butto Hatoricry	0111	Oi	2000	71,800		00 00 00	W I K I IOOG I KIVCI	TIOOG TAVOI
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2006			05-12-06	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2006				Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2006				Methow River	Methow River
Washington Dept. of Fish and	vv clio i latorici y	01	00	2000	538,819		00 12 00	WOUTOW TOTAL	Wictiow Mivel
Wildlife Total					330,013				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	231,551	03-15-06	05-14-06	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	273,636	03-15-06	05-14-06	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006				Clark Flat Acclim Pond	Yakima River
	,				,				
Yakama Tribe	Leavenworth NFH	CO	UN	2006	34,112	04-26-06	05-15-06	Nason Creek	Wenatchee River
Yakama Tribe	Leavenworth NFH	CO	UN	2006				Maher Creek Acclim. Pond	Wenatchee River
Yakama Tribe Yakama Tribe Total Grand Total	Leavenworth NFH	CO	UN	2006	108,574 <b>1,036,604</b> <b>3,026,223</b>		05-15-06	Coulter Creek	Wenatchee River

### HATCHERY RELEASE NEXT TWO WEEKS

Hatchery R	elease S	ummarv
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	From:	5/19/2006	6	to	6/1/2006				
Agency National Marine Fisheries Service National Marine Fisheries Service Total	<b>Hatchery</b> Lyons Ferry Hatchery	Species CH0	<b>Race</b> FA	MigYr 2006	NumRel 230,000 <b>230,000</b>			RelSite Cpt John Acclim Pond	<b>RelRiver</b> Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2006	500,000	05-29-06	05-29-06	Big Canyon (Clearwater River)	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2006	500,000	05-30-06	05-30-06	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2006	281,500	05-30-06	06-30-06	North Lapwai Valley Hatchery	Clearwater River M F
Nez Perce Tribe	Umatilla Hatchery	CH0	FA	2006	370,000	05-29-06	05-30-06	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe Total					1,651,500	)			
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2006	200,000	06-01-06	06-01-06	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2006	350,000	05-30-06	05-30-06	Cpt John Acclim Pond	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2006	400,000	05-24-06	06-01-06	Grande Ronde River	Grande Ronde River
Washington Dept. of Fish and Wildlife Washington Dept. of Fish and Wildlife Total	Wells Hatchery	ST	SU	2006	98,379 <b>1,048,37</b> 9		05-26-06	Okanogan River	Okanogan River
Grand Total					2,929,879	)			

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

										sh with f Highest l	
			Number of	Number w	Number w	% Fin	% Severe	Rank		Rank	Rank
Site	Date	Species	Fish	GBT signs	Fin Signs	GBT	Fin GBT	1	2	3	4
Low	er Grani	te Dam									
		Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	05/16/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Littl	e Goose	Dam									
	05/09/06	Chinook + Steelhead	100	4	4	4.00%	0.00%	4	0	0	0
	05/16/06	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0
Low	er Monu	mental Dam									
	05/08/06	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	05/15/06	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0
McN	lary Dam										
	05/08/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/12/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/14/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bon	neville D	am									
	05/09/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/12/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/16/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Roc	k Island	Dam									
	05/11/06	Chinook + Steelhead	99	3	3	3.03%	0.00%	3	0	0	0
	05/15/06	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0
	05/18/06	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0

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

	<u>Hungry H. Dns</u> 24 h 12 h				Boun	dary			Grand	d Coul	<u>ee</u>		Grand	d C. T	wr		<b>Chief</b>	Jose	<u>ph</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>
<u>Date</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>
5/5				0	122	122	123	24	113	114	115	24	111	112	112	24	109	110	110	24
5/6				0	121	122	123	24	114	114	115	24	111	112	112	24	110	110	110	23
5/7				0	122	122	123	24	114	114	114	24	112	113	113	24	110	110	111	24
5/8				0	121	122	122	24	113	113	114	24	111	111	112	24	110	110	110	24
5/9				0	121	122	123	24	112	112	112	24	110	110	111	24	109	110	110	24
5/10				0	121	122	123	24	112	113	113	24	110	110	111	24	110	110	110	24
0, 1 1				0	122	122	122	24	113	114	114	24	112	112	113	24	110	110	110	7
5/12				0	121	122	122	23	113	113	114	24	111	112	112	24				0
5/13				0	121	122	123	24	112	113	113	24	110	111	112	24				0
5/14				0	121	121	122	23	112	113	113	24	110	110	112	23				0
5/15				0	122	123	124	25	113	114	114	25	111	112	113	25	112	112	112	11
5/16				0	122	123	124	24	114	114	114	24	112	113	114	24	112	112	113	24
5/17				0	124	126	127	24	114	115	115	24	112	113	114	24	113	113	114	24
5/18				0	126	127	129	24	115	115	116	24	113	114	115	24	113	114	115	24

**Total Dissolved Gas Saturation Data at Mid Columbia River Sites** 

	Chief	J. Dn	st		Wells				Wells	Dwns	strm		Rock	y Rea	<u>ch</u>		Rock	y R. T	lwr	
	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>
<u>Date</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>
5/5	109	109	110	24	108	108	109	24	112	115	123	24	109	109	109	24	110	111	113	24
5/6	110	110	111	24	109	109	109	24	113	116	123	24	109	109	109	24	110	110	110	24
5/7	109	110	110	24	108	109	109	24	110	110	111	24	109	109	109	24	110	110	110	24
5/8	109	109	109	24	108	108	108	24	112	115	117	24	108	109	109	24	109	110	110	24
5/9	109	109	109	23	107	108	108	21	112	114	119	21	108	109	110	24	109	110	111	24
5/10	109	109	110	24	108	109	109	24	110	111	113	24	111	112	112	24	112	112	113	24
5/11	110	110	110	7	109	110	110	24	111	112	114	24	113	114	114	24	113	114	116	24
5/12				0	109	109	110	24	111	111	114	24	110	110	110	24	113	114	119	24
5/13				0	108	109	109	24	110	110	110	24	110	110	110	24	112	112	115	24
5/14				0	109	109	110	24	112	115	118	24	110	110	111	24	112	112	112	24
5/15	111	111	111	5	109	110	111	25	111	112	113	25	111	111	114	25	113	114	115	25
5/16	111	111	112	17	110	111	111	23	113	115	118	23	113	113	114	24	113	114	116	24
5/17	112	112	113	24	111	111	112	24	114	117	121	24	113	114	115	24	113	114	116	24
5/18	112	113	113	24	111	111	112	23	122	127	134	23	115	115	116	24	116	117	118	24

**Total Dissolved Gas Saturation at Mid Columbia River Sites** 

	Rock	Island	<u>t</u>		Rock	I. Tlw	<u>r</u>		<u>Wana</u>	pum			Wana	pum '	<u>Tlwr</u>		<b>Pries</b>	t Rapi	<u>ds</u>	
	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>
<u>Date</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>
5/5	113	113	114	24	101	101	101	24	116	117	118	23	117	119	122	23	116	118	120	23
5/6	113	113	113	24	101	101	101	24	114	115	116	23	119	121	125	23	116	117	120	23
5/7	113	113	113	24	101	101	101	24	112	113	113	23	115	117	118	23	115	116	117	23
5/8	111	113	113	24	107	112	115	24	110	111	112	23	115	117	119	23	111	112	113	23
5/9	108	109	110	24	113	114	115	24	112	114	116	23	115	118	122	23	112	114	115	23
5/10	111	112	113	24	115	116	117	24	113	114	115	23	115	117	121	23	116	119	121	23
5/11	112	113	114	24	116	117	117	24	113	113	114	23	115	117	119	23	115	116	117	23
5/12	112	114	116	24	116	117	118	24	112	112	112	23	116	117	121	23	113	115	116	23
5/13	113	113	114	24	116	117	117	24	114	116	117	23	114	116	118	23	115	116	117	23
5/14	112	112	113	24	116	116	117	24	115	118	120	23	115	117	119	23	115	117	119	23
5/15	113	114	115	25	116	117	117	24	116	116	118	15	116	117	118	23	115	117	117	23
5/16	113	114	115	24	117	117	118	24	117	117	119	20	116	118	120	23	117	118	120	23
5/17	112	113	113	24	116	117	119	24	115	115	118	13	117	117	120	11	118	119	122	23
5/18	115	116	117	24	119	120	120	24				0				0				0

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

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

	Pries	t R. Dr	<u>ıst</u>		Pasc	<u>o</u>			Dwor	<u>shak</u>			Clrwt	r-Pecl	<u> </u>		Anato	<u>one</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>
<u>Date</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>																
5/5	115	116	117	23				0	101	102	103	23	102	103	104	23	108	109	109	24
5/6	117	118	119	23	111	112	113	24	102	102	103	24	102	103	103	24	107	108	109	24
5/7	115	115	116	23	110	111	112	24	101	102	102	24	101	101	102	24	107	107	107	24
5/8	111	112	113	23	109	110	111	24	100	100	102	24	101	102	102	24	107	108	108	24
5/9	113	114	117	23	108	110	111	24	100	100	101	24	101	102	103	24	107	107	108	24
5/10	115	117	117	23	111	112	113	24	100	101	102	24	102	103	104	24	106	107	108	24
5/11	114	115	116	23	112	113	114	24	102	102	103	24	102	102	103	24	106	106	107	24
5/12	113	114	115	23	110	111	112	24	104	106	107	24	102	103	104	24	106	107	107	24
5/13	114	115	115	23	110	112	112	24	106	107	108	24	102	104	104	24	106	107	107	24
5/14	114	115	116	23	111	112	113	24	106	107	107	24	103	104	105	24	106	107	108	24
5/15	114	115	116	23	112	114	115	25	103	105	106	25	103	104	105	25	107	108	108	25
5/16	116	117	118	23	113	114	115	24	102	102	103	24	103	104	105	24	106	106	107	24
5/17	117	118	119	23	114	115	116	24	102	103	103	24	104	105	106	24	106	107	108	24
5/18				0	114	115	116	24	105	106	107	21	105	105	106	24	108	108	109	24

Total	Niccolvod	Cac	Saturation	Data at	Chaka	Divor C	*:+~~
lotall	Jissoivea	Gas	Saturation	Data at	Snake	Rivers	iites

	Clrwt	r-Lew	<u>iston</u>		Lowe	r Grar	<u>nite</u>		L. Gra	anite T	lwr		Little	Goos	<u>e</u>		L. Go	ose T	<u>lwr</u>	
	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>
<u>Date</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avq</u>	<u>High</u>	<u>hr</u>
5/5	102	104	105	23	107	107	107	24	117	118	119	24	117	117	119	24	118	118	118	24
5/6	102	103	104	24	107	107	108	24	117	117	118	24	116	117	117	24	117	118	118	24
5/7	101	101	101	24	106	106	107	24	117	117	117	24	112	113	114	24	114	115	116	24
5/8	101	102	103	24	105	105	105	24	117	118	120	24	110	110	111	24	113	114	114	24
5/9	101	103	104	24	104	104	104	24	115	116	117	24	110	110	111	24	115	115	116	24
5/10	102	103	105	24	105	105	106	24	112	114	116	24	111	111	112	24	116	116	117	24
5/11	102	102	103	24	107	107	107	24	111	111	111	24	112	112	115	24	115	115	118	24
5/12	102	103	105	24	106	106	106	24	110	110	111	24	111	111	112	24	114	114	115	24
5/13	102	104	105	24	105	105	105	24	110	110	111	24	108	109	109	24	113	114	114	24
5/14	102	104	105	24	105	105	105	24	112	114	117	24	108	108	109	24	112	112	113	24
5/15	103	104	105	25	106	106	107	25	118	119	121	25	109	109	112	25	112	112	113	25
5/16	102	103	104	24	106	107	107	24	120	122	123	24	110	111	112	24	114	117	118	24
5/17	103	104	104	24	106	107	107	24	123	125	126	24	115	116	118	24	117	118	119	24
5/18	104	104	105	24	106	107	107	24	128	130	130	24	119	119	120	24	121	122	124	24

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

	Lowe	r Mon			L. Mo	n. Tlw	<u>/r</u>		Ice Ha	<u>arbor</u>			Ice Ha	<u>arbor</u>	<u>Tlwr</u>		<u>McNa</u>	ary-Or	<u>egon</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>
<u>Date</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>
5/5	117	118	118	24	117	117	118	24	116	116	117	24	117	117	118	24				0
5/6	117	117	117	24	118	118	118	24	116	116	116	4	117	117	117	4				0
5/7	115	115	116	24	118	118	118	24	114	114	115	21	117	118	120	21				0
5/8	112	113	114	24	116	117	118	24	112	112	113	24	118	120	121	24				0
5/9	111	111	112	24	115	116	116	24	111	111	112	24	118	119	121	24				0
5/10	113	115	116	24	121	122	122	24	112	113	114	24	118	120	120	24				0
5/11	116	117	118	24	121	122	122	24	115	115	116	24	117	118	120	24				0
5/12	116	117	117	24	120	121	122	24	116	116	116	24	117	117	117	24				0
5/13	114	114	115	24	120	120	121	24	115	115	115	24	117	117	118	24				0
5/14	114	114	115	24	119	120	120	24	115	116	116	24	118	119	120	24				0
5/15	115	116	116	25	118	119	120	25	116	117	117	25	118	119	120	25				0
5/16	115	115	116	24	118	119	119	24	116	116	116	24	118	118	118	24				0
5/17	117	119	121	24	119	120	120	24	116	117	117	24	120	121	123	24				0
5/18	119	120	121	24	121	121	123	24	118	118	119	24	122	123	124	24				0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	<b>McNa</b>	ry-Wa	ısh		McNa	ry Tlv	<u>/r</u>		<u>John</u>	Day			<u>John</u>	Day T	lwr		The I	<u>Dalles</u>		
	<u>24 h</u>	12 h		<u>#</u>	<u>24 h</u>	12 h		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>
<u>Date</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<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>	<u>hr</u>
5/5				0				0				0				0				0
5/6	114	114	115	24	117	118	120	24	114	115	116	24	118	118	118	24	112	113	115	24
5/7	110	110	112	24	119	120	120	24	112	113	113	24	118	118	119	24	111	112	112	24
5/8	108	108	109	24	116	117	120	24	109	110	111	24	118	119	119	24	110	110	111	24
5/9	109	110	112	24	115	115	115	24	107	107	107	24	117	118	119	24	111	113	114	24
5/10	111	112	113	24	118	119	120	24	107	108	109	24	118	119	119	24	111	112	113	24
5/11	113	114	114	20	117	120	120	24	109	110	110	24	117	119	120	24	112	113	114	24
5/12	113	113	114	24	118	119	119	24	110	110	111	24	119	120	120	24	111	113	114	24
5/13	111	112	113	24	118	119	119	24	111	111	112	24	119	120	120	24	113	115	116	24
5/14	112	113	114	24	116	117	119	24	112	112	112	24	117	118	118	24	114	115	117	24
5/15	115	116	117	25	115	115	116	25	113	113	115	25	117	118	119	24	115	117	118	25
5/16	116	117	118	24	115	115	116	24	114	114	115	23	117	118	119	23	114	115	116	24
5/17	116	117	119	24	116	116	118	24	116	117	118	24	119	120	120	24	115	117	117	24
5/18	116	117	117	24	120	121	121	24	117	118	118	24	119	120	120	24	116	117	118	24

Total Dissolved Gas	Saturation Data a	t Lower Columbia	River Sites
i utai Dissulveu Gas	Saturation Data a	L LOWEL COMMINDI	i nivei oiles

	The D	alles	<b>Dnst</b>		Bonn	eville			Warre	endale	<u>)</u>		Cama	ıs\Wa	shouga	<u> </u>	Casc	ade Is	land	
	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>
<u>Date</u>	<u>Avg</u>	Avg	<u>High</u>	<u>hr</u>	<u>Avg</u>	Avg	<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>	<u>hr</u>
5/5				0				0				0				0	120	121	121	17
5/6	117	117	118	24	114	115	116	24	115	115	116	23	114	115	115	24	119	119	120	17
5/7	116	117	117	24	112	112	113	24	113	113	113	23	112	112	113	24	120	120	120	17
5/8	115	116	116	24	111	111	112	24	112	113	114	23	111	111	112	24	120	121	122	17
5/9	116	118	119	24	113	114	114	24	114	114	114	23	112	113	114	24	120	121	122	17
5/10	117	118	118	24	115	116	118	24	115	116	116	23	114	115	115	24	120	120	121	17
5/11	117	117	118	24	115	116	117	24	116	116	117	23	115	116	116	24	119	120	120	17
5/12	117	117	118	24	112	112	114	24	113	114	115	23	113	113	114	24	120	120	120	17
5/13	118	119	120	24	113	114	116	24	114	115	115	23	113	113	114	24	121	121	122	17
5/14	118	119	119	24	116	117	118	24	117	117	117	23	115	117	117	24	120	120	120	17
5/15	118	119	120	25	116	117	118	25	117	117	117	23	115	115	116	25	120	121	121	18
5/16	117	118	118	24	117	117	118	24	116	117	117	23	115	117	118	24	119	119	121	17
5/17	118	119	119	24	115	115	116	24	115	115	116	23	115	116	117	24	119	120	122	17
5/18	119	120	120	24	115	115	116	24	117	117	118	23	115	116	116	24	122	122	123	16

### **Two-Week Summary of Passage Indices**

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

See Sampling Comments: <a href="http://www.fpc.org/currentDaily/smpcomments.htm">http://www.fpc.org/currentDaily/smpcomments.htm</a>

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

					COMB	INED YEA	RLING CHI	NOOK				
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/2006		84	81	71	587	183,801	210,037	53,849	1,276	66,147	61,643	53,051
05/06/2006	*	37	31	87	480	126,030	170,504	53,862	475		42,305	53,140
05/07/2006		40	43	93	255	177,521	143,617	59,524	1,940	99,449	61,990	44,492
05/08/2006	*	140	38	107	214	261,237	203,182	66,606	1,390		62,462	23,112
05/09/2006	*	104	14	153	469	244,264	146,922	79,083	2,405	123,881	70,207	39,875
05/10/2006	*	47	51	68	324	121,421	128,967	72,928	985		80,424	47,013
05/11/2006	*	34	17	53	486	72,827	64,840	55,004	985	85,833	91,472	60,435
05/12/2006	*	41	29	54	416	77,073	99,685	57,922	390		61,255	65,369
05/13/2006	*	26	26	47	264	65,142	66,570	52,607	842	99,373	50,927	68,480
05/14/2006	*	108	26	59	238	60,500	61,504	43,506	1,606		58,013	95,652
05/15/2006	*			111	284	62,929	62,189	50,969	332	122,261	62,170	76,457
05/16/2006	*			332	539	68,662	137,510	65,299	527		68,013	86,842
05/17/2006	*			623	721	83,613	119,308	74,938	316	120,654	88,573	80,350
05/18/2006	*			166		61,067	116,162	48,758	206		94,719	82,950
05/19/2006												
Total:		661	356	2,024	5,277	1,666,087	1,730,997	834,855	13,675	717,598	954,173	877,218
# Days:		10	10	14	13	14	14	14	14	7	14	14
Average:		66	36	145	406	119,006	123,643	59,633	977	102,514	68,155	62,658
YTD		30,806	25,005	12,904	19,187	3,492,264	3,528,439	1,162,062	31,741	1,300,997	1,696,232	1,823,638

					COMBIN	ED SUBYE	ARLING C	HINOOK				
	П	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/2006		0	1	0	7	939	498	0	3	2,179	1,780	2,591
05/06/2006	*	0	0	0	7	287	0	0	6		1,126	226,636
05/07/2006		0	0	0	13	295	8,882	0	0	2,260	205	119,980
05/08/2006	*	0	0	0	12	298	494	0	2		155	45,495
05/09/2006	*	0	0	0	3	291	2,069	0	42	1,268	484	21,695
05/10/2006	*	0	0	0	4	0	0	0	3		216	10,573
05/11/2006	*	0	0	0	3	0	0	0	6	3,403	926	6,310
05/12/2006	*	0	0	0	6	0	2,868	0	12		248	2,394
05/13/2006	*	0	0	0	6	0	2,008	0	26	1,305	502	1,796
05/14/2006	*	0	0	1	13	250	5,054	0	16		396	1,859
05/15/2006	*		-	1	23	542	1,665	123	13	1,519	166	1,086
05/16/2006	*			3	65	1,839	5,350	123	85		142	1,487
05/17/2006	*		-	0	64	2,784	1,401	0	85	1,160	473	1,294
05/18/2006	*			1		6,990	2,261	361	586		892	1,989
05/19/2006												
Total:	 	0	1	6	226	14,515	32,550	607	885	13,094	7,711	445,185
# Days:		10	10	_	13	14,515	14	14	14	7	14	14
Average:	H	0	0	0	17	1,037	2,325	43	63	1,871	551	31,799
YTD		3	35		287	23,169	46,182	947	2,213	50,203	19,630	1,708,219

### Two-Week Summary of Passage Indices

						COMBINE	D COHO					
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)						
05/05/2006		0	0	0	1	939	2,482	0	265	852	1,335	12,547
05/06/2006	*	0	0	0	0	1,435	503	0	143		2,413	11,405
05/07/2006		0	0	0	0	1,769	0	181	864	1,989	1,432	16,497
05/08/2006	*	0	0	0	0	2,975	0	181	899		4,638	8,029
05/09/2006	*	0	0	0	3	1,456	1,035	187	1,026	1,433	3,553	8,727
05/10/2006	*	0	0	0	0	3,006	2,207	198	1,179		8,216	15,221
05/11/2006	*	0	0	0	0	2,030	855	340	1,009	1,701	4,168	10,437
05/12/2006	*	0	0	0	0	502	2,151	130	746		2,481	15,803
05/13/2006	*	0	0	0	0	1,258	1,148	322	1,179	1,866	2,058	14,486
05/14/2006	*	0	0	0	0	1,500	2,246	384	3,915		5,514	18,768
05/15/2006	*			0	0	2,712	555	675	2,375	1,177	4,490	18,918
05/16/2006	*			0	0	2,759	3,210	613	3,679		9,234	31,560
05/17/2006	*			0	0	2,784	4,483	1,140	3,081	2,653	8,172	32,032
05/18/2006	*			0		5,150	2,826	1,518	3,192		8,693	40,454
05/19/2006												
Total:		0	0	0	4	30,275	23,701	5,869	23,552	11,671	66,397	254,884
# Days:		10	10	14	13		14	14	14	7	14	14
Average:		0	0	0	0	2,163	1,693	419	1,682	1,667	4,743	18,206
YTD		0	0	0	46	42,475	33,236	6,989	24,350	16,405	77,269	399,081

	П				C	OMBINED :	STEELHEA	VD				
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	П	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/2006	П	46	509	253	31	268,656	219,902	42,065	266	20,091	39,389	6,683
05/06/2006	*	49	388	73	37	126,317	154,865	53,682	204		40,375	7,643
05/07/2006	П	47	381	95	46	138,891	115,466	49,030	485	15,099	33,346	4,999
05/08/2006	*	54	538	70	118	98,485	91,354	51,376	796		37,724	6,082
05/09/2006	*	78	409	180	202	101,025	60,520	42,352	654	19,766	39,756	7,393
05/10/2006	*	77	498	87	54	85,061	76,500	27,224	631		26,809	4,841
05/11/2006	*	56	324	78	58	59,886	56,994	25,615	780	12,101	24,315	3,641
05/12/2006	*	57	413	70	51	56,989	54,226	21,878	919		23,065	8,141
05/13/2006	*	44	388	85	49	56,842	57,676	23,014	989	10,325	11,936	6,944
05/14/2006	*	42	531	79	41	58,000	60,653	17,675	1,092		13,921	4,053
05/15/2006	*			81	88	64,014	53,022	23,888	675	9,766	11,379	2,383
05/16/2006	*			372	161	72,340	70,616	25,421	929		12,671	2,667
05/17/2006	*			594	371	172,702	80,501	39,671	712	15,250	18,129	6,756
05/18/2006	*			187		151,933	152,629	33,509	955		22,287	7,002
05/19/2006												
Total:	Ш	550	4,379	2,304	1,307	1,511,141	1,304,924	476,400	10,087	102,398	355,102	79,228
# Days:		10	10	14	13	14	14	14	14	7	14	14
Average:	Ц	55	438	165	101	107,939	93,209	34,029	721	14,628	25,364	5,659
YTD		1,964	19,430	9,148	3,066	3,797,344	3,402,534	816,383	11,793	342,884	977,071	195,247

### Two-Week Summary of Passage Indices

					(	OMBINED	SOCKEYE					
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)						
05/05/2006		0	0	0	1	0	513	677	271	16,941	11,572	1,091
05/06/2006	*	2	0	0	2	287	1,531	365	106		16,085	7,886
05/07/2006		2	0	0	7	1,180	493	362	413	33,085	12,276	6,499
05/08/2006	*	0	0	0	12	1,488	746	363	738		13,915	5,839
05/09/2006	*	0	0	0	194	873	1,041	562	947	34,405	16,314	8,484
05/10/2006	*	5	0	0	179	1,913	553	398	854		26,160	8,550
05/11/2006	*	2	0	0	34	1,776	292	273	507	22,498	20,379	6,553
05/12/2006	*	2	0	0	19	2,511	0	325	361		12,400	24,663
05/13/2006	*	0	0	0	9	1,006	574	0	860	33,556	16,912	24,902
05/14/2006	*	0	0	0	11	1,000	1,408	192	766		15,664	18,986
05/15/2006	*			0	27	1,356	838	860	516	34,984	13,613	11,789
05/16/2006	*			0	110	1,226	1,339	858	718		19,606	15,603
05/17/2006	*			0	68	3,132	1,681	443	439	42,427	16,046	22,444
05/18/2006	*			0		2,207	2,847	1,520	695		13,595	21,120
05/19/2006												
Total:		13	0	0	673	19,955	13,856	7,198	8,191	217,896	224,537	184,409
# Days:		10	10	14	13	14	14	14	14	7	14	14
Average:		1	0	0	52	1,425	990	514	585	31,128	16,038	13,172
YTD		13	0	0	678	34,534	36,501	11,276	13,080	271,065	245,562	187,508

<sup>\*</sup> See sampling comments

http://www.fpc.org/currentDaily/smpcomments.htm

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

#### **Definitions for Smolt Index Counts**

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

 ${\sf GRN}\;({\sf Collection}) = {\sf Grande}\;{\sf Ronde}\;{\sf River}\;{\sf Trap}: {\sf Collection}\;{\sf Counts}$ 

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

RIS data collected for the FPC by Chelan Co. PUD/Washington Dept. of Fish and Wildlife.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

IMN data collected for the FPC by the Nez Perce Tribe.

#### **Two Week Transportation Summary**

Source: Fish Passage Center Updated: 5/19/06 10:18 AM

05/06/06 TO 05/19/06 **Species** CH0 CH1 CO SO ST **Grand Total** Site Data LGR Sum of NumberCollected 8,600 1,149,305 20,400 13,800 1,012,095 2,204,200 Sum of NumberBarged 8,571 1,048,726 20,348 13,573 999,090 2,090,308 Sum of NumberBypassed 0 97,304 0 0 12,319 109,623 Sum of Numbertrucked 0 0 0 0 0 0 24 88 Sum of SampleMorts 0 56 0 8 Sum of FacilityMorts 29 2,978 52 219 638 3,916 Sum of ResearchMorts 0 0 0 24 265 241 Sum of TotalProjectMorts 29 3,275 52 227 686 4,269 LGS Sum of NumberCollected 24,402 1,313,650 17,300 10,271 988,137 2,353,760 Sum of NumberBarged 24,398 1,311,831 17,300 10,118 987,405 2,351,052 2 Sum of NumberBypassed 1 2 5 0 0 0 0 Sum of Numbertrucked 0 0 0 0 Sum of SampleMorts 0 16 0 2 4 22 149 Sum of FacilityMorts 7 1.131 0 152 1,439 Sum of ResearchMorts 0 4 0 0 0 7 153 Sum of TotalProjectMorts 1,151 0 154 1.465 LMN Sum of NumberCollected 449 656,284 4,490 5,588 376,724 1,043,535 Sum of NumberBarged 449 671,229 4,490 401.494 1,083,291 5,629 Sum of NumberBypassed 0 2,536 4,903 0 0 2,367 Sum of Numbertrucked 0 0 0 0 0 0 9 Sum of SampleMorts 0 22 0 0 31 Sum of FacilityMorts 0 497 0 59 254 810 Sum of ResearchMorts 0 0 0 0 0 0 0 0 59 263 Sum of TotalProjectMorts 519 841 MCN Sum of NumberCollected 7,258 6,602 123,969 603,141 407,671 57,641 Sum of NumberBarged 602,531 Sum of NumberBypassed 7,250 407,356 6,600 123,737 57,588 Sum of Numbertrucked 0 0 0 0 35 50 Sum of SampleMorts 2 0 9 4 Sum of FacilityMorts 6 265 2 221 48 542 Sum of ResearchMorts 0 15 0 2 1 18 Sum of TotalProjectMorts 53 315 232 610 Total Sum of NumberCollected 40,709 3,526,910 48,792 153,628 2,434,597 6,204,636 Total Sum of NumberBarged 33,418 3,031,786 42,138 29,320 2,387,989 5,524,651 Total Sum of NumberBypassed 7,251 507,198 6,600 123,737 72,276 717,062 Total Sum of Numbertrucked 0 0 0 0 Total Sum of SampleMorts 2 129 0 19 41 191 Total Sum of FacilityMorts 42 1,089 6,707 4,871 54 651 Total Sum of ResearchMorts 0 0 25 287 260 2 Total Sum of TotalProjectMorts 44 5,260 54 672 1,155 7,185

### **YTD Transportation Summary**

Source: Fish Passage Center

Updated: 5/19/06 10:18 AM

Cource.	Fish Passage Center	TO:	05/19/06			Updated:	J/ 1	9/06 10:18 AM
		Species						_
Site	Data	CH0	CH1	СО		SO	ST	Grand Total
LGR	Sum of NumberCollected	14,140	2,300,431		28,080	23,440	2,472,738	
	Sum of NumberBarged	9,357	1,865,165		26,505	18,136	2,178,989	4,098,152
	Sum of NumberBypassed	4,736	429,285		1,479	4,930	292,720	733,150
	Sum of NumberTrucked	0	0		0	0	0	0
	Sum of SampleMorts	5	188		1	21	69	284
	Sum of FacilityMorts	42	5,506		95	353	914	6,910
	Sum of ResearchMorts	0	287		0	0	46	333
	Sum of TotalProjectMorts	47	5,981		96	374	1,029	7,527
LGS	Sum of NumberCollected	34,956	2,711,838		24,724	27,696	2,614,443	5,413,657
	Sum of NumberBarged	30,872	2,330,919		23,197	18,495	2,020,870	4,424,353
	Sum of NumberBypassed	4,075	376,387		1,524	8,894	591,449	982,329
	Sum of NumberTrucked	0	0		0	0	0	0
	Sum of SampleMorts	3	81		0	8	10	102
	Sum of FacilityMorts	10	3,044		3	306	413	3,776
	Sum of ResearchMorts	0	10		0	0	1	11
	Sum of TotalProjectMorts	13	3,135		3	314	424	3,889
LMN	Sum of NumberCollected	718	918,723		5,397	8,862	650,285	1,583,985
	Sum of NumberBarged	499	902,383		5,238	8,270	627,539	1,543,929
	Sum of NumberBypassed	218	33,534		159	576	49,662	84,149
	Sum of NumberTrucked	0	0		0	0	0	0
	Sum of SampleMorts	1	39		0	3	15	58
	Sum of FacilityMorts	0	717		0	113	419	1,249
	Sum of ResearchMorts	0	0		0	0	0	0
	Sum of TotalProjectMorts	1	756		0	116	434	1,307
MCN	Sum of NumberCollected	26,136	708,334		9,014	150,974	184,452	1,078,910
	Sum of NumberBarged	0	0		0	0	-	0
	Sum of NumberBypassed	26,055	707,699		9,010	150,706	184,322	1,077,792
	Sum of NumberTrucked Sum of SampleMorts	0	0		0	0 13	10	0
	Sum of FacilityMorts	30 49	81 527		0 4	249		
	Sum of ResearchMorts	2	27		0	6		
	Sum of TotalProjectMorts	81	635		4	268		
	m of NumberCollected	75,950	6,639,326		67,215	210,972	5,921,918	12,915,381
	m of NumberBarged	40,728	5,098,467		54,940	44,901	4,827,398	
	m of NumberBypassed	35,084	1,546,905		12,172	165,106		
	m of NumberTrucked m of SampleMorts	39	0 389		<u>0</u> 1	0 45		
	m of FacilityMorts	101	9,794		102	1,021	1,860	
	m of ResearchMorts	2	324		0	6		
	m of TotalProjectMorts	142	10,507		103	1,072		

#### Cumulative Adult Passage at Mainstem Dams Through: 05/18

			Spring Chinook						S	Summer	Chinoo	k				Fall Ch	inook		
		200	)6	20	05	10-Y	r Avg.	200	06	200	)5	10-Y	r Avg.	20	06	20	05	10-Yr	Avg.
DAM	EndDate	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	05/18	88,676	2,413	60,322	2,787	138,006	6,589	0	0	0	0	0	0	0	0	0	0	0	0
TDA	05/18	48,646	1,167	44,759	1,510	91,007	4,225	0	0	0	0	0	0	0	0	0	0	0	0
JDA	05/18	37,187	1,191	39,114	1,237	74,141	3,192	0	0	0	0	0	0	0	0	0	0	0	0
MCN	05/18	24,618	866	32,888	1,137	65,056	2,768	0	0	0	0	0	0	0	0	0	0	0	0
IHR	05/18	12,761	231	15,913	301	40,964	1,576	0	0	0	0	0	0	0	0	0	0	0	0
LMN	05/18	9,584	117	14,443	218	37,206	1,287	0	0	0	0	0	0	0	0	0	0	0	0
LGS	05/18	6,649	98	12,542	141	33,801	1,166	0	0	0	0	0	0	0	0	0	0	0	0
LGR	05/18	4,778	74	12,776	184	32,675	1,063	0	0	0	0	0	0	0	0	0	0	0	0
PRD	05/17	3,149	1	7,599	53	13,069	110	0	0	0	0	0	0	0	0	0	0	0	0
RIS	05/17	1,143	15	4,651	36	8,259	142	0	0	0	0	0	0	0	0	0	0	0	0
RRH	05/17	397	1	1,458	12	2,800	20	0	0	0	0	0	0	0	0	0	0	0	0
WEL	05/17	36	0	481	1	1,274	10	0	0	0	0	0	0	0	0	0	0	0	0
WFA	05/17	16,251	70	20,883	580	n/a	n/a							0	0	0	0	n/a	n/a

			Col	10			Sockeye				Steelhead			
	20	006	2005		10-Yr	10-Yr Avg.		10-Yr				10-Yr	Wild	
DAM	Adult	Jack	Adult	Jack	Adult	Jack	2006	2005	Avg.	2006	2005	Avg.	2006	
BON	0	0	0	0	0	0	0	8	0	2,525	1,791	3319	703	
TDA	0	0	-1	1	0	0	0	0	0	1,081	763	999	353	
JDA	0	0	3	-14	0	-1	0	0	0	2,283	1,019	3003	1,028	
MCN	0	0	0	0	0	0	0	0	0	2,077	1,023	1476	758	
IHR	0	0	0	0	0	0	0	0	0	2,637	1,271	1600	900	
LMN	0	0	0	0	0	0	0	0	0	2,656	898	1611	1,025	
LGS	0	0	0	0	0	0	0	0	0	2,656	995	1910	887	
LGR	0	0	0	0	0	0	0	0	0	7,622	4,821	6223	2,326	
PRD	1	0	0	0	0	0	0	7	0	20	11	2	0	
RIS	0	0	2	0	0	0	1	26	1	57	48	26	37	
RRH	0	0	0	0	0	0	0	0	0	140	348	105	123	
WEL	0	0	0	0	0	0	0	0	0	20	53	21	14	
WFA	0	0	0	0	n/a	n/a	0	0	n/a	9,581	8,909	n/a	n/a	

BON and LGR have switched to video counts so the data is delayed.

These numbers were collected from USACE, Grant PUD, Douglas PUD, Chelan PUD, ODFW and DART.

Wild steelhead numbers are included in the total. Wild Steelhead are defined as unclipped fish.

Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC.

Historic counts 1997 to present were obtained from the Corps of Engineers.

Page last updated on: 05/19/06

BON counts from January 1, 2006 to March 14, 2006 (our traditional counts begin March 15):

	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
ſ	1	0	2,516	238

Run Year counts (June 1, 2005 to May 31, 2006) for Lower Granite:

Steelhead	
0	

<sup>\*</sup>PRD is not posting wild steelhead numbers.