



Fish Passage Center

Weekly Report #98 - 2

March 27, 1998

2501 SW First Ave., Suite 230
Portland, OR 97201-4752
phone: 503/230-4582
fax: 503/230-7559

SUMMARY OF EVENTS:

1. Water Supply: The early bird forecast for April developed by the River Forecast Center was released on March 26, 1998. The April early bird forecast has increased slightly from the March mid-month forecast. The following table compares the April early bird forecast with March final and March mid-month forecasts. The early bird water supply forecast remains below average for the majority of sites throughout the Columbia River basin but it has not declined from the mid-month forecast. The April early bird forecast should be considered with caution. The final April forecast will be completed on April 8.

Water Supply forecasts 1998

Location/ period	March Final MAF / %	March Mid-Month MAF / %	April Early-Bird MAF / %
Libby Apr-Sep	5.48 87 %	5.31 78 %	5.43 80 %
Hungry Horse Apr-Sep	1.62 74 %	1.79 82 %	1.72 79 %
Grand Coulee Jan-Jul	54.8 87 %	54.7 86 %	55.5 88 %
The Dalles Jan-Jul	91.7 87 %	89.1 84 %	90.8 86 %
Lower Granite Jan-Jul	26.4 89 %	24.0 81 %	25.3 85 %
Dworshak Apr-Jul	2.0 74 %	1.96 73 %	1.95 72 %
Brownlee Apr-Jul	5.25 91 %	4.24 73 %	5.08 88 %

Precipitation has increased over the past week. Precipitation for the Columbia River above The Dalles has increased to 106 % of average for March, through March 24. Precipitation for the Snake River above Ice Harbor remains below average with 97 % of normal precipitation for March through March 24. Snake River Plain precipitation through March 24, is also below average

at 91 % of normal. The Salmon, Boise and Payette rivers have received 96 % of average precipitation through March 24.

2. System Storage and Streamflow:

Project operations and Streamflow forecast data has become extremely difficult to obtain from the federal operators and regulators. The Corps of Engineers distributed their projections, based upon the March final runoff volume forecast, for weekly average flows during the spring migration period. Weekly average flow for the first two weeks of April, at the beginning of the spring juvenile outmigration, are projected to be approximately 55 kcfs at Lower Granite Dam and 133 kcfs at McNary Dam. Utilizing these flow projections, flows at Priest Rapids can be expected to be approximately 74 kcfs for the same time period. Because the forecasts have steadily declined throughout the month, projected flows could be even lower.

Most system reservoirs are refilling through the end of March. Increased precipitation has resulted in increased inflow to the Brownlee project. The reservoir is projected to fill to elevation 2066 by March 29. The project outflow is 32 kcfs with inflows averaging 47 kcfs. This is resulting in refill and spill of approximately 2 kcfs. The Idaho Power Company is projecting that the reservoir elevation will reach 2075 by April 10 if these conditions persist. This represents a considerable change from the projections provided by the COE on March 25. Dworshak is projected to fill from elevation 1533.7 feet this week to elevation 1541.0 feet at the end of March. Grand Coulee continues to fill and is projected to reach elevation 1257.5 feet by the end of March. Libby and Hungry Horse reservoirs are pro-

jected to each fill one-foot by the end of March to elevations 2391.6 and 3506.3 respectively.

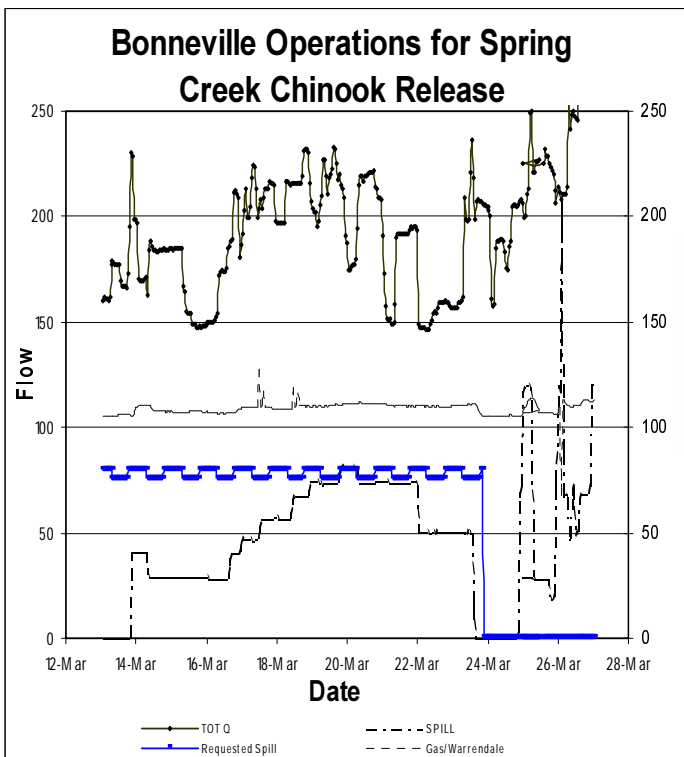
Flows have increased late this week as a result of snow melt and precipitation. Weekly average flows at Lower Granite were 52 kcfs, ranging from 41.7 kcfs to 74.10 daily average flow. At Priest Rapids flows averaged 115 kcfs for the week with daily average flows ranging from 67.9 kcfs to 159.5 kcfs. At McNary the weekly average flow was 168 kcfs with daily average flows ranging from 130 kcfs to 197.5 kcfs.

3. Spill: Spill occurred at Grand Coulee, Chief Joseph, and all mainstem projects except Dworshak, Wells and Rock Island dams. Idaho Power Company advised that, limited spill occurred at Brownlee Dam. These spill events were the result of increased streamflow from snowmelt and precipitation in excess of load demand.

The Corps of Engineers implemented System Operation Request #98-7, which requested spill at Bonneville Dam through March

23, to provide passage protection to Spring Creek Hatchery released Chinook juveniles. Spill was increased to manage to the states' dissolved gas standard of 110 % at the Warrendale station. Spill continued at Bonneville Dam on March 24 –25, as with other projects, as a result of lack of load demand and increased flow. Hourly dissolved gas readings below Grand Coulee ranged from 102% to 136% during the brief spill hours.

4. Smolt Monitoring: This week has seen increased collections of wild yearling chinook at the lower Salmon River trap (WTB), lower Grande Ronde River trap (GRN), and Snake River trap (LEW). PIT tagged detections at the Salmon River trap show the presence of fish PIT tagged late summer to late fall of 1997 in the Lemhi and South Fork Salmon rivers. The two lower Imnaha River traps (IMN) have continued a second week of relatively high collections of wild yearling chinook through March 23. High flows and debris sank the Imnaha River traps resulting in no collection count March 24 and 25 and resumption of sampling with only one trap on March 26. Wild yearling chinook PIT tagged at the Imnaha River trap began showing up at the Snake River trap on March 23. Hatchery yearling chinook collections jumped from 69 to 3,490 fish at the lower Salmon River trap between March 23 and 24, and have continued above 1,000 fish. PIT tag detections indicate that the hatchery yearling chinook at the Salmon River trap are from Rapid River Hatchery and that Rapid River Hatchery chinook are also now present at the Snake River trap. Low numbers of wild steelhead have been collected to date in the Imnaha, Grande Ronde, and Snake River traps. Collections at Bonneville Dam Powerhouse 1 consisted mostly of yearling and subyearling chinook, with a few coho and wild steelhead also present.



5. Adult Fish Passage: Most COE dams will begin fish counting on April 1. The Mid-Columbia projects will begin counting adult fish near the middle of April with Wells Dam starting their counting on May 1. The fish counts from Lower Granite and Bonneville dams are 8-h counts at present and both projects will begin 16-h reporting on April 1.

At Lower Granite Dam, the adult steelhead counts surpassed the 1,000 barrier for the spring portion of the 1997-98 run-year. The total count through March 22 was 1,548, and that was about greater than the 1997 count and the 10-yr average through the same date. One interesting item was that one adult spring chinook was counted at Lower Granite Dam on March 18. According to the COE records, this fish was one of the few that has been counted at Lower Granite Dam in March; the last spring chinook that was counted in March was back in 1987.

At Bonneville Dam, the cumulative adult spring chinook count was 104 through March 24. This total was slightly above the 1997 count of 89, but was well below the 10-yr average of 206 through March 24. Until sampling begins at Bonneville Dam, it is not known what percentage of the chinook run is comprised of 4-yr old or 5-yr old fish. Adult spring chinook counts ranged from 1 to 41 for the week.

6. Hatchery Releases: In the **Snake River basin**, yearling spring chinook were released from several hatcheries during the week with some being volitionally released, and others forced from the ponds. Dworshak NFH finished planting about 1,000,000 yearling chinook on March 26. Rapid River Hatchery should be nearing the 50% migration of chinook from their ponds this week. Yearling chinook from the Tucannon Hatchery began migrating volitionally from the acclimation ponds in mid-March and should continue to emigrate through mid-April. Kooskia NFH and McCall Hatchery will release their chinook next week with other hatcheries releasing chinook during the next two weeks. Most if not all yearling spring and summer chinook in the Snake River basin will be released to begin their downstream migration to the ocean by mid-April.

As noted in the Hatchery Release Section, summer steelhead have been released at several sites already this season. ODFW completed release of about 179,000 fish from Wallowa Hatchery with the volitional release of about 186,000 steelhead from the upper pond following exit of the 179k from the lower pond. Steelhead were also planted below Hells Canyon Dam on the Snake River. Large numbers of steelhead will be released in the Snake River basin during the upcoming month.

About 485,000 coho salmon have been released in the Clearwater River basin to date.

In the **Mid-Columbia Reach**, McNary Dam to below Chief Joseph Dam, no hatchery releases of yearling spring chinook were completed during the past two weeks. Yearling spring chinook will be released from some hatcheries beginning next week. Most of the spring chinook will be released mid-April. So far this season, only yearly **summer** chinook have been released in this Reach. About 539,000 summer chinook were released from Similkameen Ponds during the preceding week.

In the **lower Columbia River**, yearling spring chinook have been released in the Klickitat and Umatilla rivers to date. Also, about 350,000 subyearling spring chinook were released in the Big White Salmon River. Other releases of spring chinook will be made during April in the Deschutes River basin, Wind River, and Little White Salmon River.

Coho have been released in the Umatilla and Klickitat rivers during the past two weeks and will be on-going during April and May. Yearling fall chinook were also released in the Umatilla River with planned releases in April as well.

The release of subyearling fall chinook from Spring Creek Hatchery was completed during the past two weeks with releases to follow in April and May.

**Hatchery Release Summary
Schedule for Last Two Weeks
From 03/13/98 to 03/26/98**

Hatchery	Species	FPC LotID	Number Released	Release Dates		Release Site	River Name
				Begin	End		
IDFG							
Clearwater	SP Chinook	98005	160,100	03/16/98	03/16/98	Hells Canyon Dam	Snake River
	SP Chinook	98006	145,300	03/17/98	03/17/98	Hells Canyon Dam	Snake River
Niagara Springs	SU Steelhead	98120	660,720	03/23/98	04/06/98	Hells Canyon Dam	Snake River
Rapid River	SP Chinook	98007	896,250	03/16/98	04/10/98	Rapid River H	Little Salmon River
	Agency Total:		1,862,370				
Nez Perce Tribe							
Willard	Coho	98136	244,640	03/16/98	03/16/98	Lapwai Cr	Clearwater River, Main Fk
	Coho	98137	230,576	03/18/98	03/18/98	Potlatch R	Clearwater River, Main Fk
	Agency Total:		475,216				
ODFW							
Lower Herman C	Coho	98055	500,000	03/10/98	03/20/98	Umatilla R	Umatilla River
Wallowa	SU Steelhead	98102	179,100	03/24/98	03/24/98	Wallowa Acclim Pd	Grande Ronde River
	SU Steelhead	98101	186,100	03/25/98	04/08/98	Wallowa Acclim Pd	Grande Ronde River
	Agency To		865,200				
Umatilla Tribe							
Thornhollow	FA Chinook	98045	256,910	03/13/98	03/13/98	Thornhollow Acclim Pd	Umatilla River
	Agency Total:		256,910				
USFWS							
Dworshak	SP Chinook	98014	970,000	03/25/98	03/26/98	Dworshak H	N Fk Clearwater River
Spring Creek	FA Chinook	98073	7,727,127	03/13/98	03/13/98	Spring Creek H	Columbia River
	SP Chinook	98056	350,000	03/16/98	03/17/98	White Salmon R	Columbia River
	Agency Total:		9,047,127				
WDFW							
Klickitat	SP Chinook	98093	600,000	03/01/98	03/13/98	Klickitat H	Klickitat River
Lewis River	Coho	98142	140,000	03/16/98	03/18/98	Klickitat R	Klickitat River
Tucannon	SP Chinook	98038	49,000	03/11/98	04/15/98	Curl Lake	Tucannon River
	SP Chinook	98039	15,000	03/11/98	04/15/98	Tucannon H	Tucannon River
	SP Chinook	98040	15,000	03/23/98	04/03/98	Tucannon R	Tucannon River
Wells	SU Chinook	98018	539,000	03/13/98	03/20/98	Similkameen Acclim Pd	Okanogan River
	Agency Total:		1,358,000				
	Total Release:		13,864,823				

Hatchery Release Summary
Schedule for Next Two Weeks
From 03/27/98 to 04/09/98

Hatchery	Species	FPC LotID	Number Released	Release Dates		Release Site	River Name
				Begin	End		
IDFG							
Clearwater	SP Chinook	98004	8,900	04/01/98	04/15/98	Selway R	Clearwater River, Main Fk
	SP Chinook	98003	51,530	04/07/98	04/07/98	Red River Acclim Pd	S Fk Clearwater River
	SP Chinook	98002	206,000	04/07/98	04/10/98	Crooked R Accl Pd	S Fk Clearwater River
Magic Valley	SU Steelhead	98118	50,000	04/01/98	04/01/98	Squaw Cr Acclim Pd	Salmon River
McCall	SU Chinook	98009	370,000	03/31/98	04/09/98	S Fk Salmon R	Salmon River
	SU Chinook	98010	24,900	04/01/98	04/15/98	S Fk Salmon R	Salmon River
Niagara Springs	SU Steelhead	98122	29,400	04/07/98	04/07/98	Pine Bar/Salmon R	Salmon River
	SU Steelhead	98123	141,980	04/08/98	04/10/98	Hammer Cr	Salmon River
Powell	SP Chinook	98001	244,900	04/08/98	04/08/98	Powell Acclim Pd	Lochsa River
	Agency Total:		1,127,610				
Nez Perce Tribe							
Lyons Ferry	FA Chinook	98042	147,585	04/01/98	04/15/98	Pittsburg Landing	Snake River
	FA Chinook	98044	135,710	04/01/98	04/15/98	Cpt John Accl Pd	Snake River
	FA Chinook	98043	76,571	04/01/98	04/15/98	Clearwater R	Clearwater River, Main Fk
	Agency Total:		359,866				
ODFW							
Big Canyon	SU Steelhead	98104	97,500	03/31/98	03/31/98	Big Canyon H	Grande Ronde River
	SU Steelhead	98103	97,500	04/01/98	04/15/98	Big Canyon H	Grande Ronde River
Cascade	Coho	98054	1,000,000	04/01/98	04/10/98	Umatilla R	Umatilla River
Imnaha	SU Chinook	98098	92,500	04/06/98	04/07/98	Imnaha H	Imnaha River
Irrigon	SU Steelhead	98099	200,000	04/06/98	04/08/98	Grande Ronde R	Grande Ronde River
	SU Steelhead	98100	62,500	04/09/98	04/09/98	Catherine Cr	Grande Ronde River
Lookingglass	SP Chinook	98097	290,000	04/06/98	04/07/98	Lookingglass H	Grande Ronde River
Round Butte	SU Steelhead	98129	162,000	04/06/98	04/09/98	Bel. Pelton Dam	Deschutes River
	Agency Total:		2,002,000				
USFWS							
Entiat	SP Chinook	98063	357,000	04/01/98	04/15/98	Entiat H	Entiat River
Hagerman	SU Steelhead	98067	605,000	03/31/98	04/30/98	Sawtooth H	Salmon River
	SU Steelhead	98065	60,000	03/31/98	04/30/98	Sawtooth H	Salmon River
Kooskia	SP Chinook	98013	77,000	03/30/98	03/30/98	Kooskia H	Mid Fk Clearwater River
	Agency Total:		1,099,000				

Hatchery Release Summary
Schedule for Next Two Weeks
From 03/27/98 to 04/09/98

Hatchery	Species	FPC LotID	Number Released	Release Dates		Release Site	River Name
				Begin	End		
WDFW							
Chewuch Ac Pond	SP Chinook	98025	92,500	04/06/98	04/20/98	Chewuch R	Methow River
East Bank	SU Chinook	98016	624,000	04/01/98	05/15/98	Dryden Accl Pd	Wenatchee River
	SP Chinook	98015	15,000	04/01/98	04/30/98	Chiwawa H	Wenatchee River
Lyons Ferry	FA Chinook	98041	450,000	04/01/98	04/15/98	Lyons Ferry H	Snake River
Methow	SU Chinook	98017	346,000	04/01/98	04/30/98	Carlton Accl Pd	Methow River
	SP Chinook	98024	202,000	04/06/98	04/20/98	Methow H	Methow River
	SP Chinook	98026	78,000	04/06/98	04/20/98	Twisp R	Methow River
Ringold	SP Chinook	98139	375,000	04/01/98	04/04/98	Ringold Springs H	Mid-Columbia River
Wells	SU Chinook	98027	357,000	04/01/98	04/20/98	Wells	Mid-Columbia River
	Agency Total:		2,539,500				
Warm Springs Tribe							
Oak Springs	SU Steelhead	98133	60,000	04/08/98	04/10/98	Hood R	Hood River
Round Butte	SP Chinook	98134	62,000	04/06/98	04/13/98	Hood R	Hood River
	Agency Total:		122,000				
	Total Release:		7,249,976				

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
03/13/98	97.9	0.0	98.8	0.0	103.1	0.0	107.3	0.0	105.2	0.0	107.1	0.0	114.7	0.0
03/14/98	73.0	0.0	76.3	0.0	79.0	0.0	83.9	0.0	82.7	0.0	86.5	0.0	91.6	0.0
03/15/98	82.5	0.0	84.2	0.0	87.5	0.0	90.2	0.0	88.4	0.0	91.6	0.0	95.2	0.0
03/16/98	127.8	0.0	130.9	0.0	133.3	0.0	134.7	21.8	130.5	0.0	122.5	0.0	132.0	0.0
03/17/98	128.8	0.0	132.1	0.0	135.8	0.0	141.6	20.7	139.9	0.0	135.9	0.0	143.9	0.0
03/18/98	114.3	0.0	121.6	0.0	123.4	0.0	129.5	12.6	128.7	0.0	129.1	0.0	136.1	0.0
03/19/98	112.3	0.0	113.0	0.0	117.8	0.0	122.2	6.2	120.9	0.0	127.7	0.0	134.8	0.0
03/20/98	94.1	0.0	99.1	0.0	102.9	0.0	112.1	0.0	111.0	0.0	122.3	0.0	129.6	0.0
03/21/98	72.3	0.0	75.9	0.0	78.5	0.0	83.9	0.0	83.7	0.0	89.2	0.0	96.3	0.0
03/22/98	46.1	0.0	46.2	0.0	52.7	0.0	56.4	0.0	56.1	0.0	64.7	0.0	67.9	0.0
03/23/98	90.8	0.0	89.3	0.0	88.9	0.0	88.9	0.0	88.9	0.0	114.5	0.0	117.9	0.0
03/24/98	91.4	0.9	89.4	0.0	90.6	0.0	90.4	0.0	89.2	0.0	95.7	0.0	104.6	0.0
03/25/98	153.6	14.9	151.0	12.8	155.8	0.5	157.0	21.2	151.7	0.0	144.7	33.4	159.5	44.1
03/26/98	121.9	0.0	130.9	0.9	141.2	12.5	146.6	18.9	146.5	0.0	138.1	21.1	152.2	25.7

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

Date	Dworshak		Brownlee		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
03/13/98	1.3	0.0	---	---	37.9	0.0	32.4	0.0	33.9	0.0	32.4	0.0
03/14/98	1.3	0.0	---	---	39.4	0.0	38.1	0.0	40.2	0.0	39.3	0.0
03/15/98	1.3	0.0	---	---	41.3	0.0	40.2	1.4	42.0	0.0	42.3	0.0
03/16/98	1.3	0.0	---	---	47.7	0.0	48.3	0.1	49.3	0.0	47.4	0.0
03/17/98	1.3	0.0	---	---	44.0	0.0	44.2	0.0	49.7	0.0	50.2	0.0
03/18/98	1.4	0.0	---	---	42.9	0.0	42.8	0.0	44.5	0.0	41.5	0.0
03/19/98	1.6	0.0	---	---	46.3	0.0	44.7	0.0	45.6	0.0	48.5	0.0
03/20/98	1.3	0.0	---	---	47.1	0.0	49.1	0.0	51.8	0.0	48.3	0.0
03/21/98	1.3	0.0	---	---	41.7	0.0	43.2	0.0	46.0	0.0	43.6	0.0
03/22/98	1.3	0.0	---	---	44.4	0.0	47.8	0.0	51.0	0.0	53.3	0.0
03/23/98	1.3	0.0	---	---	50.1	0.0	52.0	0.0	54.4	0.0	55.5	0.0
03/24/98	1.3	0.0	---	---	65.5	0.6	62.8	1.4	65.3	1.7	58.7	5.6
03/25/98	2.4	0.0	---	---	74.1	7.6	72.9	11.3	78.1	21.0	81.8	24.9
03/26/98	3.4	0.0	---	---	75.4	6.2	75.2	8.0	78.0	8.5	79.9	22.7

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		
03/13/98	166.7	0.0	184.8	0.0	185.5	0.0	178.0	6.8	60.5	101.7
03/14/98	150.2	0.0	159.4	0.0	157.6	0.0	180.5	32.5	66.9	72.2
03/15/98	127.5	0.0	136.8	0.0	134.5	0.0	161.4	28.8	59.9	63.5
03/16/98	159.4	0.0	168.5	0.0	167.3	0.0	175.3	33.0	65.7	67.4
03/17/98	179.2	14.7	186.4	0.0	184.9	0.0	208.9	51.9	69.3	78.5
03/18/98	195.4	20.0	205.7	0.0	206.0	0.0	214.2	63.7	64.6	76.7
03/19/98	180.9	8.0	197.2	0.0	194.2	0.0	213.3	75.4	60.3	68.4
03/20/98	176.3	0.0	186.8	0.0	192.7	0.0	204.6	76.0	61.5	57.9
03/21/98	164.6	6.5	178.1	0.0	165.5	0.0	178.3	73.7	69.2	26.2
03/22/98	130.4	0.0	143.2	0.0	141.7	0.0	153.4	50.3	64.1	29.6
03/23/98	156.1	0.0	166.6	0.0	167.5	0.0	193.5	28.1	69.8	86.4
03/24/98	172.1	2.1	180.3	1.7	183.7	6.7	190.1	10.6	69.3	101.0
03/25/98	197.5	47.5	210.0	21.4	205.0	45.0	222.1	56.9	70.2	85.8
03/26/98	253.3	83.4	262.4	46.7	249.2	41.9	248.4	70.7	65.3	103.2

Total Dissolved Gas Saturation (%)
Average of 12 Highest Hours, 24 h Average and 24 h High²

Total Dissolved Gas Saturation Data at Upper Columbia Sites

Date	Can. Boundary			Grand Coulee				Tlwr G. Coulee				Chief Joseph				Wells				Rocky Reach				
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
3/13	103	103	104	24	104	105	106	23	102	102	104	23	---	---	---	0	---	---	---	0	---	---	---	0
3/14	102	102	102	24	104	104	105	23	102	103	103	23	---	---	---	0	---	---	---	0	---	---	---	0
3/15	102	102	103	24	104	105	106	23	102	103	104	23	---	---	---	0	---	---	---	0	---	---	---	0
3/16	102	102	103	24	104	104	105	23	102	102	103	23	---	---	---	0	---	---	---	0	---	---	---	0
3/17	102	102	103	20	103	103	103	23	101	101	102	23	---	---	---	0	---	---	---	0	---	---	---	0
3/18	102	102	103	24	103	103	104	23	101	101	102	23	---	---	---	0	---	---	---	0	---	---	---	0
3/19	102	102	102	24	103	104	105	23	101	101	102	23	---	---	---	0	---	---	---	0	---	---	---	0
3/20	102	102	103	24	104	105	105	23	102	102	104	23	---	---	---	0	---	---	---	0	---	---	---	0
3/21	102	102	103	24	105	105	105	23	103	103	104	23	---	---	---	0	---	---	---	0	---	---	---	0
3/22	102	102	103	24	105	105	106	23	104	104	106	23	---	---	---	0	---	---	---	0	---	---	---	0
3/23	103	103	103	24	105	105	105	23	103	103	106	23	---	---	---	0	---	---	---	0	---	---	---	0
3/24	104	106	112	20	105	105	106	23	103	104	106	23	---	---	---	0	---	---	---	0	---	---	---	0
3/25	106	108	110	24	106	107	109	23	112	120	137	23	---	---	---	0	---	---	---	0	---	---	---	0
3/26	106	108	113	24	105	106	106	23	103	104	105	23	---	---	---	0	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation Data at Mid Columbia Sites

Date	Tlwr. Rocky R.			Rock Island				Tlwr. Rock Island				Wanapum				Tlwr Wanapum				Priest Rapids				
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
3/13	---	---	---	0	---	---	---	0	---	---	---	0	103	104	105	23	103	103	104	22	104	104	105	23
3/14	---	---	---	0	---	---	---	0	---	---	---	0	104	104	104	23	104	104	105	23	104	105	106	23
3/15	---	---	---	0	---	---	---	0	---	---	---	0	103	103	103	23	103	103	103	23	105	106	107	23
3/16	---	---	---	0	---	---	---	0	---	---	---	0	102	103	103	23	102	103	103	23	104	105	105	23
3/17	---	---	---	0	---	---	---	0	---	---	---	0	102	102	103	23	102	102	102	22	103	103	103	23
3/18	---	---	---	0	---	---	---	0	---	---	---	0	102	102	103	23	102	102	103	23	103	103	104	23
3/19	---	---	---	0	---	---	---	0	---	---	---	0	104	105	106	23	104	105	105	23	104	105	105	23
3/20	---	---	---	0	---	---	---	0	---	---	---	0	106	106	107	19	106	106	107	19	107	107	108	23
3/21	---	---	---	0	---	---	---	0	---	---	---	0	106	106	106	23	105	106	106	22	108	108	108	22
3/22	---	---	---	0	---	---	---	0	---	---	---	0	106	106	107	23	105	106	106	23	107	108	108	23
3/23	---	---	---	0	---	---	---	0	---	---	---	0	105	105	106	8	106	106	106	23	107	108	108	23
3/24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	104	104	105	11	107	108	108	23
3/25	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	107	108	115	23
3/26	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	116	117	118	23

Total Dissolved Gas Saturation at Mid Columbia, Clearwater and Snake Sites

Date	Dwnstr P Rapids			Dworshak				Clearwater				Snake-Lewiston				Lower Granite				Tlwr L. Granite				
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
3/13	---	---	---	0	106	108	111	24	---	---	---	0	---	---	---	0	104	105	105	24	103	103	103	24
3/14	---	---	---	0	108	109	113	24	---	---	---	0	---	---	---	0	104	105	106	24	103	103	104	24
3/15	---	---	---	0	107	108	108	24	---	---	---	0	---	---	---	0	105	105	105	2	103	103	103	2
3/16	---	---	---	0	112	115	115	24	---	---	---	0	---	---	---	0	104	105	105	24	104	104	104	24
3/17	---	---	---	0	116	116	116	24	---	---	---	0	---	---	---	0	103	103	104	24	103	103	103	24
3/18	---	---	---	0	115	115	116	6	---	---	---	0	---	---	---	0	103	104	106	24	102	102	102	24
3/19	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103	104	104	24	102	102	103	24
3/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103	104	105	24	102	102	103	24
3/21	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103	103	104	24	102	102	102	24
3/22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103	103	103	24	102	102	103	24
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	104	104	105	24	103	104	104	24
3/24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	104	104	105	12	103	103	104	11
3/25	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	104	104	105	24	106	109	113	24
3/26	---	---	---	0	105	110	116	24	---	---	---	0	---	---	---	0	102	102	103	10	104	106	109	24

¹ Data provided by the Corps of Engineers.

² Dissolved gas readings and averages have been rounded to the nearest integer.

Total Dissolved Gas Saturation (%)
Average of 12 Highest Hours, 24 h Average and 24 h High²

Total Dissolved Gas Saturation Data at Snake Sites

Date	Little Goose			Tlwr L. Goose			Lower Mon.			Tlwr L. Mon			Ice Harbor			Tlwr Ice Harbor								
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#						
Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr					
3/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103	103	104	24	102	103	103	24
3/14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	102	103	104	24	102	102	103	24
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	102	102	103	24	102	102	102	24
3/16	---	---	---	0	---	---	---	0	103	103	104	24	---	---	---	0	102	102	102	14	102	103	104	14
3/17	---	---	---	0	---	---	---	0	102	103	103	24	---	---	---	0	101	101	102	24	102	102	103	24
3/18	---	---	---	0	---	---	---	0	103	103	104	24	---	---	---	0	102	102	104	24	102	102	102	24
3/19	---	---	---	0	---	---	---	0	103	103	104	24	---	---	---	0	102	103	105	24	102	103	103	24
3/20	---	---	---	0	---	---	---	0	103	104	105	24	---	---	---	0	103	105	106	24	103	103	104	24
3/21	---	---	---	0	---	---	---	0	104	104	104	2	---	---	---	0	103	104	105	24	104	104	104	24
3/22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	103	104	104	24	104	104	104	24
3/23	---	---	---	0	---	---	---	0	104	104	105	24	---	---	---	0	104	104	104	24	104	104	104	24
3/24	---	---	---	0	---	---	---	0	105	106	107	24	---	---	---	0	104	104	105	24	105	106	111	24
3/25	---	---	---	0	---	---	---	0	105	105	106	24	---	---	---	0	104	104	104	11	111	111	112	11
3/26	---	---	---	0	---	---	---	0	104	104	106	24	---	---	---	0	104	105	107	24	110	111	112	24

Total Dissolved Gas Saturation Data at Lower Columbia Sites

Date	McNary-Oregon			McNary-Wash.			Tlwr McNary			John Day			Tlwr John Day			The Dalles								
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#						
Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr					
3/13	105	106	108	24	105	106	107	24	104	104	105	24	---	---	---	0	---	---	---	0	---	---	---	0
3/14	104	105	105	24	104	105	105	24	104	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/15	104	104	104	2	105	105	105	2	104	104	104	2	---	---	---	0	---	---	---	0	---	---	---	0
3/16	104	105	105	24	104	105	105	24	104	104	105	24	---	---	---	0	---	---	---	0	---	---	---	0
3/17	104	104	105	24	104	104	104	24	107	110	111	24	---	---	---	0	---	---	---	0	---	---	---	0
3/18	103	104	105	24	104	105	106	24	110	110	111	24	---	---	---	0	---	---	---	0	---	---	---	0
3/19	103	104	104	24	104	104	105	24	107	109	110	24	---	---	---	0	---	---	---	0	---	---	---	0
3/20	103	103	103	7	103	103	103	6	104	104	104	7	---	---	---	0	---	---	---	0	---	---	---	0
3/21	105	105	106	24	104	105	106	24	106	108	111	24	---	---	---	0	---	---	---	0	---	---	---	0
3/22	105	105	106	24	104	105	105	24	105	106	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/23	105	106	106	24	105	106	106	24	106	106	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/24	106	106	109	24	105	106	107	24	106	106	107	24	107	107	107	9	106	106	106	7	---	---	---	0
3/25	105	105	106	23	106	106	107	23	112	113	116	23	106	107	107	24	108	109	114	17	106	106	106	15
3/26	104	104	105	23	105	105	105	23	116	118	121	23	105	105	106	24	112	114	115	17	105	106	108	24

Total Dissolved Gas Saturation Data at Lower Columbia Sites

Date	Dnstr T. Dalles			Bonneville			Warrendale			Skamania			Camas\Wash.			Wauna Mill								
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#						
Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr					
3/13	---	---	---	0	105	105	105	24	106	106	109	24	105	105	106	24	105	106	106	23	105	105	106	23
3/14	---	---	---	0	105	105	105	24	109	110	110	24	107	107	108	24	107	109	110	23	105	105	105	23
3/15	---	---	---	0	105	105	105	24	107	108	108	24	106	106	107	24	107	107	108	23	105	105	106	23
3/16	---	---	---	0	105	105	105	24	107	108	109	24	106	107	108	24	107	107	108	23	105	105	106	23
3/17	---	---	---	0	104	104	104	24	111	112	127	24	115	122	122	24	107	109	110	23	106	106	107	23
3/18	---	---	---	0	104	105	105	24	110	112	119	24	114	120	122	24	108	108	109	23	106	107	107	23
3/19	---	---	---	0	105	105	106	24	110	111	112	24	108	109	110	24	107	108	108	23	107	108	108	23
3/20	---	---	---	0	105	106	106	24	111	112	112	24	111	112	113	24	109	111	112	23	108	109	109	22
3/21	---	---	---	0	105	106	106	24	110	111	111	24	112	114	116	24	108	109	109	23	108	108	108	23
3/22	---	---	---	0	105	105	105	24	110	110	111	24	111	112	113	22	109	110	111	23	108	108	109	23
3/23	---	---	---	0	105	106	106	24	109	111	111	24	109	111	112	24	109	110	111	23	108	109	109	23
3/24	---	---	---	0	105	105	105	24	105	106	106	24	104	105	107	24	105	106	109	23	107	107	108	23
3/25	---	---	---	0	105	105	105	24	109	111	114	24	109	113	118	24	107	111	114	23	106	106	107	23
3/26	105	105	107	13	106	107	110	24	111	112	113	24	109	110	111	24	107	108	110	23	105	105	106	23

¹ Data provided by the Corps of Engineers.

² Dissolved gas readings and averages have been rounded to the nearest integer.

Two-Week Summary of Passage Indices

Date	Yearling Chinook							Hatchery/Wild Combined			
	Hatchery							RIS	MCN	JDA	BO1
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)				
03/13/98	0	0	---	0	---	---	---	---	---	---	134
03/14/98	---	---	---	---	---	---	---	---	---	---	610
03/15/98	---	---	---	---	---	---	---	---	---	---	152
03/16/98	---	0	0	0	---	---	---	---	---	---	76
03/17/98	4	0	0	0	---	---	---	---	---	---	259
03/18/98	259	0	0	0	---	---	---	---	---	---	238
03/19/98	168	0	0	1	---	---	---	---	---	---	220
03/20/98	87	0	0	4	---	---	---	---	---	---	407
03/21/98	---	0	---	---	---	---	---	---	---	---	157
03/22/98	---	0	---	---	---	---	---	---	---	---	108
03/23/98	69	0	0	2	---	---	---	---	---	---	169
03/24/98	3,490	0	0	10	---	---	---	---	---	---	261
03/25/98	1,171	0	0	80	---	---	---	---	---	---	230
03/26/98	501	0	0	46	---	---	---	---	---	---	513
Total:	5,749	0	0	143	0	0	0	0	0	0	3,534
# Days:	9	12	9	10	0	0	0	0	0	0	14
Average:	639	0	0	14	0	0	0	0	0	0	252

Date	Wild Yearling Chinook							Wild Subyearling Chinook		
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)
03/13/98	0	10	---	0	---	---	---	---	---	---
03/14/98	---	---	---	---	---	---	---	---	---	---
03/15/98	---	---	---	---	---	---	---	---	---	---
03/16/98	---	239	14	0	---	---	---	---	---	---
03/17/98	2	464	10	0	---	---	---	---	---	---
03/18/98	60	501	20	0	---	---	---	---	---	---
03/19/98	61	317	14	1	---	---	---	---	---	---
03/20/98	37	184	2	0	---	---	---	---	---	---
03/21/98	---	84	---	---	---	---	---	---	---	---
03/22/98	---	79	---	---	---	---	---	---	---	---
03/23/98	54	155	39	0	---	---	---	---	---	---
03/24/98	207	0	114	9	---	---	---	---	---	---
03/25/98	109	0	34	137	---	---	---	---	---	---
03/26/98	98	19	23	51	---	---	---	---	---	---
Total:	628	2,052	270	198	0	0	0	0	0	0
# Days:	9	12	9	10	0	0	0	0	0	0
Average:	70	171	30	20	0	0	0	0	0	0

Smolt Monitoring Program (SMP) site definitions: Juvenile salmonids are sampled for the SMP at 11 dams or traps. Passage values are reported here as either collection or index counts. Collection counts are expanded, if necessary, for sub-sampling effort. Index counts are further expanded to account for non-sampled flow volume. Data are collected at Rock Island Dam PH2 (RIS) by Chelan Co. PUD. ODFW operates the Grande Ronde trap (GRN), and reports on data collected at Little Goose Dam (LGS). IDFG operates the Salmon River trap (LEW). The Nex Perce Tribe operates a trap on the Imnaha River (IMN). WDFW reports data from the collection facilities at Lower Granite Dam (LGR); Lower Monumental Dam (LMN); and McNary Dam (MCN). NMFS samples the Unit 3B gatewell at John Day Dam (JDA), and provides an index value based on 8 hour sampling at Bonneville PH1 (BON).

Two-Week Summary of Passage Indices

Date	Hatchery Subyearling Chinook							Combined Subyearling Chinook			
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO1 (INDEX)
03/13/98	0	0	---	0	0	---	---	---	---	---	67
03/14/98	---	---	---	---	---	---	---	---	---	---	68,537
03/15/98	---	---	---	---	0	---	---	---	---	---	97,799
03/16/98	---	0	0	0	---	---	---	---	---	---	29,807
03/17/98	0	0	0	0	---	---	---	---	---	---	11,368
03/18/98	0	0	0	0	0	---	---	---	---	---	9,790
03/19/98	0	0	0	0	---	---	---	---	---	---	3,740
03/20/98	0	0	0	0	---	---	---	---	---	---	2,211
03/21/98	---	0	---	---	---	---	---	---	---	---	1,264
03/22/98	---	0	---	---	---	---	---	---	---	---	809
03/23/98	0	0	0	0	---	---	---	---	---	---	676
03/24/98	0	0	0	0	---	---	---	---	---	---	543
03/25/98	0	0	0	0	---	---	---	---	---	---	558
03/26/98	0	0	0	0	---	---	---	---	---	---	909
Total:	0	0	0	0	0	0	0	0	0	0	228,078
# Days:	9	12	9	10	3	0	0	0	0	0	14
Average:	0	0	0	0	0	0	0	0	0	0	16,291

Date	All Coho										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO1 (INDEX)
03/13/98	0	0	---	0	---	---	---	---	---	---	0
03/14/98	---	---	---	---	---	---	---	---	---	---	0
03/15/98	---	---	---	---	---	---	---	---	---	---	0
03/16/98	---	0	0	0	---	---	---	---	---	---	303
03/17/98	0	0	0	0	---	---	---	---	---	---	0
03/18/98	0	0	0	0	---	---	---	---	---	---	0
03/19/98	0	0	0	0	---	---	---	---	---	---	34
03/20/98	0	0	0	0	---	---	---	---	---	---	13
03/21/98	---	0	---	---	---	---	---	---	---	---	20
03/22/98	---	0	---	---	---	---	---	---	---	---	27
03/23/98	0	0	0	0	---	---	---	---	---	---	74
03/24/98	0	0	0	0	---	---	---	---	---	---	20
03/25/98	0	0	0	0	---	---	---	---	---	---	60
03/26/98	0	0	0	0	---	---	---	---	---	---	15
Total:	0	0	0	0	0	0	0	0	0	0	566
# Days:	9	12	9	10	0	0	0	0	0	0	14
Average:	0	0	0	0	0	0	0	0	0	0	40

Smolt Monitoring Program (SMP) site definitions: Juvenile salmonids are sampled for the SMP at 11 dams or traps. Passage values are reported here as either collection or index counts. Collection counts are expanded, if necessary, for sub-sampling effort. Index counts are further expanded to account for non-sampled flow volume. Data are collected at Rock Island Dam PH2 (RIS) by Chelan Co. PUD. ODFW operates the Grande Ronde trap (GRN), and reports on data collected at Little Goose Dam (LGS). IDFG operates the Salmon River trap (LEW). The Nex Perce Tribe operates a trap on the Imnaha River (IMN). WDFW reports data from the collection facilities at Lower Granite Dam (LGR); Lower Monumental Dam (LMN); and McNary Dam (MCN). NMFS samples the Unit 3B gatewell at John Day Dam (JDA), and provides an index value based on 8 hour sampling at Bonneville PH1 (BON).

Two-Week Summary of Passage Indices

Hatchery Steelhead											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO1 (INDEX)
03/13/98	0	0	---	0	---	---	---	---	---	---	0
03/14/98	---	---	---	---	---	---	---	---	---	---	0
03/15/98	---	---	---	---	---	---	---	---	---	---	0
03/16/98	---	0	0	0	---	---	---	---	---	---	0
03/17/98	0	0	0	0	---	---	---	---	---	---	0
03/18/98	0	0	0	0	---	---	---	---	---	---	0
03/19/98	0	0	0	0	---	---	---	---	---	---	0
03/20/98	0	0	0	0	---	---	---	---	---	---	0
03/21/98	---	0	---	---	---	---	---	---	---	---	0
03/22/98	---	1	---	---	---	---	---	---	---	---	0
03/23/98	0	1	0	0	---	---	---	---	---	---	0
03/24/98	0	0	0	0	---	---	---	---	---	---	0
03/25/98	0	0	0	0	---	---	---	---	---	---	0
03/26/98	0	0	6	0	---	---	---	---	---	---	15
Total:	0	2	6	0	0	0	0	0	0	0	15
# Days:	9	12	9	10	0	0	0	0	0	0	14
Average:	0	0	1	0	0	0	0	0	0	0	1

Wild Steelhead											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO1 (INDEX)
03/13/98	0	0	---	0	---	---	---	---	---	---	0
03/14/98	---	---	---	---	---	---	---	---	---	---	0
03/15/98	---	---	---	---	---	---	---	---	---	---	0
03/16/98	---	2	1	0	---	---	---	---	---	---	0
03/17/98	0	15	1	0	---	---	---	---	---	---	0
03/18/98	0	24	1	1	---	---	---	---	---	---	0
03/19/98	0	9	1	1	---	---	---	---	---	---	0
03/20/98	0	4	0	4	---	---	---	---	---	---	0
03/21/98	---	5	---	---	---	---	---	---	---	---	0
03/22/98	---	9	---	---	---	---	---	---	---	---	9
03/23/98	0	28	1	1	---	---	---	---	---	---	21
03/24/98	0	0	52	1	---	---	---	---	---	---	0
03/25/98	1	0	35	10	---	---	---	---	---	---	24
03/26/98	1	25	30	6	---	---	---	---	---	---	73
Total:	2	121	122	24	0	0	0	0	0	0	127
# Days:	9	12	9	10	0	0	0	0	0	0	14
Average:	0	10	14	2	0	0	0	0	0	0	9

Smolt Monitoring Program (SMP) site definitions: Juvenile salmonids are sampled for the SMP at 11 dams or traps. Passage values are reported here as either collection or index counts. Collection counts are expanded, if necessary, for sub-sampling effort. Index counts are further expanded to account for non-sampled flow volume. Data are collected at Rock Island Dam PH2 (RIS) by Chelan Co. PUD. ODFW operates the Grande Ronde trap (GRN), and reports on data collected at Little Goose Dam (LGS). IDFG operates the Salmon River trap (LEW). The Nex Perce Tribe operates a trap on the Imnaha River (IMN). WDFW reports data from the collection facilities at Lower Granite Dam (LGR); Lower Monumental Dam (LMN); and McNary Dam (MCN). NMFS samples the Unit 3B gatewell at John Day Dam (JDA), and provides an index value based on 8 hour sampling at Bonneville PH1 (BON).

Two-Week Summary of Passage Indices

Hatchery Sockeye											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO1 (INDEX)
03/13/98	0	0	---	0	---	---	---	---	---	---	0
03/14/98	---	---	---	---	---	---	---	---	---	---	0
03/15/98	---	---	---	---	---	---	---	---	---	---	0
03/16/98	---	0	0	0	---	---	---	---	---	---	0
03/17/98	0	0	0	0	---	---	---	---	---	---	0
03/18/98	0	0	0	0	---	---	---	---	---	---	0
03/19/98	0	0	0	0	---	---	---	---	---	---	0
03/20/98	0	0	0	0	---	---	---	---	---	---	0
03/21/98	---	0	---	---	---	---	---	---	---	---	0
03/22/98	---	0	---	---	---	---	---	---	---	---	0
03/23/98	0	0	0	0	---	---	---	---	---	---	0
03/24/98	0	0	0	0	---	---	---	---	---	---	0
03/25/98	0	0	0	0	---	---	---	---	---	---	0
03/26/98	0	0	0	0	---	---	---	---	---	---	0
Total:	0	0	0	0	0	0	0	0	0	0	0
# Days:	9	12	9	10	0	0	0	0	0	0	14
Average:	0	0	0	0	0	0	0	0	0	0	0

Wild Sockeye											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO1 (INDEX)
03/13/98	0	0	---	0	---	---	---	---	---	---	0
03/14/98	---	---	---	---	---	---	---	---	---	---	0
03/15/98	---	---	---	---	---	---	---	---	---	---	0
03/16/98	---	0	0	0	---	---	---	---	---	---	0
03/17/98	0	0	0	0	---	---	---	---	---	---	0
03/18/98	0	0	0	0	---	---	---	---	---	---	0
03/19/98	0	0	0	0	---	---	---	---	---	---	0
03/20/98	0	0	0	0	---	---	---	---	---	---	0
03/21/98	---	0	---	---	---	---	---	---	---	---	0
03/22/98	---	0	---	---	---	---	---	---	---	---	0
03/23/98	0	0	0	0	---	---	---	---	---	---	0
03/24/98	0	0	0	0	---	---	---	---	---	---	0
03/25/98	0	0	0	0	---	---	---	---	---	---	0
03/26/98	0	0	0	0	---	---	---	---	---	---	0
Total:	0	0	0	0	0	0	0	0	0	0	0
# Days:	9	12	9	10	0	0	0	0	0	0	14
Average:	0	0	0	0	0	0	0	0	0	0	0

Operational Comments:

IMN 3/23 - 26/98 Trap took partial sample on 3/23 and was out of service 3/24, 3/25, 3/26 due to high flows and debris.

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Cumulative Adult Passage at Mainstem Dams Through March 26, 1998

	Spring Chinook						Summer Chinook						Fall Chinook					
	1998		1997		10-Yr Avg.		1998		1997		10-Yr Avg.		1998		1997		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	104	0	89	0	206	0												
TDA																		
JDA																		
MCN																		
IHR																		
LMN																		
LGS																		
LWG	1	0	0	0	0	0												
PRD																		
RIS																		
RRH																		
WEL																		

	Coho						Sockeye			Steelhead		
	1998		1997		10-Yr Avg.		1998	1997	10-Yr Avg.	1998	1997	10-Yr Avg.
	Adult	Jack	Adult	Jack	Adult	Jack						
BON									263	541	452	
TDA												
JDA												
MCN												
IHR												
LMN												
LGS												
LWG									1,548	1,329	1,354	
PRD												
RIS												
RRH												
WEL												

Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC.
 1996, 1997, and 1998 counts were obtained from the Corps of Engineers.
 Current and historic data are available and reported through 3/24 at Bonneville Dam and 3/22 at Lower Granite Dam.