



Fish Passage Center

Weekly Report #01 - 19

July 20, 2001

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

SIGNIFICANT POINTS

- **Mainstem migration flows continued to decline this week.**
- **The Biological Opinion summer flow target for Lower Granite Dam of 50 kcfs began on June 20. Flows for the past week averaged 26.3 Kcfs.**
- **The Biological Opinion summer flow target for McNary Dam of 200 kcfs began on July 1. Flows for the past week averaged 80.1 Kcfs**

SUMMARY OF EVENTS:

Water Supply: No new information available.

Reservoir Operations: Over the past week system reservoirs operated as illustrated in the following table. Grand Coulee Reservoir stopped refilling and is drafting to elevation 1280 feet by the end of the month. At the request of the State of Montana Libby outflow was increased from 6 Kcfs to 10 Kcfs for a short period in order to address the growth of algae below the project. Albeni Falls outflow is being adjusted to keep the project between 2062 and 2062.5 feet for summer recreation. Flow augmentation from Dworshak Reservoir for flow and temperature regulation began on July 2. Outflow from Dworshak is set to powerhouse capacity, which is presently 9.8 Kcfs. The reservoir drafted about 6.2 feet over the week.

The Upper Snake projects continued drafting pools for irrigation demands to 40% of capacity on July 19. American Falls is at 34% of capacity, Palisades is at 20% of capacity and Jackson Lake is at 71% of capacity.

Reservoir	Elevations July 13 – July 19, 2001
Libby	2435.2 – 2435.9
Grand Coulee	1283.9 – 1282.0
Dworshak	1578.8 – 1572.6
Brownlee*	2073.9 – 2074.1

Flows: The mainstem migration flows were far below the NMFS Biological Opinion requirement in all river reaches. For the week of July 13 through July 19, weekly average flows at Priest Rapids was 58.8 kcfs with the highest daily average flow of 70.1 kcfs occurring on July 17 and the lowest daily average flow occurring on of 47 kcfs occurring on July 15.

Daily average flows at Lower Granite Dam have remained fairly steady through the week due to flow augmentation from Dworshak Dam. The highest daily average flow of 29 kcfs occurred on July 17 and the lowest daily average flow of 24 occurred on July 15. The weekly average flow at Lower Granite Dam was 26.3 kcfs. The NMFS Biological Opinion summer flow target for Lower Granite Dam of 50 kcfs began on June 20.

The weekly average flow at McNary Dam have been 80.1 kcfs with the lowest daily average flow occurring on July 13 of 68.9 kcfs and the highest daily average flow of 99.2 occurring on July 18.

Spill: Summer spill did not occur in the federal hydrosystem this past week. Spill at Priest Rapids averaged 24% of daily average flow last week and at Wanapum Dam spill averaged 31% of daily average flow.

Total dissolved gas readings at most monitors are reading in excess of 100%, but less than the waiver limits. One subyearling chinook with bubbles in its unpaired fins was observed this past week at Rock Island Dam.

Smolt Monitoring Program. Collection of subyearling chinook at Lower Granite and Little Goose dams dropped over 50% from last week's average, but increased over 200% for the second week in a row at Lower Monumental Dam. Subyearling chinook passage indices at Rock Island Dam doubled this week to average over 1,000 fish per day. The migration of subyearling chinook also showed strength again this week at McNary Dam (weekly average up 160%). McNary Dam's daily subyearling chinook collections rose above 100,000 fish at the start of the week and grew to 272,500 fish by week's end. Subyearling chinook collections at John Day Dam increased 40% this week, while passage indices of subyearling chinook dropped 17% at Bonneville Dam.

Adult Fish Passage: At Bonneville Dam, the cumulative count of adult summer chinook salmon through July 19 was 66,580, about 2.5 times and 3.6 times more than the respective Year 2000 and 10-year average. The adult chinook counts at Bonneville Dam ranged from a high of 1,129 to a low of 698 per day through the week. At The Dalles Dam, 59,389 adult summer chinook salmon have been counted (7/19 count missing), approximately 89.2% of the Bonneville count. The cumulative adult summer chinook salmon count at McNary Dam was 53,403, with 14,413 tallied at Ice Harbor (Snake River) and about 33,767 (through July 18) at Priest Rapids Dam (Mid-Columbia River). Numbers of adult chinook entering the Snake River continued to decline while the Priest Rapids counts averaged about 1,000 fish per day through the week.

Steelhead passage at Bonneville Dam averaged nearly 5,000 per day through the week ending July 19 with the steelhead count at 102,192, which is 1.9 and 3.3 times greater than the respective year 2000 count and the 10-year average. If this trend continues, 2001 could produce a record-setting run of adult steelhead in the Columbia River basin above Bonneville Dam. Returns of unclipped (mostly wild) steelhead comprise about 39% of the total steelhead run past Bonneville. Through July 19, there were more Wild fish (unclipped total = 39,852) past Bonneville Dam than hatchery and wild steelhead combined for the 10-year average (30,730). Ice Harbor Dam count of steelhead averaged about 800 per day for the week with the season total now at 14,810, about 3.0 times more than the 2000 and 10-year average. Steelhead counts at Mid-Columbia projects were increasing with about 130 per day passing Priest Rapids Dam and totaling 1,966 for the season, about 2.2 times greater than 2000 and 3.5 times the 10-year average.

Adult sockeye passage at Bonneville Dam ranged from a high count of about 400 to a low of 200, with the total count through July 19 of 114,021, about 1.2 times and 2.5 times more than the respective 2000 count and 10-year average count. About 100,000 sockeye salmon have been counted at Priest Rapids Dam through July 18 with most of these sockeye continuing up into Lake Wenatchee or Lake Osoyoos basins. Sockeye passage continues at high rates at the upper Mid-Columbia projects. About 93,000 have been counted at Rock Island Dam with more than 60% of these fish counted at Rocky Reach and Wells dams and destined for Lake Osoyoos. The Snake River portion of the sockeye run was 30 adult sockeye counted through July 19 at Lower Granite Dam (does not include video or night counts).

The return of coho salmon is estimated at 1.3 million to the mouth of the Columbia River; note that this includes both the early and late stock coho. No estimates have been made to Bonneville Dam as yet for adult coho salmon, but expectations are that the counts will be greater than in previous years. About 75% of the adult coho that pass Bonneville Dam do so in September.

Hatchery Releases.

Snake River – Releases of yearling and subyearling chinook, sockeye, and coho salmon and steelhead are completed for the 2001 migration season.

Mid-Columbia [above McNary Dam] – Releases of yearling and subyearling chinook, sockeye, and coho salmon and steelhead are completed for the 2001 migration season.

Lower Columbia [McNary Dam to above Bonneville Dam]– Releases of yearling and subyearling chinook and coho salmon, and steelhead are completed for the 2001 migration season.

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary									
From:		7/6/01	to		7/19/01				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Lyons Ferry	CH0	FA	2001	24,000	06-01-01	07-06-01	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe Total					24,000				
NMFS	Lyons Ferry	CH0	FA	2001	7,500	06-01-01	07-06-01	Pittsburg Landing	Snake River
NMFS Total					7,500				
Grand Total					31,500				

7/20/01

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
07/06/01	58.7	0.1	56.6	0.0	53.8	4.4	52.6	0.0	54.8	0.0	64.5	20.1	61.0	14.5
07/07/01	36.0	0.1	44.1	0.0	46.6	4.0	46.0	0.0	48.4	0.0	53.1	16.5	50.9	12.3
07/08/01	51.0	0.1	45.6	0.0	44.7	3.7	46.9	0.0	48.7	0.0	59.7	18.5	59.9	14.1
07/09/01	54.1	0.1	59.6	0.0	64.1	5.3	68.3	0.0	71.2	0.0	68.5	21.2	64.2	15.2
07/10/01	42.4	0.1	39.2	0.0	40.9	4.0	40.0	0.0	41.8	0.0	74.3	23.2	72.1	17.4
07/11/01	35.2	0.2	38.9	0.0	41.2	3.3	40.9	0.0	40.5	0.0	40.4	12.5	49.0	11.9
07/12/01	51.7	0.1	51.1	0.0	52.8	4.1	53.8	0.0	54.2	0.0	44.6	13.9	40.5	9.8
07/13/01	63.9	0.1	66.3	0.0	66.9	5.2	64.9	0.0	64.6	0.0	67.4	21.1	61.1	14.7
07/14/01	45.9	0.1	48.7	0.0	46.8	4.0	48.3	0.0	52.4	0.0	64.1	19.9	62.7	15.0
07/15/01	29.8	0.1	29.1	0.0	31.0	2.3	33.4	0.0	34.4	0.0	48.1	15.0	47.0	11.3
07/16/01	54.3	0.1	55.1	0.0	56.3	4.2	61.8	0.0	62.6	0.0	51.7	16.0	50.3	12.1
07/17/01	57.3	0.1	60.3	0.0	61.9	4.8	56.9	0.0	55.8	0.0	70.3	21.8	70.1	16.7
07/18/01	55.7	0.1	56.5	0.0	57.5	4.4	54.7	0.0	56.4	0.0	53.7	16.8	59.1	14.0
07/19/01	60.5	0.1	60.9	0.0	61.9	4.6	61.3	0.0	63.0	0.0	68.8	21.5	61.5	14.7

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/06/01	7.0	0.0	6.9	8.2	29.3	0.0	28.8	0.0	28.9	0.0	29.2	0.0
07/07/01	9.0	0.0	7.3	7.5	26.2	0.0	27.0	0.0	29.0	0.0	27.4	0.0
07/08/01	9.6	0.0	6.8	7.0	27.9	0.0	28.7	0.0	29.2	0.0	28.9	0.0
07/09/01	9.7	0.0	7.4	7.2	25.5	0.0	26.2	0.0	27.3	0.0	27.1	0.0
07/10/01	9.7	0.0	7.5	8.5	25.2	0.0	25.7	0.0	28.0	0.0	27.2	0.0
07/11/01	9.7	0.0	9.1	9.2	26.0	0.0	26.4	0.0	26.7	0.0	25.8	0.0
07/12/01	9.7	0.0	6.7	7.7	28.4	0.0	28.8	0.0	30.5	0.0	30.1	0.0
07/13/01	9.7	0.0	8.1	8.8	26.3	0.0	26.9	0.0	27.3	0.0	25.5	0.0
07/14/01	9.7	0.0	7.5	7.6	27.5	0.0	27.5	0.0	26.9	0.0	26.8	0.0
07/15/01	9.8	0.0	7.4	7.1	24.0	0.0	23.2	0.0	24.6	0.0	23.3	0.0
07/16/01	9.8	0.0	8.5	7.7	24.4	0.0	26.0	0.0	26.6	0.0	25.9	0.0
07/17/01	9.8	0.0	7.6	7.7	29.0	0.0	29.1	0.0	30.7	0.0	29.9	0.0
07/18/01	9.8	0.0	8.0	8.3	25.2	0.0	25.5	0.0	26.2	0.0	25.6	0.0
07/19/01	9.8	0.0	---	---	27.6	0.0	27.4	0.0	28.5	0.0	28.5	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		
07/06/01	85.7	0.0	80.3	0.0	83.0	0.0	91.5	0.0	0.6	82.4
07/07/01	84.3	0.0	81.5	0.0	83.5	0.0	85.1	0.0	0.6	75.9
07/08/01	66.9	0.0	68.4	0.0	72.9	0.0	83.2	0.0	0.2	74.4
07/09/01	94.8	0.0	86.2	0.0	89.2	0.0	84.2	0.0	4.9	70.7
07/10/01	97.4	0.0	96.8	0.0	97.4	0.0	97.6	0.0	9.2	79.8
07/11/01	90.3	0.0	96.3	0.0	101.7	0.0	100.8	0.0	5.6	86.6
07/12/01	72.4	0.0	78.9	0.0	79.5	0.0	88.6	0.0	1.1	78.9
07/13/01	68.9	0.0	68.9	0.0	72.4	0.0	81.4	0.0	0.6	72.3
07/14/01	83.3	0.0	66.1	0.0	70.2	0.0	75.9	0.0	0.6	66.7
07/15/01	74.2	0.0	63.1	0.0	65.1	0.0	75.9	0.0	0.6	66.8
07/16/01	78.9	0.0	81.6	0.0	84.2	0.0	83.2	0.0	0.6	74.0
07/17/01	77.3	0.0	81.3	0.0	85.9	0.0	86.2	0.0	0.5	77.1
07/18/01	99.2	0.0	101.4	0.0	102.7	0.0	105.3	0.0	7.0	89.7
07/19/01	79.2	0.0	79.7	0.0	83.2	0.0	83.9	0.0	0.5	74.8

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	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph			
	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	
7/6	108	109	111	24	108	109	110	24	107	107	107	24	---	---	---	0	109	109	110	24
7/7	109	109	109	24	109	110	114	24	107	107	107	24	---	---	---	0	108	109	110	24
7/8	105	106	108	24	108	109	109	24	107	107	107	24	---	---	---	0	109	109	109	23
7/9	105	105	105	23	108	109	109	24	107	107	107	24	---	---	---	0	108	109	111	23
7/10	105	105	106	24	108	109	110	24	107	107	108	24	---	---	---	0	110	111	111	22
7/11	105	105	105	24	107	108	108	24	107	107	108	24	---	---	---	0	110	110	111	23
7/12	106	107	110	24	107	107	108	23	108	109	136	19	106	107	108	22	109	109	110	23
7/13	108	109	112	24	106	107	108	24	109	112	136	20	106	106	108	24	109	110	110	23
7/14	110	110	110	24	106	107	108	23	107	107	108	24	106	107	108	22	109	110	110	23
7/15	108	108	109	23	106	107	107	23	108	108	108	24	107	108	110	20	109	109	110	23
7/16	107	108	109	23	105	105	106	22	107	108	108	24	107	107	110	23	109	109	110	23
7/17	106	106	107	24	105	105	105	24	107	107	108	24	106	107	108	19	109	109	110	23
7/18	104	105	108	24	105	106	106	24	107	107	107	24	106	107	108	23	108	108	109	23
7/19	109	109	110	23	105	106	106	24	107	107	107	24	106	107	108	21	108	108	109	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr				
	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
7/6	108	109	110	24	109	109	110	23	110	111	112	23	110	110	111	111	19	110	110	111	18
7/7	108	109	110	24	109	109	110	24	110	111	111	24	111	111	112	112	22	106	110	110	17
7/8	108	109	109	23	109	110	111	24	110	111	112	24	111	111	112	20	108	110	110	18	
7/9	109	110	111	23	110	111	111	23	111	112	112	23	111	112	112	20	110	111	111	20	
7/10	109	109	110	23	111	112	113	24	111	112	113	24	112	113	113	20	111	112	112	18	
7/11	108	109	110	23	110	111	111	23	110	111	112	23	112	112	113	20	111	111	112	19	
7/12	108	109	110	23	111	111	114	22	110	111	112	22	112	112	113	21	111	111	112	21	
7/13	110	111	111	23	110	110	111	23	110	111	112	23	111	112	112	22	111	111	111	20	
7/14	110	111	112	23	110	111	112	23	109	111	112	23	111	111	112	19	111	111	112	19	
7/15	110	111	112	23	110	110	111	24	108	110	111	24	111	111	111	20	111	111	111	20	
7/16	110	110	111	23	109	110	110	22	109	110	111	22	109	110	110	19	110	110	110	19	
7/17	109	109	110	23	109	110	111	23	110	111	112	23	108	109	109	20	109	109	109	19	
7/18	108	109	110	23	110	111	121	23	109	110	111	23	107	108	108	22	108	108	108	22	
7/19	108	108	109	23	110	111	112	24	110	111	112	24	109	109	110	20	108	108	109	20	

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
	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	
7/6	108	108	109	19	109	109	109	13	107	107	107	24	109	110	111	24	106	107	108	24
7/7	107	108	109	14	105	109	110	19	107	109	109	24	109	110	111	24	106	107	109	24
7/8	108	109	110	17	107	109	110	18	108	109	111	24	109	110	112	24	107	108	110	24
7/9	109	110	110	22	109	110	111	22	108	110	110	24	111	111	112	9	108	110	111	24
7/10	110	111	112	23	111	111	112	23	110	111	112	24	111	112	113	24	109	110	112	24
7/11	109	110	111	21	110	111	111	21	108	109	110	24	110	111	112	24	108	109	110	24
7/12	108	109	109	23	110	111	112	23	107	108	110	24	110	111	111	24	108	110	111	24
7/13	109	109	109	22	111	111	112	22	108	109	110	24	111	111	112	24	108	109	110	24
7/14	109	109	109	21	111	112	112	21	107	108	109	24	110	111	112	24	107	108	110	24
7/15	108	109	109	20	110	110	111	20	106	107	108	24	109	110	111	24	107	107	108	24
7/16	107	107	108	23	109	109	110	23	104	104	105	24	108	109	110	24	105	106	109	24
7/17	107	107	107	22	109	110	110	21	104	104	105	24	108	109	110	24	104	105	106	24
7/18	107	107	107	22	109	109	109	22	---	---	---	0	---	---	---	0	---	---	---	0
7/19	107	107	107	23	109	109	110	22	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	Priest R. Dnst			Pasco			Dworshak			Clrwtr-Peck			Anatone			#				
	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High					
7/6	107	107	108	15	108	108	110	24	102	102	102	24	---	---	---	0	102	104	107	24
7/7	107	107	108	9	106	107	107	24	100	101	101	23	---	---	---	0	102	105	108	24
7/8	108	108	109	5	106	107	107	24	100	101	101	24	103	104	106	24	102	105	108	24
7/9	109	109	111	14	107	108	109	24	100	100	101	24	103	104	106	24	103	105	108	24
7/10	110	110	111	24	108	109	109	23	100	101	101	24	103	105	106	24	103	105	108	24
7/11	109	110	111	24	107	107	108	20	100	101	101	24	103	104	106	24	102	104	107	24
7/12	108	108	109	24	105	106	106	21	100	100	101	24	103	104	105	24	102	104	107	24
7/13	108	109	110	24	106	107	107	24	100	100	101	24	103	104	105	24	102	104	106	24
7/14	108	109	110	24	106	107	107	23	101	101	102	24	103	105	106	24	102	105	107	24
7/15	107	108	108	24	106	107	107	24	101	101	101	24	103	104	106	24	102	104	107	24
7/16	106	106	107	24	104	104	105	24	101	101	101	24	102	103	105	24	101	103	105	24
7/17	105	106	106	24	102	102	103	24	100	100	101	24	102	103	104	24	101	103	105	24
7/18	---	---	---	0	103	104	105	24	99	100	100	24	102	103	104	24	101	102	105	24
7/19	---	---	---	0	104	105	106	21	100	100	101	24	102	104	105	24	102	104	106	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr			#				
	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High					
7/6	102	104	105	24	106	107	109	24	100	101	101	21	104	106	108	24	101	102	103	24
7/7	103	105	106	23	108	109	110	24	101	101	102	24	104	105	105	24	102	102	103	24
7/8	103	105	107	24	108	109	112	24	100	101	102	23	103	105	106	24	101	101	102	24
7/9	103	105	107	24	106	108	109	24	99	100	103	24	104	108	109	24	101	101	102	24
7/10	103	105	107	24	109	111	113	24	99	100	102	24	107	108	108	24	101	102	102	24
7/11	103	105	106	24	108	108	110	24	99	100	101	24	104	105	106	23	101	101	102	23
7/12	103	105	106	24	108	108	110	24	100	101	101	24	106	106	108	24	101	102	102	24
7/13	103	105	106	24	107	108	110	24	101	101	102	24	102	103	104	24	99	100	100	24
7/14	103	105	107	24	105	107	109	24	101	102	102	24	98	98	99	24	99	99	99	24
7/15	103	105	106	24	103	103	104	24	101	102	102	24	96	97	98	24	98	98	98	24
7/16	102	103	105	24	103	104	106	24	100	101	101	24	98	98	98	23	98	98	99	23
7/17	102	103	105	24	103	104	105	24	101	101	101	24	98	98	99	24	98	99	99	24
7/18	102	104	106	24	102	103	104	24	100	101	101	24	98	98	99	24	98	99	99	24
7/19	103	105	106	24	103	104	105	24	100	100	101	24	98	98	99	24	98	99	99	24

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

Date	Lower Mon.			L. Mon. Tlwr			Ice Harbor			Ice Harbor Tlwr			McNary-Oregon			#				
	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High					
7/6	104	104	106	24	103	104	105	24	105	106	107	24	104	105	105	24	109	110	110	24
7/7	104	104	105	24	103	104	105	24	105	106	107	23	104	104	105	23	110	111	112	24
7/8	103	103	104	24	102	103	103	24	103	105	106	24	104	105	106	24	110	111	113	24
7/9	105	106	107	24	102	103	104	24	105	106	107	24	104	104	105	24	111	112	115	24
7/10	105	106	107	24	102	103	104	24	106	108	108	24	104	105	105	24	112	113	113	24
7/11	104	105	107	24	101	102	103	24	105	106	107	23	104	104	105	23	110	111	113	24
7/12	105	105	106	24	101	102	103	21	104	105	107	24	103	104	104	24	109	110	112	24
7/13	102	103	104	24	101	102	103	24	104	105	105	23	103	104	104	23	107	108	109	24
7/14	103	103	104	24	101	102	103	24	103	105	106	24	104	105	106	24	107	107	110	23
7/15	102	103	103	23	101	102	103	23	102	102	104	24	107	108	108	24	106	107	109	24
7/16	101	101	101	24	100	101	103	24	101	102	103	24	126	129	130	24	103	103	104	24
7/17	100	101	101	24	99	100	101	24	100	100	101	24	113	125	130	24	102	103	103	24
7/18	99	99	100	24	99	100	101	24	98	99	99	24	101	102	103	24	102	103	103	24
7/19	99	99	100	24	98	99	100	24	98	99	102	24	101	101	102	24	102	103	106	24

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	McNary-Wash			McNary Tlwr			John Day			John Day Tlwr			The Dalles			#				
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h						
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High		hr			
7/6	109	110	111	24	107	107	108	24	101	102	102	24	102	102	103	24	101	101	102	24
7/7	110	110	112	24	108	108	109	24	101	101	102	24	102	102	102	24	101	101	102	24
7/8	109	110	111	24	107	107	108	24	101	101	101	23	102	102	102	24	101	102	102	23
7/9	109	110	112	24	107	107	108	24	101	101	102	23	102	102	102	24	101	102	102	23
7/10	110	111	113	24	107	108	109	24	102	102	102	23	102	102	102	24	102	102	103	23
7/11	108	109	111	24	106	107	107	24	101	102	102	23	102	102	103	24	102	102	102	23
7/12	107	108	109	24	106	107	107	24	102	102	103	23	102	102	103	24	101	101	102	23
7/13	106	107	108	24	105	106	107	24	101	102	102	23	101	102	102	24	101	101	102	23
7/14	107	108	109	23	106	106	107	23	101	101	102	23	101	102	102	24	101	102	102	23
7/15	105	105	105	24	105	105	105	24	101	101	101	23	101	102	102	24	101	101	101	23
7/16	104	104	104	24	103	104	104	24	100	100	101	23	100	101	101	24	100	100	101	23
7/17	102	102	103	24	102	103	103	24	99	100	100	23	100	100	100	24	100	100	100	23
7/18	101	101	102	24	102	102	102	24	99	100	100	23	99	100	100	24	99	100	100	23
7/19	101	102	104	24	101	102	103	24	100	100	101	23	100	100	100	24	100	100	101	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			Bonneville			Warrendale			Skamania			Camas\Washugal			#				
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h						
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High		hr			
7/6	102	102	102	24	100	101	101	24	101	102	103	24	101	101	101	24	102	103	103	24
7/7	102	102	103	24	100	100	101	24	101	102	102	24	101	101	102	24	103	103	104	24
7/8	102	103	103	24	100	100	101	23	101	102	103	23	101	101	102	23	103	104	104	24
7/9	102	103	103	24	101	101	101	23	102	103	104	23	102	102	103	23	104	105	105	24
7/10	103	103	103	24	101	101	102	23	102	103	103	23	102	102	103	23	104	104	105	24
7/11	102	103	103	24	101	101	101	23	102	103	103	23	102	102	102	23	103	104	104	24
7/12	102	102	103	24	101	101	101	23	102	102	103	23	101	102	102	23	103	103	104	24
7/13	102	103	103	24	100	100	100	23	100	101	101	23	101	101	101	23	102	103	104	24
7/14	102	103	103	23	100	100	100	23	100	100	100	18	100	101	101	23	101	102	103	24
7/15	101	102	102	24	99	100	100	23	98	98	99	21	100	100	100	23	100	101	101	24
7/16	100	101	101	23	98	99	99	23	99	100	101	23	99	99	100	23	100	100	100	24
7/17	100	101	101	24	98	99	99	23	100	100	101	23	99	99	100	23	99	99	100	24
7/18	100	100	101	24	99	99	99	23	100	100	101	23	99	100	100	23	99	100	101	24
7/19	100	101	101	24	100	100	100	23	101	102	102	23	100	101	101	23	101	102	102	24

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				Fish with L. Line GBT	
								Rank 1	Rank 2	Rank 3	Rank 4	Num Fish	Avg. Rank
McNary Dam													
	07/12/01	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	07/16/01	Subyearling Chinook	99	1	0	0.00%	0.00%	0	0	0	0	1	1
	07/16/01	Yearling Chinook	1	0	0	0.00%	0.00%	0	0	0	0	0	0
Bonneville Dam													
	07/10/01	Subyearling Chinook	67	0	0	0.00%	0.00%	0	0	0	0	0	0
	07/13/01	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	07/17/01	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	07/19/01	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
Rock Island Dam													
	07/12/01	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	07/16/01	Subyearling Chinook	100	2	0	0.00%	0.00%	0	0	0	0	2	1
	07/19/01	Subyearling Chinook	68	1	1	1.47%	0.00%	1	0	0	0	0	0

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/06/2001 *	---	---	---	---	0	353	340	2	1,052	2,475	277
07/07/2001	---	---	---	---	220	201	170	0	1,000	350	627
07/08/2001	---	---	---	---	180	653	270	1	1,700	782	478
07/09/2001	---	---	---	---	60	302	450	2	1,095	0	902
07/10/2001	---	---	---	---	0	212	210	1	1,120	198	671
07/11/2001	---	---	---	---	40	230	210	1	1,398	550	375
07/12/2001 *	---	---	---	---	60	375	240	1	300	650	292
07/13/2001	---	---	---	---	40	54	500	1	960	450	213
07/14/2001	---	---	---	---	60	254	240	0	700	800	327
07/15/2001	---	---	---	---	80	125	300	1	300	550	0
07/16/2001	---	---	---	---	60	48	120	0	1,400	100	0
07/17/2001	---	---	---	---	0	0	160	0	861	700	91
07/18/2001	---	---	---	---	20	44	135	0	100	200	111
07/19/2001	---	---	---	---	20	46	80	0	700	1,050	215
07/20/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	840	2,897	3,425	10	12,686	8,855	4,579
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	60	207	245	1	906	633	327
YTD	12,660	26,732	9,049	527	1,957,726	749,108	552,447	6,631	2,292,984	995,081	1,686,189

COMBINED SUBYEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/06/2001 *	---	---	---	---	9,700	15,560	300	218	139,898	23,850	25,095
07/07/2001	---	---	---	---	27,740	11,412	370	297	82,000	11,500	37,645
07/08/2001	---	---	---	---	26,300	5,907	560	136	46,500	15,658	38,878
07/09/2001	---	---	---	---	17,720	3,558	1,110	641	17,490	7,260	67,359
07/10/2001	---	---	---	---	6,600	6,915	730	1,093	28,884	16,866	26,051
07/11/2001	---	---	---	---	9,520	16,584	880	419	50,094	28,750	49,049
07/12/2001 *	---	---	---	---	9,080	5,279	1,830	799	56,700	39,850	40,729
07/13/2001	---	---	---	---	10,080	11,018	7,450	1,094	123,120	25,275	32,198
07/14/2001	---	---	---	---	8,420	7,368	2,280	1,074	103,200	16,250	30,531
07/15/2001	---	---	---	---	5,440	3,136	2,000	646	106,100	16,250	18,667
07/16/2001	---	---	---	---	5,160	3,443	1,780	613	104,100	24,600	31,031
07/17/2001	---	---	---	---	3,880	2,524	1,620	1,835	140,459	23,250	47,712
07/18/2001	---	---	---	---	7,500	2,308	2,070	1,513	245,200	26,300	45,289
07/19/2001	---	---	---	---	5,480	1,230	1,590	515	272,500	68,550	30,563
07/20/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	152,620	96,242	24,570	10,893	1,516,245	344,209	520,797
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	10,901	6,874	1,755	778	108,303	24,586	37,200
YTD	1	1	13	31	627,840	132,540	35,164	15,809	8,431,932	968,204	2,213,413

*The total, #days and average do not include the current day's data. *See sampling comments. [http://www.fpc.org/current daily/smpcomments.htm](http://www.fpc.org/current%20daily/smpcomments.htm). This means that one or more of the sites on this date had an incomplete or biased sample.

These data are preliminary and have been derived from various sources. For verification and/or origin of these data, contact the operators of the Fish Passage Data System at (503) 230-4099.

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.

Two-Week Summary of Passage Indices

COMBINED COHO

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/06/2001 *	---	---	---	---	400	1,300	60	46	110	150	126
07/07/2001	---	---	---	---	780	100	10	81	0	50	401
07/08/2001	---	---	---	---	920	1,300	20	35	300	0	277
07/09/2001	---	---	---	---	500	525	20	18	45	30	476
07/10/2001	---	---	---	---	280	860	50	63	196	0	783
07/11/2001	---	---	---	---	340	1,025	30	36	180	0	241
07/12/2001 *	---	---	---	---	500	375	50	19	400	300	159
07/13/2001	---	---	---	---	660	1,675	120	33	180	75	61
07/14/2001	---	---	---	---	280	675	80	45	100	50	0
07/15/2001	---	---	---	---	340	350	40	16	0	150	0
07/16/2001	---	---	---	---	340	168	80	8	100	0	0
07/17/2001	---	---	---	---	340	160	20	18	40	0	30
07/18/2001	---	---	---	---	420	180	0	26	0	100	101
07/19/2001	---	---	---	---	260	100	30	18	100	50	0
07/20/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	6,360	8,793	610	462	1,751	955	2,655
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	454	628	44	33	125	68	190
YTD	0	0	0	6	54,740	18,866	1,490	45,116	145,333	59,838	2,162,067

COMBINED STEELHEAD

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/06/2001 *	---	---	---	---	3,500	2,608	1,560	17	240	0	76
07/07/2001	---	---	---	---	7,580	810	560	15	0	0	401
07/08/2001	---	---	---	---	3,420	1,454	1,130	11	300	54	277
07/09/2001	---	---	---	---	3,540	1,282	1,300	8	135	30	627
07/10/2001	---	---	---	---	2,860	2,517	550	25	151	60	447
07/11/2001	---	---	---	---	3,560	2,962	490	33	342	0	241
07/12/2001 *	---	---	---	---	3,640	2,209	1,250	6	100	0	239
07/13/2001	---	---	---	---	4,220	2,065	700	9	0	225	244
07/14/2001	---	---	---	---	5,960	1,431	880	13	0	50	302
07/15/2001	---	---	---	---	5,160	1,156	540	10	100	0	202
07/16/2001	---	---	---	---	3,340	565	300	4	0	0	0
07/17/2001	---	---	---	---	3,340	245	200	4	100	50	91
07/18/2001	---	---	---	---	3,940	389	60	10	0	0	111
07/19/2001	---	---	---	---	2,040	355	190	8	0	100	108
07/20/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	56,100	20,048	9,710	173	1,468	569	3,366
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	4,007	1,432	694	12	105	41	240
YTD	4,567	34,103	4,357	5,399	5,526,196	827,453	343,671	17,817	559,853	188,989	488,059

Two-Week Summary of Passage Indices

COMBINED SOCKEYE

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/06/2001 *	---	---	---	---	0	0	40	1	0	0	403
07/07/2001	---	---	---	---	0	0	0	5	100	0	501
07/08/2001	---	---	---	---	20	100	0	3	0	108	226
07/09/2001	---	---	---	---	0	1	0	19	0	90	326
07/10/2001	---	---	---	---	0	0	0	33	4	2	224
07/11/2001	---	---	---	---	0	25	0	2	48	50	188
07/12/2001 *	---	---	---	---	0	0	10	27	0	0	106
07/13/2001	---	---	---	---	0	52	0	14	60	0	61
07/14/2001	---	---	---	---	0	50	0	3	0	150	63
07/15/2001	---	---	---	---	0	25	0	2	0	0	0
07/16/2001	---	---	---	---	20	1	0	5	0	0	0
07/17/2001	---	---	---	---	0	0	0	5	60	0	60
07/18/2001	---	---	---	---	0	0	0	4	0	50	0
07/19/2001	---	---	---	---	0	0	10	1	0	150	0
07/20/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	40	254	60	124	272	600	2,158
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	3	18	4	9	19	43	154
YTD	24	0	0	0	4,510	9,688	976	2,980	283,302	102,009	106,006

Definitions for Smolt Index Counts

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

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BO1 (Index) = Bonneville Dam First Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 1 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.

Cumulative Adult Passage at Mainstem Dams Through: 07/19

DAM	Spring Chinook						Summer Chinook						Fall Chinook			
	2001		2000		10-Yr Avg.		2001		2000		10-Yr Avg.		2001		2000	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	391,367	14,172	178,302	21,259	70,775	4,654	66,580	12,276	26,506	11,540	18,559	3,062	0	0	0	0
TDA	302,372	9,953	102,953	14,796	41,161	3,200	59,389	8,388	21,040	8,313	14,627	2,133	0	0	0	0
JDA	262,215	6,181	86,553	12,157	33,812	2,643	53,392	7,553	19,534	6,257	13,864	1,760	0	0	0	0
MCN	258,689	6,683	64,647	10,836	30,645	2,566	53,403	6,598	16,159	5,192	13,347	1,599	0	0	0	0
IHR	171,173	3,023	38,807	9,489	16,921	1,647	14,413	2,261	4,022	3,089	4,139	725	0	0	0	0
LMN	180,787	1,784	35,520	10,336	15,613	1,755	18,270	1,395	4,399	3,101	3,902	725	0	0	0	0
LGS	174,823	2,990	34,330	10,152	14,769	1,744	14,077	2,305	3,888	3,605	3,720	789	0	0	0	0
LWG	171,958	3,136	33,822	10,318	13,830	1,676	12,560	3,210	3,616	3,538	3,850	789	0	0	0	0
PRD	50,379	987	20,098	1,092	9,843	292	33,767	1,534	14,207	1,228	9,789	396	0	0	0	0
RIS	39,785	1,761	14,850	1,558	7,292	362	24,475	5,077	10,162	5,748	5,894	826	0	0	0	0
RRH	15,893	543	5,336	392	1,847	90	13,096	1,534	5,352	1,315	1,986	211	0	0	0	0
WEL	9,994	885	2,130	457	869	97	10,456	945	2,450	655	937	158	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2001		2000		10-Yr Avg.		10-Yr			10-Yr			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2001	2000	Avg.	2001	2000	Avg.	2001
BON	2	0	0	0	5	2	114,021	92,744	45,136	102,192	53,855	30,730	39,852
TDA	0	0	0	0	0	0	101,384	72,829	34,913	52,143	24,618	13,140	24,261
JDA	35	2	2	0	0	0	108,595	87,475	37,221	34,684	17,760	11,167	13,422
MCN	0	0	0	0	0	0	94,385	59,350	34,731	29,713	9,016	7,710	10,380
IHR	0	0	0	0	0	0	22	188	23	14,810	4,958	4,626	3,510
LMN	0	0	0	0	0	0	30	257	29	15,233	4,009	4,025	4,206
LGS	0	0	0	0	0	0	56	253	29	6,948	3,019	2,314	2,428
LWG	0	0	0	0	0	0	30	250	28	9,908	4,233	5,622	2,998
PRD	6	9	29	3	2	0	105,608	85,849	37,226	1,966	909	566	**
RIS	29	0	12	0	2	0	93,387	68,353	22,844	975	480	352	378*
RRH	24	0	7	0	0	0	56,498	48,086	12,237	623	297	216	205*
WEL	0	0	0	0	0	0	60,406	49,619	10,993	311	132	125	124

PRD data from Grant CO PUD's website and through 7/18; RIS, RRH data from Chelan CO PUD's website and through 7/19; WEL data from Douglas CO PUD and through 7/16.

TDA is missing counts for 7/19; LGS is missing counts for 7/18 & 7/19.

* Wild Steelhead count from COE and through 7/11. **PRD is not reporting Wild Steelhead numbers.

These numbers were collected from the COE's Running Sums text files.

Wild steelhead numbers are included in the total.

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.

Two Week Transportation Summary

		07/07/01 TO 07/20/01						
		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	152,620	840	6,360	40	56,100	215,960	
	Sum of NumberBarged	151,952	831	6,324	40	55,610	214,757	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of TotalProjectMortalities	668	9	36	0	490	1,203	
LGS	Sum of NumberCollected	96,242	2,897	8,793	254	20,048	128,234	
	Sum of NumberBarged	94,092	2,531	8,761	233	19,375	124,992	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of TotalProjectMortalities	3,230	366	31	21	673	4,321	
LMN	Sum of NumberCollected	24,570	3,425	610	60	9,710	38,375	
	Sum of NumberBarged	24,194	3,301	610	59	9,495	37,659	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of TotalProjectMortalities	376	124	0	1	215	716	
MCN	Sum of NumberCollected	1,516,245	12,686	1,751	272	1,468	1,532,422	
	Sum of NumberBarged	1,422,508	13,780	1,747	350	1,528	1,439,913	
	Sum of NumberBypassed	11,550	0	0	0	0	11,550	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of TotalProjectMortalities	25,246	298	101	22	123	25,790	
Total Sum of NumberCollected		1,789,677	19,848	17,514	626	87,326	1,914,991	
Total Sum of NumberBarged		1,692,746	20,443	17,442	682	86,008	1,817,321	
Total Sum of NumberBypassed		11,550	0	0	0	0	11,550	
Total Sum of Numbertrucked		0	0	0	0	0	0	
Total Sum of TotalProjectMortalities		29,520	797	168	44	1,501	32,030	

YTD Transportation Summary

TO: 07/20/01

Site	Data	Species					Grand Total
		CH0	CH1	CO	SO	ST	
LGR	Sum of NumberCollected	627,840	1,957,726	54,740	4,510	5,526,196	8,171,012
	Sum of NumberBarged	626,438	1,867,699	53,647	4,110	5,255,559	7,807,453
	Sum of NumberBypassed	1	79,198	976	221	265,274	345,670
	Sum of NumberTrucked	0	6,433	30	167	3,386	10,016
	Sum of TotalProjectMortalities	1,401	4,395	87	12	1,976	7,871
LGS	Sum of NumberCollected	132,952	751,264	18,871	9,694	828,941	1,741,722
	Sum of NumberBarged	130,718	744,967	18,659	9,611	819,180	1,723,135
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of NumberTrucked	0	898	0	28	336	1,262
	Sum of TotalProjectMortalities	3,314	3,469	61	45	4,957	11,846
LMN	Sum of NumberCollected	35,164	552,447	1,490	976	343,671	933,748
	Sum of NumberBarged	34,762	529,098	1,489	971	340,437	906,757
	Sum of NumberBypassed	0	16,478	0	0	511	16,989
	Sum of NumberTrucked	0	5,519	0	0	319	5,838
	Sum of TotalProjectMortalities	402	1,352	1	5	2,404	4,164
MCN	Sum of NumberCollected	8,384,729	2,219,755	139,676	267,834	550,331	11,562,325
	Sum of NumberBarged	7,302,529	1,015,898	75,349	126,194	231,146	8,751,116
	Sum of NumberBypassed	448,891	1,162,074	57,288	136,862	303,005	2,108,120
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	45,212	6,178	687	530	4,013	56,620
Total Sum of NumberCollected		9,180,685	5,481,192	214,777	283,014	7,249,139	22,408,807
Total Sum of NumberBarged		8,094,447	4,157,662	149,144	140,886	6,646,322	19,188,461
Total Sum of NumberBypassed		448,892	1,257,750	58,264	137,083	568,790	2,470,779
Total Sum of NumberTrucked		0	12,850	30	195	4,041	17,116
Total Sum of TotalProjectMortalities		50,329	15,394	836	592	13,350	80,501

