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SSARR= 7/5/99

CORPS OF ENGINEERS, NORTHWESTERN DIVISION - NORTH PACIFIC REGION
Reservoir Control Center
DWORSHAK, LOWER GRANITE, GRAND COULEE, PRIEST RAPIDS, McNARY
Weekly Average Summary

07/07/99
8:26 AM

Week Ending	DWR PE ft	DWR Flow kcfs	DWR Adj Q kcfs	DWR Adj PE ft	LWG Objective kcfs	LWG Flow kcfs	LWG Adj Q kcfs	GCL PE ft	GCL Adj PE ft	PRD Objective kcfs	PRD Flow kcfs	PRD GCL-Adj kcfs	MCN Objective kcfs	MCN Flow kcfs	MCN DWR-Adj kcfs	MCN GCL-Adj kcfs	Week Ending
7-Mar-99	1482.6	12.6	12.6	1482.6		84.8	84.8	1261.1	1261.1		145.4	145.4		237.0	237.0	237.0	7-Mar-99
14-Mar-99	1469.5	14.1	14.1	1469.5		74.5	74.5	1254.4	1254.4		147.3	147.3		229.7	229.7	229.7	14-Mar-99
21-Mar-99	1460.7	13.9	13.9	1460.7		88.7	88.7	1250.4	1250.4		127.5	127.5		228.6	228.6	228.6	21-Mar-99
28-Mar-99	1460.9	14.2	14.2	1460.9		118.2	118.2	1249.0	1249.0		134.2	134.2		258.3	258.3	258.3	28-Mar-99
4-Apr-99	1450.1	14.6	14.6	1450.1		93.1	93.1	1242.6	1242.6		148.8	148.8		260.3	260.3	260.3	4-Apr-99
11-Apr-99	1445.5	8.4	8.4	1445.5		75.8	75.8	1235.8	1235.8		137.1	137.1		220.6	220.6	220.6	11-Apr-99
18-Apr-99	1446.0	7.8	7.8	1446.0	100	82.3	82.3	1229.3	1229.3	135.0	116.1	116.1		205.6	205.6	205.6	18-Apr-99
25-Apr-99	1450.2	12.8	12.8	1450.2	100	114.1	114.1	1224.0	1224.0	135.0	154.3	154.3	260	272.1	272.1	272.1	25-Apr-99
2-May-99	1453.6	13.5	13.5	1453.6	100	109.8	109.8	1220.6	1220.6	135.0	185.7	185.7	260	300.4	300.4	300.4	2-May-99
9-May-99	1455.2	11.4	11.4	1455.2	100	99.0	99.0	1219.7	1219.7	135.0	175.8	175.8	260	281.7	281.7	281.7	9-May-99
16-May-99	1450.2	14.0	14.0	1450.2	100	86.9	86.9	1215.5	1215.5	135.0	161.7	161.7	260	254.9	254.9	254.9	16-May-99
23-May-99	1466.4	5.3	5.3	1466.4	100	95.2	95.2	1217.4	1217.4	135.0	155.0	155.0	260	260.6	260.6	260.6	23-May-99
30-May-99	1501.8	1.4	1.4	1501.8	100	163.7	163.7	1237.9	1237.9	135.0	159.9	159.9	260	314.9	314.9	314.9	30-May-99
6-Jun-99	1526.7	1.4	1.4	1526.7	100	161.2	161.2	1251.2	1251.2	135.0	191.1	191.1	260	353.0	353.0	353.0	6-Jun-99
13-Jun-99	1541.5	1.4	1.4	1541.5	100	121.2	121.2	1257.9	1257.9	135.0	200.6	200.6	260	323.2	323.2	323.2	13-Jun-99
20-Jun-99	1562.6	1.4	1.4	1562.6	100	148.5	148.5	1273.2	1273.2	135.0	177.0	177.0	260	333.2	333.2	333.2	20-Jun-99
27-Jun-99	1576.7	1.4	1.4	1576.7	53.96	127.8	127.8	1282.4	1282.4	135.0	192.5	192.5	260	329.9	329.9	329.9	27-Jun-99
4-Jul-99	1585.0	1.5	1.5	1585.0	53.96	80.7	80.7	1287.4	1287.4		196.1	196.1	200	287.6	287.6	287.6	4-Jul-99
11-Jul-99	1590.2	1.5	1.5	1590.2	53.96	54.9	54.9	1288.0	1288.0		175.0	175.0	200	241.8	241.8	241.8	11-Jul-99
18-Jul-99	1585.7	12.2	8.5	1588.7	53.96	57.7	54.0	1290.0	1290.0		170.7	170.7	200	232.2	228.5	228.5	18-Jul-99
25-Jul-99	1577.5	14.0	14.0	1580.6	53.96	51.7	51.7	1290.0	1290.0		159.5	159.5	200	216.8	216.8	216.8	25-Jul-99
1-Aug-99	1567.7	14.0	14.0	1571.0	53.96	44.3	44.3	1290.0	1289.2		147.0	151.6	200	195.4	195.4	200.0	1-Aug-99
8-Aug-99	1556.5	14.0	14.0	1560.0	53.96	39.0	39.0	1287.7	1287.5		162.9	159.8	200	203.2	203.2	200.0	8-Aug-99
15-Aug-99	1544.5	14.0	14.0	1548.1	53.96	36.6	36.6	1285.5	1284.6		157.0	160.5	200	196.4	196.4	200.0	15-Aug-99
22-Aug-99	1531.9	14.0	14.0	1535.7	53.96	36.1	36.1	1283.2	1281.1		154.8	161.6	200	193.2	193.2	200.0	22-Aug-99
29-Aug-99	1520.5	12.4	14.0	1522.7	53.96	34.4	36.1	1281.0	1280.0		150.3	143.7	200	187.4	189.1	182.5	29-Aug-99

Weekly Notes:

1 Pool Elevation (PE) and Flow are actual values to date, then SSARR forecast values for the rest of the period. SSARR dated: 7/5/99
2 Libby completed 18 days of 30 kcfs at Bonners Ferry for incubation flows on July 5th, flows will be reduced to 8 kcfs by July 11th and Libby fills to 2459.0' by July 25th, then releases a flat flow of 25.0 kcfs throught the month of August to reach 2439.0 feet by Aug 31st.
3 Hungry Horse releases 2100 cfs and fills to 3561' on July 14th, then drafts to 3540 feet by August 31st.
4 Grand Coulee operates in the top 2' (1288 - 1290') in July then drafts to 1280 feet by August 29th to meet flow objectives at McNary.
5 Albeni Falls is full and passing inflow.
6 Brownlee operates within the top foot (2076 - 2077') through July 9th, drafts 237 Kaf by July 28th (at a rate of 1 ft per day), then passes inflow.
7 Dworshak releases min outflow (1.5 kcfs) through July 11th, then drafts to 1522.7 feet by August 29th releasing no more than 14 kcfs.

Volume Runoff Comparison:

	SSARR Apr-Jul	WSF Apr-Jul	JUN-99FINAL 1
LIB	6.51 Maf	6.00 Maf	
DWR	3.15 Maf	3.14 Maf	
LWG	25.41 Maf	25.40 Maf	
HGH	2.11 Maf	2.11 Maf	
GCL	60.87 Maf	62.10 Maf	
BRN	8.06 Maf	7.51 Maf	
TDA	98.11 Maf	97.20 Maf	

Seasonal Average Actual/Forecasted Flows:

LWG	4/3 - 6/20	114 kcfs
	6/21 - 8/31	56 kcfs
PRD	4/10 - 6/30	170.0 kcfs
MCN	4/20 - 6/30	302 kcfs
	7/01 - 8/31	217 kcfs

Observed Average Flow Apr 01 - Date:

LWG	111 kcfs
PRD	168 kcfs
MCN	285 kcfs

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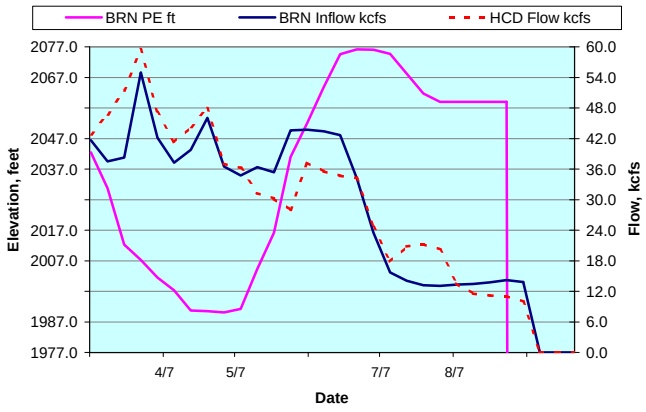
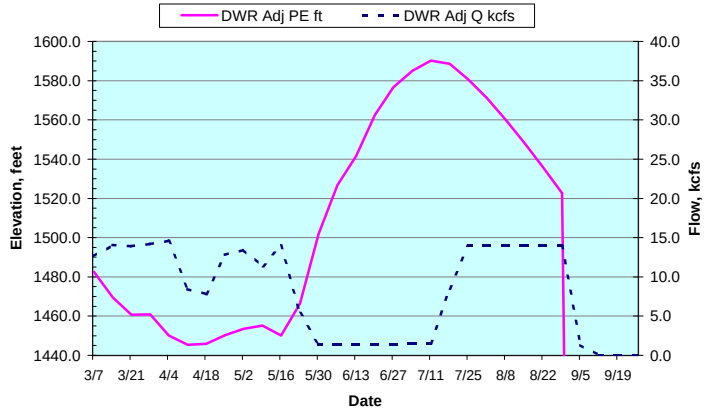
CORPS OF ENGINEERS, NORTHWESTERN DIVISION - NORTH PACIFIC REGION
Reservoir Control Center
ARROW, LIBBY, HUNGRY HORSE, ALBENI FALLS, BROWNLEE, HELLS CANYON, BONNEVILLE
Weekly Average Summary

07/07/99
8:26 AM

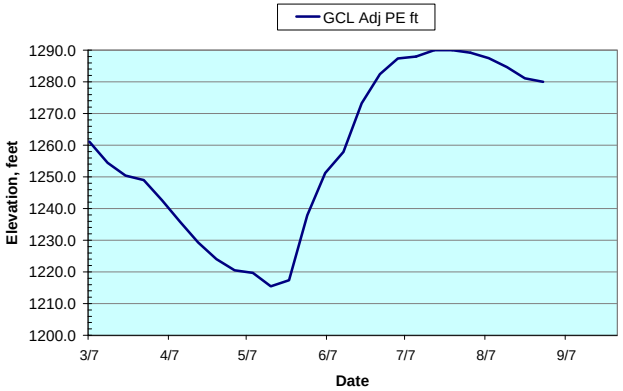
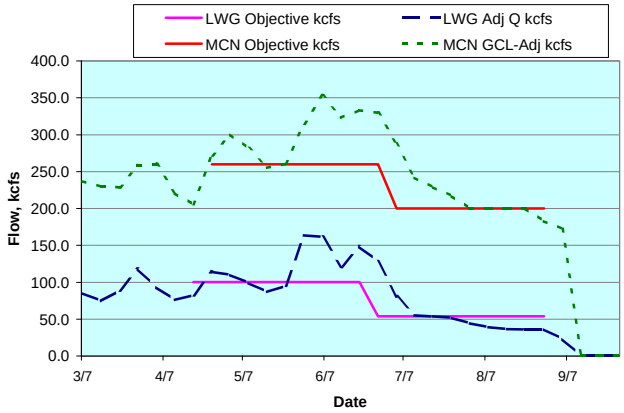
Week Ending	ARDB PE ft	ARDB Flow kcfs	LIB PE ft	LIB Flow kcfs	HGH PE ft	HGH Flow kcfs	ALF PE ft	ALF Flow kcfs	BRN Inflow kcfs	BRN PE ft	HCD Flow kcfs	BON Flow kcfs	BON Dwr Adj kcfs	BON GCL-Adj kcfs	Week Ending
7-Mar-99	1387.8	41.5	2325.3	16.7	3500.6	7.1	2055.5	17.3	41.6	2042.5	42.8	264.5	264.5	264.5	7-Mar-99
14-Mar-99	1386.4	41.1	2321.7	8.5	3495.5	7.1	2055.4	16.2	37.5	2030.7	46.7	249.3	249.3	249.3	14-Mar-99
21-Mar-99	1385.0	39.1	2321.3	4.0	3490.6	7.1	2055.6	17.4	38.3	2012.3	51.4	248.6	248.6	248.6	21-Mar-99
28-Mar-99	1385.0	34.8	2322.8	4.0	3487.4	7.0	2055.7	26.3	54.9	2007.3	59.5	280.8	280.8	280.8	28-Mar-99
4-Apr-99	1386.6	20.2	2323.8	4.0	3483.4	7.0	2055.3	27.7	42.1	2001.5	47.1	288.0	288.0	288.0	4-Apr-99
11-Apr-99	1388.6	20.2	2324.1	4.0	3483.3	1.7	2055.6	20.7	37.3	1997.4	41.3	242.1	242.1	242.1	11-Apr-99
18-Apr-99	1390.7	20.1	2325.0	4.0	3483.6	2.0	2055.5	21.9	39.8	1990.7	44.3	217.0	217.0	217.0	18-Apr-99
25-Apr-99	1393.7	20.1	2331.5	4.0	3487.0	2.5	2055.6	32.1	46.1	1990.5	47.9	285.4	285.4	285.4	25-Apr-99
2-May-99	1396.6	20.1	2340.5	4.0	3491.1	3.2	2055.5	40.3	36.5	1990.0	37.1	318.4	318.4	318.4	2-May-99
9-May-99	1399.6	20.1	2346.3	4.0	3492.9	3.6	2055.5	38.4	34.7	1991.2	36.2	303.0	303.0	303.0	9-May-99
16-May-99	1400.6	26.1	2351.4	4.0	3494.9	2.1	2055.6	32.6	36.4	2004.4	31.3	271.7	271.7	271.7	16-May-99
23-May-99	1402.5	29.9	2360.6	4.0	3499.9	2.1	2056.9	30.1	35.4	2016.1	30.2	278.8	278.8	278.8	23-May-99
30-May-99	1407.9	25.8	2384.2	4.0	3513.9	2.4	2058.5	62.2	43.6	2041.0	27.9	341.9	341.9	341.9	30-May-99
6-Jun-99	1412.1	23.1	2399.3	4.0	3524.3	2.1	2059.3	70.0	43.7	2052.1	37.3	369.9	369.9	369.9	6-Jun-99
13-Jun-99	1416.0	22.4	2409.4	4.0	3530.1	2.2	2059.7	65.0	43.4	2063.9	35.6	340.1	340.1	340.1	13-Jun-99
20-Jun-99	1425.4	21.8	2422.5	19.6	3540.4	1.6	2061.6	58.8	42.7	2074.6	34.7	342.3	342.3	342.3	20-Jun-99
27-Jun-99	1432.3	15.3	2431.0	20.4	3548.4	0.7	2062.4	68.1	34.2	2076.2	34.3	340.9	340.9	340.9	27-Jun-99
4-Jul-99	1435.7	21.4	2435.4	23.1	3554.6	1.1	2062.3	60.7	23.5	2076.0	24.7	300.8	300.8	300.8	4-Jul-99
11-Jul-99	1439.9	28.0	2441.5	14.1	3559.2	2.1	2062.5	41.2	15.7	2074.7	17.9	249.6	249.6	249.6	11-Jul-99
18-Jul-99	1441.0	58.0	2452.3	8.0	3561.0	4.6	2062.5	35.3	14.1	2068.2	20.8	238.1	234.3	234.3	18-Jul-99
25-Jul-99	1440.9	58.0	2459.0	9.6	3558.9	8.0	2062.5	30.9	13.2	2061.8	21.3	224.2	224.2	224.2	25-Jul-99
1-Aug-99	1439.7	58.0	2458.8	21.1	3556.1	8.0	2062.5	26.2	13.0	2059.0	20.2	201.7	201.7	206.3	1-Aug-99
8-Aug-99	1439.0	75.0	2455.3	25.0	3552.8	8.0	2062.5	24.0	13.3	2059.0	13.6	207.7	207.7	204.6	8-Aug-99
15-Aug-99	1437.6	75.0	2450.7	25.0	3549.0	8.0	2062.5	22.1	13.4	2059.0	11.5	202.0	202.0	205.5	15-Aug-99
22-Aug-99	1435.9	75.0	2445.8	25.0	3545.0	8.0	2062.5	20.7	13.8	2059.0	11.2	198.5	198.5	205.3	22-Aug-99
29-Aug-99	1433.9	75.0	2440.6	25.0	3541.1	7.6	2062.5	19.3	14.2	2059.0	11.1	193.7	195.3	188.8	29-Aug-99



Dworshak



Grand Coulee



Lower Granite, McNary