

Summary of Columbia River Flood Control, 1-Jan

WY 2009

Project >>	MCDB	ARDB	LIB	DCDB	HGH	GCL	BRN	DWR
Project Limits								
Maximum Elevation, ft	2475.0	1446.0	2459.0	1892.0	3560.0	1290.0	2077.0	1600.0
Minimum Elevation, ft	2320.0	1378.0	2287.0	1794.2	3336.0	1208.0	1976.0	1445.0
Usable Storage, kaf	12053.3	7361.6	4979.5	1398.6	2981.0	5185.3	975.3	2015.7
Usable Storage, ksfd	6076.9	3711.5	2510.5	705.1	1502.9	2614.3	491.7	1016.3

Dec. 31 Project Conditions								
Elevation, ft (MSL)	2437.6	1430.8	2411.0	1862.0	3524.4	1285.3	2069.2	1530.6
Draft, kaf	3762.8	1663.1	2001.2	508.0	782.5	379.6	109.1	1089.7
Usable Stor. less Draft, kaf	8290.6	5436.9	2978.4	890.6	2198.5	4805.7	866.2	926.0

To Meet Jan. 31 Flood Control Requirements								
Elevation Change, ft	-	-0.3	-	-22.7	-	-	-	-2.1
Draft Change, kaf	-	39.9	-	349.0	-	-	-	28.4

System Flood Control Requirements, Drafts									
Project >>	MCDB	ARDB	LIB VarQ	DCDB	HGH VarQ	GCL	BRN	DWR Sys	DWR Loc
Jan. 31, kaf	1662	1703	1421	857	366	0	0	1118	1124
	2810	2603	1037	1270	470	0	288	1444	1417
	-	-	845	1270	-	-	-	-	-
	4080	3600	845	1270	586	537	268	1837	1470
	4080	3600	845	1270	642	1117	227	1868	1394
	4080	3600	845	1270	698	2293	209	1465	-

System Flood Control Requirements, Elevations									
	Jan. 31, ft	1430.5	2426.2	1839.3	3544.1	1290.0	2077.0	1528.5	1528.0
Feb. 28, ft	-	1422.9	2435.6	1812.5	3539.3	1290.0	2054.7	1502.6	1504.9
Mar. 15, ft	-	-	2440.1	1812.5	-	-	-	-	-
Mar. 31, ft	-	1414.1	2440.1	1807.7	3533.9	1283.3	2056.4	1464.3	1500.4
Apr. 15, ft	-	1414.1	2440.1	1807.7	3531.3	1275.7	2059.9	1461.1	1506.8
Apr. 30, ft	-	1414.1	2440.1	1807.7	3528.5	1259.1	2061.4	1500.8	-

Flood Control Summary at The Dalles, Oregon				
Apr-Aug, kaf	82100			
Apr-Aug %-Normal	88.2%		Upstream Storage Adjustment, kaf, Chart #2 (3) =	21085
Apr-Aug Change, kaf (1)	-		Initial Controlled Flow, ICF, kcfs, Chart #1 (3) =	301.4
May-Aug, kaf	69598		Estimated Unregulated Peak Discharge, kcfs, Chart #1-A (3) =	498.8

Notes: 1 Change in official forecast from the previous month.

2 Normal Runoff Volumes based on 71-Year, 1929-1999, averages for MCDB, ARDB, LIB, DCDB, DWR as reported in the *2000 Level Modified Streamflow Report*, 2004. Normal Runoff Volumes based on 30-Year, 1971-2000, averages for HGH, GCL, BRN, and TDA as determined by the Northwest River Forecast Center.

Estimated Unregulated Peak Discharge, kcfs, Chart #1-A (3) = 498.8

Unregulated Peak Discharge, kcfs, Chart #1-A (3) = 498.8

vious month.

¹ Change in official forecast from the previous month.

2 Normal Runoff Volumes based on 71-Year, 1929-1999, averages for MCDB, ARDB, LIB, DCDB, DWR as reported

2000 Level Modified Streamflow Report, 2004. Normal Runoff Volumes based on 30-Year, 1971-2000, averages.

1950-2010. Measured streamflow (inches) = 200 x Normal Rainfall. Voltmeters based on 30-year, 1971-2000, averages HGH, GCI, BRN, and TDA as determined by the Northwest River Forecast Center.

² See Charts 1 and 2 of Columbia River Treaty Flood Control Operating Plan, Corps of Engineers.

³ See Charts 1 and 2 of Columbia River Treaty Flood Control Operating Plan, Corps of Engineers, March 1992.

Questions? Contact Ken Soderlind, 503-808-3950; or Patti Low, 503-808-3958.

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Maximum Flood Control Shift from DWR to GCL												Maximum Flood Control Shift from BRN to GCL							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	GCL	GCL	GCL	DWR	DWR	DWR	DWR / GCL	DWR	DWR	GCL	GCL	GCL	BRN	BRN / GCL	BRN	BRN	GCL	GCL	
	Non-Shifted FC Draft	Maximum Draft Limit	Maximum Shift Potential	FC Draft		FC Shift		Shifted FC		Shifted FC		Maximum Shift Potential remaining	FC Shift		Shifted FC Draft		Shifted FC		
				System	Local	Potential	Allowable	Draft	Elevation	Draft (w/DWR Shift)	Elevation (w/DWR Shift)		Potential	Allowable FC Shift	Draft	Elevation	Draft (w/DWR+BRN Shift)	Elevation (w/DWR+BRN Shift)	
Notes	-	a	2-1	-	-	4-5	Min 3,6	4-7	-	1+7	-	2-10	-	Min 12,13	13-14	-	10+14	-	
Units	kaf	kaf	kaf	kaf	kaf	kaf	kaf	kaf	ft	kaf	ft	kaf	ft	kaf	kaf	kaf	kaf	ft	
Jan. 31	0	2745	2745	818	825	0	0	825	1549.6	0	1290.0	2745	0	0	0	2077.0	0	1290.0	
Feb. 28	0	2745	2745	839	847	0	0	847	1548.1	0	1290.0	2745	83	83	0	2077.0	83	1289.0	
Mar. 31	537	3219	2682	722	654	68	68	654	1561.3	605	1282.4	2614	52	52	0	2077.0	657	1281.7	
Apr. 15	537	2276	1739	717	481	236	236	481	1572.5	773	1280.2	1503	31	31	0	2077.0	804	1279.8	
Apr. 30 b	835	835	0	717	-	0	0	717	1557.1	835	1279.4	0	0	0	13	2076.1	835	1279.4	

Notes: Under certain conditions the required flood control space at DWR and BRN may be shifted to GCL prior to 30-April. The shifted rule curve shown above represents the maximum allowable flood control shift(s) for the current water year based on the current month's flood control requirements for each project and evacuation limitations at GCL; however, the actual volume shifted to GCL on any date is ultimately determined by the Bureau of Reclamation. The shift of volume for DWR to GCL has priority over the shift of volume from BRN to GCL in cases when GCL cannot accept the total combined volume.

a The potential flood control shift to GCL is limited to the operation at GCL above elevation 1252.3 ft (2744 kaf draft) at the end of February and elevation 1225.0 ft (4355 kaf draft) at end of March and 15-Apr, and also limited by the GCL maximum draft rate limit. All projects are to be at their non-shifted flood control requirements at the end of Apr.

b No shift is allowed, all projects to be back to their non-shifted flood control requirement by 30-April.

Questions? Contact Ken Soderlind, 503-808-3950, Maler Annamalai, 503-808-3994, or Bill Proctor, 503-808-3952.