

Flood Risk Management Requirements  
Report #3 for Water Year 2017  
Issue Date: 08 March 2017

**A. Purpose of Flood Risk Management Requirements.** These requirements provide maximum end-of-month reservoir elevations and/or minimum outflows for flood risk management projects in the Columbia River Basin. These requirements are for use by U.S. Army Corps of Engineers, Bureau of Reclamation, Idaho Power, Energy Keepers, BC Hydro and Bonneville Power Administration for operations planning and include all formally approved deviations to date. Any deviation from the flood risk management requirements herein will require approval from the Chief, Columbia Basin Water Management Division (CBWM) per the Northwestern Division's (NWD) Deviation Policy (NWDR 1110-2-6). Requirements are in accordance with the Columbia River Treaty Flood Control Operating Plan (FCOP) and any project-specific water control manuals, with variations as described below. These flood risk management requirements will be revised and re-issued as new information becomes available.

**B. List of Approved Flood Deviations from Water Control Manuals.**  
None are currently in effect.

**C. Flood Risk Management Requirements**

These requirements have been prepared using the most recent official seasonal volume forecasts. The April-August volume forecast at The Dalles Dam based on the March 2017 official forecast is 92,337 kaf. All other forecasts can be found in Table 2 or at:

<http://www.nwd-wc.usace.army.mil/report/colsum/>

Table 1 shows the flood risk management elevations, draft and flow limits for the evacuation, holding and refill periods. The Initial Controlled Flow (ICF) based on the March forecast is 338 kcfs. See the FCOP for how the ICF is computed. More details on the values used can be found at:

<http://www.nwd-wc.usace.army.mil/report/storcorr/>

**D. System Flood Risk Management Refill Requirement Discussion.**  
No system refill requirements at this time.

**E. Individual Project Flood Risk Management Requirements Discussion.**  
No specific individual requirements at this time.

**Table 1. Flood Risk Management Requirements**

<b>Project</b>	<b>31Jan</b>	<b>28Feb</b>	<b>15Mar</b>	<b>31Mar</b>	<b>15 Apr</b>	<b>30 Apr<sup>3</sup></b>	<b>31 May<sup>3</sup></b>	<b>30 Jun<sup>3</sup></b>	<b>31 Jul<sup>3</sup></b>
MCDB (kaf) <sup>2</sup>	1662	2810	n/a	4080	4080	4080	2448	286	0
ARDB (ft)	1430.5	1422.9	n/a	1414.1	1414.1	1414.1	1423.9	1443.2	1444.0
DCDB (ft)	1839.3	1815.3	1812.8	1812.8	1812.8	1812.8	1837.4	1877.9	1892.0
LIB (ft) <sup>4</sup>	2396.2	2433.7	n/a	2382.1	2382.1	2382.1	2428.1	2459.0	2459.0
LIB (cfs)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HGH (ft)	3543.8	3549.0	n/a	3539.8	3538.2	3536.6	3554.0	3560.0	3560.0
SKQ (ft) <sup>5</sup>	n/a	n/a	n/a	n/a	2883.0	n/a	2890.0	2893.0	2893.0
ALF (ft) <sup>1</sup>	2060.0	2060.0	n/a	2056.0	n/a	2056.0	2062.5	2062.5	2062.5
GCL (ft)	1290.0	1290.0	n/a	1267.1	1249.4	1235.8	1264.8	1289.5	1290.0
BRN (ft)	2077.0	2048.3	n/a	2036.0	2030.8	2026.9	2070.5	2077.0	2077.0
DWR (ft)	1528.3	1531.1	n/a	1493.1	1471.1	1471.1	1556.8	1596.2	1600.0

Notes:

1. Albeni Falls flood risk management elevations are based on readings at the Hope gage.
2. KAF units refer to required flood risk management space (draft) in the reservoir.
3. Flood risk management requirements for May, June and July are based on estimated normal runoff shape. Under certain circumstances, the Refill Guide Curve (also known as Flood Control Refill Curve) procedure may be used to determine when refill is to begin at each project where applicable. These Flood Risk Management Requirements shown in Table 1 do NOT include Flood Control Refill Curves.
4. Per the Libby Dam WCM, Rule 1 of the VarQ operating procedures, releases will be limited to the hydraulic capacity of the powerhouse to the best extent possible.
5. Séliš Ksanka Qlispè Dam, formerly known as Kerr Dam.

**Table 2. Water Supply Forecasts (Kaf)**

<b>Project</b>	<b>Forecast Period</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Current month Forecast % of Normal</b>
MCDB	Apr-Aug	11569	10737	10798					98
ARDB	Apr-Aug	23045	21065	21248					97
DCDB	Apr-Aug	2010	1954	1942					97
LIB	Apr-Aug	6861	5583	6783					115
HGH	May-Sep	1828	1489	1691					100
SKQ <sup>1,2</sup>	Apr-Jul	5649	5790	6327					109
ALF <sup>1</sup>	Apr-Jul	11413	11505	12255					104
GCL <sup>1</sup>	Apr-Aug	54930	53656	57336					101
BRN <sup>1</sup>	Apr-Jul	4801	5327	7560					138
DWR	Apr-Jul	3055	2541	2867					119
TDA <sup>1</sup>	Apr-Aug	84945	82821	92337					105

Notes:

1. Official water supply forecasts for SKQ (KERM), ALF, GCL, BRN and TDA are the ESP 5-day-QPF median values published by the NWRFC on the following days for 2017: Jan 5, Feb 3, Mar 3, Apr 5, May 3, Jun 5, and Jul 8.
2. Séliš Ksanka Qlispè Dam, formerly known as Kerr Dam.

William Proctor, P.E.  
Ch., Hydrologic Engineering and Power Branch