

Flood Risk Management Requirements  
Report #1 for Water Year 2022  
Issue Date: 07 January 2022

**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 January 2022 official forecast is 91,310 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 January forecast is 308 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**

Project	31 Jan	28 Feb	31 Mar	15 Apr	30 Apr <sup>3</sup>	31 May <sup>3</sup>	30 Jun <sup>3</sup>	31 Jul <sup>3</sup>
MCDB (kaf) <sup>2</sup>	1609	2720	3949	3949	3949	2369	276	0
ARDB (ft)	1430.1	1422.3	1413.2	1413.2	1413.2	1423.3	1443.1	1444.0
DCDB (ft) <sup>5</sup>	1839.3	1812.5 <sup>5</sup>	1807.7 <sup>5</sup>	1807.7	1807.7	1834.5	1877.3	1892.0
LIB (ft) <sup>4</sup>	2384.6	2362.6	2354.2	2354.2	2354.2	n/a	n/a	2459.0
LIB (kcfs)	n/a	n/a	n/a	n/a	n/a	TBD	TBD	n/a
HGH (ft)	3542.2	3535.7	3528.2	3524.5	3520.7	n/a	n/a	3560.0
HGH (kcfs)	n/a	n/a	n/a	n/a	n/a	TBD	TBD	n/a
SKQ (ft)	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	2056.0	n/a	2056.0	2062.5	2062.5	2062.5
GCL (ft)	1290.0	1288.3	1263.7	1251.7	1239.7	1266.5	1289.6	1290.0
BRN (ft)	2077.0	2048.1	2042.8	2040.5	2038.6	2071.8	2077.0	2077.0
DWR (ft)	1527.8	1501.3	1462.0	1451.3	1491.4	1564.7	1599.0	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.
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. Per the Duncan Storage Resevation Diagram, Duncan Reservoir is required to achieve its full flood risk management draft requirement of 1807.7 ft by 15 March.

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

Project	Forecast Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Current month Forecast % of Normal
MCDB	Apr-Aug	13115							117
ARDB	Apr-Aug	25497							115
DCDB	Apr-Aug	2361							116
LIB	Apr-Aug	7273							120
HGH	May-Sep	1920							109
SKQ <sup>1</sup>	Apr-Jul	5742							94
ALF <sup>1</sup>	Apr-Jul	11262							91
GCL <sup>1</sup>	Apr-Aug	60042							103
BRN <sup>1</sup>	Apr-Jul	5216							102
DWR	Apr-Jul	3090							125
TDA <sup>1</sup>	Apr-Aug	91310							102

Notes:

1. Official water supply forecasts for SKQ, ALF, GCL, BRN and TDA are the ESP 10-day-QPF median values published by the NWRFC on the following days for 2022: Jan 5, Feb 3, Mar 3, Apr 5, May 4, Jun 3.

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