Flood Risk Management Requirements
Report #3 for Water Year 2024
Issue Date: 07 March 2024

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.

- Implementation of CRSO EIS operations at Libby (sliding scale measure and modified project flood risk management draft)

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 2024 official forecast is 73,915 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 283 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	29 Feb	31 Mar	15 Apr	30 Apr[3]	31 May[3]	30 Jun[3]	31 Jul[3]
MCDB (kaf) [2]	915	1241	2886	2886	2886	1674	289	0
ARDB (ft)	1435.9	1434.7	1423.3	1423.3	1423.3	1434.8	1443.8	1444.0
DCDB (ft)[5]	1844.4	1826.2	1817.2	1817.2	1817.2	1849.4	1882.7	1892.0
LIB (ft) [4]	2417.6	2423.0	2416.4	2416.0	2415.7	n/a	n/a	2459.0
LIB (kcfs)	n/a	n/a	n/a	n/a	n/a	TBD	TBD	n/a
HGH (ft)	3550.9	3553.2	3553.7	3554.4	3555.2	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) [1]	2060.0	2060.0	2056.0	n/a	2056.0	2062.5	2062.5	2062.5
GCL (ft)	1290.0	1290.0	1283.3	1283.3	1282.6	1286.4	1289.9	1290.0
BRN (ft)	2077.0	2055.7	2051.6	2059.5	2067.5	2075.5	2077.0	2077.0
DWR (ft)	1557.2	1567.6	1574.0	1578.7	1578.7	1592.3	1600.0	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 1826.2 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	10216	9374	10012					90
ARDB	Apr-Aug	19353	18256	19684					89
DCDB	Apr-Aug	1870	1771	1888					93
LIB	Apr-Aug	5440	4743	5261					87
HGH	May-Sep	1270	1176	1302					74
SKQ[1]	Apr-Jul	4782	4415	4420					72
ALF[1]	Apr-Jul	9116	8605	9381					76
GCL[1]	Apr-Aug	44870	44134	48422					83
BRN[1]	Apr-Jul	4181	4758	5816					113
DWR	Apr-Jul	1881	1740	1894					77
TDA[1]	Apr-Aug	69028	67766	73915					83

Notes:
1. Official water supply forecasts for SKQ, ALF, GCL, BRN, DWR and TDA are the ESP 10-day-QPF median values published by the NWRFC on the following days for 2024: Jan 4, Feb 5, Mar 5, Apr 3, May 3, Jun 5.

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