

**Technical Management Team Notification
Additional Information on Fall Operations
September 8, 2026**

Fall surface spill operations are planned as described in the 2026 Fish Passage Plan (FPP)¹, Appendix E (2026 Fish Operations Plan or FOP)² criteria between 1 September through 15 November.³ The ability to operate surface weirs to safely pass fish downstream is contingent on sufficient inflows at or above required miscellaneous flows for maintaining fish ladders, navigation locks and where appropriate, fish bypass systems, and minimum generation requirements for station service and transmission voltage support and inertia, while also maintaining forebay and tailwater operating range criteria.

Inflows at each project vary based on a combination of natural conditions and water management practices. Natural conditions include precipitation and tributary stream flows. Water management practices include operations at projects upstream of the Columbia River System (CRS) dam and reservoir projects, some of which are managed by non-federal entities. For example, variable discharge (or outflows) from public utility districts projects on the middle Columbia River influence inflows at McNary Dam; inflows on the lower Snake River are also influenced by non-federal entities upstream of Lower Granite Dam.

River flows in the CRS are notably lower in the fall months, especially in September and October, compared to the spring. The Action Agencies must manage these low flow conditions while operating to meet various concurrent system requirements such as:

- Refilling Grand Coulee Dam across September and October in preparation to support Bonneville Dam operation to protect ESA-listed chum salmon in the lower Columbia River;
- Operating within the authorized forebay and tailrace operating ranges, i.e., between minimum and maximum pool elevations;
- Maintaining effective fish ladder criteria for upstream passage;
- Maintaining minimum generation for power and transmission system reliability;
- Maintaining minimum pool elevation requirements for navigation and irrigator intakes;
- Managing pool elevations for various needs, such as tribal treaty fishing in the lower Columbia River, supporting migratory bird nesting, safety during recreational events, military watercraft testing events, etc.

Planned Fall Operations

The 2026 fall surface spill operation criteria are *new* at all six projects as noted below in Table 1. Planned operational details referenced herein can be obtained in the 2026 FOP.

For context, in 2024 and 2025, one surface weir was operated 4 hours per day, 7 days per week at the four lower Snake River dams and at McNary Dam, 1 September through 15 November. In

¹ See <https://public.crohms.org/tmt/documents/fpp/2026>

² See https://public.crohms.org/tmt/documents/fpp/2026/final/FPP26_AppE_04-02-2026.pdf

³ For additional information, reference 2026 operations per project during the fall months of September, October and November per the 2026 Fish Passage Plan (FPP), Appendix E (Fish Operations Plan or FOP), Table 3.

2026, the FOP criteria changed to operate surface weirs 24 hours per day, 7 days per week (one surface weir at each of the four lower Snake River dams and two surface weirs at both McNary and John Day dams). See Table 1 for estimated outflows (kcfs) per weir and forebay elevations (feet at mean sea level) per location. Additional details associated with the Little Goose Dam adjustable spillway weir (ASW) crest elevation are shown in Table 2.

Table 1. Type and range of outflows (kcfs) per surface weir, project forebay operating ranges (feet msl) and minimum generation ranges at each of the four lower Snake River projects (Lower Granite, Little Goose, Lower Monumental, and Ice Harbor dams) and two lower Columbia River projects (McNary and John Day dams). Minimum generation flows do not include miscellaneous or attraction flow.

Location	Type of Weir	Outflows per Weir (kcfs)	Forebay Elevation (feet msl)
Lower Granite	Removable Spillway Weir (RSW)	7.6 – 11.4	735.0 – 738.0 ^c
Little Goose ^a	Adjustable Spillway Weir (ASW)	7.0	633.0 – 638.0
Lower Monumental	Removable Spillway Weir (RSW)	6.7 – 9.5	537.0 – 540.0
Ice Harbor	Removable Spillway Weir (RSW)	7.1 – 10.4	437.0 – 440.0
McNary ^b	2 Top Spillway Weir (TSW), Spill Bay 19 and 20	7.7 – 10.8	337.0 – 340.0
John Day ^b	2 Temporary Spillway Weir (TSW), Spill Bay 18 and 19	9.5 – 12.0	262.5 – 266.5

^a The adjustable surface weir (ASW) crest elevation at Little Goose Dam will be set to 622.0 feet msl unless requested by Bonneville. The objective spill rate will be to set the ASW crest to at least 11.0' below the forebay surface to maintain a spill rate of at least 7 kcfs.

^b Operating ranges can be more constrained due to various operational needs, e.g., 2 ft at McNary for Grebe operation, 2 ft at John Day for Treaty fishing.

^c Based on current flow and criteria in April 2026 FOP Implementation Report.

Table 2. Little Goose Dam forebay and adjustable spillway weir (ASW) elevations during fall operations that will maintain a minimum of 11 feet water depth passing over the ASW. Lowest forebay operating elevation (feet msl) were estimated by Bonneville.

Lowest Forebay Operating Elevation (feet msl)	ASW Crest Elevation (feet msl)	Forebay Operating Range (feet msl)
633.0 - 633.5	622.0	633.0 – 638.0
633.6 – 634.0	622.5	633.5 – 638.0
634.1 – 634.5	623.0	634.0 – 638.0
634.6 – 635.0	623.5	634.5 – 638.0
635.1 – 635.5	624.0	635.0 – 638.0
635.6 – 636.0	624.5	635.5 – 638.0
636.1 – 636.5	625.0	636.0 – 638.0
636.6 – 637.0	625.5	636.5 – 638.0
637.1 – 638.0	626.0	637.0 – 638.0

Low Flow Operational Adjustments

The 2026 FOP fall surface spill operation is complex and sometimes impossible to implement

due to low flow conditions. Per the 2026 FOP, Section 4.1 (*Conditions that May Require Adjustments to Planned Operations*), operational adjustments in planned spill levels may be necessary to maintain project minimum generation requirements during low flow conditions⁴.

Minimum Generation Requirements

Bonneville Power Administration (Bonneville) real-time operators coordinate with the U.S. Army Corps of Engineers (Corps) Project Operators to make operational adjustments at each dam consistent with 2026 FOP. To maintain local and regional power and transmission system reliability, minimum generation requirements at each project must be met to prevent the interruption of station service and avoid blackout conditions. Minimum generation requirements must also be met to provide voltage support and inertia required for reliable operation of the transmission system.

Spill volumes in the fall cannot be managed like those in the spring months when inflows exceed minimum generation plus surface spill requirements and the remainder of flows are spilled through conventional spill gates that can be managed at a finer scale. Surface spill at each weir is either on or off⁵ and requires operational planning and reservoir flexibility. If inflows are too low to support surface spill and minimum generation, weirs must be closed to avoid uncontrolled drafting of the pool while maintaining minimum generation requirements. Additionally, the inflow uncertainty due to operations of non-federal entities upstream must also be accounted for. For example, if inflows into the lower Columbia River are lower than expected due to storage at the middle Columbia River projects.

Bonneville developed a range of inflows associated with feasible surface weir operations based on the following factors:

- Maintaining minimum generation where the minimum generation estimates are taken from the upper end of the minimum generation range to account for operational uncertainties/flexibility
- Accounting for miscellaneous flow
- Accounting for inflow uncertainty as a result of:
 - Unforecastable operations of upstream non-federal entities
 - Unpredictable incremental/local flows between the lower river dams
- Calculating the spill requirement for the day based on clearly defined parameters that can be easily followed by real-time and project operators to allow for consistent implementation across operators and minimize human error:
 - Spill for current day based on previous day average inflow
 - One weir opening and closing per day
 - Tiered system for schedule transparency
 - Repeatability and consistency
 - Continuity of operations

⁴ See 2026 FOP, Section 4.3.1 for additional details.

⁵ Except at Little Goose Dam which has an adjustable crest elevation but is still operationally constrained (see Table 2 and FPP Section 2.3.2.7).

The range of inflows is described in Table 3 (lower Snake River dams) and Table 4 (McNary Dam) of this document.

Table 3. Lower Snake River previous day inflows (kcfs) and daily surface weir (SW) operations adjusted during low flow conditions at Lower Granite, Little Goose, Lower Monumental and Ice Harbor dams.

Previous Day Inflow (kcfs)	Daily Surface Weir Operation Adjustments
≥ 25.0	Open SW all hours
18.0 – 24.9	Close no later than 0300, reopen SW for 12-hour block from 0500-1700
≤ 17.9	Close no later than 0300 hours, reopen SW for a 4-hour block from 0500-0900

Table 4. Lower Columbia River previous day inflows (kcfs) and daily top surface weir (TSW) operations adjusted during low flow conditions at McNary Dam.

Previous Day Inflow (kcfs)	Daily Surface Weir Operation Adjustments
≥ 90.0	Open TSW 19 and 20 all hours
80.0 – 89.9	Open TSW 20 all hours
75.0 – 79.9	Close both TSWs no later than 0300, reopen TSW 20 for 12-hour block from 0500-1700
≤ 74.9	Close both TSWs no later than 0300 hours, reopen TSW 20 for a 4-hour block from 0500-0900

Additional flexibilities include:

- Hours may be adjusted earlier or later at the discretion of the Project Operators or Bonneville if spill occurs for four consecutive hours between 0400 and 1200.
- Bonneville may request a surface weir be closed if the project is operating at minimum generation and the forebay is projected to draft within six inches of the lowest operating elevation with anticipated inflows (i.e., below 537.5' msl at Lower Monumental Dam). The surface weir will be reopened when inflows are sufficient to maintain surface weir flows and minimum generation⁶.
- Hours may be adjusted to accommodate project maintenance.

At McNary and John Day dams, inflows are notably variable and are managed within reservoir operating ranges and must be planned for by Bonneville to maintain minimum generation requirements. See hourly and daily average inflows shown in Figures 1 and 2.

⁶ See 2026 FOP, Table 1. -- Minimum generation flow ranges (kcfs) for turbine units at Corps hydropower projects on the lower Snake and lower Columbia rivers. The table is accurate as of April 2026 but may change in-season as coordinated through FPOM (see the FPP).

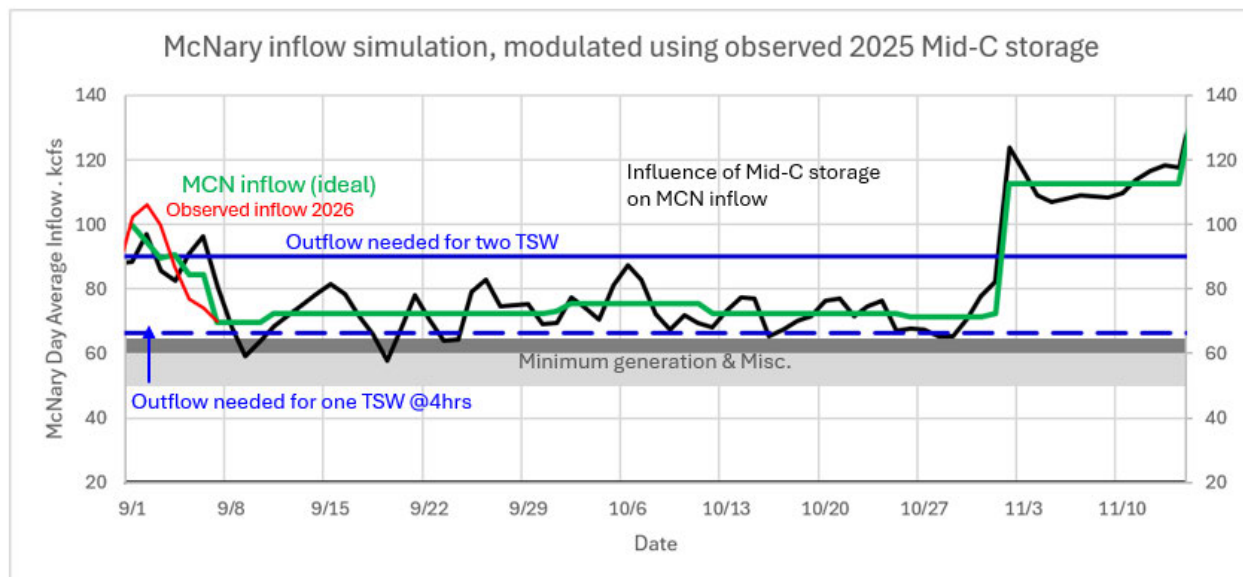


Figure 1. McNary Dam inflow simulation modeled by Bonneville, using observed 2025 mid-Columbia River storage, a non-federal operation of outflows from Priest Rapids Dam that the Action Agencies must manage in the lower Columbia River.

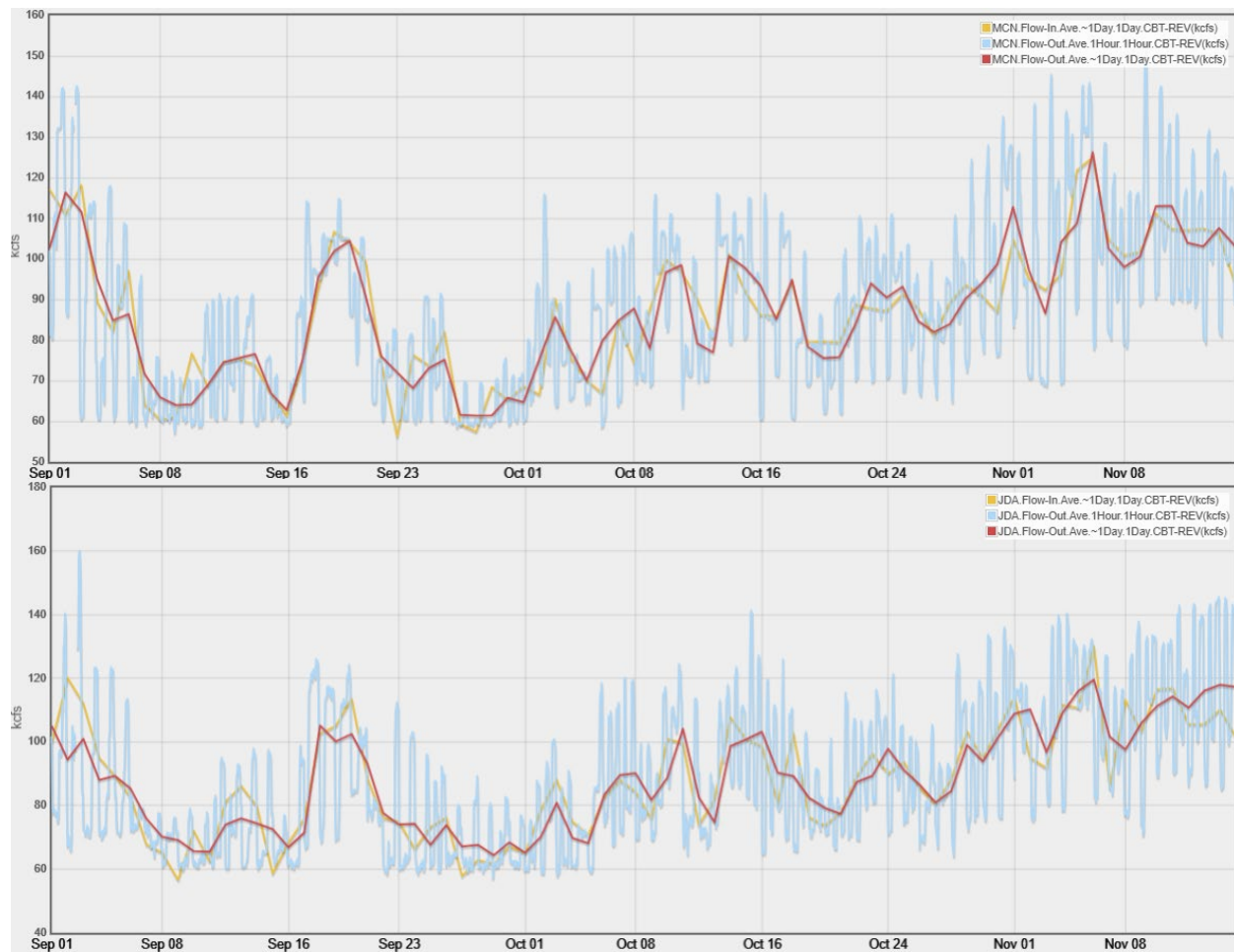


Figure 2. Hourly and daily average outflows and daily average inflows at McNary (top) and John Day (bottom) dams, 2025. Similar inflow and outflow trends were observed in 2021-2024. Graphics provided by U.S. Army Corps of Engineers.

At John Day Dam, the surface weir is open as long as the weirs are installed, unlike at the lower Snake River and McNary dams where the weirs can be controlled by the Project Operators from the operations center. Opening and closing the John Day TSWs require a crew and gantry crane and must be done during daylight hours as weather allows, with at least 3 business days of advance notice. The project cannot respond to hourly flow fluctuations below approximately 80 kcfs by closing the TSWs without violating the minimum generation requirements or operating pool constraints. Currently both surface weirs at John Day Dam are closed due to insufficient flow. When inflow forecasts are high enough, one or both weirs may be re-opened.

Next Steps

The Action Agencies will evaluate the recent implementation of the adjusted surface spill operations for refinement. Input from the TMT participants will be evaluated and considered in this process and any further adjustments will be communicated to TMT.