

FISH OPERATIONS PLAN IMPLEMENTATION REPORT

September 2026

**U.S. Army Corps of Engineers
Northwestern Division
Portland, OR**

Introduction

The 2026 Fish Operations Plan (2026 FOP) describes the U.S. Army Corps of Engineers' (Corps) planned operations for fish¹ passage at its four lower Snake River and four lower Columbia River dams during the 2026 surface spill operations in March through early April, spring and summer fish migration seasons, generally April 3 through August 31, and surface spill operations September through mid-November. The 2026 FOP is responsive to the U.S. District Court for the District of Oregon's (District Court) Preliminary Injunction Order issued February 25, 2026 and amended on March 2, 2026. The Corps will implement the 2026 FOP consistent with that order. The 2026 FOP is also consistent with spill operations for fish passage and the regional forum process for adaptive management and in-season management² provisions outlined in the Record of Decision for the Columbia River System Operations Environmental Impact Statement (CRSO EIS ROD) dated September 28, 2020, CRSO Final EIS, 2020 National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) Columbia River System (CRS) Biological Opinions (2020 CRS BiOps)³, the Corps' requirements under the Endangered Species Act (ESA), and the ongoing consultation and communications with the relevant wildlife agencies to ensure consistency with the ESA. Other project operations and water management actions not specifically addressed in this document will be consistent with other guiding operative documents, including the 2026 Water Management Plan (WMP), seasonal WMP updates, and the 2026 Fish Passage Plan (FPP).

The FOP Implementation Reports are produced to reflect implementation of the 2026 FOP for fish passage spill. This report describes the Corps' implementation of the 2026 FOP during the month of September. Information in this report includes the following:

- total flow: the total hourly river flow rate;
- generation flow: the hourly flow through the powerhouse units;
- target spill: the spill target for that hour (Table 1);
- adjusted spill: the hourly spill level that can be achieved considering that spill may vary as a function of total river flow, forebay elevation and generator capacity, and is subject to routine

¹ ESA-listed salmon and steelhead.

² Adaptive management and in-season management will be utilized for those operations not included in the Court's Preliminary Injunction Order, or as specifically ordered by the Court.

³ The Corps, in coordination with the other Action Agencies, and NMFS, employs the Regional Implementation Oversight Group (RIOG) and technical teams including the Technical Management Team (TMT) and Fish Passage Operations & Maintenance (FPOM) coordination group, to coordinate with state, tribal and other federal experts for recommendations for implementing operations consistent with the 2020 BiOps.

operational adjustments that limit the ability to spill to the target spill (see 2026 FOP, Section 4.1);

- actual spill: the hourly flow over the spillway;
- resultant 12-hour average TDG for the tailwater at each project.

This report also provides information on issues and unanticipated or emergency situations that arose during implementation of the FOP in September 2026.

Data Reporting

I. For each project providing fish passage spill operations, this report contains a graph displaying the performance of the fish passage spill program for the month of September, with hourly spill, target spill, adjusted spill, generation, and total flows. The monthly spill graphs (Figure 1 through Figure 6) begin on September 1 and end on September 30 and reflect the following operations for the lower Snake River and the lower Columbia River projects:

- The black line represents the average hourly total river flow through the project in thousand cubic feet per second (kcfs).
- The orange line represents the average hourly generation flow through the powerhouse each hour in kcfs.
- The thin solid blue line represents the actual average hourly spill level through the spillway in kcfs.
- The dashed blue line represents the target spill.
- The thick dark blue line represents the adjusted spill: the hourly spill level that can be achieved taking into consideration low flows and maintaining requirements for minimum generation, miscellaneous flows, and operating pool limits (2026 FOP section 4.1).

II. The average daily %TDG for the 12 highest hourly TDG measurements in a calendar day for all projects is shown in the September 2026 Average Percent TDG Values Table (Table 5). Red numbers indicate that the project exceeded the %TDG cap - i.e. 120% (tailwater), 115% (downstream forebay) on that day.⁴

General Implementation Remarks

For all projects that spill for fish passage the actual spill may vary from the adjusted levels due to various conditions as described below. When actual spill varied from adjusted fish passage spill, the change in spill is described below in the September 2026 Spill Variances table (Table 6).⁵ The variances table includes average hourly spill data; but when spill varies from adjusted spill for a portion of an hour, it is characterized as a variance for a full hour. Other routine activities that changed spill, which were coordinated with regional partners, are identified in the

⁴ Oregon Department of Environmental Quality approved an additional period (September 1 to November 15, 2026) that is excepted from the 110% TDG criteria via email from Steve Mrazik, Water Quality Manager dated 8/28/2026.

⁵ Forced spill conditions shown in the graphs are not considered variances and are not reported in the Spill Variance Table. Forced spill conditions may result from lack of load, high river inflows that exceed available powerhouse capacity, scheduled or unscheduled turbine unit outages or transmission outages of various durations, passing debris, etc.

September 2026 Pre-Coordinated Operations table (Table 7).

"Low flow" operations at the lower Columbia and lower Snake projects are triggered when inflow is insufficient to provide both minimum generation and the target spill levels. For this report, the decrease in target spill is represented as adjusted spill. As flows transition from higher flows to low flows, there may be situations when flows recede at a higher rate than forecasted. In addition, inflows provided by nonfederal projects upstream are variable and uncertain.

Actual spill through the spillway weirs is influenced by forebay elevation (e.g., a higher forebay results in a greater level of spill since more water can pass over the surface spillway weir). The range of surface weir spill over the normal forebay operating range is defined in the project-specific chapters of the FPP. Occurrences requiring an adjustment in spill operations and/or regional coordination are described in greater detail in the "Operational Adjustments" section below.

September Operations

The September observed precipitation was above normal with 159% of average precipitation observed at the Snake River above Ice Harbor and was above normal with 171% of average precipitation observed at the Columbia River above The Dalles.⁶ The NOAA Northwest River Forecast Center runoff summary for September indicated that the adjusted runoff for the Snake River at Lower Granite was 84% of the 30-year average (1991-2020) with a volume of 0.9 MAF (Million acre-feet). The September adjusted runoff for the Columbia River at The Dalles was 86% of the 30-year average (1991-2020) with a volume of 4.3 MAF.⁷

Fall surface spill operations from September 1 – November 15 occur via the project's spillway weir (SW) or non-spillway surface passage routes defined in Table 1 (Table 3 in the FOP). Spill may be temporarily reduced at any project to ensure navigation safety or transmission reliability.

⁶ Retrieved October 05, 2026: https://www.nwrhc.noaa.gov/water_supply/wy_summary/wy_summary.php?tab=5

⁷ Retrieved October 05, 2026: https://www.nwrhc.noaa.gov/runoff/runoff_summary.php

Table 1. Fall Surface Spill Operations ^A

Project	Dates	Hours	Notes
LWG, LGS, LMN, IHR, MCN	September 1 – November 15	24 hours/day, 7 days/week	LGS SW in high crest (~7 kcfs). MCN SW in spillbays 19, 20 September 1 – November 15.
JDA ^B	September 1 – November 15 (SW18 and SW19)	24 hours/day, 7 days/week	Opening and closing the JDA SW requires a crew and crane and must be done during daylight hours as weather allows.
TDA Sluiceway	Year-round	24 hours/day, 7 days/week	TDA sluiceway is a non-spillway surface passage route. See FPP Chapter 3 for operating criteria.
BON B2 CC	Year-round	24 hours/day, 7 days/week	
BON Sluiceway	Year-round	24 hours/day, 7 days/week	BON PH1 sluiceway is a non- spillway surface passage route. See FPP Chapter 2 for operating criteria.

A. Spill may be temporarily reduced below the FOP target spill level at any project if necessary to ensure navigation safety or transmission reliability, or to avoid exceeding State TDG standards.

B. John Day Dam will also spill from bay 2 open 1 stop (approximately 1.6 kcfs) 24 hours/day September 1 – November 15 to maintain attraction flow to the North Shore adult fish ladder, per FPP Chapter 4 (JDA).

Operational Adjustments

1. Lower Granite, Little Goose, Lower Monumental, Ice Harbor and McNary

The ability to operate SWs to safely pass fish downstream depends on having sufficient inflows to simultaneously meet the following requirements:

- Miscellaneous flows for maintaining fish ladders, navigation locks and fish bypass systems;
- Minimum generation requirements for station service and transmission voltage support and inertia; and
- Forebay and tailwater operating range criteria.

River inflows are notably lower in the fall months, especially in September and October, compared to the spring.

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 conditions. 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 SW is either on or off⁸ and requires operational planning and reservoir flexibility. If inflows are too low to support surface spill and minimum generation, SWs must be closed to avoid uncontrolled drafting of the pool while maintaining minimum generation requirements and other operational requirements (i.e., maintain at or above minimum elevations for navigation safety, minimize pool elevation changes during tribal gill net fishery, etc.). Additionally, there is uncertainty of inflow due to operations of non-federal entities upstream and unpredictable local flows.

To address these constraints, flow criteria were developed that minimize gate changes, are implementable in real-time, are consistent and repeatable, and ensure continuity of operations (see Table 2 and Table 3).⁹ After two weeks of implementation, the criteria were refined (see Table 4 and Table 5) starting September 18.¹⁰ A SW may be closed at any time if the project is operating at minimum generation and the forebay is projected to draft below the minimum forebay elevation with anticipated inflows. The SW may be reopened when inflows are sufficient to maintain SW spill and minimum generation requirements without drafting the pool below the minimum elevation. When low flow criteria require only a 4-hour block per Tables 2 through 5, the default 4-hour block schedule is 0500–0900 hours. The hours may be adjusted earlier or later if the SW spill occurs for 4 consecutive hours between 0400 and 1200. If inflow is too low to support SW spill and minimum generation requirements, SWs must be closed to avoid uncontrolled drafting of the pool while maintaining minimum generation requirements. These operations were coordinated with the TMT during the meetings on September 9 and 23, and via TMT email coordination on September 8 and 17.

The criteria above were used to determine the adjusted spill level at each project. Hours during which the operations deviate from the criteria described in Tables 2 through 5 are listed in Tables 6 and 7.

⁸ Except at Little Goose Dam which has an adjustable crest elevation but is still operationally constrained (see FPP Section 2.3.2.7).

⁹ TMT Notification, Additional Information on Fall Operations, September 8, 2026: https://public.crohms.org/tmt/agendas/2026/0909_TMT_Official_Notice_Email_09082026.pdf.

¹⁰ TMT Notification, Additional Information on Fall Operations, September 17, 2026: https://public.crohms.org/tmt/agendas/2026/0923_TMT_Official_Notice_09172026.pdf.

Table 2. Lower Snake River projects flow-dependent daily SW operations (September 1 – September 17)

Previous Day Average Inflow (kcfs)	SW Daily Operation
≥ 25.0	Keep SW open all hours.
18.0 – 24.9	Close SW by no later than 0300 (if not already closed), then open SW for a 12-hour block from 0500–1700.
≤ 17.9	Close SW by no later than 0300 (if not already closed), then open SW for a 4-hour block from 0500–0900.

Table 3. McNary flow-dependent daily SW operations (September 1 – September 17)

Previous Day Average Inflow (kcfs)	SW Daily Operation
≥ 90.0	Keep both SWs open all hours.
80.0 – 89.9	Close SW in bay 19 by no later than 0300 (if not already closed) and keep the SW in bay 20 open all hours.
75.0 – 79.9	Close both SWs by no later than 0300 (if not already closed), then open the SW in bay 20 for a 12-hour block from 0500–1700.
≤ 74.9	Close SW by no later than 0300 (if not already closed), then open SW in bay 20 for a 4-hour block from 0500–0900.

Table 4. Lower Snake River projects flow-dependent daily SW operations (September 18 – September 30)

Project:	Lower Granite	Little Goose	Lower Monumental	Ice Harbor	
Flow site:	Project inflow	Upstream project outflow	Upstream project outflow	Upstream project outflow	SW Daily Operation
Previous Day Flow (kcfs)	≥ 24.0	≥ 21.0	≥ 22.0	≥ 24.0	Open SW for a 24-hour block from 0500 of the current day to 0459 of the following day
	19.0 – 23.9	17.0 – 20.9	18.0 – 21.9	19.0 – 23.9	Open SW for 12-hour block from 0500–1700
	≤ 18.9	≤ 16.9	≤ 17.9	≤ 18.9	Open SW for a 4-hour block from 0500–0900

Table 5. McNary flow-dependent daily SW operations (September 18 – September 30)

Previous Day McNary Inflow (kcfs)	SW Daily Operation
≥ 90.0	Open SW 19 and SW 20 for a 24-hour block from 0500 of the current day to 0459 of the following day
80.0 – 89.9	Open SW 20 for a 24-hour block from 0500 of the current day to 0459 of the following day
75.0 – 79.9	Open SW 20 for 12-hour block from 0500–1700
≤ 74.9	Open SW 20 for a 4-hour block from 0500–0900

2. John Day

Opening and closing the John Day SWs requires a crew and gantry crane and must be done during daylight hours as weather allows, with at least 3 business days of advance notice. This operating constraint means that the project cannot open and close the SWs on a daily basis like at McNary. Instead, operating one SW requires sustained inflows in excess of those required to operate a SW (approximately 80 kcfs) to ensure minimum generation requirements and operating pool constraints are met under both known and unforeseen circumstances. The two SWs were

closed on September 1 and 2 due to insufficient inflows on September 1 and 2 (SW 18 and SW 19, respectively).

Table 6. September 2026 Variances

Project	Parameter	Date	Time^[1]	# of Hours	Type	Reason
Lower Granite	Additional Spill	09/09	0100-0500	5	Program Error	Hourly spill occurred through surface weir due to a loss of data to the project.
Lower Granite	Additional Spill	09/23	1600	1	Maintenance	Hourly spill of ~2 kcfs occurred through a conventional spillbay gate due to exercising of spillbay 4 after inspection and maintenance.
Lower Monumental	Additional Spill	09/23	1000	1	Maintenance	Hourly spill of ~5 kcfs occurred through a conventional spillbay gate due to exercising of spillbay 3 after inspection and maintenance.
Little Goose	Additional Spill	09/18	0600-0800	3	Human Error	Hourly spill increased to 10 kcfs (greater than ~7 kcfs SW in high crest) through surface weir due to misinterpretation of the planned spill operation.
Ice Harbor	Reduced Spill	09/01	0100-0300	3	Operational Limitations	No surface weir spill due to implementation of incorrect spill target caused by an erroneous inflow calculation. The operation was based on best available information at the time.
Ice Harbor	Reduced Spill	09/01	1800	1	Human Error	The surface weir was closed for part of the hour by mistake.

^[1] Note: Data collected for reporting spill variances is reported using hourly-averaged data. Therefore, while spill may be increased or decreased for only a portion of an hour, it is represented in the Pre-Coordinated Operations Table as an hour.

Table 7. September 2026 Pre-Coordinated Operations

Project	Parameter	Date	Time^[1]	# of Hours	Type	Reason
Little Goose	Additional Spill	09/02	1100-1600	6	Maintenance	Hourly spill occurred through conventional spillbay gates (~2-5 kcfs) due to an emergency line outage. Regionally coordinated via MOC 26LGS05.
Little Goose	Additional Spill	09/02	1800-2400	7	Maintenance	Hourly spill occurred through surface weir due to an emergency line outage. Regionally coordinated via MOC 26LGS05.
Ice Harbor	Additional Spill	09/14	0100-0500 2000-2400	5 5	Maintenance	Additional surface weir spill occurred from 0100-0500 and 2000-2400. Regionally coordinated via MOC 26IHR06.
Ice Harbor	Reduced Spill	09/14	1100-1700	7	Maintenance	Surface weir spill did not occur from 1100-1700 due to a bathymetric survey. Regionally coordinated via MOC 26IHR06.
McNary	Reduced Spill	09/03	1900-2000	2	Navigation	One surface weir was closed for navigation safety. Regionally coordinated via 2026 FOP, Sections 4.1 and 4.6.
McNary	Reduced Spill	09/04	2000	1	Navigation	One surface weir was closed for navigation safety. Regionally coordinated via 2026 FOP, Sections 4.1 and 4.6.

^[1] Note: Data collected for reporting spill variances is reported using hourly-averaged data. Therefore, while spill may be increased or decreased for only a portion of an hour, it is represented in the Pre-Coordinated Operations Table as an hour.

McNary	Equivalent Spill	9/16	0500-1700	13	Maintenance	Spill occurred through two surface weirs from 0500-1000. No spill from 1100-1700 due to a bathymetric survey. Regionally coordinated via MOC 26MCN14.
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Table 8. September 2026 Average Percent TDG Values

Station:	LWG	LGNW	LGSA	LGSW	LMNA	LMNW	IHRA	IDSW	MCNA	MCPW	JDY	JHAW	TDA	TDDO	BON	WRNO
Gas Cap %:	115	120	115	120	115	120	115	120	115	120	115	120	115	120	115	120
1-Sep	103	112	107	111	106	113	107	110	103	116	103	113	109	• ¹¹	104	118
2-Sep	102	110	106	112	106	112	106	110	102	114	103	108	107	•	104	114
3-Sep	101	110	105	111	105	109	106	108	102	114	103	106	105	•	103	114
4-Sep	100	110	106	110	105	113	105	110	101	115	102	104	103	104	103	113
5-Sep	100	110	105	109	105	113	105	109	100	113	101	104	102	104	103	115
6-Sep	100	112	105	110	105	113	105	110	100	109	101	104	102	103	103	114
7-Sep	99	111	104	109	105	113	105	110	100	108	101	103	101	103	102	114
8-Sep	99	111	104	110	104	113	104	109	99	107	-	103	-	103	101	114
9-Sep	99	114	104	109	104	112	104	110	101	109	-	104	-	104	-	114
10-Sep	100	114	104	109	104	113	106	110	102	110	-	104	-	104	-	113
11-Sep	100	114	103	110	104	113	105	110	101	110	-	104	-	104	-	113
12-Sep	101	113	104	111	105	113	107	110	103	109	-	104	-	103	-	113
13-Sep	100	112	103	110	104	112	107	109	102	108	-	103	-	102	-	112
14-Sep	100	112	102	109	103	112	105	109	101	108	-	103	-	103	-	113
15-Sep	101	113	103	110	103	112	105	109	101	107	-	103	-	103	-	113
16-Sep	100	113	103	110	102	112	104	109	101	112	-	103	-	103	-	114
17-Sep	100	112	102	109	103	112	104	109	101	107	-	103	-	103	-	115
18-Sep	99	103	102	111	103	113	103	106	100	107	-	103	-	103	-	113
19-Sep	99	104	104	110	103	113	103	107	100	107	-	103	-	103	-	114
20-Sep	99	103	104	110	103	113	104	110	100	108	-	104	-	103	-	115
21-Sep	102	104	105	107	103	108	104	107	102	108	-	104	-	103	-	113
22-Sep	101	105	105	107	103	108	104	107	103	108	-	102	-	102	-	114
23-Sep	100	104	104	110	103	112	104	107	102	108	-	102	-	102	-	113
24-Sep	100	104	104	107	104	108	105	108	103	109	-	104	-	102	-	114
25-Sep	101	105	104	105	103	107	105	107	103	108	-	102	-	101	-	112
26-Sep	99	103	101	105	102	107	104	107	100	107	-	102	-	102	-	112
27-Sep	99	104	102	105	102	107	104	107	100	107	-	102	-	102	-	110
28-Sep	- ¹²	103	102	110	102	107	-	107	-	109	-	102	-	102	-	109
29-Sep	-	104	101	104	102	107	-	106	-	114	-	101	-	101	-	109
30-Sep	-	102	100	104	-	107	-	106	-	113	-	103	-	101	-	111
Exceedances:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

¹¹ Missing data at TDDO from 09/01 – 09/03 due to failed sensor.

¹² - indicates gauge is out of service for winter.

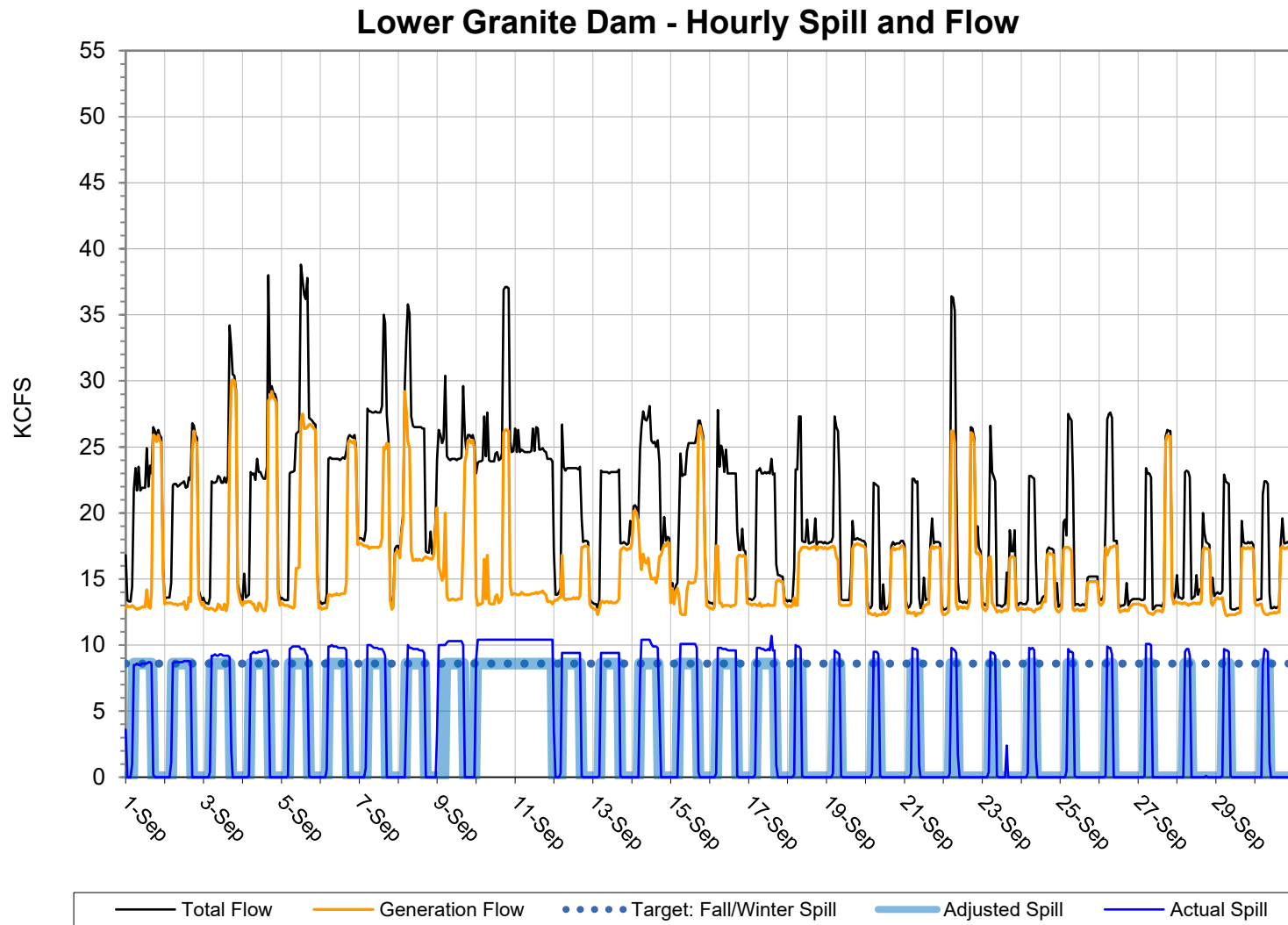


Figure 1: Hourly Spill and Flow at Lower Granite Dam. The adjusted spill line is a simplified representation due to limitations of representing a range of minimum generation values. See Table 6 and Table 7 for spill variances and pre-coordinated operations.

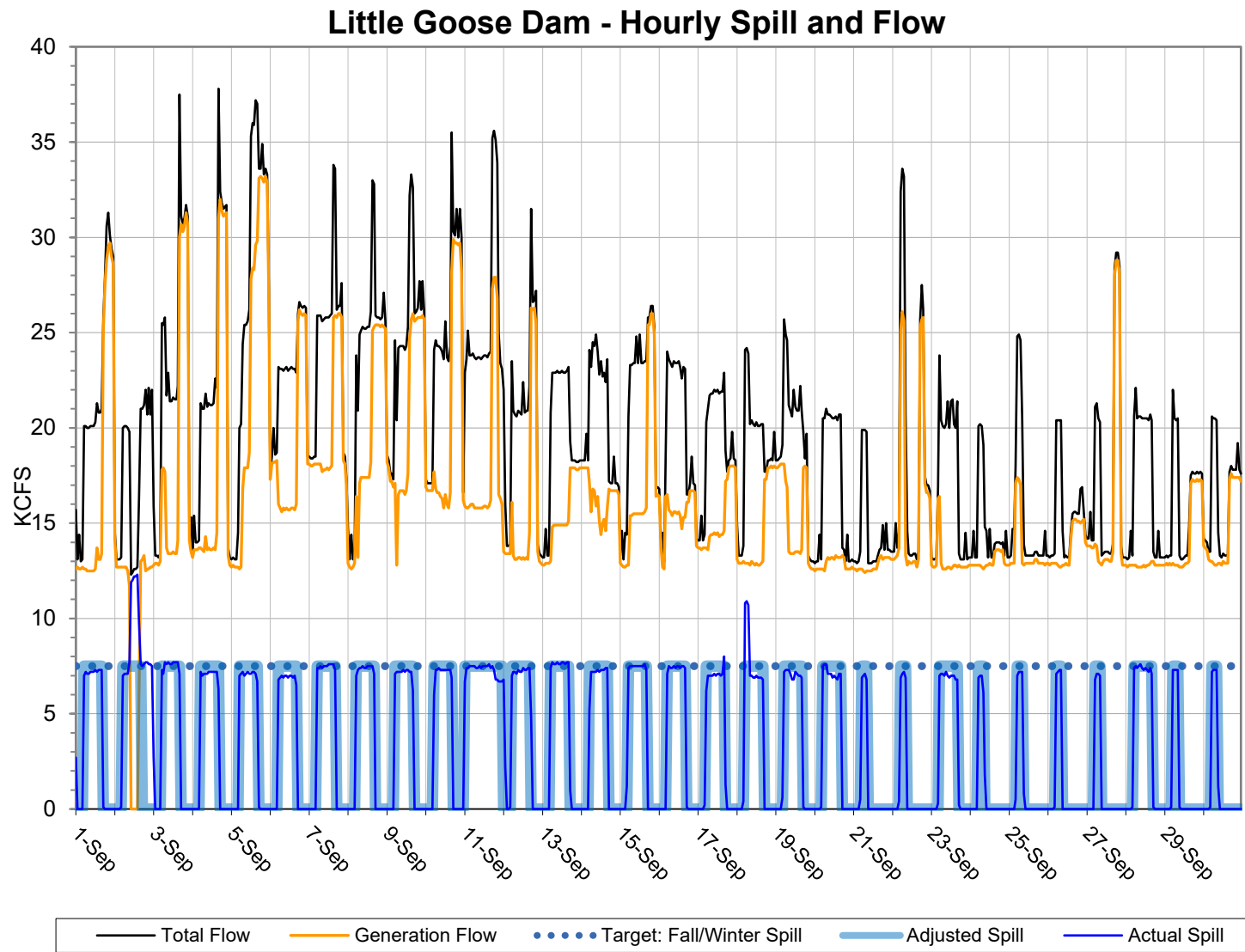


Figure 2: Hourly Spill and Flow at Little Goose Dam. The adjusted spill line is a simplified representation due to limitations of representing a range of minimum generation values. See Table 6 and Table 7 for spill variances and pre-coordinated operations.

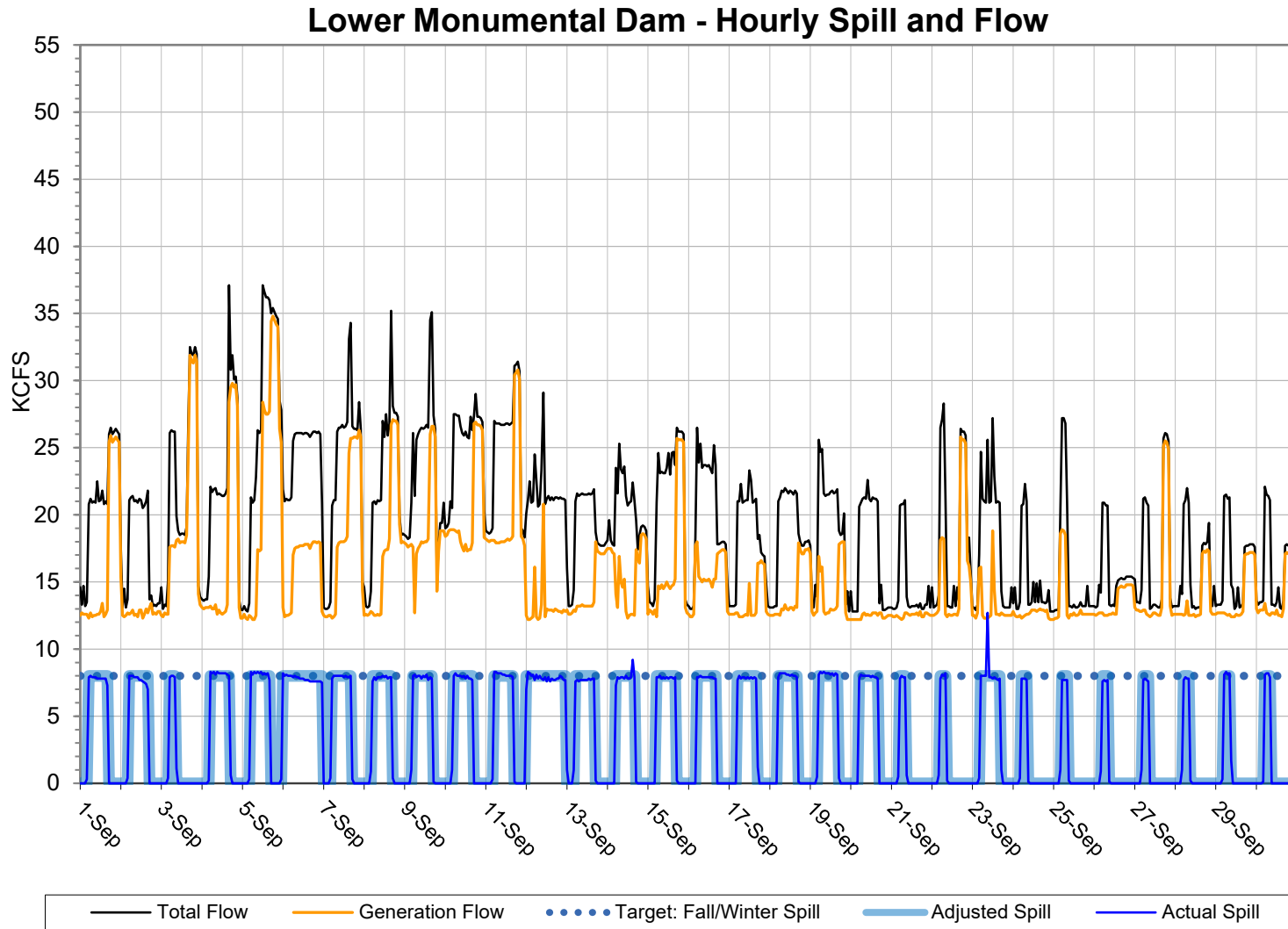


Figure 3: Hourly Spill and Flow at Lower Monumental Dam. The adjusted spill line is a simplified representation due to limitations of representing a range of minimum generation values. See Table 6 and Table 7 for spill variances and pre-coordinated operations.

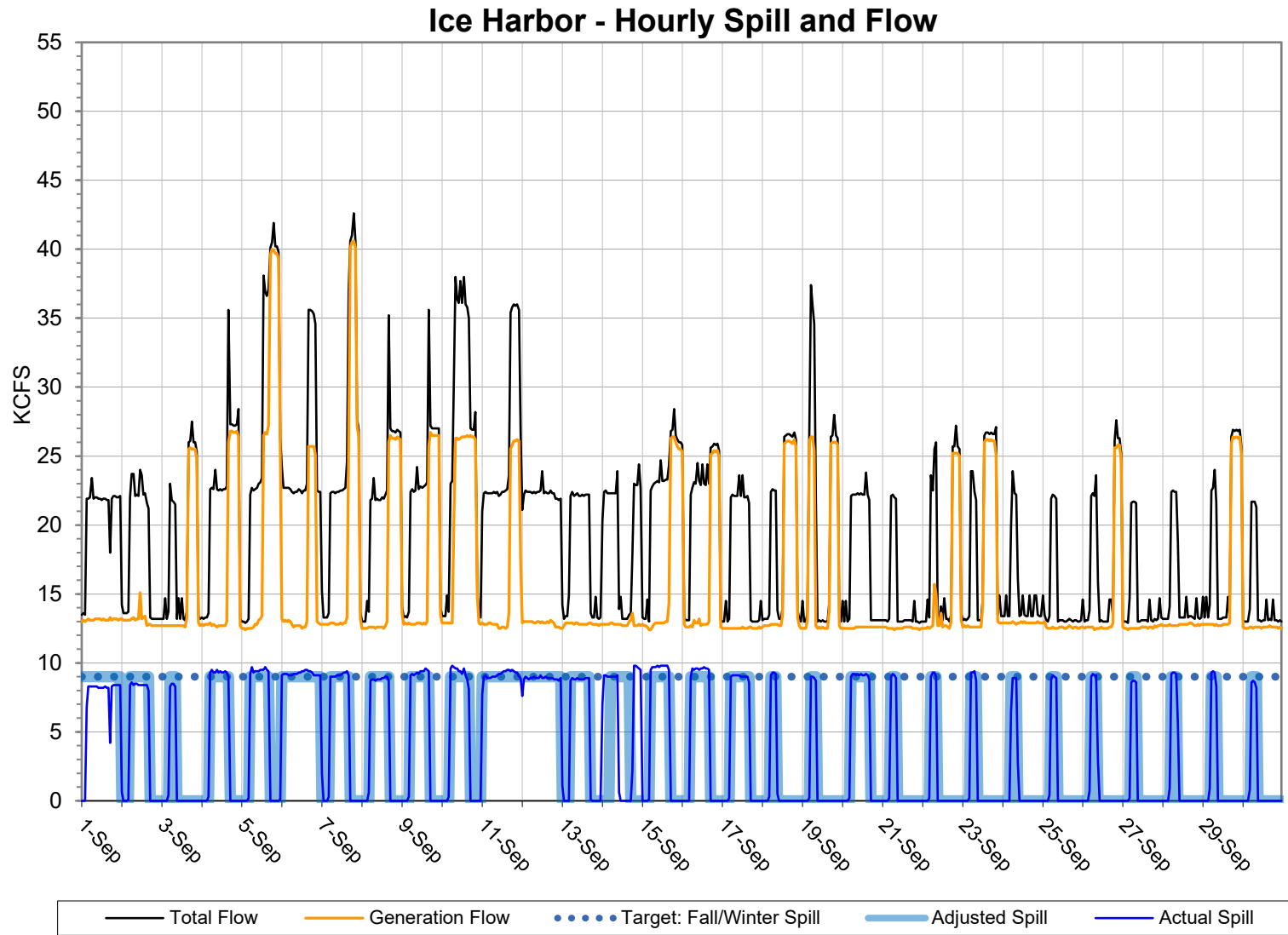


Figure 4: Hourly spill and flow at Ice Harbor Dam. The adjusted spill line is a simplified representation due to limitations of representing a range of minimum generation values. See Table 6 and Table 7 for spill variances and pre-coordinated operations.

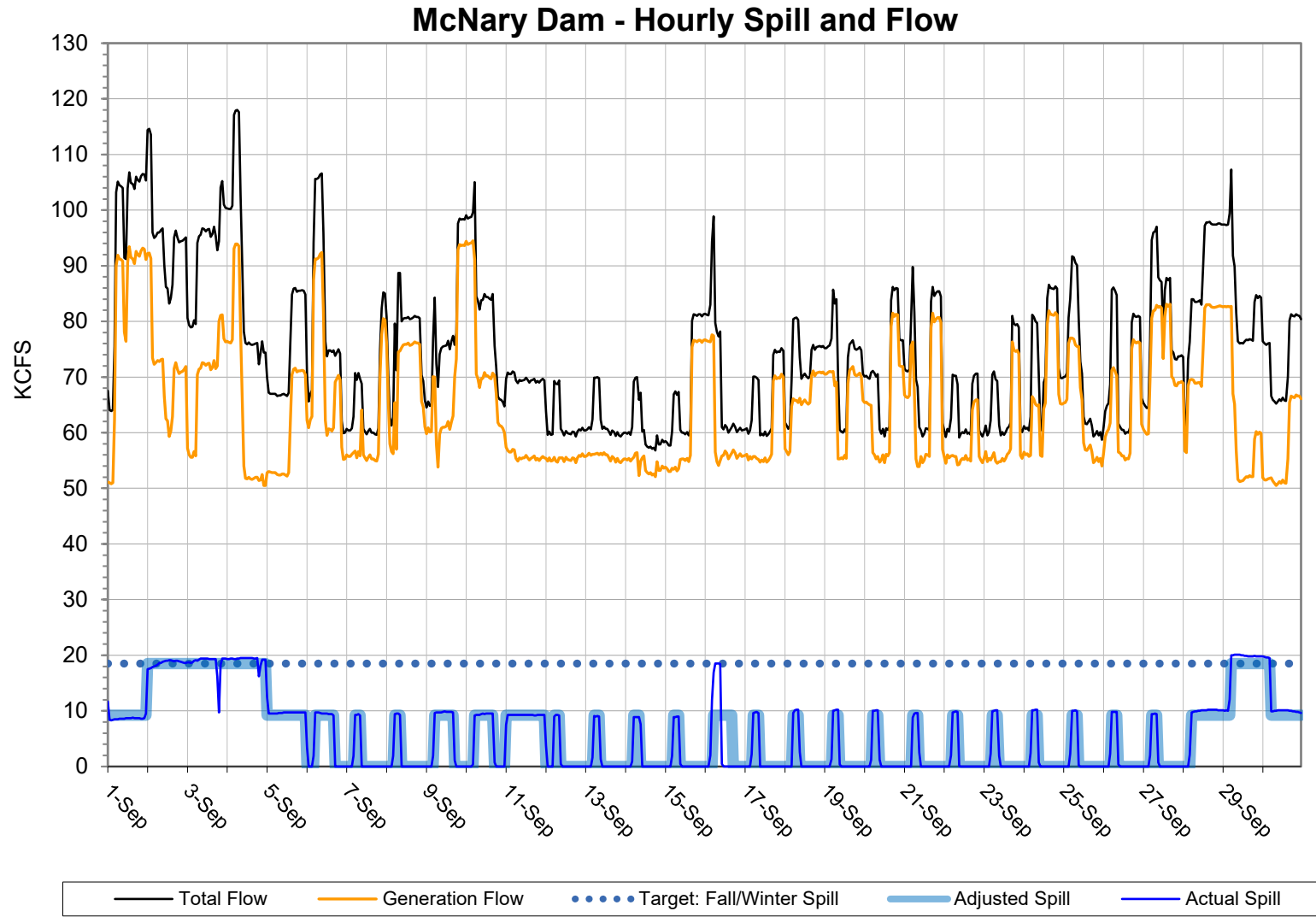


Figure 5: Hourly spill and flow at McNary Dam. The adjusted spill line is a simplified representation due to limitations of representing a range of minimum generation values. See Table 6 and Table 7 for spill variances and pre-coordinated operations.

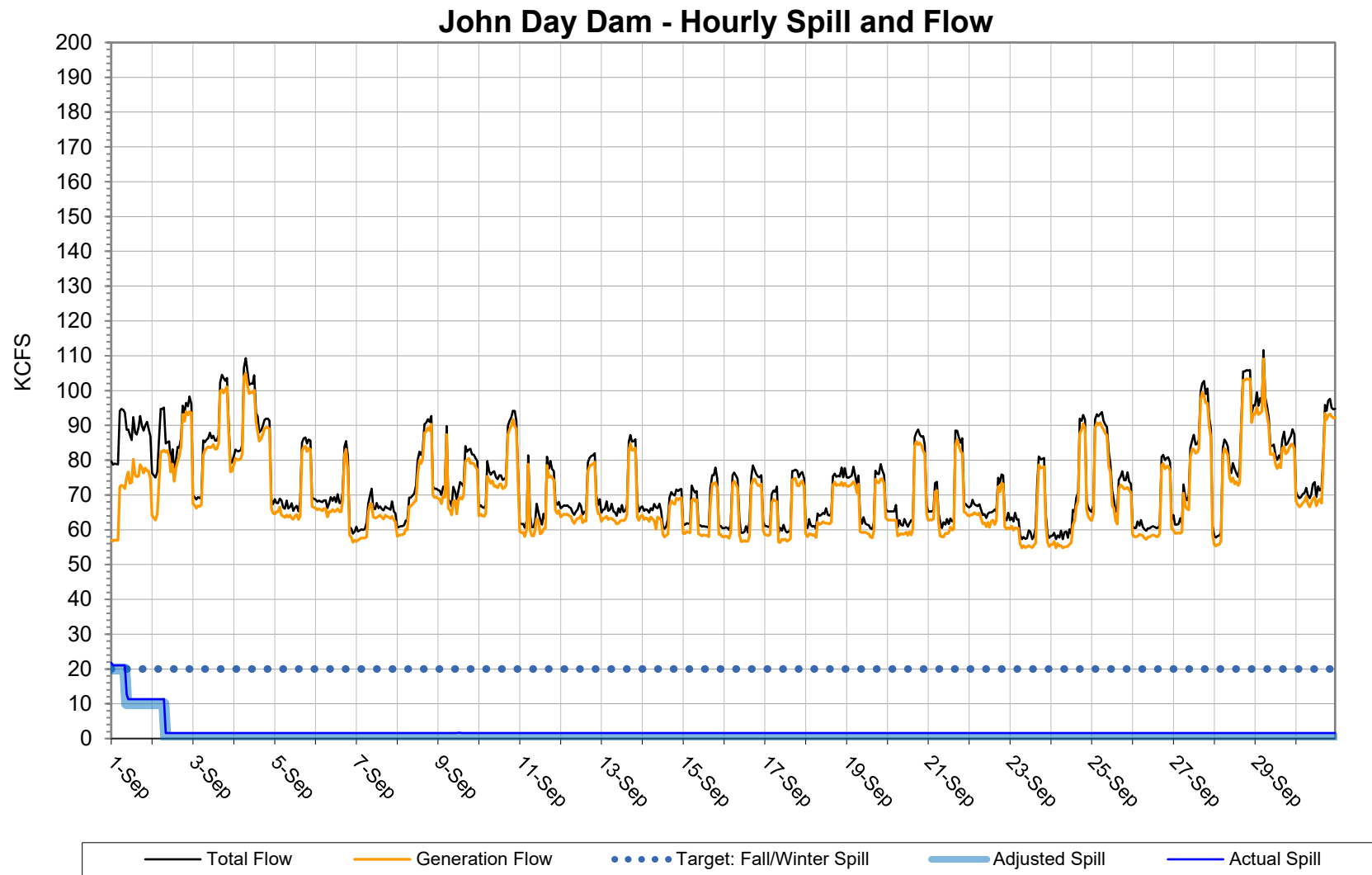


Figure 6: Hourly spill and flow at John Day Dam. The adjusted spill line is a simplified representation due to limitations of representing a range of minimum generation values. See Table 6 and Table 7 for spill variances and pre-coordinated operations.