

Site C Clean Energy Project

Permanent Upstream Fish Passage Facility Operations Report

Reporting Period: October 1 to 31, 2025

Prepared by BC Hydro

November 14, 2025

Introduction

BC Hydro filled the Site C Reservoir and started to operate the generating station in the fall of 2024. As such, the permanent upstream fish passage facility (hereafter permanent facility) was operated at the outlet of the generating station to provide for fish passage during the operations phase of the Project.

Structure of the report

This report summarizes the data and information presented in weekly reports prepared by the facility operator, as described in the Manual of Operational Parameters and Procedures (OPP), and covers the full extent of operations in October 2025. Note that the facility was shutdown following the last day of operation on October 31.

This report has the following sections:

- Biological operation;
- Environmental conditions;
- Mechanical operation; and
- Adjustments.

Biological operation is defined as the sorting, sampling, tagging, transport and release of fish. Mechanical operation is defined as the operation of the pumps, gates, crowder, lock, sensors, loggers, and other mechanical equipment to ensure the permanent facility achieves the biological objectives described in Section 4.1 of the Fish Passage Management Plan¹.

Summary

Four thousand six hundred and ninety eight fish – 4661 Mountain Whitefish, 18 Bull Trout, 6 Rainbow Trout, 5 Arctic Grayling, 5 Largescale Sucker, 2 Longnose Sucker, and 1 Lake Trout – were sorted and sampled at the permanent facility, and transported and released into the Site C Reservoir (Table 1).

BC Hydro winterized the permanent facility after the last crowd on October 31.

¹ Available at: <http://sitecproject.com/sites/default/files/Fish%20Passage%20Management%20Plan.pdf>

Biological operation

In total, 4698 fish were sorted in the permanent facility during the reporting period (Table 1; Figure 1). Seven mortalities were observed during the reporting period (0.3% of all fish sorted in 2025), which is in-line with the anticipated levels of mortality during operations².

Table 1. Total number of fish sorted, sampled, transported and released during the reporting period.

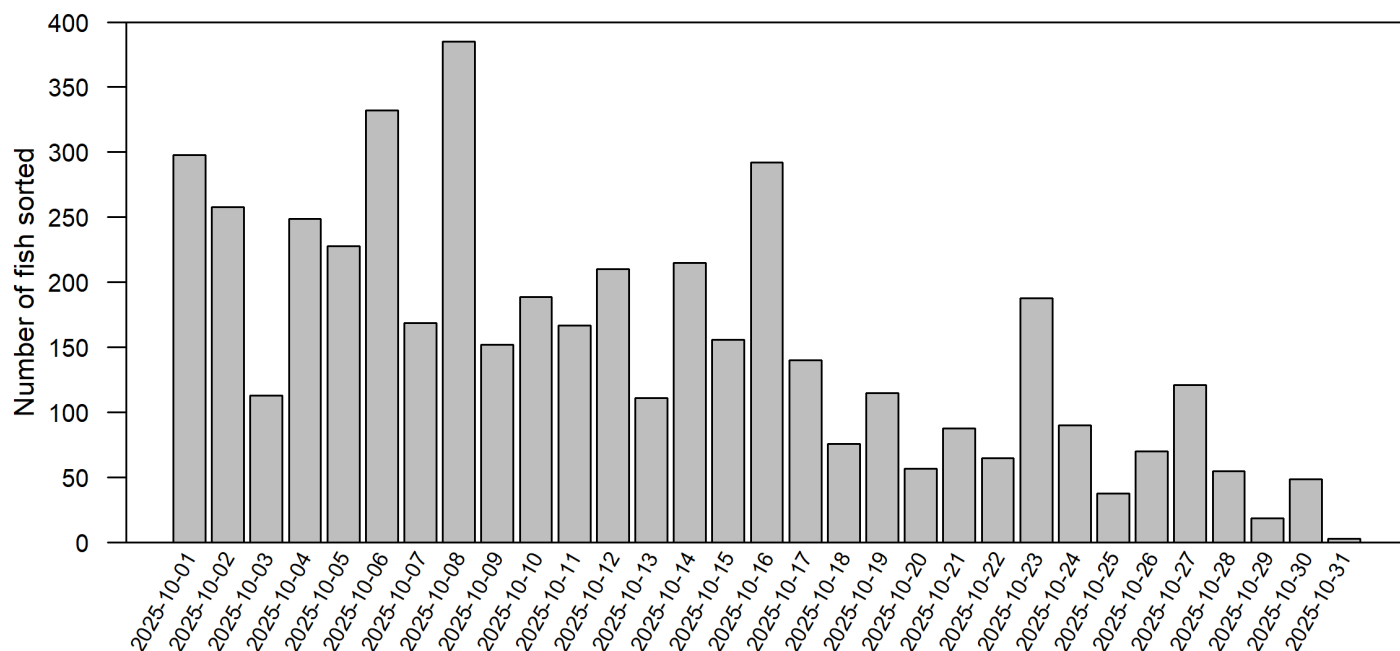
Species	Sorted	Transported and released	PIT tagged	Mortalities	Genetics	Microchemistry or ageing
Arctic Grayling	5	5	3		3	3
Brook Stickleback						
Brook Trout						
Bull Trout	18	18	17		16	16
Burbot						
Finescale Dace						
Flathead Chub						
Goldeye						
Kokanee						
Lake Chub						
Lake Trout	1	1			1	1
Lake Whitefish						
Largescale Sucker	5	5	4			
Longnose Dace						
Longnose Sucker	2	2	2			
Mountain Whitefish	4661	4661	1983	7		6
Northern Pike						
Northern Pikeminnow						
Northern Redbelly Dace						
Peamouth						
Pearl Dace						
Prickly Sculpin						
Pygmy Whitefish						
Rainbow Trout	6	6	4		4	5
Redside Shiner						
Slimy Sculpin						
Spoonhead Sculpin						
Spottail Shiner						
Trout-perch						
Unknown Species						
Walleye						
White Sucker						
Yellow Perch						
Grand total	4698	4698	2013	7	24	31

Not all fish species were PIT tagged or sampled for genetics, microchemistry, or ageing, as described in the OPP.

² The FAA for Main Civil Works and Facility Operations ([15-HPAC-01160](#)) describes an acceptable level of incidental mortality to be no more than 5% of the total number of fish sorted in the temporary facility on an annual basis.

Between 3 and 385 fish were sorted daily during the reporting period (Figure 1).

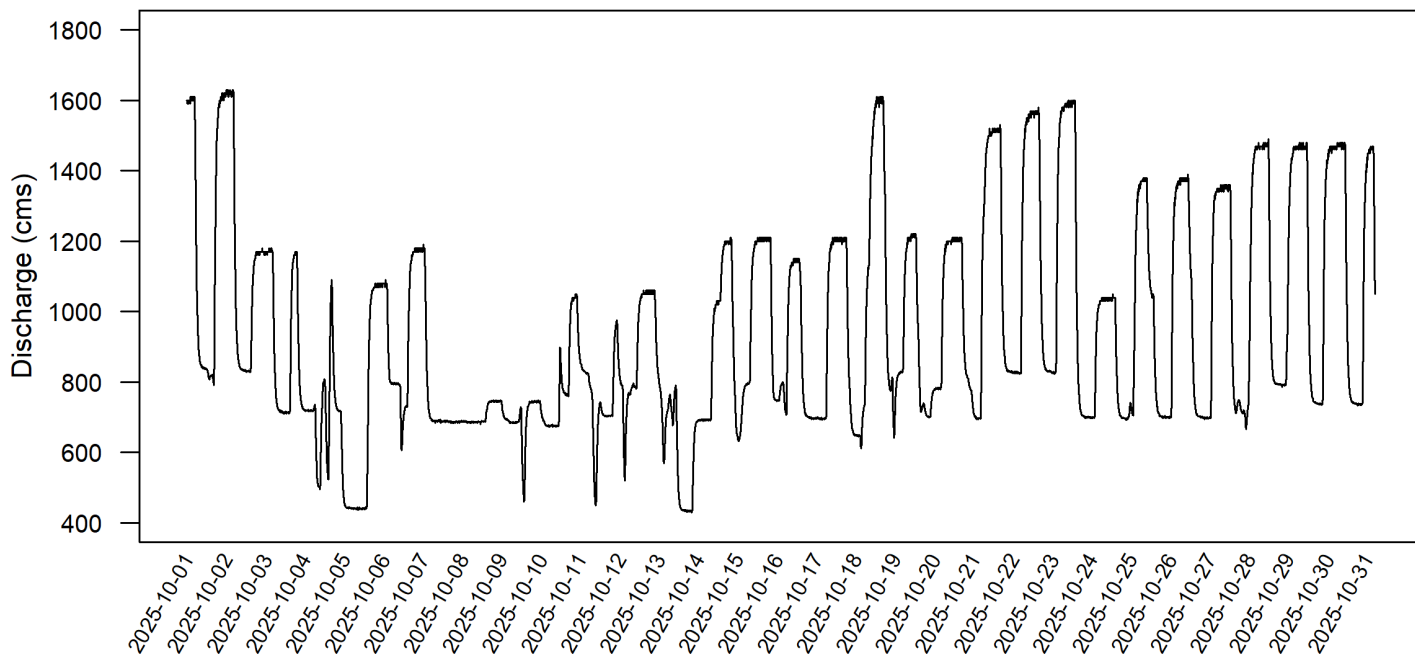
Figure 1. Daily number of fish sorted in the permanent facility during the reporting period.



Environmental conditions

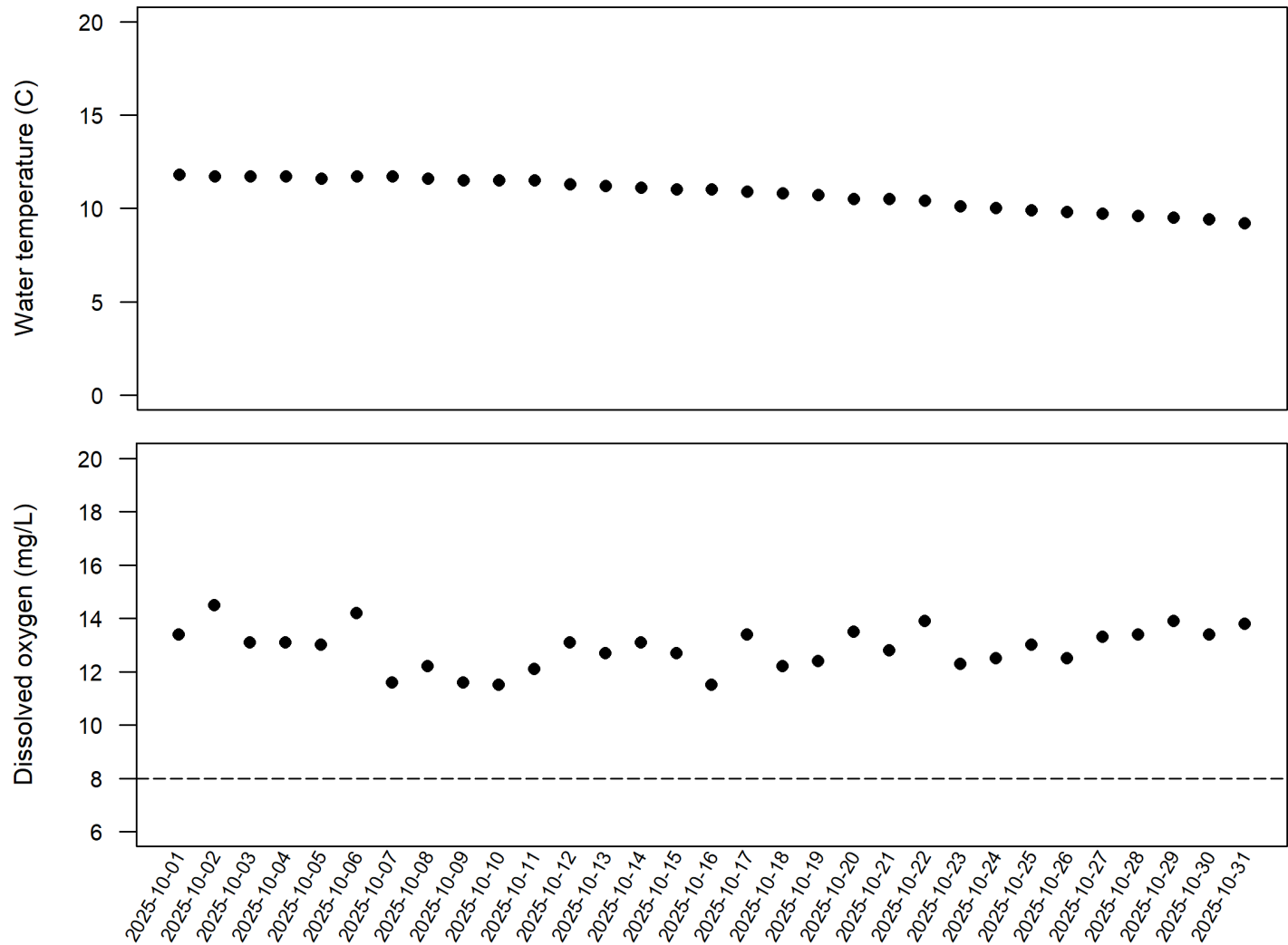
Discharge in the Peace River fluctuated during the reporting period from a low of 430 cms on October 14 to a high of 1630 cms on October 2 (Figure 2).

Figure 2. Discharge in the Peace River during the reporting period as measured at the Peace River above Pine River (07FA004) Water Survey of Canada (WSC) hydrometric station. Data were downloaded from the WSC on November 13; the downloaded data were provided at 5-minute intervals and were listed as provisional by the WSC.



Water temperature steadily declined during the reporting period (Figure 4). Dissolved oxygen remained above the minimum dissolved oxygen level (8.0 mg/L) described in the design report of the permanent facility.

Figure 4. Daily water temperature (°C) and dissolved oxygen (mg/L) during the reporting period as measured in the pre-sort holding pool of the permanent facility.



Mechanical operation

Fish were crowded daily from the pre-sort holding pool into the fish lock. Operators then proceeded to raise crowded fish to the elevation of the sorting facility. Note that this process is referred to as a “sorting cycle”. Between one and eleven sorting cycles were conducted each day during the reporting period (Table 2).

Table 2. Daily total number of sorting cycles.

Date	Number of sorting cycles	Start time
2025-10-01	9	09:00, 09:42, 10:30, 11:17, 11:46, 12:51, 13:09, 13:36, 14:16
2025-10-02	7	09:24, 09:52, 10:28, 11:27, 12:57, 13:41, 14:07
2025-10-03	11	09:03, 09:17, 09:56, 10:08, 10:35, 11:03, 11:43, 12:03, 12:55, 13:43, 14:16
2025-10-04	7	09:16, 09:55, 10:18, 10:53, 12:58, 13:23, 13:57
2025-10-05	8	09:10, 09:51, 10:33, 11:05, 11:43, 12:56, 13:37, 14:12
2025-10-06	6	09:25, 10:11, 11:12, 13:16, 13:55, 14:19
2025-10-07	8	08:49, 09:49, 10:22, 11:12, 11:46, 13:09, 13:41, 14:22
2025-10-08	7	09:16, 09:53, 10:41, 11:22, 13:05, 13:42, 14:25
2025-10-09	7	09:10, 09:44, 10:30, 10:59, 11:38, 12:57, 13:46
2025-10-10	6	09:02, 09:44, 10:59, 13:24, 14:22, 14:45
2025-10-11	7	09:06, 09:42, 10:29, 11:17, 12:52, 13:36, 14:27
2025-10-12	7	08:57, 09:56, 10:44, 11:52, 13:14, 13:38, 14:23
2025-10-13	7	09:45, 10:15, 11:14, 12:52, 13:18, 13:54, 14:29
2025-10-14	6	09:20, 10:19, 11:25, 12:48, 13:43, 14:16
2025-10-15	8	09:11, 09:40, 10:21, 11:21, 11:57, 13:25, 13:50, 15:01
2025-10-16	6	09:12, 10:16, 11:09, 12:06, 13:29, 14:39
2025-10-17	5	09:27, 10:03, 11:07, 13:01, 13:58
2025-10-18	8	09:11, 09:40, 10:22, 10:58, 11:41, 13:13, 13:42, 14:09
2025-10-19	5	09:09, 10:09, 10:59, 11:54, 13:17
2025-10-20	8	09:22, 10:00, 10:48, 11:16, 13:06, 13:36, 14:24, 14:52
2025-10-21	7	09:21, 09:57, 10:35, 11:03, 12:56, 13:31, 14:16
2025-10-22	7	09:10, 10:20, 11:24, 11:56, 13:27, 14:09, 14:40
2025-10-23	7	09:20, 10:12, 10:53, 11:39, 12:23, 13:39, 14:44
2025-10-24	6	09:21, 10:18, 10:54, 11:58, 13:21, 14:33
2025-10-25	7	09:15, 10:08, 10:42, 11:14, 11:45, 13:15, 14:11
2025-10-26	7	09:02, 10:01, 10:47, 11:22, 13:00, 13:35, 14:15
2025-10-27	7	09:00, 09:44, 10:29, 11:23, 11:52, 13:23, 14:43
2025-10-28	6	09:17, 10:10, 11:06, 11:37, 13:02, 13:49
2025-10-29	6	09:21, 10:18, 10:51, 11:36, 12:33, 14:05
2025-10-30	7	09:17, 10:07, 10:54, 11:51, 13:03, 13:19, 13:59
2025-10-31	1	07:43

Table 3. Summary of standby or shutdown periods during the reporting period.

Date	Standby or shutdown	Rationale
N/A	N/A	N/A

Table 4. Root causes and corrective actions as a result of equipment malfunctions, breakdowns, or damage during the reporting period.

Date	Malfunction, breakdown or damage	Description	Root cause	Corrective action
2025-10-12	Malfunction	The PLC mirror on the fish lock froze.	Unknown.	Operator reset the computer, but the HMI screen still could not be accessed on the fish lock. Operator was able to continue daily operation via the PLC screen in the electrical room. McMillen resolved this issue by October 16.

Adjustments

Several adjustments were made during the reporting period to improve the biological and mechanical operation of the permanent facility (Table 5). BC Hydro described the potential for adjustments to the day-to-day biological and mechanical operation of the permanent facility in Section 7 of the Fish Passage Management Plan². In general the permanent facility was operated as planned and described in the OPP.

Table 5. Summary of adjustments made to the biological and mechanical operation of the permanent facility during the reporting period.

Component	Adjustment
Biological operation	A number of minor adjustments were made to improve the biological and mechanical operation of the permanent facility during the reporting period. None of the adjustments changed the operation in a material way.
Mechanical operation	

Prepared by

This report was prepared by the following individuals:

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