Arrowsmith Water Service and Englishman River Water Service
Monthly Update – August 2026

Purpose

This document is intended to provide board members of the Arrowsmith Water Service (AWS) and the Englishman River Water Service (ERWS) with an update on the status of the joint ventures. This document is also publicly accessible through the City of Parksville's website.

Background

Arrowsmith Water Service (AWS) was established as a joint venture between the Regional District of Nanaimo (RDN), City of Parksville (Parksville), and the Town of Qualicum Beach to develop a regional water supply system. In 1996, AWS applied for a water licence to construct the Arrowsmith Dam. A conditional licence was granted in March 1997, authorizing the Dam to store 9,000,000 m^3 of water for community supply and conservation.

Each year, from June 1 to October 31 — defined as the 'operating season' — water is released from Arrowsmith Dam to augment baseflow in the Englishman River. A Water Survey of Canada (WSC) hydrometric flow gauge (08HB002) is installed in the river near the City of Parksville to monitor flow levels and ensure operational requirements are met. Following the Order set out by the Province of BC, when a flow release reduction from Arrowsmith Dam is allowed so that less than 1.6m3/s of flow is recorded at the flow gauge, water use conservation measures are enacted for users of the ERWS. The details of the Order can be found on the City of Parksville website within the AWS section.

In 2011, the ERWS was established, as a joint venture between Parksville and the RDN, to enable year-round water withdrawal from the Englishman River. Parksville received a Permit to Operate the Englishman River Water Treatment Plant on November 8, 2019.

Arrowsmith Dam

Ultrafiltration Membranes at the water treatment plant

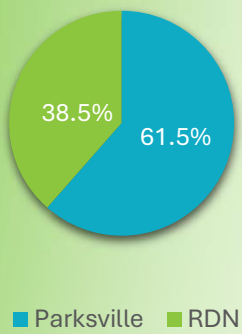
August 2026

ERWS WTP Production
195,389 m^3

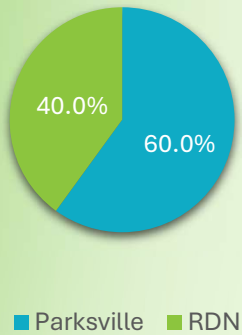
RDN Share of ERWS
75,240 m^3

Parksville Share of ERWS
120,149 m^3

August 2026 ERWS Consumption Percentages



Year to Date ERWS Consumption Percentages



Arrowsmith Water Service

Operators carried out routine inspections and clean up of debris. A glitch caused the dam lake level to increase, which required a correction on the SCADA system.

Reservoir release was carefully managed to maintain the minimum required flow at hydrometric gauge 08HB002. An order under the Water Sustainability Act, received on August 5, allowed for a flow reduction from 1.0 m^3/s to 0.80 m^3/s at gauge 08HB002 for the remainder of the flow release period, which ends October 31. This order was received to further aid with conservation efforts at the Arrowsmith Reservoir, while ensuring sufficient river flows were maintained to support environmental flow needs. The conservation efforts helped with bringing the Arrowsmith Reservoir out of a record breaking minimum historical level that took place from August 3rd to the 10th.

Gauge 08HB002 was calibrated on August 20, when adjustments to the dam release could be made in order to correct the flow rate.

Englishman River Water Service

Routine operational activities included daily plant and raw water pump house rounds, intake inspections, fish impingement checks, analyzer checks, data management, geobag maintenance, and continuous process monitoring.

Preventive and corrective maintenance activities included repeated cleaning of UF rotameters and turbidity analyzers, finished water turbidity analyzer flushing and cleaning, CL-17 reagent and cell maintenance, pH probe and cell-block cleaning, lab pH probe calibration, lab turbidity and chlorine analyzer verification, sulfuric acid transfer, hydroxide pump tubing replacement, and routine intake screen cleaning. A high-level alarm for reservoir 4 required communication resynchronization.

Routine water quality monitoring included, bacteriological sampling for VIHA, THM/HAA/alkalinity sampling, aluminum and iron sampling, alkalinity/hardness testing, and LSI checks.

Safety work at the WTP included monthly checks for eyewash, shower, CO2 sensor, fire extinguishers, and exits.

In August, an issue arose with the Raw Water Pump #3, which went offline due to an unknown fault. The investigation included inspection of the pump, motor, check valve, coordination with contractors, review of crane access requirements, removal and shipment of the E&H mass flow transmitter, preparation for pump removal, repairs to the seal water line, installation of additional isolation valves, and ultimately, crane-assisted removal of the pump and motor for transport to a mechanical warehouse.

The assessment determined that the failure was caused by a damaged pump shaft steel coupling, which will require replacement.

Additional safety controls were implemented throughout the work, including lockout/tagout, barricades, “Do not enter” tape, temporary fencing, and controlled access during crane staging and pump/motor removal activities.

EDI was on site for the 5-year fish monitoring study. They completed the second and final ramping study for the project. The fish density monitoring will take place in September.

Figure 1. Arrowsmith Dam Reservoir Level

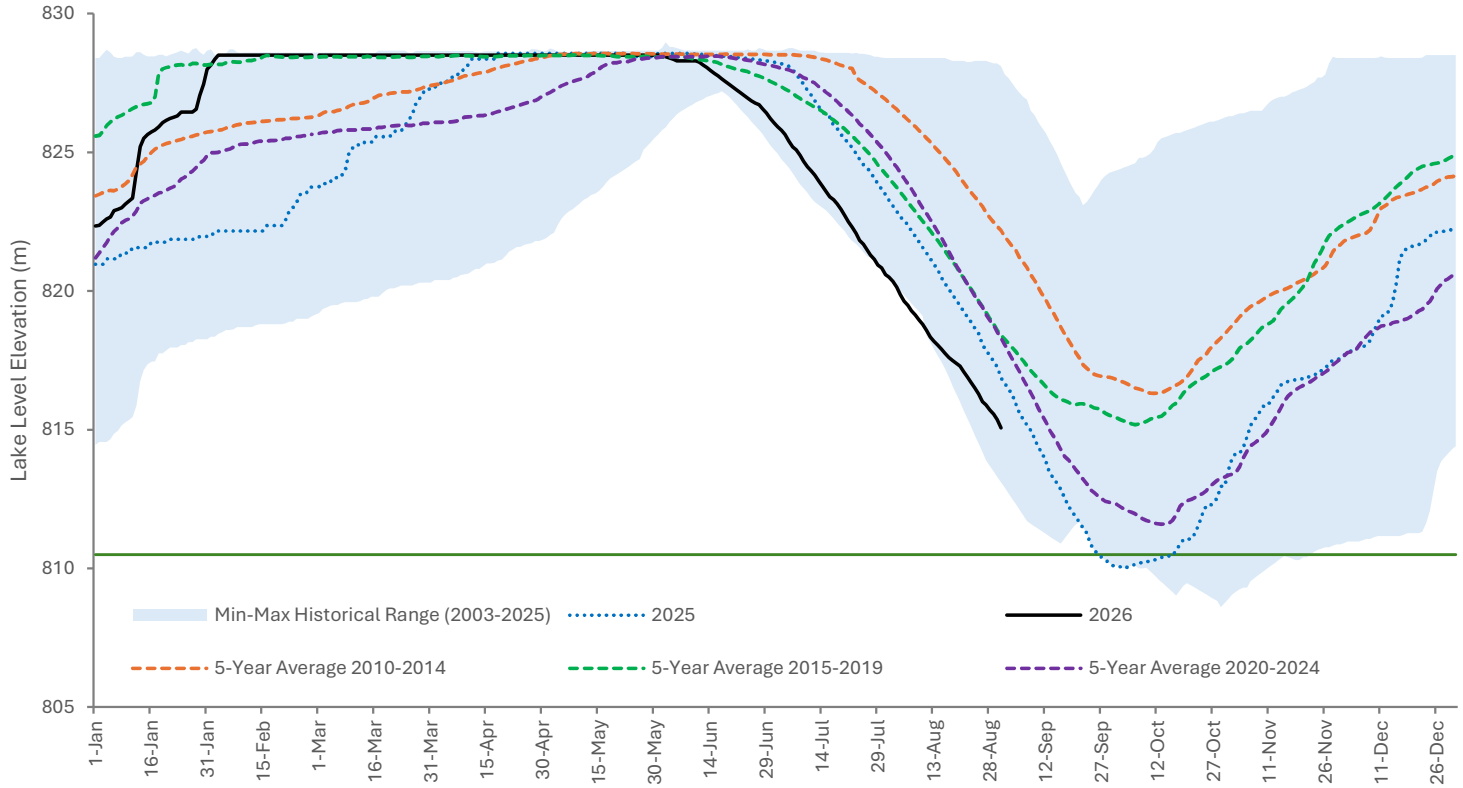


Figure 2. Volumetric Flow Rates and Rainfall

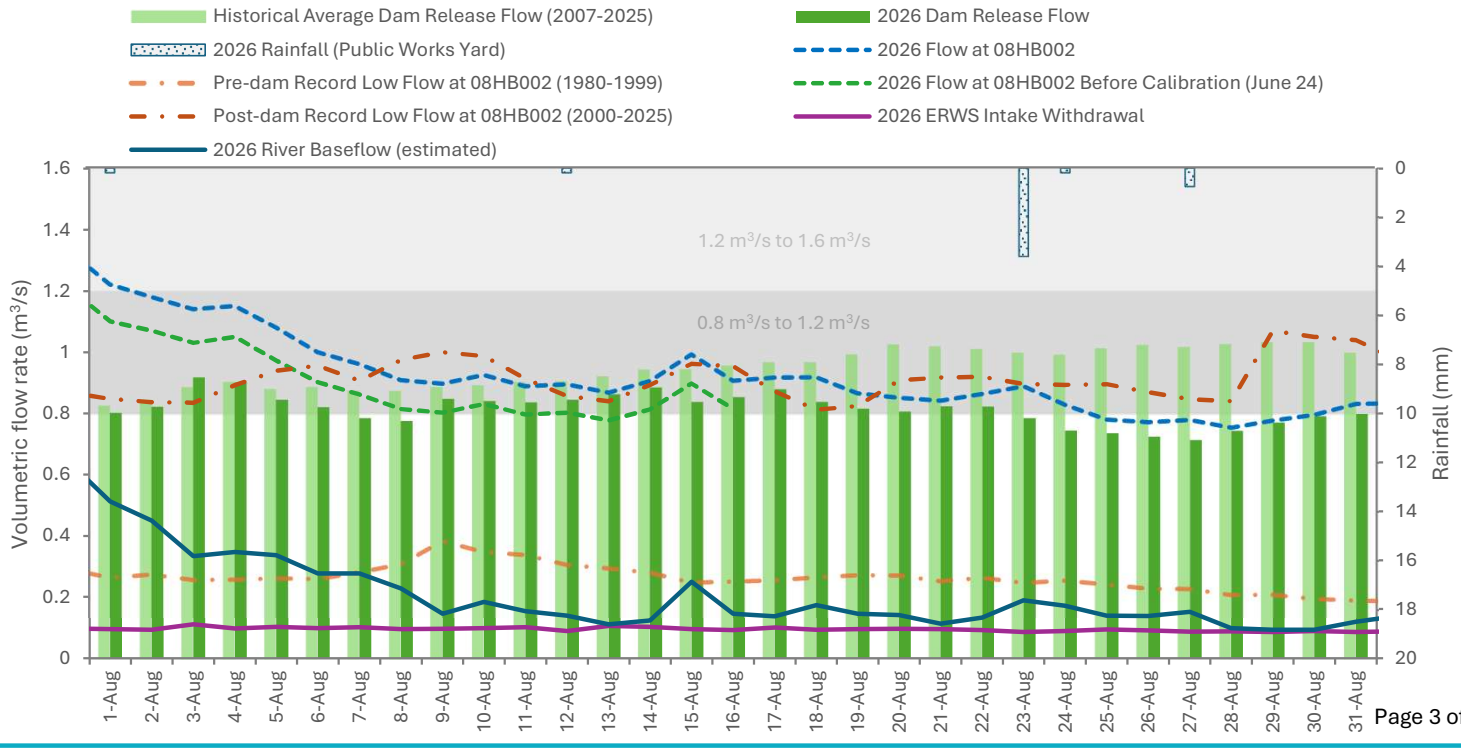


Figure 3. ERWS Water Consumption

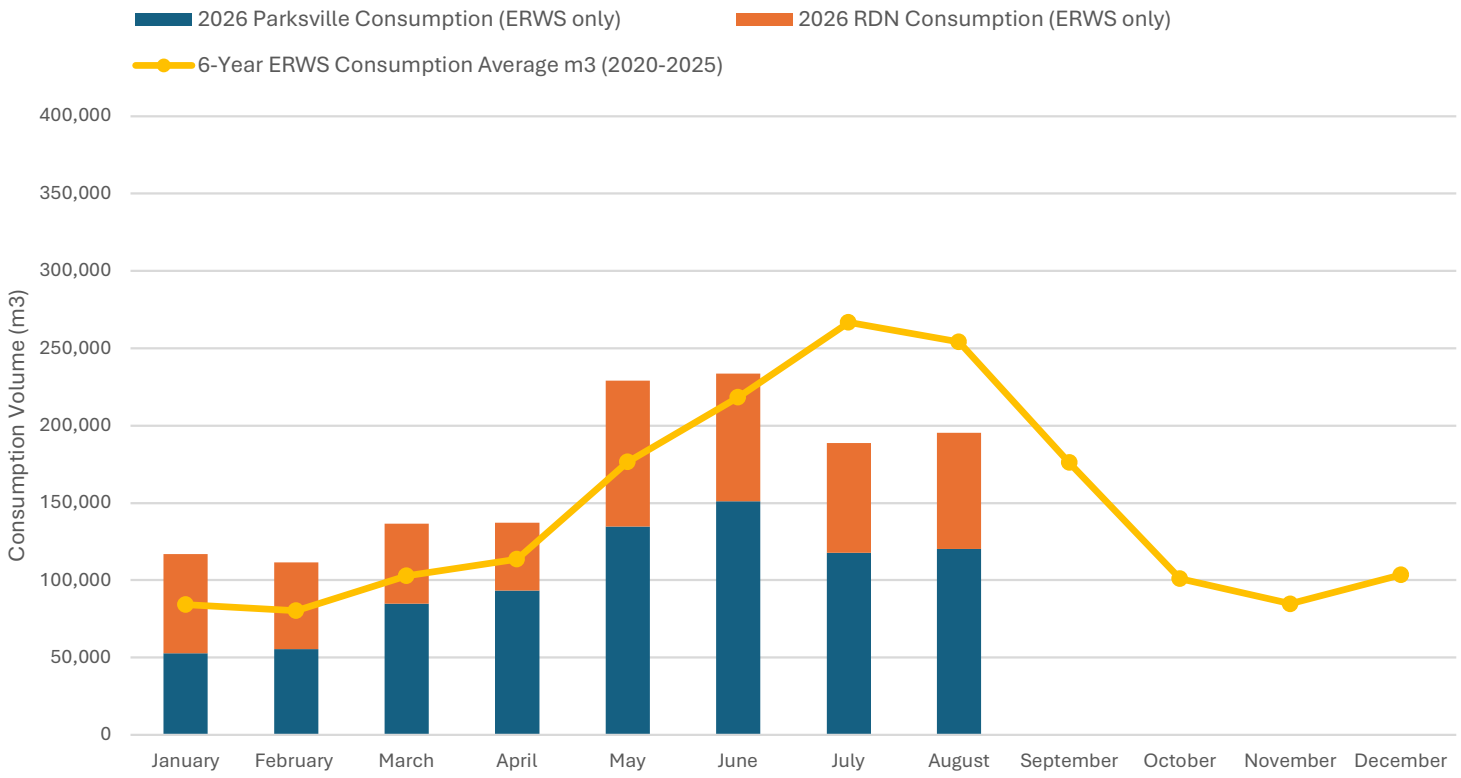


Figure 4. Parksville and RDN Consumption During Water Conservation Level 4

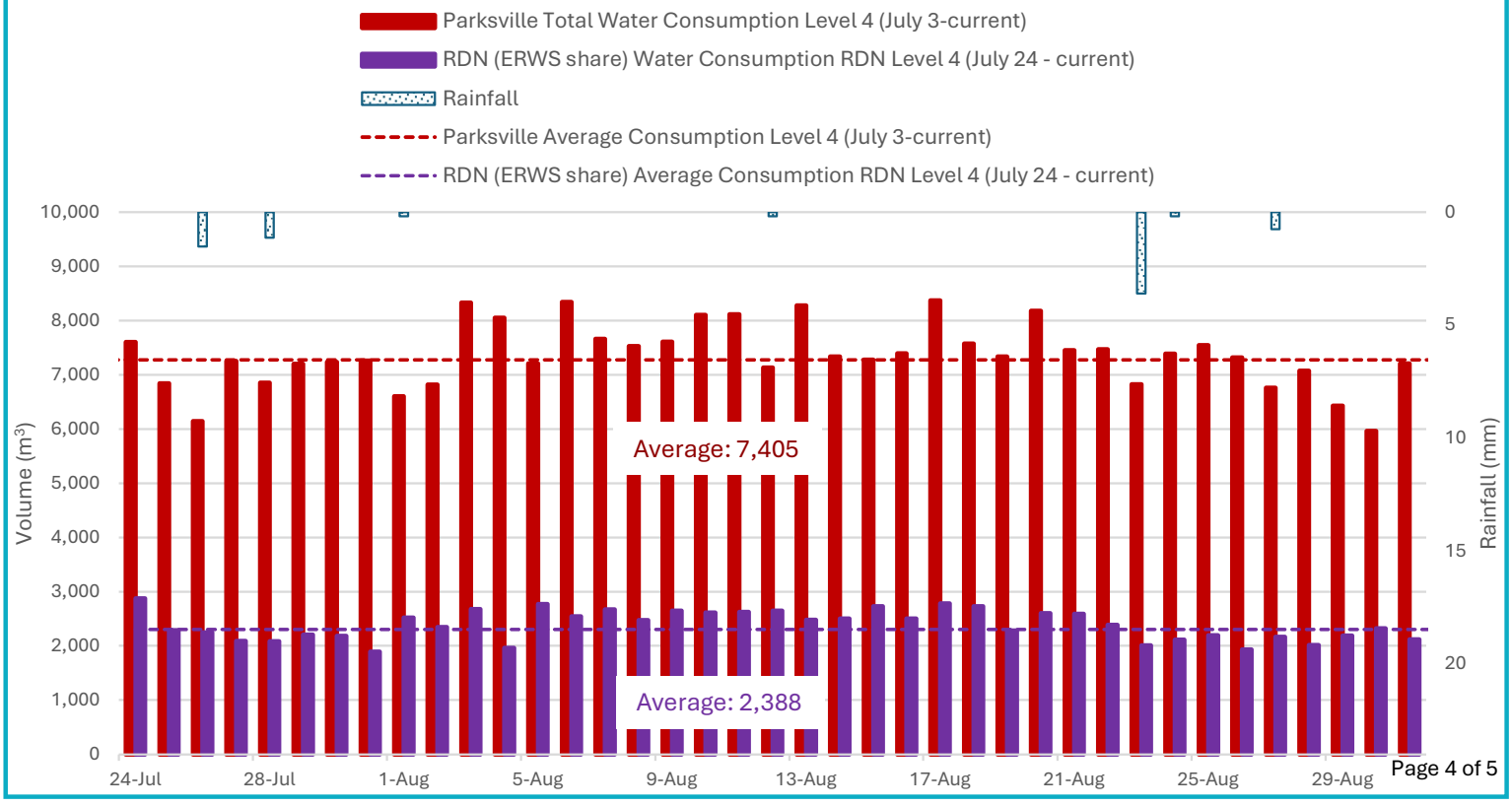


Figure 5. **Englishman River Watershed**