Brighton Tailwater
Water Quality Monitoring Results 2025-26

(Patuxent River Catch and Release Area)

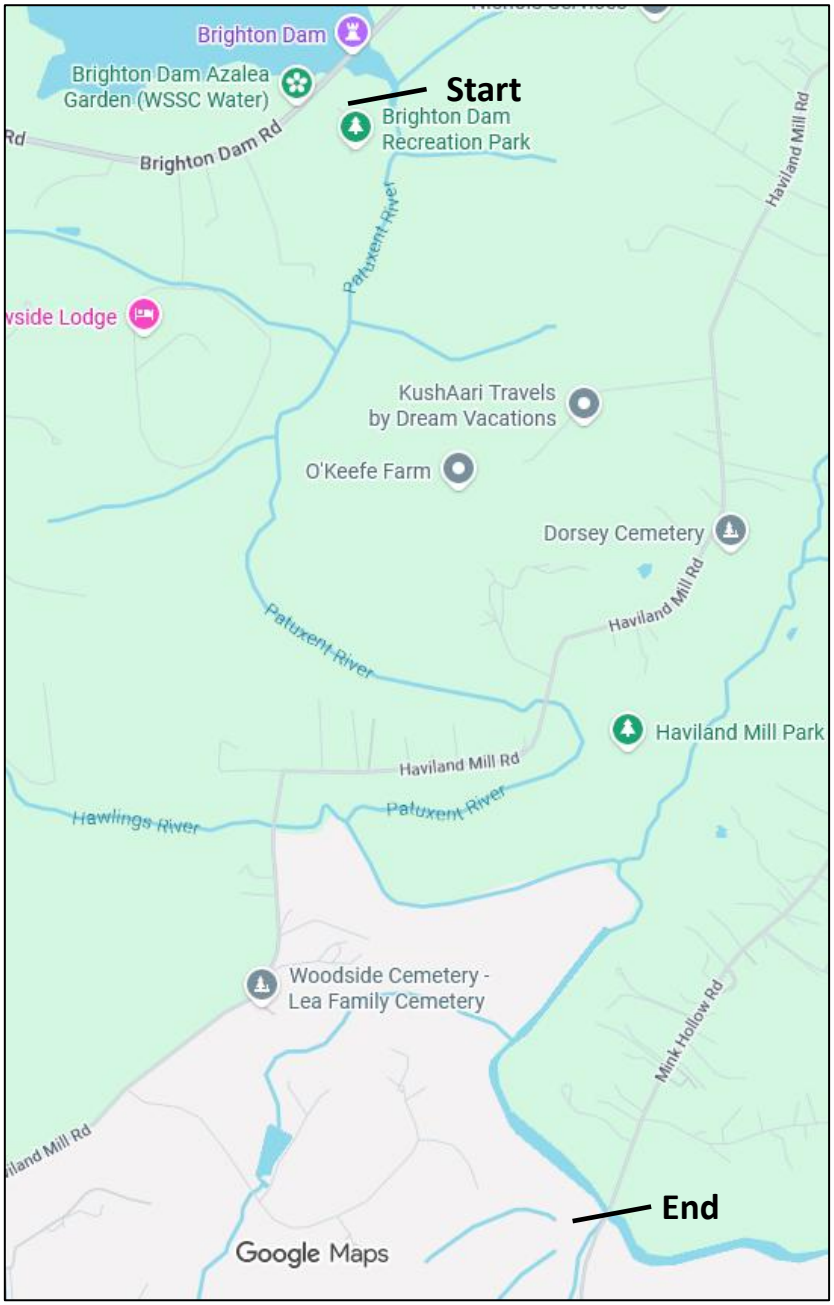
Potomac-Patuxent Trout Unlimited (PPTU)

10/29/2026

Background

- **PPTU monitored the Patuxent River tailwater (about 1.5 miles below Brighton Dam) to assess water quality for trout during 2025 and 2026**
- **Goal is to have a fishery capable of supporting stocked trout year-round**
  - **Class IV water, catch & release, artificial flies only**
  - **Tailwater is stocked regularly by DNR in fall and/or early spring**
- **Dam is operated by WSSC for regional water supply**
  - **Hydroelectric function no longer used**
- **MDE limits are: Dissolved Oxygen (DO) $\geq$5 mg/L and water temp $\leq$ 75^{o}F**
- **Discharge is the only parameter currently monitored by USGS (must be $\geq$ 7.5 cfs)**

Patuxent Tailwater Catch & Release Area



Monitoring Equipment

- **Sensor was immersed downstream of Haviland Mill Bridge**
- **Data was downloaded weekly via Bluetooth connection from logger on river bank**
- **Acknowledgements:**
  - **PPTU water monitoring group included Bob Bokulic, Jay Sheppard, Ron Kerrick, Ron Briggs, Jim Irons, and Alan Williams**
  - **DNR/FBS Adam and Neal Eshleman assisted with sensor deployment and measurement verification**
  - **USGS Todd Lester suggested the PME wiper module to address silt buildup on the sensor**



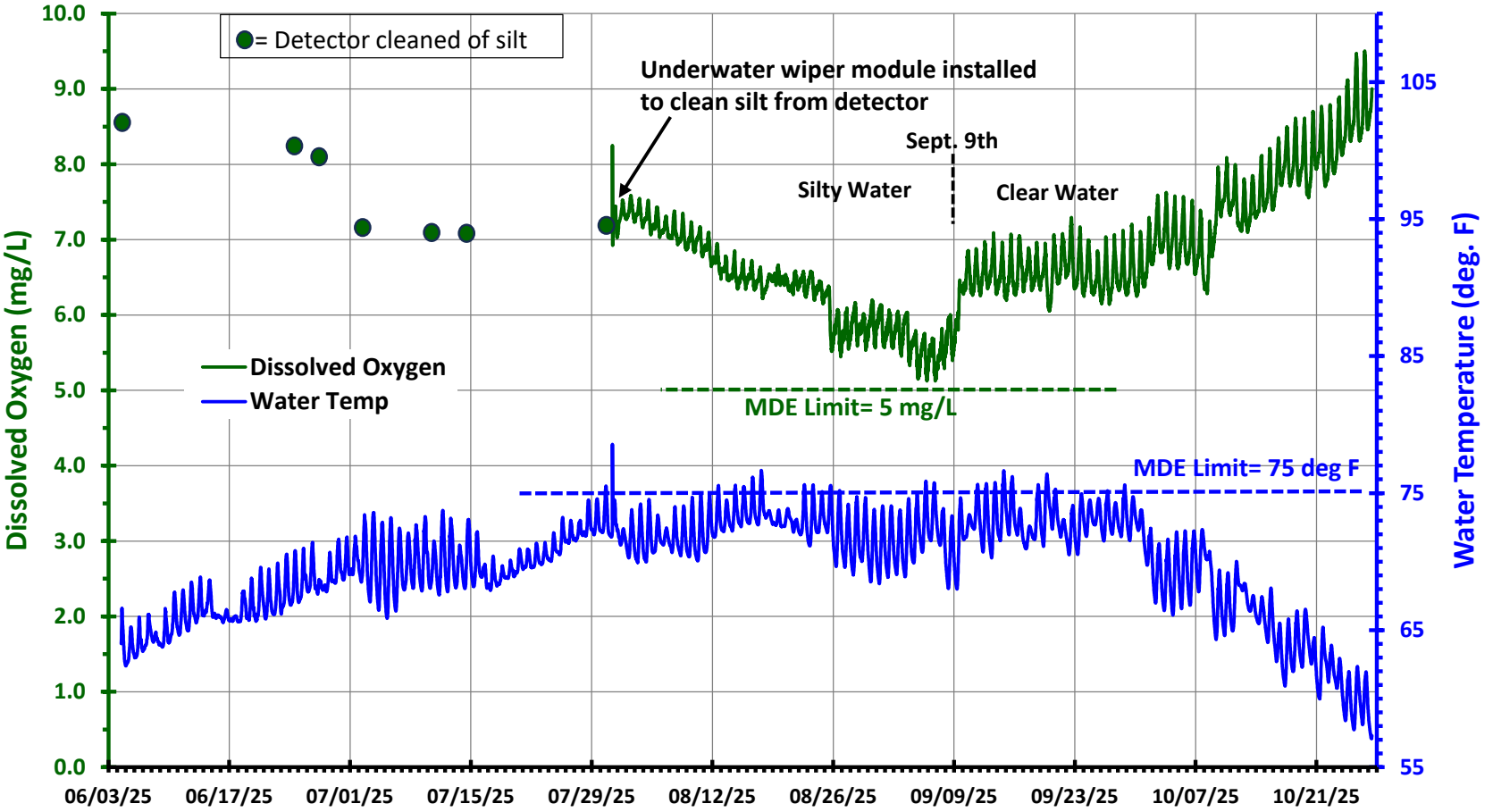
Onset/HOBO DO Sensor and Logger
(Sampling interval= 20 sec)

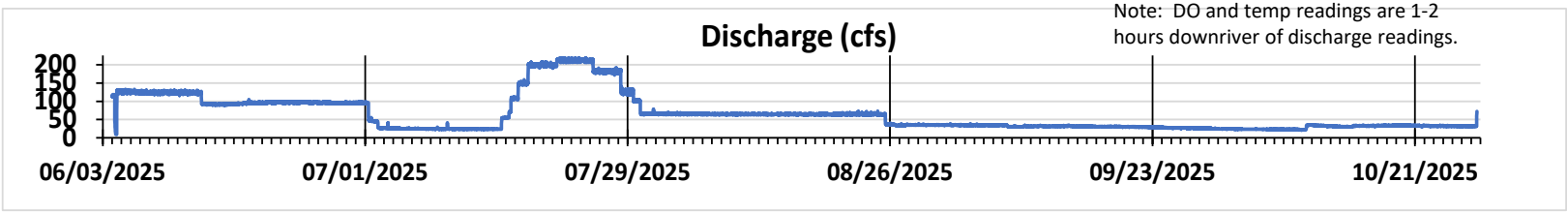


DO Sensor Integrated wi/ PME Wiper Module
(Cleans off detector surface 4x/day)

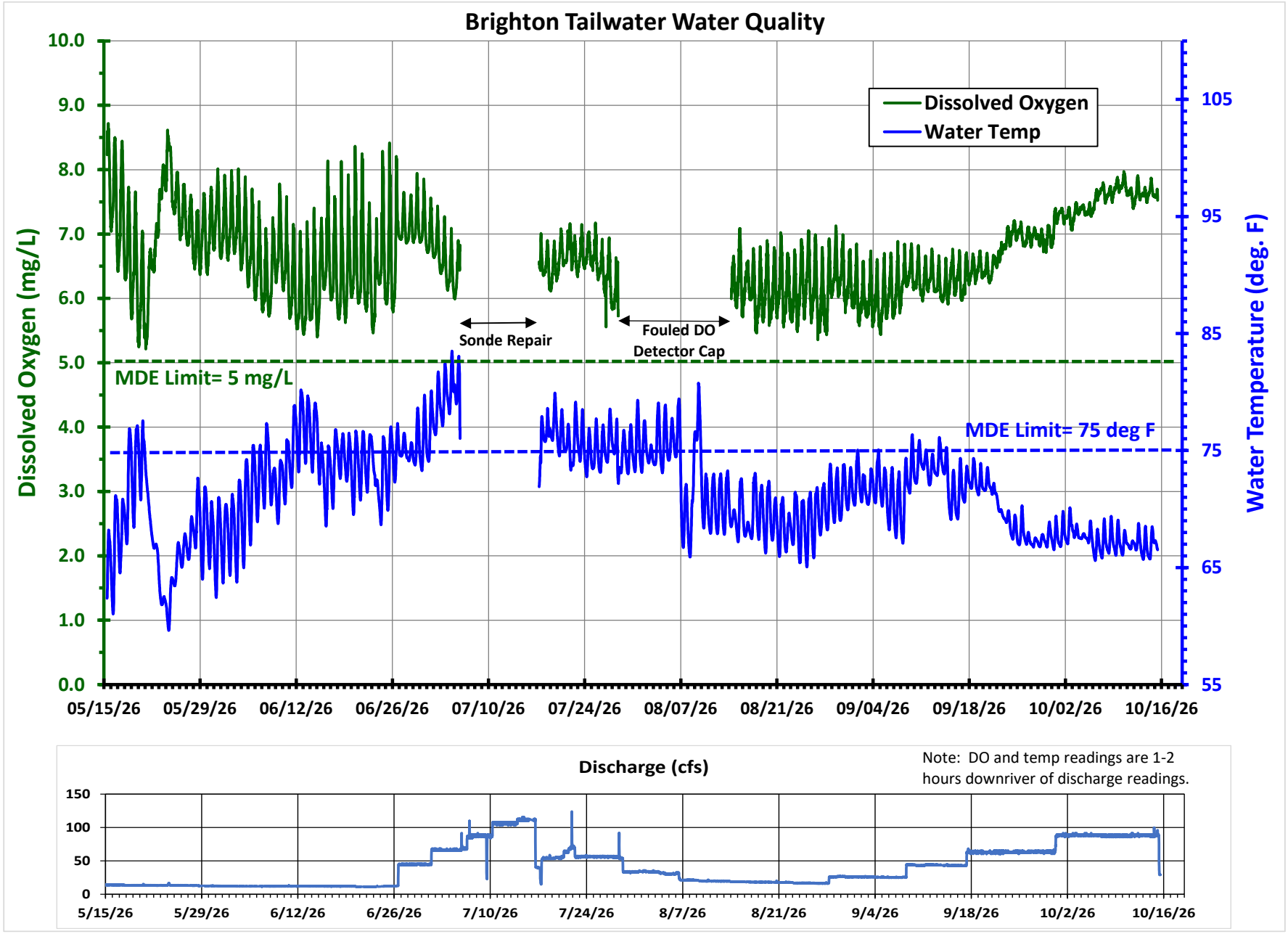
2025 Monitoring Results (Jun to Oct)

- **Silt impeded DO measurements from mid-June until an underwater wiper was installed. Silt suddenly cleared in the water during the week of Sept. 9th.**





2026 Monitoring Results (May to Oct)



Findings

- **DO remained above 5 mg/L throughout the 2025 and 2026 monitoring seasons**

- **Water temperature stayed below 75^{o}F during 2025 *but exceeded that limit for substantial periods during 2026***
  - **Peaked above the limit nearly every day from Jun 10th - Aug 10th**
  - **High of 83.5^{o} F**

- **Both seasons experienced drought conditions, but extreme drought conditions existed just prior to May 2026**

- **Silt was not quantified, but appeared high during the 2025 season (muddy water until 9/9) and moderate during the 2026 season (often “stained”)**
  - **Excessive silt suppresses bug life, which the trout depend on**

Sensor Measurement Verification

HOBO sensor measurements were occasionally spot-checked by the DNR Fishing and Boating Services office using their portable calibrated YSI meter. They measured either directly at the HOBO site or the bridge where Haviland Mill Road crosses the river.

PPTU HOBO Sonde			DNR YSI Meter			
Date/Time	DO (mg/L)	Water Temp. (deg F)	Date/Time	DO (mg/L)	Water Temp. (deg F)	Location
6/4/2025 11 am	8.6	63.7	6/4/2025 11 am	8.8	63.5	HOBO sonde site
7/31/2025 11 am	7.2	72.9	7/31/2025 10 am	7.2	73.1	HOBO sonde site
10/23/2025 1 pm	8.7	61.8	10/23/2025 1 pm	8.9	61.5	Haviland Bridge
5/18/2026 11 am	7.1	69.2	5/18/2026 11 am	7.5	69.8	Haviland Bridge
7/20/2026 4:40 pm	6.9	78.5	7/20/2026 4:40 pm	7.2	78.3	Haviland Bridge