

26.9.2026
Media Release

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Penang's Environment-Friendly Water Treatment Plant Enters "The Malaysia Book of Records"

- **3 citations: Highest Capacity Water Recovery Plant, First Water Treatment Plant with Zero Residual Discharge and First Water Treatment Plant with Zero Plant Losses.**

PENANG, Saturday, 26.9.2026: For the first time in the history of water supply in Penang, one of the state's water treatment plants (WTP) is mentioned in "The Malaysia Book of Records".

The **Sungai Dua Water Treatment Plant (WTP)** in Seberang Perai Utara is Penang's most important WTP. In 2025, it produced an average of 1,108 million litres per day (MLD) of treated water for supply to 465,000 water consumers.

PBAPP has pioneered the implementation of a "Zero Waste Water Treatment Residue (WTR) Recycling System" in the Sungai Dua WTP, and it is now referenced in the book as:

- **The Highest Capacity Water Recovery Plant:** Between 30 MLD and 45 MLD of supernatant water was recovered at the Sungai Dua WTP through PBAPP's recycling system during an independent assessment period.
- **First Water Treatment Plant with Zero Residual Discharge:** There was zero discharge of supernatant water into the environment during normal operations.
- **First Water Treatment Plant with Zero Plant Losses:** During a verified assessment period, the Sungai Dua WTP recorded a "net unrecovered plant water loss" of 0m³, setting a new benchmark for WTP operational efficiency in Malaysia.

According to The Malaysia Book of Records: "These achievements demonstrate PBAPP's commitment to engineering innovation, circular economy principles, water resource efficiency and sustainable utility operations, while establishing a practical and replicable model for future water treatment plants in Malaysia."

Environment-friendly recognition

The book references acknowledge environment-friendly achievements at the Sungai Dua WTP that support the Penang2030 vision of transforming the state into “a family-friendly, green and smart state that inspires the nation”:

- The cyclical harvesting of 30 - 45 MLD of supernatant water (from PBAPP’s processes of converting WTR from a waste material into a raw material for making bricks) eliminates water wastage and wastewater disposal issues when employing conventional treatment technology to produce treated water.
- The 30 MLD - 45 MLD of supernatant water harvested may be regarded as a “recycled water resource” that is being used to produce more treated water daily at the Sungai Dua WTP.
- The Sungai Dua WTP has stopped discharging any WTR or wastewater into nearby streams and rivers.
- PBAPP does not have to dispose WTR from the Sungai Dua WTP as a scheduled waste at a designated landfill site. PBAPP’s WTR management costs were reduced by 73.6%.
- PBAPP’s Zero Waste WTR Recycling System has proved that it is possible and rational to continuously recycle WTR (at a rate of 450 metric tonnes a day) and harvest up to 45 MLD of supernatant water in Malaysia.

While the Sungai Dua WTP may not be the biggest, latest or most expensive WTP in Malaysia, it is now recognised as **the most environment-friendly WTP in our country**.

It is hoped that PBAPP’s Zero Waste WTR Recycling System may be replicated and/or modified for use at other WTPs throughout Malaysia, thereby obviating the need for large-scale dumping of WTR at landfills. In 2021, it was estimated that all the WTPs in Malaysia generated a total of 5,500 metric tonnes of WTR per day or about 2.1 million metric tonnes a year.

Thank You.

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Appendix A:

Awards and recognitions for PBAPP's Zero Waste WTR Recycling System
 (October 2025 – September 2026)

Date	Award/Recognition	From
26.9.2026	- Highest Capacity Water Recovery Plant - First Water Treatment Plant with Zero Residual Discharge - First Water Treatment Plant with Zero Plant Losses.	The Malaysia Book of Records
22.9.2026	Malaysia Water Industry Award 2026 (MWIA 2026) for "Most Innovative Water Solutions"	Malaysia Water Association (MWA) and Pengurusan Aset Air Berhad (PAAB)
12.11.2025	ESG (Environment, Social, Governance) 3-Star Listing: ESG Breakthrough Innovation	United Nations Global Compact Network Malaysia & Brunei (UNG CYMB)
15.10.2025	MWIC Gold Award – Circular Economy & Water Reuse (NextWave Innovation Awards)	Malaysian International Water Convention 2025 (MIWC 2025)