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PRESS STATEMENT

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SUNGAI MUDA: PENANG WATER SUPPLY IS VULNERABLE UNTIL RM1.2B MDEP IS FULLY COMPLETED

- **PBAPP needs to abstract more than 1,000 million litres (MLD) of raw water from Sungai Muda daily.**
- **During emergencies, PBAPP can only draw down a maximum of 300 MLD from the Expanded Mengkuang Dam (EMD).**

PENANG, Tuesday, 16th May 2023: The Penang State Government is seeking the cooperation and support of the Federal Government to fully complete the Mengkuang Dam Expansion Project (MDEP) as soon as possible.

Without implementation of the full scope of the RM1.2 billion MDEP (as envisioned in 2011) Penang water supply services will inevitably be disrupted by mishaps occurring at Sungai Muda, its one and only major raw water resource.

Sungai Muda

Since 1973, Sungai Muda has served as a raw water resource that is shared by Penang and Kedah. More than 80% of the raw water that PBAPP abstracts daily comes from the Lahar Tiang Intake on Penang's side of Sungai Muda.

PBAPP abstracts more than 1,000 million litres of raw water per day (MLD) from Sungai Muda, downstream of 14 Kedah water treatment plants (WTPs) and 4 irrigation intakes.

Sungai Dua Water WTP

Raw water from Sungai Muda is pumped to the Sungai Dua WTP. The Sungai Dua WTP is Penang's most important WTP because it produces more than 80% of the treated water that is supplied in the State of Penang daily.

The average daily treated water output of the Sungai Dua WTP is about 1,000 MLD in May 2023. About 600 MLD is supplied to almost all areas in Seberang Perai and about 400 MLD is supplied to the South-West District of Penang Island, including to the Bayan Lepas Free Trade Zone.

As such, to ensure continuous good water supply services in the State of Penang, 24/7, PBAPP must make sure that the Sungai Dua WTP runs optimally, 24/7.

In total, about 400,000 water consumers in Seberang Perai and Penang are dependent on treated water from the Sungai Dua WTP. Therefore, if PBAPP cannot abstract raw water from Sungai Muda for pumping to the Sungai Dua WTP, water supply for about 400,000 water consumers will inevitably be compromised.

This is exactly what happened on 14.5.2023. A mishap in Kedah caused the river level of Sungai Muda to drop to a level which prevented PBAPP from abstracting raw water from Sungai Muda. As a result, water supply services for 400,000 water consumers in Penang was affected by a mishap in Kedah.

Expanded Mengkuang Dam

The Expanded Mengkuang Dam (EMD) was built in Seberang Perai to serve as a strategic drought reserve dam. During dry seasons, its reserves may be drawn down to “supplement” raw water supply to the Sungai Dua WTP when Sungai Muda river levels are low. The dam is then refilled with water from Sungai Kulim during wet seasons.

Kindly note that the EMD was not built (or expanded) to replace Sungai Muda. It is also not a “daily dam” like the Air Itam Dam or Teluk Bahang Dam from which raw water is drawn daily for water supply.

As at May 2023, the following are the key specifications of the EMD:

a.	Maximum effective capacity	86,400 million litres (ML)
b.	Primary raw water resource	Sungai Kulim (during wet seasons)
c.	Maximum capacity of Mak Sulong Pumping Station to refill the dam	400 million litres per day (MLD)
d.	Primary “supply area”	Sungai Dua Water Treatment Plant (WTP) via Sungai Dua Canal
e.	Maximum drawdown capacity	300 MLD

The EMD’s specifications reflect the following facts:

- The EMD is the biggest dam in Penang, with a maximum effective capacity of 86,400 ML, but its maximum drawdown capacity is limited to 300 MLD.
- The EMD supplies raw water directly to the Sungai Dua WTP. Its raw water cannot be supplied to any other WTP or dam in the State of Penang. It cannot replace the Air Itam Dam or the Teluk Bahang Dam on Penang Island.

- Due to its 300 MLD drawdown limitation, the EMD cannot provide sufficient raw water to support 100% treated water production at the Sungai Dua WTP during emergencies.
- This is the reason why PBAPP was only able to draw down 300 MLD from the EMD on 14.5.2023.

The Penang State Government and PBAPP would like to convert the EMD from a “300 MLD strategic drought drawdown dam” to a “1,000 MLD strategic drought dam and Sungai Muda emergency dam”.

To achieve this objective, the following projects have to be completed by the Federal Government:

Projects	
1.	Phase 2B of the MDEP: Laying of a pipeline to upgrade the drawdown capacity to 600 MLD at any time.
2.	Laying of additional pipelines to further boost the drawdown capacity to 1000 MLD at any time.
3.	Phase 2C of the MDEP: Construction of a new 440 MLD pumping station at Sungai Muda to enable refilling of the EMD from a second raw water resource: Sungai Muda.
5.	Construction of a new barrage across Sungai Muda at Rantau Panjang to support additional abstraction of raw water from the river during wet seasons to refill the EMD.

Until these projects are completed:

- The EMD cannot fulfill its full potential as Penang’s largest dam.
- The EMD cannot fully back-up Sungai Muda during emergency scenarios.
- Penang will remain vulnerable to incidents and mishaps at Sungai Muda.
- There is no way for PBAPP to sustain normal water supply services throughout the State of Penang if there is a prolonged drought that lasts 6 months, let alone 12 months, without some rainfall.

Thank You.