

19.5.2023

PRESS STATEMENT

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CLARIFICATION: PLEASE THINK OF THE MENGGUANG DAM AS A 300MLD “BACK-UP RESOURCE” FOR SUNGAI DUA WATER TREATMENT PLANT

- **Under normal conditions, PBAPP abstracts raw water exclusively from Sungai Muda to support 100% treated water production at the Sungai Dua Water Treatment Plant (WTP).**
- **Under drought or emergency conditions, PBAPP may only draw down 300 MLD from the Expanded Mengkuang Dam (EMD) for use, only at the Sungai Dua WTP.**
- **Other than the Sungai Dua WTP, the raw water in the EMD cannot be pumped or supplied to any other WTP or dam in the State of Penang.**

PENANG, Friday, 19.5.2023: Perbadanan Bekalan Air Pulau Pinang Sdn Bhd (PBAPP) would like to clarify that the Expanded Mengkuang Dam (EMD) is a “strategic drought reserve dam” that supports the Sungai Dua Water Treatment Plant (WTP).

It is not a “daily dam” like the Air Itam Dam or Teluk Bahang Dam.

PBAPP does not draw down raw water from the EMD when there is sufficient water to abstract from Sungai Muda to support 100% treated water production at the Sungai Dua WTP.

In March 2023, PBAPP abstracted an average of 1,254 MLD of water from Sungai Muda to produce 1,028 MLD from the Sungai Dua WTP. PBAPP will draw down water from the EMD only when it cannot abstract 1,254 MLD of water from Sungai Muda.

As such, the EMD is meant to serve the Sungai Dua WTP as a “back-up” raw water resource when Sungai Muda levels run low. PBAPP has also been drawing down water from the EMD (for use in the Sungai Dua WTP) during emergency scenarios such as the 14.5.2023 Sungai Muda river level incident.

There are two key physical limitations for the use of the EMD as a “back-up” raw water resource:

1. This dam's maximum drawdown capacity is 300 million litres per day (MLD). PBAPP is presently abstracting an average of 1,254 MLD of water per day from Sungai Muda to support 100% treated water production at the Sungai Dua WTP. As such, the EMD, by itself, can only support about 23.9% of the full treated water production at the Sungai Dua WTP.
2. The raw water from the EMD can only be channeled to the Sungai Dua WTP. This raw water cannot be pumped to any other WTP or dam in the State of Penang. So, the EMD cannot serve as a "back-up" raw water resource for any other WTP or dam.

The EMD was built to exclusively support treated water production at one WTP; the Sungai Dua WTP. This is because the Sungai Dua WTP produces more than 80% of the treated water that PBAPP supplies in Seberang Perai and the South-West District of Penang Island daily.

Service areas of the Sungai Dua WTP, other dams and other WTPs

The service area of the Sungai Dua WTP encompasses about 453,954 residential and business premises in Seberang Perai Utara (SPU), Seberang Perai Tengah (SPT) Seberang Perai Selatan (SPS) and the South-West District of Penang Island.

The total number of water consumers in Penang in 2022 was 676,857 consumers. Other than the 453,954 water consumers in the service area of the Sungai Dua WTP, there are 222,903 other water consumers who are "served" by the following 3 other dams and 8 other WTPs:

- Air Itam Dam (Penang Island)
- Bukit Pancur Dam (Seberang Perai)
- Teluk Bahang Dam (Penang Island)

- Air Itam WTP (Penang Island)
- Batu Ferringhi WTP (Penang Island)
- Bukit Toh Allang WTP (Seberang Perai)
- Bukit Pancur WTP (Seberang Perai)
- Guillemard WTP (Penang Island)
- Penang Hill WTP (Penang Island)
- Sungai Pinang WTP (Penang Island)
- Waterfall WTP (Penang Island)

PBAPP manages all of these dams and WTPs to specifically meet the water supply needs of water consumers in specific areas. Every operating dam and WTP in Penang has a role to play to sustain 100% urban and 99.8% rural water supply coverage.

Without these 3 dams and 8 WTPs, a total of 222,903 water consumers in Penang may have no water supply.

Rescuing Air Itam in an emergency water scenario

During an emergency scenario, such as if the Air Itam Dam runs dry, PBAPP has the option to pump more water from the Sungai Dua WTP into the service area of the Air Itam Dam.

However, this must be done carefully. There may be consequences such as:

- Water supply disruptions in the existing service areas of the Sungai Dua WTP, such as Seberang Perai and the Bayan Lepas FTZ in the South-West District of Penang Island.
- Pipe bursts or pump house breakdowns throughout the State of Penang due to extremely high water pumping pressure.
- Some water consumers in Air Itam, especially residents who live on higher ground, may still not have water supply.

Conclusions

1. The maximum effective capacity of the EMD is 86,400 million litres (ML) but PBAPP may only draw down 300 MLD until the Federal Government completes the Mengkuang Dam Expansion Project (MDEP) to increase the draw down capacity to 1,000 MLD.

The MDEP started in 2011. It is still incomplete in 2023.

2. The 86,400 ML stored in the EMD cannot be “transferred freely” to any other WTP or dam in Penang. It is not physically possible at this point in time.
3. Due to high water demand in 2023, water supply for all water consumers in Penang may only be sustained at 100%, on a 24/7 basis, if all the state’s 4 dams (including the EMD) and 9 water treatment plants (including the Sungai Dua WTP) function optimally.
4. A total of 453,954 Penang water consumers living and working in the service area of the Sungai Dua WTP may theoretically “survive” a 12-month drought in Penang...if PBAPP can abstract sufficient water from Sungai Muda and the EMD to run the Sungai Dua WTP at 100% capacity.



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However, the remaining 222,903 water consumers in Penang may not have water supply if the Air Itam Dam, Bukit Pancur Dam, Teluk Bahang Dam and all other small rivers in Penang run dry.

5. PBAPP is working hard to ensure that the depleted reserves of Air Itam Dam and Teluk Bahang Dam do not run dry until the rains arrive in September 2023.

However, we also need the support of all water consumers in Penang to reduce their water consumption immediately.

The 3 easiest and most effective ways for domestic consumers to save water are:

- a. Do not use a hose to water your plants or gardens. Use a watering can instead.
- b. Do not use a hose to clean your car or motorcycle. Use a bucket, cloth and sponge instead; and please clean your vehicle only when it is absolutely necessary.
- c. Do not leave a tap running. Turn on the tap only when you need to rinse your hands, food, dishes, cutlery, clothes and other items. Shut the tap immediately afterwards and teach your children to shut the tap properly.

For more water saving tips, please visit the PBAPP website at: www.pba.com.my

Thank You.
