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Media Release

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PENANG WATER SUPPLY ALERT: EFFECTIVE CAPACITIES OF 2 DAMS ON PENANG ISLAND BELOW 30%

- **The Air Itam Dam and Teluk Bahang Dam may only be refilled with significant rainfall. However, the volume of rainfall expected in September 2024 is uncertain.**
- **Water consumers in the service areas of the Air Itam Dam and Teluk Bahang Dam should use less water to avoid a water shortage.**
- **NADMA awaiting advice and analysis from MET Malaysia to conduct cloud seeding.**

PENANG, Wednesday, 14.8.2024: The effective capacities of the Air Itam Dam and Teluk Bahang Dam on Penang Island have dipped below the 30% mark due to lack of rainfall and high water consumption.

Water consumers in Air Itam, Farlim, Teluk Bahang, Batu Ferringhi, Tanjung Bungah and nearby areas should note that the effective capacities of the dams that serve them are abnormally low in August 2024.

As such, PBAPP seeks their kind cooperation to use less water until the September wet season arrives. For easy water saving tips, please visit: www.pba.com.my

September is expected to bring significant rainfall to Penang. However, due to climate change, the volume of rainfall is uncertain.

The following facts and figures summarise the water supply status in Penang:

Air Itam Dam		Percentage	Million Litres (ML)
1.	Effective capacity on 12.8.2024	29.7%	641
2.	Maximum effective capacity	100.0%	2,159
3.	Drop in effective capacity in July 2024 1.7.2024 – 31.7.2024 (31 days)	25.3% (0.82% per day)	546 (17.61 per day)
4.	Drop in effective capacity in August 2024 1.8.2024 – 12.8.2024 (12 days)	6.1% (0.51% per day)	132 (11.00 per day)
5.	Primary service areas	Air Itam, Farlim and nearby areas	

The Air Itam Dam data shows that reductions in the dam's effective capacity have “slowed down” from an average of 0.82% (or 17.61 ML) per day in July 2024 to 0.51% (11.0 ML) per day in the first 12 days of August 2024.

This is primarily due to rainfall in the Water Catchment Areas (WCAs) of the Air Itam Dam. In the 31 days of July 2024, PBAPP recorded only 48mm of rainfall in the WCAs as compared to 36mm in the first 12 days of August 2024.

Nevertheless, please note that the additional rainfall is only “slowing down” the drop in the effective capacity of the dam.

The volume of rainfall recorded so far in August 2024 cannot increase the effective capacity of the Air Itam Dam because PBAPP is drawing down an average of 22.16ML per day from the dam to meet water demand in Air Itam, Farlim and nearby areas.

Teluk Bahang Dam		Percentage	Million Litres (ML)
1.	Effective capacity on 12.8.2024	26.4%	4,810
2.	Maximum effective capacity	100.0%	18,240
3.	Drop in effective capacity in July 2024 1.7.2024 – 31.7.2024 (31 days)	9.7% (0.31% per day)	1,770 (57.10 per day)
4.	Drop in effective capacity in August 2024 1.8.2024 – 12.8.2024 (12 days)	3.2% (0.27% per day)	580 (48.33 per day)
5.	Primary service areas	Teluk Bahang, Batu Ferringhi, Tanjung Bungah and nearby areas	

The effective capacity of the Teluk Bahang Dam is 18,240 ML or 8.45 times the effective capacity of the Air Itam Dam. The data shows that reductions in the effective capacity of the Teluk Bahang Dam has changed from an average of 0.31% (or 57.10 ML) per day in July 2024 to 0.27% (48.33 ML) per day in August 2024.

This is primarily due to rainfall in the Teluk Bahang Dam's WCA. In the 31 days of July 2024, PBAPP recorded only 47mm of rainfall in its WCA as compared to 84mm in the first 12 days of August 2024.

As in the case of the Air Itam Dam, the additional rainfall in the first 12 days of August was insufficient to increase the effective capacity of the Teluk Bahang Dam.

This is due to the fact that PBAPP is drawing down an average of 68.06ML per day from the Teluk Bahang Dam in August 2024 to meet water demand in Teluk Bahang, Batu Ferringhi, Tanjung Bungah and nearby areas.

This data analysis reflects the uncertainties in predicting how long the raw water reserves the dams may last. The 2 key factors that make a big difference are:

- 1. Rainfall:** The Air Itam Dam and Teluk Bahang Dam may only be refilled by rainfall in the respective WCAs. Every mm of rainfall recorded should “prolong” the dam reserves. Sustained heavy rainfall may increase effective capacity. Weather forecasts indicate that Penang may expect more incidences of significant rainfall in August and September 2024 as compared to previous months. However, we cannot be sure about the volume of actual rainfall.
- 2. Water consumption:** The Air Itam Dam and Teluk Bahang Dam are “daily dams”. Raw water is drawn from these dams daily to produce sufficient treated water to meet consumer demands. Theoretically, if water consumers reduce water usage by 10%, the reserves of the dams may be extended by 10%. If consumers reduce consumption by 20%, then the remaining reserves may last 20% longer.

Sungai Muda and the Expanded Mengkuang Dam (EMD)

The Sungai Muda river level at PBAPP’s Lahar Tiang Intake in Seberang Perai fell below the “2.0m safe level” for 24 of the 31 days in July 2024. However, since 5.8.2024, it has risen above the 2.0m mark. On 12.8.2024, the river level was recorded at 2.69m.

PBAPP has normalised raw water abstraction operations at Lahar Tiang. For now, we are able to abstract sufficient raw water from Sungai Muda to support optimal treated water production at the Sungai Dua Water Treatment Plant (WTP).

Accordingly, PBAPP has stopped drawing down water from the Expanded Mengkuang Dam (EMD) since 8.8.2024. The effective capacity of the EMD stands at 86.2% as at 12.8.2024.

This means that low Sungai Muda river levels are no longer posing a threat to water supply for about 465,000 water consumers (about 66.7% of Penang’s 696,910 water consumers) in the service areas of the Sungai Dua WTP.

The Sungai Dua WTP’s service area encompasses most areas in Seberang Perai (SPU, SPT and SPS) as well as the South-West District (DBD) on Penang Island.

Cloud Seeding

In a letter dated 9.8.2024, the National Disaster Management Agency (NADMA) has informed the Penang State Secretary that it is awaiting advice and analysis from the Malaysian Meteorological Department (METMalaysia) before conducting cloud seeding operations over Penang. NADMA also stated that cloud seeding operations were subject to the availability of RMAF aircraft.



PBAPP on high alert

In view of the low effective capacities of the Air Itam Dam and Teluk Bahang Dam, PBAPP personnel are continuing to operate on a high alert basis, 24/7. We will continue to monitor developments carefully and provide public updates until the effective capacities of all Penang dams are normalised.

Thank You.

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