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PRESS STATEMENT BY
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PWSI 2050: PENANG'S CONTINGENCY PLANS TO ADDRESS RAW WATER RISKS

- **The Sungai Perak Raw Water Transfer Scheme (SPRWTS) has not been implemented yet, and Sungai Muda may only meet Penang and Kedah's raw water needs until 2025.**

PENANG, Tuesday, 8.9.2020: Perbadanan Bekalan Air Pulau Pinang Sdn Bhd (PBAPP), the principal subsidiary of PBA HOLDINGS BHD (PBAHB), has formulated contingency plans to address Penang's raw water risks.

These contingency plans are necessary due to 3 key factors:

- Climate change has altered rainfall patterns in Penang. Significantly less rainfall in 2019 has depleted the effective capacities of the Air Itam Dam and the Teluk Bahang Dam, thereby endangering water supply security in Penang.

Although PBAPP has continued to supply water to all consumers thus far in 2020, we cannot accurately predict the impact of climate change in 2021 and beyond.

- It has been projected that Sungai Muda may only be able to meet Penang and Kedah's combined raw water needs until 2025.

Moreover, the threat of logging in Ulu Muda, the water catchment area for Sungai Muda in Kedah, has re-emerged in 2020.

- The Sungai Perak Raw Water Transfer Scheme (SPRWTS) has not been implemented by the Federal Government. To date, direct talks with Perak have reached a stalemate. Penang is willing to buy raw water but Perak wishes to sell treated water.

Perak has counter-proposed for Penang to jointly invest in a co-owned and jointly managed new water treatment plant (WTP) in Perak that will exclusively treat raw water from Sungai Perak for use in North Perak and Penang. This proposed WTP will be a massive facility because it has to treat sufficient water for two states at one go.

It should be noted Lembaga Air Perak (LAP) and PBAPP are two individual water supply operators serving two different states. Perak's counter-proposal will compel LAP and PBAPP to co-manage one water treatment plant in Perak. This is an unprecedented approach in Malaysia. It may cause unnecessary issues and problems, arising from the differing water supply policies, priorities and water demand in Perak and Penang.

PBAPP will not have full control over WTP operations in Perak, and as such, will not be able to operate water treatment works in a manner that specifically addresses water needs in Penang.

On the other hand, the SPRWTS is a "raw water" solution that will allow LAP and PBAPP to continue operating individually, as per the status quo, towards meeting specific water needs in Northern Perak and Penang towards 2050.

This is why all large-scale water transfer projects in Malaysia, such as the Johor-Melaka and Pahang-Selangor schemes, are raw water schemes, and not treated water schemes.

Based on 2009 projections, the SPRWTS will take 7 years to complete and commission. If the project is implemented from 2021, it may be operational from 2027. However, Penang may face a raw water shortage by 2025.

Proposed PWSI 2050 Projects

In view of these 3 key factors, PBAPP has drafted a "Penang Water Supply Initiative 2050" (PWSI 2050) to outline 3 contingency plans that will mitigate the raw water risks faced by Penang.

The initial PWSI 2050 projects are:

1. Package 12A of the Sungai Dua Water Treatment Plant

Potential yield: 114 million litres per day (MLD)

Package 12A involves the construction of a new 114 MLD water treatment module in the Sungai Dua WTP. It will allow PBAPP to produce more treated water to meet water supply needs in Penang until the SPRWTS comes online.

2. Sungai Perai Water Supply Scheme (SPWSS)

Potential yield: 136 MLD

The SPWSS is aimed at tapping Sungai Perai as an additional raw water resource for Penang. Previous engineering studies have indicated that raw water from this river may not be safely treated using conventional water treatment technology. As such, the SPWSS will explore the possibility of employing alternative water treatment technologies to “treat” the raw water properly for human consumption.

3. Phase 1 of the Penang Desalination Water Supply Scheme (PDWSS) Potential yield: 250 MLD

Phase 1 of the PDWSS proposes the construction of a sea water desalination facility in the southern area of Penang Island. Its purpose is to address the increasing water supply needs in Balik Pulau and the surrounding areas, as well as for the Penang South Reclamation (PSR) project towards 2030. Phase 1 is scheduled for commissioning in December 2024. Subsequent phases may be implemented until 2050 since Penang is surrounded by sea, with theoretically unlimited access to sea water.

Key PWSI 2050 Considerations

PBAPP has commissioned a feasibility study on its proposed PWSI 2050 projects. The feasibility study is being conducted by an independent engineering consultant, and is scheduled for completion by January 2021.

The key considerations for the PWSI 2050 feasibility study include:

- Updated projections of water demand in Penang towards 2050 (based on actual PBAPP data recorded from 2010 to 2019, as well as projected water demand from new development projects in Penang);

- Timeline considerations to mitigate raw water risks by 2025;
- Feasibility of the proposed projects and technologies; and
- Costs and options.

All aspects of the PWSI 2050 projects (including budgets, timing, public tenders and implementation policies) will be subject to prior approval by the Penang State Government.

Please note that the PWSI 2050 does NOT affect or compromise the following:

- Implementation of the SPRWTS by the Federal Government
The SPRWTS is still the most rational raw water solution, in terms of both potential yield and cost-effectiveness. The Penang State Government and PBAPP will continue to pursue the implementation of the SPRWTS because the Federal Government had agreed to undertake raw water resource schemes for Penang when we migrated to the National Water Services Industry Restructuring Initiative (NWSRI) in 2011.
- Abstraction of raw water from Sungai Muda
PBAPP still needs to abstract raw water from Sungai Muda daily to meet Penang's water supply needs towards 2050 and beyond. The SPRWTS and the PWSI 2050 projects are meant to serve as additional raw water resources for Penang in the future.
- Preservation of 160,000 hectares (ha.) of rainforests in Ulu Muda
Ulu Muda is the largest and most important water catchment area in the Northern Corridor Economic Region (NCER). The Penang State Government and PBAPP will continue to champion the cause for proper gazettement of 160,000 ha. of rainforests in Ulu Muda as "water catchment areas" in perpetuity. This is to ensure water supply security for 4.2 million Malaysians living in Perlis, Kedah and Penang.

Please allow me to reiterate that the primary objective of the PWSI 2050 is to introduce additional water supply projects that will help us to meet future water demands.

For the long-term, Penang will still need the SPRWTS, raw water from Sungai Muda and the preservation of Ulu Muda to ensure raw water security towards 2050.

Thank You.

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