

Date Published: 25 Sep 2002

1 The Government has accepted the recommendation of the Expert Panel to proceed with the indirect use of NEWater as an additional source of drinking water. For a start, PUB will introduce 2 mgd of NEWater (less than 1% of total daily water consumption) into our raw water reservoirs in Feb 2003. The amount will be increased progressively to about 2.5% of total daily water consumption by 2011.

Background Information

2 On 11 July 2002, PUB received a report from the Panel of Experts on the use of NEWater to supplement our conventional sources of potable water supply. The Expert Panel has established that NEWater is safe for drinking based on the results of comprehensive physical, chemical and microbiological analysis conducted over a two-year period. NEWater is found to be well within the drinking water standards specified by the US Environmental Protection Agency and World Health Organisation. NEWater is also cleaner than PUB drinking water. In line with current practice in the USA, the Panel recommended the indirect potable use of NEWater.

3 PUB has completed its evaluation of the Expert Panel's Report. Chairman PUB Mr Tan Gee Paw said: "PUB is satisfied that the Expert Panel has been thorough in its review, and has adopted internationally recognized drinking water standards to benchmark NEWater. PUB therefore accepts and endorses the proposal to use NEWater for indirect potable use. This means mixing and blending NEWater with raw water in the reservoirs before undergoing conventional treatment at the waterworks for supply to the public for potable use."

Positive Response to Potable Use of NEWater

4 Public support towards the potable use of NEWater has been overwhelming. In the past two months, advisers to grassroots organizations have briefed community leaders and grassroots members on NEWater. ENV and PUB also held a series of public education seminars for grassroots leaders, members of business associations, working adults and students. Out of 3,000 seminar participants, more than 98% supported the idea of adopting NEWater for indirect potable use. In response to requests from many grassroots organizations and event organizers, PUB has supplied more than 650,000 bottles of NEWater so far. This encouraging demand for NEWater has given many people the chance to try out NEWater and helped them overcome the psychological barrier towards reclaimed water.

Why Indirect Potable Use instead of Direct Potable Use?

5 Even though NEWater is safe for direct drinking, there are three major considerations for adopting the approach of indirect potable use. These are:

i) The established practice in the US over the past 20 years is to put the reclaimed water through a "naturalization" process in the reservoir before processing it again for potable use. Even though PUB is using leading edge technology in the production of NEWater, it is still prudent to follow established practice adopted in the developed world.

ii) Some Singaporeans may still have reservations with direct consumption of reclaimed water. The mixing of NEWater with reservoir water will help them overcome this psychological barrier over time.

iii) Because NEWater is cleaner than PUB water, it lacks minerals as these have been removed during the process of reverse osmosis. Mixing NEWater with raw water in the reservoir will enable NEWater to pick up minerals in the reservoirs.

Dual Role of NEWater in Singapore's Long Term Water Supply

Free Up More PUB Water for Domestic Use

6 Notwithstanding the introduction of NEWater for indirect potable use, the primary use of NEWater will be for direct non-potable use in the non-domestic sectors such as wafer fabrication parks, industrial estates and commercial buildings for industrial and air-cooling purposes. This means that more PUB water can be freed up by these non-domestic sectors and be channeled to meet future increase in water demand for domestic use.

7 By early 2003, two NEWater factories in Bedok and Kranji will be completed to supply 15mgd of NEWater to 12 wafer fabrication plants in Woodlands, Tampines and Pasir Ris. PUB will also proceed with the construction of a third NEWater factory at Seletar with an initial capacity of 5mgd. It will be ready by early 2004 to supply NEWater to the industrial estates in the Ang Mo Kio and Serangoon areas. PUB is also studying the setting up of a fourth NEWater plant in Ulu Pandan to serve the industrial estates at Jurong and Tuas areas.

8 Our target is to supply at least 55 mgd of NEWater for direct non-potable use in the non-domestic sector by 2011.

Strengthen the Resilience of our Water Supply System

9 NEWater will also play an important role in supplementing the supply of potable water. This is especially so in the event that conventional sources of water supply are affected by reasons beyond our control, such as change in weather pattern, prolonged droughts, excessive pollution in catchment areas and so on. By putting in place a system for indirect potable use of NEWater, we are making our overall water supply system even more resilient.

Impact of NEWater on PUB Water Tariff

10 The introduction of NEWater for both indirect potable use and direct non-potable use should not lead to higher PUB water tariffs. NEWater will reduce the need for us to go for desalination water which is more costly than NEWater. The amount of NEWater for indirect potable use is relatively small, constituting only up to 2.5% of the total daily consumption over the next 10 years. Moreover, the introduction of NEWater for direct non-potable use in the non-domestic sectors will allow us to free up more PUB water for potable use in the domestic sector.

Summary

11 Indirect potable use of reclaimed water is not new. It has been practised in several places in the US since the mid 1970's. The practice is growing as more countries and cities face water shortages.

12 Commenting on the government's decision, Mr Lim Swee Say, Minister for the Environment, said: "NEWater is a safe, affordable and sustainable source of water supply. It will enable us to be more self-sufficient in water. More importantly, with NEWater, we can be better assured that Singapore will, now and in the future, have enough water at an affordable cost to meet all our needs."

Jointly Issued by:

Ministry of the Environment, and Public Utilities Board

For media queries, please contact:

Ms Chung Puay Noi
Deputy Director
Corporate Communications Division
Public Utilities Board
Tel: 6731 3105
Hp: 9846 2883
Email: chung_puay_noi@pub.gov.sg

or

Ms Angeline Yap
Assistant Director
Corporate Communications Department
Ministry of the Environment
Tel: 6731 9590
Email: Angeline_Yap@env.gov.sg

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