

## Sustainable, holistic approach to water management helps PUB Singapore win prestigious water award

An island nation of 4.5 million people, Singapore faces the challenge of developing the infrastructure needed to support a densely populated country with limited access to resources. Through strategic planning, visionary leadership and a strong emphasis on sustainability, government leaders have taken a holistic approach to total water resource management.

### Stockholm Water Industry Award

The successes of this integrated approach led PUB, Singapore's water agency, to be honored with the Stockholm Water Industry Award. This prestigious award, presented on August 15 in Stockholm, is the water industry's equivalent of the Nobel Prize.

"PUB has worked hard over the last 40 years to overcome our water challenges and put in place a sustainable water supply for our people through the establishment of the Four National Taps strategy," said Khoo Teng Chye, chief executive of PUB. "This strategy is driven by a clear vision of what it takes to be sustainable in water—investing in technology, timely and cost-effective execution by public sector agencies and close partnerships with the business sector and the community."

The award cited PUB as "an exemplary model of integrated water management in a framework of good policy and innovative engineering solutions."

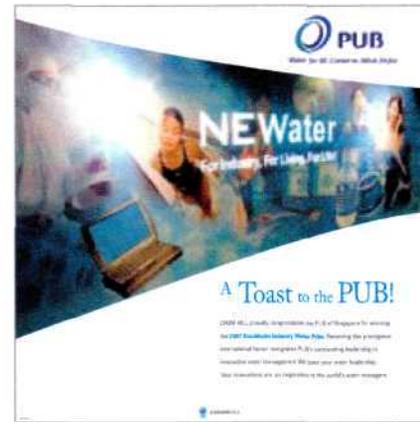
The Stockholm Water Industry Award was first awarded in 2000 to recognize innovative corporate development of water and wastewater process technologies, contributions to environmental enhancement through improved performance in production processes, new products and other significant contributions by businesses and industries to meet global water-related challenges.

### Quest for water leadership

During the next five years, the Singapore government will invest S\$330 million (US\$228 million) to further develop the water sector. By 2015, the water industry is expected to contribute S\$1.7 billion (US\$1.1 billion) to Singapore's gross domestic product as well as provide 11,000 new jobs.

The country is well on its way to achieving its vision of becoming a global hub of water industry expertise. Several multinational water companies and organizations, including CH2M HILL and the International Water Association, have established regional headquarters in Singapore. Water research centers are being created throughout the country to spur study and innovation. Singapore is also partnering with the World Health Organization to share its lessons learned about sustainable water management with other countries.

Next June, Singapore will host the inaugural Singapore International Water Week to bring together 6,000 government officials, industry leaders and water specialists. The event promises to further establish Singapore as a leader in the global water industry.



### Holistic and sustainable water management

Adopting the Four National Taps program, which focuses on local water catchment and imported reuse and desalinated water, has allowed PUB to provide Singapore residents with a diverse and sustainable supply of safe water for drinking and industrial use. CH2M HILL has been a key partner in implementing many of these programs, including:



#### Deep Tunnel Sewerage System:

With 60 miles of 24-foot-diameter tunnels for wastewater, Singapore's Deep Tunnel Sewerage System uses deep tunnel gravity flow to deliver wastewater to new treatment facilities. A CH2M HILL joint venture provided program management and delivered the project on time and within budget.



**Changi Water Reclamation Plant:** This 800-million-liter-per-day plant is currently in the final construction phase, having commissioned more than half the plant. CH2M HILL designed and is providing construction management and commissioning services for the plant.



**NEWater:** This reuse program puts treated used water through additional membrane and ultraviolet light disinfection treatment processes to produce high-quality water for industrial use and a small percentage for reservoirs. CH2M HILL is currently PUB Singapore's consultant on a project to connect NEWater plants with a trans-island pipeline.



**ABC's Water Program:** This program includes projects using water-sensitive urban design to improve water quality and increase public enjoyment of water resources. CH2M HILL-Atelier Dreiseitl Partnership created the master plan for the Central Catchment project.