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OVERSEAS TRAVEL REPORT

Dr Graham Jacobs Minister for Water; Mental Health

Singapore International Water Week: Sustainable Cities - Infrastructure and Technologies for Water.

Including:

The Water Leaders Summit

The Water Convention

The Water Expo

The Australian Business Forum

From: Monday 22nd June 2009 to Friday 27th June 2009

COST:

SOURCE OF FUNDING:

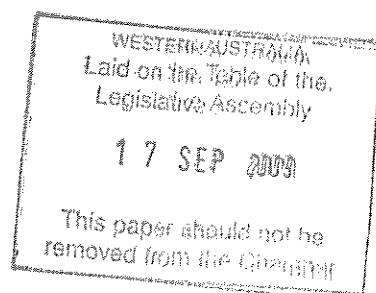
Ministerial Expense	\$ Amount
Air Fare – Minister	\$3540.75
Air Fare – Official Party Members	\$1044.58
Total	\$4585.33

OFFICIAL PARTY MEMBERS:

Elizabeth Burns:

Principal Policy Adviser – Water

As part of the hosting package, the organisers provided me with four nights accommodation in a suite room at their official five star hotel, including one daily breakfast. Similarly they provided my accompanying officer with four nights accommodation in a deluxe room at the same hotel, including one daily breakfast. In addition, they also provided a car for my disposal over the four days.



STATEMENT ON THE PURPOSE AND BENEFITS DERIVED FROM THE TRIP

The Singapore International Water Week is a global platform that brings policymakers, industry leaders, experts and practitioners together to address challenges, showcase technologies, discover opportunities and celebrate achievements in the water world.

The Water Leaders Summit



7th Minister's Forum on Infrastructure Development in the Asia-Pacific Region

The first event of the World Leaders Summit was the 7th Minister's Forum on Infrastructure Development in the Asia-Pacific Region. This annual meeting brought together ministers, mayors, top government officials, global water industry leaders, heads of international organisations, leading researchers and practitioners to consider pressing water governance, technology and business issues. The summit was by invitation only and it was an honour to be invited and to be asked to speak.

The Forum was chaired by the Singaporean Minister for the Environment and Water Resources Dr Yaacob Ibrahim with delegates from Brunei Darussalam, China, Hong Kong SAR, Columbia, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, and Vietnam. The delegates provided statements detailing the water and water infrastructure issues and the solutions their jurisdictions were developing. It was interesting to note that water and water infrastructure issues are consistent across the Asia-Pacific Region however there is a variety of solutions.

The Water Leaders Summit and Water Convention



The Water Leaders Summit was chaired by Professor Tommy Koh, Chairperson of the Asia Pacific Water Forum Governing Council and Ambassador-At-Large, Ministry of Foreign Affairs, Singapore and was again by invitation only. 200-300 senior members of the water industry attended several sessions over the four day summit.

The summit and convention focussed on key and emerging issues covering four main themes:

- water technology solutions for today's applications
- managing water infrastructure
- water and health
- planning for sustainable water solutions

In addition, the winner of the Lee Kuan Yew Water Prize 2009, Professor Gatzke Lettinga, delivered the acclaimed Singapore Water Lecture which detailed the Professors revolutionary energy-efficient technology which uses micro-organisms in an oxygen-free environment to purify used water.

WATER EXPO

More than 200 companies from 40 countries participated in this year's Water Expo. The Expo provided an opportunity to learn of the latest technologies, products and services, with companies keen to network with high-level officials from all water sectors.

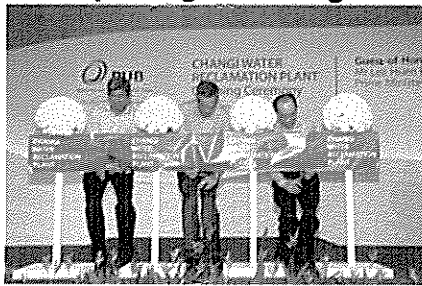
Australian Business Forum



At the Australian Business forum I represented the Western Australian Government by providing an overview of the Western Australian experiences in relation to the drying climate and the consequential management and service provision of water. The forum attracted delegates from trade and research organisations, key technology providers, financial institutions and water authorities.

The focus was on the sharing of knowledge in relation to a decline in run-off from catchments and the increase of significant weather events. It was clear that while Western Australia has significant challenges in maintaining a sustainable water supply we are certainly one of those in the forefront of protecting and maintaining our precious resource.

The Opening of Changi Water Reclamation Plant



In addition to the summit and the forums it was an honour to be invited to attend the opening of the Changi Water Reclamation Plant. The plant was constructed in graduated stages over 15 years and has been designed to meet Singapore's water treatment needs for the next 100 years. The 32 hectare facility can treat 800,000 cubic meters of used water a day.

A large portion of the treated water is then further processed and is utilised by both industry and as a source of drinking water.

Lee Kuan Yew Water Prize

The Lee Kuan Yew Water Prize was one of the highlights of the Singapore International Water Week. The award honours outstanding contributions towards solving global water problems by either applying revolutionary technologies or innovative policies and programmes which benefit humanity.

The prestigious Water Prize is named after Singapore's first Prime Minister and present Minister Mentor Lee Kuan Yew, who through his foresight and leadership has enabled Singapore to attain a sustainable water supply.

The award ceremony was held at the President's Palace with His Excellency S R Nathan, the President of the Republic of Singapore as the Guest of Honour. The extent of the celebration of water week identified the significance the Singaporean Government place on water and water related issues.

Marina Barrage

The visit to the Marina Barrage was truly an experience. The Marina Barrage is one of Singapore's 15 drinking water reservoirs and is the only one in the city. The reservoir was created by building a tidal barrier across the mouth of the Marina Channel. This barrier prevents salt intrusion keeping the sea water out even during periods of high tides.

The advantages of the Marina Barrage are the creation of a potable water source (following treatment) alleviating flooding in the low lying areas of the city as well as providing a stable water level which in turn allows water sports in the city 12 months of the year. The Marina Barrage is also a meeting place for Singaporeans boasting many wonderful restaurants, family picnic areas and fabulous views of the city skyline from the Marina Barrage rooftop.

SingSpring Desalination Plant

The Singaporean Government arranged a private tour of the SingSpring Desalination Plant. The desalination plant, which is located in Tuas, utilises advanced, cost and energy-efficient reverse osmosis ("RO") technology, as part of its water desalination process. The plant has a capacity of more than 113 Kilolitres per day which is one of the largest seawater reverse-osmosis plants in the region.

The national water agency of Singapore, the Public Utilities Board has a 20-year water purchase agreement with SingSpring which commenced in December 2005. Under the water purchase agreement capacity payments are payable throughout the term of the water purchase agreement and do not vary with the volume of water supplied by the SingSpring Plant.

It is anticipated that RO technology will remain viable in the long term and it is expected the plant to be able to supply desalinated water beyond the 20 year term.

BENEFITS TO WESTERN AUSTRALIA

Benefits derived

Singapore International Water Week was unique opportunity for me as the Minister for Water to meet face-to-face with political and industry leaders and share discussions on water matters. Despite the differing political philosophies and population sizes between the nations of the Asia Pacific region there are many common issues and challenges. Being able to access the lessons learned from across the region, particularly in relation to water recycling and efficiency will be extremely useful.

I was also able to see firsthand the most up to date technological developments in the field of water and wastewater treatment and discuss these technologies with those that have adopted them and the companies that construct them.

The visit to the SingSpring Desalination Plant enabled me to compare the Western Australia's current Kwinana plant and the Southern Seawater Desalination Plant in Binninup with the technology in Singapore.

The water treatment technology was remarkably similar to that of Western Australian however the supply model differed.

The Singapore model is based on a water supply agreement contract. Western Australian plants are built in an alliance partnership. This alliance partnership particularly with the second desalination plant allows the State and the alliance partners to share the risk.

Ensuring the plant remains a state owned asset also allows for the plant to be "turned off" in the event that other drinking water sources become more viable. In addition the Southern Seawater Desalination Plant will be powered by alternative power sources as they become available. Singapore's plant utilises the country's traditional grid power source.

Singapore has significant reliance on recycled water and the government calls this water source NEWater. There is a comprehensive public education campaign as well as a NEWater education centre. My visit to the centre was enlightening.

The centre provides information on a range of water use subjects such as efficiency but its main purpose is to educate the community on recycling water processes and to address health concerns and perceptions. The centre caters for all age groups, is interactive and fun. The demonstration of the learning activities provided me with ideas for the development of an education centre in Western Australia.

Upon my return to Western Australia I discussed my ideas with the Water Corporation and as a result, a centre providing information on the Water Wise concepts and the treatment of replenished water will be constructed at the Ground Water Replenishment project site as a component of the pilot.