

署長的話 Director's Statement



和世界大部分城市一樣，香港現正進入一個新紀元，在水的使用和分配上需要細心規劃、未雨綢繆。我們在制定政策和採取行動時，斷不能獨善其身，而必須同時顧及鄰近珠江三角洲地區的需要。

Hong Kong, like most cities around the world, is entering an era that requires careful planning and forethought on the use and distribution of water. We have reached a point where our policies and actions can no longer focus solely on Hong Kong but must also take into account the requirements of our neighbours within the Pearl River Delta.

馬利德工程師

Ir MA Lee Tak

水務署署長 *Director of Water Supplies*

採取區域視野

去年，受到氣候變化的影響，廣東省經歷旱災。災情始於二零零九年底，並持續到今年春季，令省內東江沿流三大主要水庫的總存水量大幅下降。

本港現時約七至八成的食水由東江輸入，佔東江年均流量約百分之三。儘管是次旱情沒有影響到香港的供水，但我們日益意識到應居安思危，節約用水，為鄰近地區省下珍貴的水資源。

過去一年，我們與廣東省當局的合作進一步加強。我們已就東江沿岸水流量的科學監控及調度，與廣東省當局全面通力合作，務求改進原水的貯存和分配，以滿足區內，包括香港的所有需求。最令人感到放心的是，廣東省當局重申，會優先確保香港持續獲得足夠的供水。不過，作為珠江三角洲其他城市的良好伙伴，香港必定會盡自己的本分，致力推廣可持續地善用水資源。

水質方面，廣東省當局繼續在東江沿岸一帶實施保護措施，務求保證供港水質符合相關的國家地表水環境質量標準。這相應地令我們節省處理原水的費用。東江水輸送到香港後，便會貯存在水塘和送到濾水廠，經進一步處理及測試水質後，才會輸送給各用戶。

Adopting a Regional Perspective

Last year, there were drought conditions experienced in Guangdong Province as a result of the impacts of climate change. These conditions began by the end of 2009 and continued through to the spring of this year, causing a major drop in storage at the Province's three main reservoirs along the Dongjiang.

Today, 70 to 80 per cent of Hong Kong's fresh water needs are met by the water imported from Dongjiang, which amounts to 3 per cent of the annual flow volume of Dongjiang. Whilst our supplies have not been threatened by the drought conditions, we are increasingly aware of the need to take only the water that we need and to use it efficiently for the scarce resource to be saved for our neighbours.

Over the past year, cooperation with the Guangdong authorities have been strengthened. We have co-operated fully with the Guangdong authorities on their scientific regulation of flow along Dongjiang for improved storage and distribution of raw water to satisfy all regional needs, including Hong Kong. Guangdong has affirmed that sustaining an adequate supply of water to Hong Kong is a priority. This is most reassuring. We, however, are determined to play our part to fulfill our role as a good partner to other municipalities in the Pearl River Delta in promoting sustainable use of water.

On water quality, the Guangdong authorities continue to implement protection measures along the Dongjiang to ensure that the quality of the water pumped to Hong Kong meets relevant national environmental standards for surface water. This in turn enables us to save cost in raw water treatment. Once the Dongjiang water reaches Hong Kong, it goes to impounding reservoirs and water treatment works for further treatment and quality tests before being ready for distribution.



參與羽毛球比賽。
Participation in a badminton competition.



歡迎參觀濾水廠的小學生。
A cordial welcome is extended to students at a water treatment works open day.

保持供求平衡

我們透過推行全面水資源管理策略，令香港用水的供應和需求達致平衡。在這方面，我們把沖廁系統中海水沖廁的範圍擴大至更多地區，減低食水的需求。現時，本港超過八成的人口使用海水沖廁。預計在未來數年內，比例將增至八成半。

我們繼續致力為香港尋找替代水源，包括飲用水，以及可用作沖廁、清洗街道、洗車和灌溉的非飲用水。到目前為止，數個有關再造水或洗盥污水重用的計劃已通過試驗階段，並現正引入新的房屋發展項目。同時，我們的污水循環再用試驗計劃亦十分成功，雖然所涉及的技術較為昂貴，但已證明這計劃在操作上是可行的。

我們推行的兩項海水化淡試驗計劃，都能利用海水生產出優質的食水，為日後海水化淡的發展奠定穩固的基礎。香港地勢臨海，地理環境十分適合使用逆滲透技術化淡海水。我們現正密切監察這方面的發展，期望現時高昂的生產成本會降至可接受的水平，以及能量回收裝置的發展會紓緩有關淡化海水耗用大量能源的關注。

我們的全面水資源管理策略現已穩步就緒。我們會就該項策略持續進行檢討，並會在需要時作出調整的措施，以配合不斷轉變的情況、新開發的資源，以及與持續尋找和使用水相關的日新月異科技發展。

Balancing Supply and Demand

Our Total Water Management strategy is firmly imbedded as the tool we use to balance supply and demand in Hong Kong. As part of this strategy, we have expanded the use of sea water in our supplies of flushing water to more areas, thus reducing our fresh water demand. Over 80 per cent of Hong Kong's population use sea water for flushing and within the next few years, this percentage is expected to grow to 85.

We have continued to focus on alternative sources of water for Hong Kong, including potable water and non-potable water that can be used for toilet flushing, street cleaning, car washing and irrigation. Several schemes involving reclaimed or recycled grey water have successfully passed through their trial phase and are being introduced into new housing developments. At the same time our trial schemes on recycling effluent have been successful. Although the technology is more costly, it has proven to be operationally feasible.

Our two pilot desalination schemes producing good quality drinking water from the sea have also laid a solid foundation for future development on desalination. Hong Kong with its proximity to the sea, is well placed to adopt desalination using reverse osmosis technology. The initiative is being closely monitored in the hope that the current high production costs will fall to an economically viable level and the development of energy recovery devices will alleviate concerns about large-scale energy use in desalination.

Our Total Water Management strategy is now firmly in place. It will undergo an ongoing review process and the measures contained therein will be fine-tuned as necessary for adapting to changing conditions, new resources and emerging technological developments that are related to the sustainable sourcing and use of water.

着眼節約用水

保護水資源，人人有責。過去一年，我們實施了多項措施，使公眾把重點放在明智用水和節約用水方面。香港人均每日耗水量為130公升食水和90公升沖廁海水，大幅高於鄰近城市和人均每日總耗水量約170公升的國際平均數。

使用本署用水效益標籤計劃認可的節水裝置，有望把上述耗水量減少三成。是項計劃分階段實施；第一階段已於去年推行，重點產品是淋浴花灑頭。繼後的階段會涵蓋家居、辦公室和工作場所常用的其他用水裝置和器具。我們鼓勵發展商和市民在建造新樓宇或更換、維修現有樓宇和家居的裝置時，使用計劃認可的裝置。

節約用水的公眾教育運動，特別是在學校的推行，是宣傳節約用水的有用工具。有關的評估顯示，節約用水的重要信息，已有效地由校園裏傳遞回學生的家中。透過鼓勵市民參與節約用水，不論是學生或成人，我們都會提高他們對有責任地用水的意識，積累長遠正面的影響。

Focusing on Conservation

Protecting our water supplies also comes down to individual responsibility and over the past year we have implemented measures that focus public attention on the wise use of water and its conservation. Daily individual consumption in Hong Kong averages 130 litres of fresh water and 90 litres of sea water for flushing. This is substantially higher than our neighboring cities and the international average that stands at around 170 litres per day for total consumption.

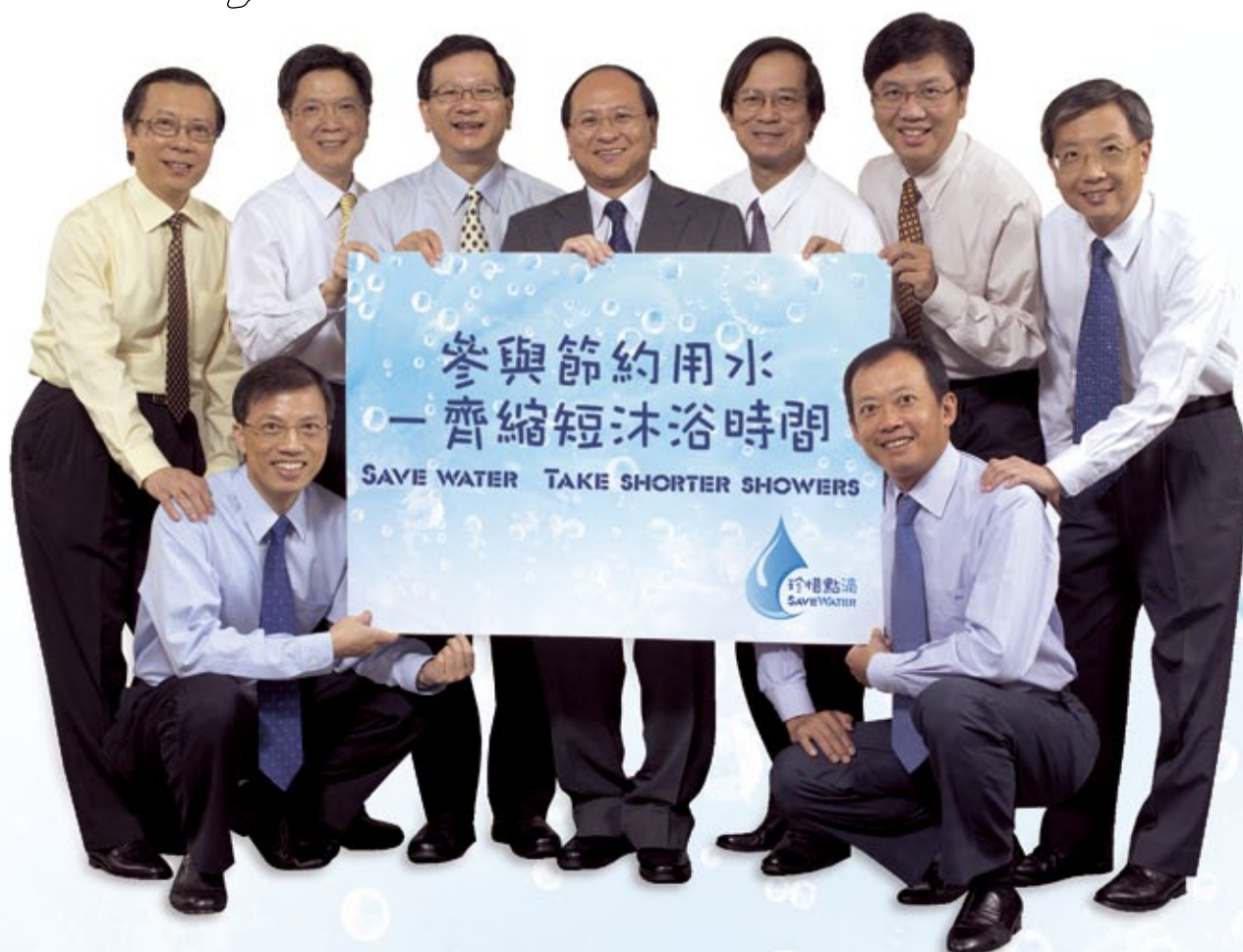
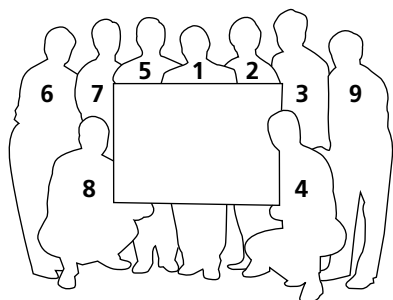
Use of water saving devices accredited under our Water Efficiency Labelling Scheme (WELS) will have the potential of reducing these consumption figures by 30 per cent. The first phase of the multi-phase scheme introduced over the past year focused on showerheads. Subsequent phases will cover other fixtures and appliances used frequently at home, office and workplace. Developers and individuals are encouraged to use WELS accredited equipment when developing new buildings or replacing and repairing equipment in existing buildings and homes.

Public education campaigns on water conservation are proving to be a valuable tool, particularly in schools where evaluations show that the key messages have been transmitted effectively from schools to students' homes. By engaging members of the public on water conservation – whether school age or adults – we will raise awareness about responsible water use with an accumulative and long term positive effect.

大潭水務文物徑正式設立，於二零零九年九月十八日舉行揭幕儀式。
Tai Tam Waterworks Heritage Trail was formally established with the opening ceremony held on 18 September 2009.



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Director of Water Supplies
2. 陳光為工程師太平紳士
Ir CHAN Kwong Wei, JP
水務署副署長
Deputy Director of Water Supplies
3. 鄒志偉工程師太平紳士
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助理署長／機械及電機
Assistant Director/Mechanical & Electrical
4. 吳孟冬工程師太平紳士
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助理署長／發展
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8. 李光明先生
Mr LEE Kwong Ming
助理署長／財務及資訊科技
Assistant Director/Finance &
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9. 李尹璇先生
Mr LI Wan Suen, Clement
部門秘書
Departmental Secretary



倚重進展科技

在去年的年報中，我曾提及本署一直致力研究世界其他地方已進行試驗與用水有關的新技術。我們現已掌握一系列的技術，藉以監察我們的供水輸送系統的情況、檢測水管滲漏，以及調控水壓。這些技術已在香港的環境進行測試，並已證實其成效，特別是使用先進減壓裝置所節省得的供水成本，一般都高於購置相關裝置的費用。啟德發展等新發展項目會配備先進的減壓裝置，確保這些地區的供水輸送系統的滲漏會長遠維持在低水平。

我們繼續引進其他國家所使用的新技術和最佳方法，應用於我們的集水區、水務設施，以及水安全計劃上。

我有信心說，長遠而言，我們的用水供應是穩定的，因為集水區繼續有效運作，而且我們現正引入改善措施，包括一個把一向排放的洪水輸送回鄰近水塘的轉運計劃。

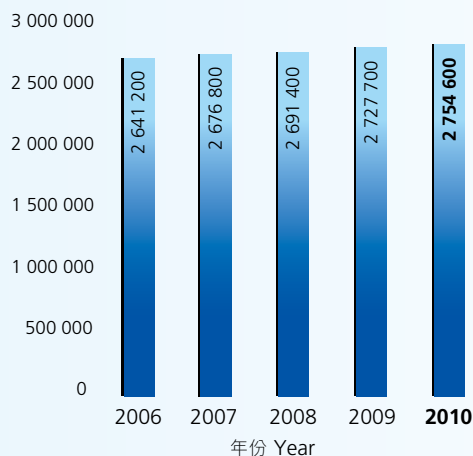
Riding on Technological Advances

In my report 12 months ago, I spoke of the effort we have put into researching new water-related technology that has been trialed elsewhere in the world. We now have a toolbox of technologies that we are using to monitor the performance of our distribution system, detecting mains leakage and monitoring and controlling pressure. These technologies have been tested in Hong Kong conditions and we have demonstrated their effectiveness and efficiency. In particular, the value of water saved as a result of using advanced pressure reduction devices normally more than covers the cost of the equipment. New developments such as the Kai Tak Area Development Scheme will be equipped with advanced pressure reduction devices, ensuring water leakage in these areas will remain at a low level over the life of the water supply and distribution network.

New technology and best practices used in other countries continue to be applied across our work – in catchment areas and waterworks installations and through our Water Safety Plan.

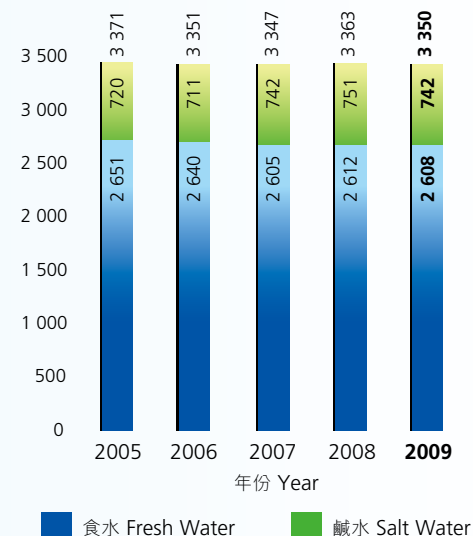
I can say with confidence that our water supplies are secure for the long term. Catchment areas continue to be effective. Improvements are being introduced including an Inter-reservoirs Transfer Scheme which conveys previously discharged flood water back into an impounding reservoir in the vicinity.

客戶數目（截至二零一零年三月三十一日）
Number of Accounts (As at 31 March 2010)



總平均日耗水量
Total Average Daily Water Consumption

百萬公升／日 million litres per day





在西區配水庫重置工程上與香港大學成功合作。
A successful partnership with the University of Hong Kong resulted in the reprovisioning of Western service reservoirs.

聚力同心伙伴

基於我們已和其他機構建立良好的伙伴關係，我們在過去一年所做的工作大部分都取得成功。我們在香港大學慶祝新西區配水庫重置工程完工，有關工程是大學新百周年校園發展計劃的一部分，標誌著成功應用良好的市區規劃原則，以應付有限土地資源的挑戰。我們把兩個海水配水庫建造在石洞內，而兩個食水配水庫上蓋則會有一個面積達4 000平方米的園景花園。這四個水庫現已投入運作，為中西區居民供水。

我們與政府古物古蹟辦事處緊密合作，推廣41項列為歷史古蹟的水務設施建築。這項成就引證了前人的高瞻遠矚，令我們引以為傲。已有本地和海外遊客被本署印製的紀念冊和導賞圖吸引，往郊野公園徑遊覽，參觀這些歷史建築，當中不少設施現仍在運作中。

因展開用水效益標籤計劃的關係，我們一直與大廈和地產業的代表緊密合作，這兩個界別對我們的節約用水計劃均作出正面的回應。

透過與學校建立伙伴關係，我們有關節約用水的宣傳計劃已滲入本港年青人的生活中。我們的推廣計劃已獲得不少注意，並被視為通識教育的一項重要元素，本人對此感到欣慰。

同樣地，年內本署的諮詢小組成員和工作伙伴的工作滿有創意和富有效率，就水質、節約用水和可持續用水方式、水安全，以及全面水資源管理等事宜向本署提供明智的建議。

Building Strength on Partnerships

A considerable amount of the work we have undertaken over the past year has succeeded because of the good partnerships we have built with other parties. At the University of Hong Kong, we celebrated the completion of the new Western service reservoirs that have been developed as part of the University's new Centennial Campus signifying successful application of good urban planning principles to meet the challenge of limited land resource. Two salt water reservoirs have been built into a rock cavern while the roof of two fresh water service reservoirs will be a 4 000 square metres landscaped garden. The reservoirs are in operation for residents of the Central and Western District.

We worked closely with the Government's Antiquities and Monuments Office to promote the 41 waterworks structures that have been awarded historic monument status. We are particularly proud of this achievement which stands as testament to the vision of our predecessors. Already a published souvenir book and a guide map have attracted residents and visitors alike to walk the country park trails to visit these historic structures, many of which remain operational.

Associated with the launch of WELS, we have worked closely with representatives of the building and real estate sectors. Responses from both sectors are positive towards our programme of water conservation.

Our promotion programmes on water conservation have made their way into the lives of the city's young people through our partnerships at school level. I am pleased to say that our promotion programmes have attracted considerable attention and are now regarded as an important ingredient in general education.

Similarly, members of our advisory group, along with our business partners, have operated with thought and efficiency over the year, offering us wise advice on water quality, conservation and sustainability practices, water safety and other aspects of our Total Water Management.

推進部門目標

去年，本人鼓勵員工大膽創新、積極進取和跨界別工作，以實現全面水資源管理的目標。我很高興向大家匯報，員工不單響應本人的呼籲，多位員工還因工作表現卓越而獲頒公務員優質服務獎和申訴專員嘉許獎。

本署各項招聘和培訓計劃，以及有關意見顯示，水務署被視為賞識人才、提供廣泛工作經驗和鼓勵創新的僱主，其實，這全是員工和諧共融的團隊精神所致，並因此令本署漸成為大學畢業和轉職的年青才俊尋求加入工作的心儀政府部門之一。

前線員工經常受到高度注視，特別是在本港主要地區水管爆裂的時候，他們面對壓力，但仍能作出妥善回應。部門已致力減低這些事故對市民造成的不便，而員工方面亦已優化危機管理能力，並加強跨部門合作。本署的水管更換及修復計劃現已完成逾四成的工程，加上檢測水管滲漏的技術不斷進步，將有助日後減少發生這些事故的機會。

在邁步向前時，我們繼續攜手同心制訂優質用水管理的政策和方法，至為重要。香港的未來繫於可靠、暢達、清潔和可持續的供水，而供應的用水不但能應付全港的需求，還會顧及鄰近地區的需要。由於我們擁有合適的人材和政策，並得到社會各界的支持，本人對達到這個目標是滿有信心的。



馬利德
水務署署長
二零一零年六月三十日

Advancing Organisational Objectives

Last year, I encouraged staff to think innovatively, act proactively and to work across disciplines to achieve our Total Water Management goals. I am pleased to report that not only did staff heed my call, they have been recognised for their outstanding work in terms of the Civil Service Outstanding Service Award Scheme and the Ombudsman's Award.

Our recruitment and training programmes and collected views showed that the Water Supplies Department is seen as an employer that recognises talent, offers broad work experience and encourages innovation. All this is achieved in a spirit of teamwork and harmony. As a result, we are becoming a departmental 'employer of choice' with young talents seeking to join from university and from other employment.



Front line staff have found themselves in high profile situations particularly in terms of mains bursts in key areas of the city. They have responded well under pressure. As we strive to reduce the public inconvenience associated with these incidents, staff enhanced in terms of crises management and inter-departmental co-operation. Our programme of repair and rehabilitation which is now more than 40 per cent completed, along with advancement in leakage detection technologies, will help reduce these incidents in the future.

As we move forward, it is important that together we continue to put in place policies and practices of high quality water management. Hong Kong's future relies on a reliable, accessible, clean and sustainable water supply that not only meets the demands of the city but also takes into account the needs of our neighbours. I remain confident that we have the people, policies and the support of the community to achieve this.

Ma Lee-tak
Director of Water Supplies
30 June 2010