水務署
WATER SUPPLIES DEPARTMENT

應對氣候變化：
Combat Against Climate Change :

開源·節流

EXPLOIT
NEW WATER RESOURCES AND
FOSTER WATER
CONSERVATION CULTURE

2014/15
年報 ANNUAL REPORT

VISION 抱負

滿足客戶對優質供水服務的需求，務求有卓越之表現。

To excel in satisfying customers' needs for the provision of quality water services.

VALUES 信念

- 以客為本
  Customer satisfaction
- 確保質量
  Reliability
- 重視環保
  Environmental awareness
- 竭盡所能
  Dedication
- 精益求精
  Improvement
- 同心協力
  Teamwork

MISSION 使命

- 以最符合成本效益的方式為客戶提供可靠充足的優質食水及海水。
  To provide a reliable and adequate supply of wholesome potable water and sea water to our customers in the most cost-effective way.
- 提供以客為本的服務。
  To adopt a customer-oriented approach in our services.
- 維持及激勵一支能幹、高效率及完全投入的工作隊伍，以服務社羣。
  To maintain and motivate an effective, efficient and committed workforce to serve the community.
- 時刻關注對保護環境方面須負的責任。
  To remain conscious of our responsibilities towards the environment.
- 善用資源和科技，力求不斷改善服務。
  To make the best use of resources and technology in our striving for continuous improvement in services.

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部門總覽

Corporate Profile

香港特別行政區政府水務署負責監測及管理水源，並確保及維持香港的食水及海水供應。本署每天提供約260萬立方米食水，以滿足約720萬居民的需要。我們賴以生存的食水部分取自香港山坡上的廣闊集水區，而大量則從中國南部的東江輸入，經嚴格處理及監測務求符合最新國際水質標準。其後，所有食水會儲存在廣泛分佈的配水庫內，以待配送至各家各戶及商用物業。本署亦審慎運用海水，先將海水處理，然後送往沖廁系統。香港的市區及新市鎮內大部分住宅、商業及工業大廈一般均使用海水沖廁這類水資源有助降低整體的食水需求。本署亦積極透過海水化淡、污水再造、洗盥污水再造和雨水收集等先進技術，開拓新水源並監督有關發展。

水務署員工每天竭盡所能，致力滿足香港市民的期望及需求，並實行成效顯著的政策措施，節約珍貴的水資源。水是一種必備資源，亦是香港社會活力與繁榮的基石，因此我們將繼續加強與各界持份者合作，優化供水，維持香港當前及未來安全優質的水源。

It is the solemn responsibility of the Hong Kong SAR Government's Water Supplies Department to monitor and manage all facets of securing and maintaining fresh and salt water supplies throughout Hong Kong. Each day our Department supplies about 2.6 million cubic metres of fresh water to satisfy the needs of about 7.2 million residents. The fresh water supplies we rely on are drawn in part from Hong Kong's vast hillside catchment installations along with a substantial amount of water that comes from Dongjiang in southern part of Mainland, which is subject to stringent treatment and monitoring in order to meet the latest international water quality standards. Afterwards all fresh water resources are kept in an extensive array of service reservoirs for distribution to homes and commercial developments. We also make prudent application of seawater, which is first treated and then sent along to supply toilet flushing systems. Seawater flushing is commonly found in most residential, commercial and industrial buildings in urban area and new towns of Hong Kong. This type of water resource is instrumental in helping us reduce our overall requirements for fresh water resources. The Department is also proactive in initiating and monitoring the development of new water sources through more advanced methodologies such as desalination, water reclamation, grey water recycling and rainwater harvesting.

Every day each WSD employee is dedicated to meeting the expectations and needs of Hong Kong customers while successfully implementing robust and effective policies and practices to help conserve our precious water resources. Water is an indispensable resource that serves as a cornerstone for the vitality and prosperity of Hong Kong. That is why we will continue to work in partnership with all stakeholders to optimise our supplies so that Hong Kong's water remains secure and of high quality today and long into the future.

主要統計數字（截至二零一五年三月三十一日）
Principal Statistics (as at 31.3.2015)

百萬立方米 million cubic metres (mcm)

* 包括敷設於私人街道的水管。
* Water mains laid in private streets are included.

水塘數目
No. of Impounding Reservoirs

17
個 nos.

總容量
Total Storage Capacity

586.05
百萬立方米
million cubic metres (mcm)

濾水廠數目
No. of Water Treatment Works

21
個 nos.

總日產量
Total Daily Treatment Capacity

5.02
百萬立方米
million cubic metres (mcm)

食水抽水站數目
No. of Fresh Water Pumping Stations
（包括食水和原水抽水站及泵房）
(including both fresh & raw water pumping stations and pump houses)

153
座 nos.

總抽水日產量
Total Daily Pumping Capacity

31.59
百萬立方米
million cubic metres (mcm)

海水抽水站數目
No. of Salt Water Pumping Stations
（包括抽水站及泵房）
(including both pumping stations and pump houses)

34
座 nos.

總抽水日產量
Total Daily Pumping Capacity

1.96
百萬立方米
million cubic metres (mcm)

食水及海水抽水站數目
No. of Combined Fresh Water & Salt Water Pumping Stations

7
座 nos.

總抽水日產量
Total Daily Pumping Capacity

0.29
百萬立方米
million cubic metres (mcm)

食水配水庫數目
No. of Fresh Water Service Reservoirs

171
個 nos.

總容量
Total Storage Capacity

4.18
百萬立方米
million cubic metres (mcm)

海水配水庫數目
No. of Salt Water Service Reservoirs

52
座 nos.

總容量
Total Storage Capacity

0.24
百萬立方米
million cubic metres (mcm)

食水管長度
Length of Fresh Water Mains
（直徑20毫米至2,400毫米）
(20 mm to 2,400 mm diameter)

6,803*
公里
kilometres (km)

海水管長度
Length of Salt Water Mains
（直徑20毫米至1,200毫米）
(20 mm to 1,200 mm diameter)

1,723*
公里
kilometres (km)

水務署組織圖

WSD Organisation Chart

林天星工程師，JP
Ir LAM Tin Sing, Enoch, JP
水務署署長
Director of Water Supplies

黃仲良工程師
Ir WONG Chung Leung
水務署副署長
Deputy Director of Water Supplies

林正文工程師
Ir LAM Ching Man
助理署長／客戶服務
Assistant Director/ Customer Services

周世威工程師
Ir CHAU Sai Wai
助理署長／發展
Assistant Director/ Development

內部稽查組
Internal Audit Section

客戶服務科
Customer Services Branch

- 客戶服務部 Customer Services Division
- 技術支援組 Technical Support Unit
- 水塘安全組 Reservoir Safety Section

發展科
Development Branch

- 發展（1）部 Development (1) Division
- 發展（2）部 Development (2) Division
- 水質科學部 Water Science Division

- 一般行政組 General Administration Section
- 合約顧問組 Contract Advisory Unit
- 公共關係組 Public Relations Unit

李光明先生
Mr LEE Kwong Ming

助理署長／財務
Assistant Director/
Finance

財務
Finance Branch

- 財務部 Finance Section
- 物料供應組 Supplies Section
- 資訊科技工程計劃管理及覆檢小組 IT Project Management & Review Unit
- 客戶帳務組 Customer Accounts Section

黃敏清工程師
Ir WONG Man Ching

助理署長／機械及電機
Assistant Director/
Mechanical & Electrical

機械及電機科
Mechanical and Electrical Branch

- 保養部 Maintenance Division
- 工程計劃部 Projects Division
- 機電行政組 M & E Administration Unit
- 安全組 Safety Unit
- 資訊科技及數據管理組 Information Technology & Data Management Unit
- 技術拓展組 Technical Development Unit

梁永廉工程師, JP
Ir LEUNG Wing Lim, JP

助理署長／設計及建設
Assistant Director/
New Works

設計及建設科
New Works Branch

- 建設部 Construction Division
- 顧問工程管理部 Consultants Management Division
- 設計部 Design Division
- 工程管理部 Project Management Division

錢柱森工程師, JP
Ir CHIN Chu Sum, JP

助理署長／運作
Assistant Director/
Operations

運作科
Operations Branch

- 香港及離島區 Hong Kong and Islands Region
- 九龍區 Kowloon Region
- 新界東區 New Territories East Region
- 新界西區 New Territories West Region
- 運作組 Operations Section
- 斜坡安全組 Slope Safety Section

李尹璇先生
Mr LI Wan Suen, Clement

部門秘書
Departmental Secretary

部門行政部
Departmental Administration Division

大事紀要

Events in Brief

二零一四年
四月至五月
April to May
2014

"Save Water • Cherish the World" Roving Exhibitions
「惜水愛地球」巡迴展覽

After more than a year of visits to shopping malls and housing estates throughout Hong Kong, the "Save Water • Cherish the World" roving exhibitions aimed at strengthening public awareness of water conservation successfully accomplished their mission as the last exhibition was held at the end of May 2014.

旨在加深市民大眾節約用水意識的「惜水愛地球」巡迴展覽，過去一年多現身於全港各區商場及屋苑，於二零一四年五月底結束，圓滿達成任務。

二零一四年
五月
May
2014

"Let's Save 10 Litres Water" Launching Ceremony
「齊來慳水十公升」啟動儀式

The "Let's Save 10 Litres Water" Campaign got underway in March 2014 marked by an official launch ceremony held on 17th May 2014 at the Piazza of the Hong Kong Cultural Centre in Tsim Sha Tsui to help kick the programme into high gear. This important Campaign aims to encourage the public to implement water-saving practices and monitor their own water-saving performance by signing a "Water Conservation Declaration". Each participating household is then entitled to receive a pair of complimentary flow controllers to help conserve water. The Campaign has received an overwhelming response from the public with complimentary flow controllers having been delivered to over 130,000 participating households by the end of March 2015.

本署於二零一四年三月展開「齊來慳水十公升」運動，並於二零一四年五月十七日在尖沙咀香港文化中心廣場舉行正式啟動儀式，全面投入活動。這個重要活動旨在鼓勵市民透過簽署「節水宣言」，身體力行節約用水，監察自己的節水表現。每個參與家庭均可免費獲贈節流器一對，幫助減少用水量。是次運動受到市民踴躍支持，截至二零一五年三月底水務署已向130,000個參與家庭派發節流器。

二零一四年
六月
June
2014

"Cherish Water Resources" Waterworks Installations Drawing Competition Award Presentation Ceremony and Winning Entries Roving Exhibition
「珍惜水資源」水務設施繪畫比賽 頒獎典禮及得獎作品巡迴展

The "Cherish Water Resources" Waterworks Installations Drawing Competition encourages the public to express through their individual creativity and imagination the concept of "Cherish Water Resources". They do this by using Hong Kong's waterworks installations as the main creative element to promote water conservation by visual artistic means. The aim of the competition is to enhance the public's understanding of Hong Kong's waterworks installations and remind them to cherish these facilities as well as the water resources we use. There was a great deal of positive feedback as nearly 900 entries were received from the Open Category and Secondary School Category. An award presentation ceremony as well as an exhibition featuring 53 winning entries were held in June 2014 at Youth Square in Chai Wan. Roving exhibitions to display some of the selected entries were also held at various districts from June to September 2014.

「珍惜水資源」水務設施繪畫比賽鼓勵全港市民發揮創意及想像力，以本地水務設施為創作元素，用視覺語言去推動「珍惜水資源」的理念，藉此加深普羅大眾對本地水務設施的認識、鼓勵各界愛護相關設施及珍惜水資源。是次繪畫比賽反應踴躍，公開組及中學組總共收到近900份作品。本署已於二零一四年六月假柴灣青年廣場舉行頒獎典禮，展出53幅得獎作品，並於二零一四年六月至九月期間在各區舉行巡迴展覽，展出部分參賽作品。

二零一四年
七月
July
2014

Certificate Presentation Ceremony for Water Conservation Ambassadors
保護水資源大使證書頒發典禮

The "Water Conservation Ambassadors Selection Scheme" is the highlight of the "Water Conservation Starts from Home" promotional campaign. This scheme encourages youngsters to cherish water resources and educates them on reminding their classmates, family members and friends to participate in water conservation. The ambassadors are selected based on their achievement in conservation evaluated using the data submitted by the students, viz the number of household members and their domestic water consumption. Over 4,500 students from 35 primary schools have participated in this year's scheme. The "Certificate Presentation Ceremony for Water Conservation Ambassadors" was held in July 2014 at Youth Square, Chai Wan and 523 certificates were awarded in the event. Since the launching of the scheme in 2009, the WSD has awarded a total of nearly 2,800 certificates to students up to date.

「保護水資源大使選拔賽」為「節約用水 – 從家開始」宣傳活動的重點，鼓勵青少年珍惜水資源，教導他們提醒身邊的同學、家人及朋友一起節約用水。大使選拔以學生提交的家庭成員人數及家庭用水量數據為基礎，評估參賽者的節約成果。來自35所小學的4,500多名學生參加了本年度的比賽。本署已於二零一四年七月在柴灣青年廣場舉行「保護水資源大使證書頒發典禮」，共有523名人士獲頒證書。自二零零九年比賽開始至今，水務署已向近2,800名人士頒發證書。

二零一四年
八月
August
2014

"Quality Water Recognition Scheme for Buildings" and "Flushing Water Plumbing Quality Maintenance Recognition Scheme" Certificate Presentation Ceremony
「大廈優質供水認可計劃」及「沖廁水系統優質維修認可計劃」證書頒發典禮

The certificate presentation ceremony for the Quality Water Recognition Scheme for Buildings (QWRSB) and Flushing Water Plumbing Quality Maintenance Recognition Scheme (FWPQMRS) was held in August 2014 to recognise the efforts of property owners, owners' corporations, property management companies, and other related entities concerning proper maintenance of their fresh water and flushing water plumbing systems. By the end of July 2014, 3,888 certificates had been issued under the QWRSB and nearly 1,000 certificates had been issued under the FWPQMRS.

本署於二零一四年八月舉行「大廈優質供水認可計劃」及「沖廁水系統優質維修認可計劃」證書頒發典禮，以表揚業主、經營者、樓宇管理公司及其他相關團體在妥善維修樓宇食水及沖廁水系統方面所作出的努力。截至二零一四年七月底，「大廈優質供水認可計劃」已發出3,888張證書，而「沖廁水系統優質維修認可計劃」亦已發出近1,000張證書。

二零一四年
九月
September
2014

Water Supplies Seminar
水務講座

To enhance communications with members of the public, a water supplies seminar is held annually to exchange views and ideas on water quality and water supply services. This year's gathering focused on the "WSD Mobile App", "Flushing Water Plumbing Quality Maintenance Recognition Scheme & Maintenance and Repair of Inside Service", and "Voluntary Water Efficiency Labelling Scheme on Flow Controllers".

為加強與公眾的溝通，本署每年均會舉辦水務講座，藉此聆聽廣大市民對水質及供水服務的意見，並與業界作更緊密交流。是次講座的重點為「水務署流動應用程式」、「沖廁水系統優質維修認可計劃與內部供水系統保養及維修」及「自願參與用水效益標籤計劃 — 節流器」。

二零一四年
十月
October
2014

ECO Expo Asia 2014
國際環保博覽 2014

The WSD took part in ECO Expo Asia 2014, the international trade fair on green technologies hosted by the Hong Kong Trade Development Council (HKTDC) and co-organised by the Environment Bureau. At this event, the WSD promoted its Voluntary Water Efficiency Labelling Scheme (WELS) to businesses, public institutions and non-governmental organisations. More than a thousand visitors attended the 4-day trade fair.

本署透過參與由香港貿易發展局主辦，環境局協辦的環保科技國際商貿展覽 —「國際環保博覽2014」，向商界、公共機構及非政府機構人士推廣自願參與的「用水效益標籤計劃」。為期四天的博覽會吸引了過千人士到場參觀。

Advisory Committee on Water Resources and Quality of Water Supplies's (ACRQWS) visit to Guangdong
水資源及供水水質事務諮詢委員會（水諮會）廣東之行

Members of the ACRQWS visited Guangdong to inspect the Dongjiang water supply system and noted that the Guangdong authorities have continued to introduce measures to adequately safeguard the Dongjiang water supply and keep it free from contamination.

水諮會成員前往廣東視察東江供水系統，並注意到廣東省當局持續推行各項措施充分保護東江供水，確保水源並無污染。

二零一四年
十一月
November
2014

Annual Outing
年度郊遊

Over 200 staff and their families participated in the 2-day annual outing in Dongguan, during November.

逾200名員工及其家屬參加為期兩天的東莞年度郊遊活動。

Water Conservation Forum for Hotel and Catering Industries
酒店業及飲食業節約用水研討會

Hotels and catering are two industries conspicuous for their high water consumption. For this reason the WSD fully supported the Advisory Committee on Water Resources and Quality of Water Supplies (ACRQWS) in organising a discussion forum for these two particular sectors in order to provide a platform for industry practitioners to share their experiences and explore current best practices with respect to water usage management, water-saving measures, water-saving system design and technology and other issues to help promote a mindset of water conservation.

酒店業及飲食業一向屬高用水量的行業，因此，水務署全力支持水資源及供水水質事務諮詢委員會（水諮會）舉辦是此研究會，為業界提供一個平台以交流酒店業及飲食業在用水管理、節水措施、節水系統設計及技術等之經驗及心得，進一步推動節約用水的意識。

二零一四年
十二月
December
2014

Launching Ceremony for e-bill Service cum World Water Monitoring Challenge
「電子帳單服務」啟動典禮暨世界水質監測挑戰

In order to spread the message about the indispensable relationship between water conservation and environmental protection, the "Simplified e-Bill Service cum World Water Monitoring Challenge" was held at the Ma On Shan Water Treatment Works. Enhancing the e-Bill Service to promote reduction of paper consumption minimises water and electricity consumption as well as waste water generated during the process of paper production.

The World Water Monitoring Challenge was held at the same venue. This event helped raise students' awareness about protecting water resources. 50 participating students from four secondary schools were invited to carry out tests of the raw water quality at the Ma On Shan Water Treatment Works.

為傳達節約用水與環境保護之間密切關係的訊息，「電子帳單服務」簡化版啟動典禮暨「世界水質監測挑戰」假馬鞍山濾水廠舉行。透過優化電子帳單服務，在推廣節約用紙之餘，同時減少在製造紙張過程中所耗用的水和電及所產生的污水。

同場舉行的世界水質監測挑戰，邀請來自4間中學的50名中學生測試馬鞍山濾水廠的原水水質，藉此提高學生對保護水資源的意識。

二零一五年
一月
January
2015

The 71st Customer Liaison Group Meeting
客戶聯絡小組第71次會議

The 71st meeting of the CLG was held in January 2015 at the Ma On Shan Water Treatment Works (MOSWTW). Following a guided tour to the MOSWTW, a presentation was given to members about the installation of Fresh Water Cooling Towers (FWCTs) and the simplified E-bill Services.

客戶聯絡小組第71次會議於二零一五年一月假馬鞍山濾水廠舉行。馬鞍山濾水廠導賞參觀後，本署向成員簡介安裝淡水冷卻塔及「電子帳單服務」簡化版。

二零一五年
二月
February
2015

The 12th Green Carnival 2015 cum The 14th Creative Eco-model Tournament
第十二屆環保嘉年華2015暨第十四屆環保創意模型設計比賽

"The 12th Green Carnival cum the 14th Creative Eco-model Tournament" organised by the Green Council were held at the Kowloon Park Piazza in Tsim Sha Tsui on 1 February 2015. The double event celebration actively called on the public to begin adopting a more eco-friendly lifestyle. More than twenty game booths were set up at the venue to educate the public on environmental protection issues. The WSD also parked the "Let's Save 10 Litres Water" Mobile Showroom at the venue to promote water conservation to the public in more interactive and interesting ways.

由環保促進會舉辦的「第十二屆環保嘉年華暨第十四屆環保創意模型設計比賽」於二零一五年二月一日假尖沙咀九龍公園廣場舉行。兩項慶祝活動積極呼籲市民採納更環保的生活方式。現場設置二十多個攤位遊戲，向公眾教育環保。水務署亦安排了「齊來慳水十公升」的流動展覽車停泊場內，以輕鬆互動的手法向公眾帶出節約用水的訊息。

二零一五年
三月
March
2015

The 5th Walk for Living Water
第五屆「活水 • 行」

The 5th Walk for Living Water organised by the Amity Foundation was held on 14 March 2015 in Shatin. This event successfully raised funds for the building of water systems in water-deprived mountain areas of Mainland by requiring participants to experience the heavy burden of carrying water-filled buckets every day. At the same time, this event helped promote public awareness about the world's water crisis. Apart from having teams to participate in this event, the WSD also arranged a game booth at the carnival to promote water conservation.

由愛德基金會主辦的第五屆「活水 • 行」，於二零一五年三月十四日於沙田圓滿舉行。是次活動讓參與者體驗每日擔水步行，為中國缺水山區建造食水系統而籌款，同時提高市民對全球水危機的意識。水務署除派出隊伍參與外，亦為活動的嘉年華設置遊戲攤位，向市民推廣節約用水。

Hong Kong Water Race 2015
「香港水足印定向2015」

The "Hong Kong Water Race 2015" organised by the Wofoo Social Enterprises and co-organised by the WSD was held at the Kai Tak Development Site on 22 March 2015. The event served as a way of promoting the concept of 'water footprint' to the public and helped spark greater awareness of water conservation by means of city orienteering. The event has received an overwhelming positive response in the past three years and attracted more than 3,300 participants in 2015.

由和富社會企業主辦及水務署協辦的「香港水足印定向2015」於二零一五年三月二十二日在前啟德機場跑道舉行。此活動旨在透過城市定向比賽形式，讓市民認識水足印的概念及加強節約用水意識。活動舉行三年以來一直獲得市民踴躍支持，二零一五年便有逾3,300名選手參與。

Chinese New Year Carnival
新春嘉年華

For the first time, staff and their families celebrated the Lunar New Year at a carnival in a waterworks Installation (rooftop of a service reservoir), featuring game stalls, a lion dance as well as magic shows and martial arts performances.

本署員工及其家屬首次於水務設施（配水庫頂部）舉行的嘉年華中歡度新春，節目包括遊戲攤位、舞獅、魔術表演及武術表演。

Commissioning of Salt Water Supply System for the Northwest New Territories cum ISO 50001 Certificate Presentation Ceremony
新界西北區海水供水系統啟用暨ISO50001證書頒發典禮

The Salt Water Supply System for the Northwest New Territories of the WSD supplies seawater to Tuen Mun East, Yuen Long and Tin Shui Wai for toilet flushing in order to save precious fresh water resources. To celebrate the commissioning of the system, the WSD organised a "Commissioning of Salt Water Supply System for Northwest New Territories cum ISO 50001 Certificate Presentation Ceremony" in March 2015 at Lok On Pai Salt Water Pumping Station in Tuen Mun. The Secretary for Development, Mr Paul Chan, and the Director of Water Supplies, Mr Enoch Lam, officiated the joint-ceremony.

A representative from the British Standards Institution presented the International Organization for Standardisation (ISO) 50001 certificate for energy management systems to the WSD during the joint-ceremony to signify that WSD was the first government department to be awarded with the certificate, demonstrating the department's achievement of higher standard in energy management.

新界西北區海水供水系統旨在為屯門東區、元朗及天水圍一帶人口提供海水作沖廁用途，從而節省珍貴的淡水。為慶祝系統正式啟用，水務署於二零一五年三月假屯門樂安排海水抽水站舉行「新界西北區海水供水系統啟用暨ISO50001證書頒發典禮」，並邀請了發展局局長陳茂波及水務署署長林天星到場主持啟用儀式。

典禮當日，英國標準協會代表亦到場向水務署頒發國際標準化組織ISO50001能源管理證書，讓水務署成為首個獲頒此證書的政府部門，彰顯本署在能源管理方面的高標準。

署長的話

Director's Statement

開拓水資源，培養市民的節水意識，
是我們應對氣候變化挑戰的方法。
We're meeting the challenges
of climate change by exploiting
new water resources and
fostering a community-wide
mindset of water conservation.

林天星工程師，JP
Ir LAM Tin Sing, Enoch, JP
水務署署長
Director of Water Supplies

全面水資源管理策略

我們於二零零八年推出突破性的*全面水資源管理策略*，旨在全方位管理水資源，達致供水與可持續用水需求的平衡，並為本港做好準備，以應對全球氣候變化帶來的不確定因素。有關策略主要著重控制本地用水需求的增長，以及加強整體供水管理。有關策略實施以來，大大提高了本港的用水安全及可靠度。

我們在現有的成果上建立基礎，繼續根據全面水資源管理策略實行各項措施，為提升策略，我們已開始進行詳細檢討，加強我們的適應能力，為不確定因素及挑戰作周全準備。全面水資源管理策略及現行的相關措施有助我們建立由多種水源組成的供水結構，包括本地集水、輸入東江水、沖廁用海水、海水化淡、洗盥污水再造及雨水收集和再造水。這六個供水來源將令香港水資源更為安全、可靠及穩健。

Total Water Management Strategy

Beginning in 2008, we initiated a ground-breaking strategy called – *Total Water Management* (TWM) in order to manage all aspects of water resources to achieve an optimal balance between water supply and demand for sustainable use of water resources and to better prepare the Territory for future uncertainties resulting from global climate change. This TWM strategy focuses primarily on curbing the growth of local water demand and strengthening overall water supply management. Since its inception, TWM has made good contribution towards water security and reliability for the Territory.

Building on successes we've achieved to date, we will continue implementing the initiatives under the TWM strategy and have embarked on a comprehensive review with a view to updating the TWM strategy for strengthening our resilience while staying fully prepared against any uncertainties and challenges. The TWM strategy and its on-going initiatives are moving us towards a water supply structure that comprises multi-faceted sources, including local yield, imported Dongjiang water, seawater for flushing, desalinated water, recycled grey water and rainwater harvesting as well as reclaimed water. These six water supply sources will be the pillars that altogether support Hong Kong's enhanced water security, reliability and resilience.

水資源

東江水

本港食水資源從收集雨水所得，但集水設施的收集量不能滿足香港所需。同時，由於每年降雨量的差異，本地集水量並不穩定。目前，東江水佔香港食水供應量約七至八成，填補了本地集水不足帶來的缺口。因此，保證東江供水穩定可靠是確保香港用水安全的關鍵。

香港與廣東省相關部門新訂二零一五年至二零一七年的東江供水協議。本署根據最新的食水需求預測進行了詳細分析，預計在供水可靠度達99%的情況下，二零一五年至二零一七年的未來三年，香港每年對東江水的需求量不會超過8.2億立方米。這意味著即使在百年一遇的極端乾旱環境下，香港仍可維持全天二十四小時供水。新訂協議的年度供水上限8.2億立方米將有助維持香港供水的可靠性。

Water Resources

Dongjiang Water

Our local fresh water resources are the result of rainfall capture, but the yield collected from local catchment facilities is not adequate to meet all of Hong Kong's needs. The amount of local yield is also unstable due to fluctuations in yearly rainfall totals. Dongjiang (DJ) water, which now provides between 70% to 80% of our fresh water supply, is able to fill the gap arising from our inadequate local yield. Therefore, a reliable and stable DJ water supply arrangement is essential to ensure water security for Hong Kong.

A new agreement for the supply of DJ water has been concluded with the Guangdong (GD) authorities, covering the 2015-2017 period. The Department has carried out a detailed analysis based on the latest fresh water demand forecast and estimated that the annual requirement for DJ water over the coming three years 2015 to 2017 will not exceed 820 million cubic metres (mcm) with a 99% reliability of water supply. This means that the water supply will be maintained around-the-clock even under the most extreme drought conditions, an event that occurs once in 100 years. The annual supply ceiling of 820 mcm under this new agreement would help maintain the reliability of our water supply in Hong Kong.

東江輸水管道
Raw Water Supply Pipeworks from Dongjiang

東江供水協議簽約儀式
Signing Ceremony for Dongjiang Water Supply Agreement

擴大海水供應系統

為節約食水資源，自一九五零年代起，我們便因應南中國海的地利，使用海水沖廁。目前，海水供應覆蓋率約為全港總人口的八成。

我們已啟動新界西北海水供應計劃，將海水供應系統擴大至屯門東、元朗及天水圍所有供水系統。而薄扶林亦納入其中，如此一來，海水供應系統覆蓋率將由香港總人口的八成增至八成半。本署在上述地區迅速推進以海水代替食水沖廁的工程，同時將繼續實施擴大計劃，在大嶼山東涌安裝海水供應系統。

Expansion of the Salt Water Supply System

To help save fresh water resources, we have long taken full advantage of our geographic proximity to the South China Sea by using salt water for toilet flushing since the 1950s. The current salt water supply coverage is about 80% of the total population in Hong Kong.

We have launched the New Territories Northwest Salt Water Flushing Supply Scheme to expand our salt water supply system to cover completion of supply systems in Tuen Mun East, Yuen Long and Tin Shui Wai. Together with the extra expansion to Pok Fu Lam, this will help increase the salt water supply coverage from 80% to 85% of the total population in Hong Kong. While conversion of consumers' flushing supply from existing fresh water supplies to salt water in these areas continues apace, we will move forward with our expansion plan for a salt water supply system in Tung Chung in Lantau Island.

建議興建海水化淡廠位置
Site of Proposed Desalination Plant

海水化淡

氣候變化可能影響香港的供水安全，因此我們應用先進的逆滲透技術，開始在將軍澳興建海水化淡廠。我們的初步研究已確認有關項目的技術及環境可行性。二零一五年六月，我們獲立法會批准撥款，聘請顧問繼續進行項目設計。我們致力推展有關項目，以期能盡早於二零一七或一八年開始化淡廠的施工。化淡廠的目標產量預期可滿足香港約半成的食水需求，日後產量可擴大至滿足本港約一成的食水需求。

Seawater Desalination

To counter the possibility that climate change could disrupt the security of our water supply in Hong Kong, we have embarked on the construction of a desalination plant in Tseung Kwan O, using advanced reverse osmosis technology. Our preliminary studies have confirmed the technical feasibility and environmental viability of the project and in June 2015, we obtained the Legislative Council's approval for funds to employ consultants to proceed with the design of the project. We aim to commence the construction of the plant early by 2017 or 2018. The target output of the plant is expected to meet about 5% of the fresh water demand in Hong Kong with provisions for expanding its capacity in the future to meet about 10% of the Territory's total water needs.

署長的話

Director's Statement

再造水

為尋求新的水資源，我們仔細研究了再造水（即經處理的污水）的用途。

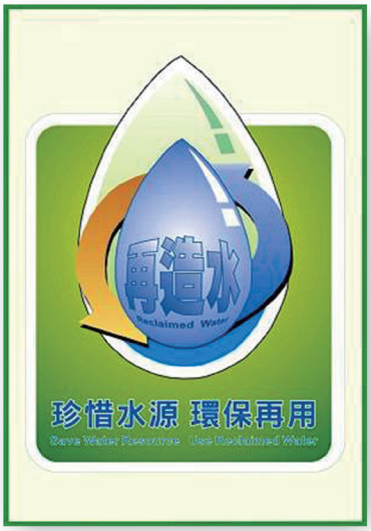
我們致力推廣使用污水經處理後所得的再造水，為此，我們著手設計所需基建，向新界東北提供再造水作沖廁及其他非飲用用途。再造水供應將分階段進行，暫定於二零二二年開始向上水、粉嶺和古洞北供水。本署估計，上述地區全面使用再造水供應系統後，每年將節約食水2,100萬立方米。海水及再造水供應網絡將合共為大概九成的人口提供沖廁用水，而使用食水沖廁的人口將減少至一成。

洗盥污水再造及雨水收集

本署致力使用再造洗盥污水及雨水，以補充水資源。有見及此，發展局及環境局聯合發佈最新技術通函，載列政府大樓使用再造洗盥污水及收集所得雨水的詳細指引。

除政府大樓外，我們亦計劃展開一項試驗計劃，在安達臣道石礦場的發展項目供應再造洗盥污水作沖廁用途。我們將繼續與相關政府部門緊密合作，為安達臣道石礦場發展區的洗盥污水再造廠規劃作出定案，並於二零一六年底前開始進行勘察及詳細設計。

Water Reclamation



To secure new water resources, we have closely studied the use of water reclamation, i.e. water derived from treated sewage effluent.

Our efforts at introducing greater use of reclaimed water from treated sewage effluent have led us to begin designing the infrastructure necessary for supplying this type of water resource to the northeast New Territories (NENT) for toilet flushing and other non-potable uses. Reclaimed water supplies will be commissioned in phases, tentatively starting from 2022, for supply to Sheung Shui, Fanling and Kwu Tung North. We estimate fresh water savings of 21 million cubic meters every year after full commissioning of the reclaimed water supply system to the above noted areas. Both the seawater and reclaimed water networks together will provide flushing water to about 90% of the population and the population using fresh water for flushing will be reduced to 10%.

Grey Water Recycling and Rainwater Harvesting

The Department has made dedicated effort to making use of recycled grey water and rainwater as supplementing water resources. With this in mind, the Development Bureau (DEVB) and Environment Bureau (ENB) have issued an updated joint technical circular that sets out more detailed guidelines on using recycled grey water and rainwater harvesting in government buildings.

In addition to government buildings, we have also begun planning a pilot scheme to supply recycled grey water for flushing purposes in developments at the Anderson Road Quarry. We will continue to work closely with all relevant government departments to finalise the scheme layout for a grey water recycling plant in the Anderson Road Quarry development and take it forward to the investigation and detailed design stage by end 2016.

培養節水意識

「齊來慳水十公升」運動

「齊來慳水十公升」運動於二零一四年三月展開，而官方啟動儀式於二零一四年五月十七日假尖沙咀香港文化中心露天廣場舉行。活動旨在鼓勵公眾簽署「節水宣言」，身體力行節約用水，監察自己的節水表現。每個參與家庭均可免費獲贈節流器一對。公眾對是次活動反應熱烈，截至二零一五年三月，我們已向逾130,000個參與家庭派發節流器。

Fostering a Mindset of Water Conservation

"Let's Save 10L Water" Campaign

The "Let's Save 10L Water" Campaign was unveiled in March 2014 and an official launch ceremony took place on 17 May 2014 at the Piazza of the Hong Kong Cultural Centre at Tsim Sha Tsui. The aim of this campaign is to encourage the public to implement water saving practices and monitor their own water saving performance by signing a "Water Conservation Declaration". Each participating household would be entitled to receiving a pair of complimentary flow controllers to help them conserve water. This campaign has received an overwhelming response from the public and as of March 2015, complimentary flow controllers had already been delivered to over 130,000 participating households.

署長的話

Director's Statement

節約用水校園

我們一直認為，早期教育有效引導年輕一代養成良好的長期節水習慣。我們亦發現，與學校緊密合作是向學生推廣節水文化的重要策略。為此，我們與多間小學合作，推出全新「節約用水整合式教育計劃」，將學校現有活動結合新措施，讓可持續的節水概念成為學校的主要教育範疇之一。

Cherish Water Campus

All along we understand that early education is an effective means to inculcate the younger generation about adopting good water saving habits that will last for a lifetime. We have also seen the strategic importance of working in close partnership with schools to promote water conservation culture amongst the students. Against this, we have in collaboration with the primary schools developed a new "Integrated Education Programme on Water Conservation (IEP)" that consolidates existing school activities and combines them with new initiatives to keep the concept of sustainable water conservation a key area of study in schools.

活水行
Walk for Living Water

香港水足印定向
Hong Kong Water Race 2015

酒店業及飲食業節約用水研討會
Water Conservation Forum for Hotel and Catering Industries

與非政府組織合作

為提高公眾的節水意識，本署亦與非政府組織建立合作關係。其中，我們與和富社會企業合辦「香港水足印定向」比賽，每年吸引逾3,000名參賽者。我們亦協助愛德基金會舉辦一年一度的「活水行」活動，並幫助世界自然基金會推廣「STEP可持續生活模式教育計劃」，以豐富小學生的節水知識。

除上述合作項目外，我們亦進行用水效益審查，並為酒店及餐飲業等主要耗水商戶制訂最佳實務指引。為協助這些行業，本署與餐飲及酒店業的持份者合作，於二零一四年十一月二十五日舉行特別論壇，分享上述主要行業實行最佳實務及節水措施的經驗。

Cooperation with Non-governmental Organisations

We have also established cooperative ventures with non-governmental organisations (NGO) to raise public awareness of water conservation. Amongst others, we work closely with Wofoo Social Enterprises in organising the "Hong Kong Water Race" in which over 3,000 participants take part each year. We also support the Amity Foundation's annual "Walk for Living Water" event, and assist World Wildlife Fund (WWF) Hong Kong in promoting their "STEP – Sustainable Lifestyle Target Education Programme", which aims to enhance primary students' knowledge about water conservation.

Apart from the above, we as well conduct water efficiency audits and develop best practice guidelines for major high water-consuming commercial operations including hotel and catering. To help support these sectors, the WSD collaborated with the catering and hotel industry stakeholders and held a special forum on 25 November 2014 to share experiences about implementing best water use practices and water conservation measures in across these key industries.

署長的話

Director's Statement

水資源教育中心

自二零一二年十二月起，本署在旺角設立臨時水資源教育中心，透過展覽、即場示範和互動遊戲加深年輕人對節水的認識。截至二零一四年底，中心吸引了近16,000名訪客，當中以學生為主。根據我們的調查，訪客中有86%的學生及99%的教職員和父母認為，參觀有利於提高他們的節水意識。我們暫定於二零一八年底在天水圍新的水務署大樓設立永久的水資源教育中心。新中心面積為旺角臨時中心的三倍，能讓我們提供更豐富的水資源內容給廣泛的訪客。

Water Resources Education Centre

We have been running a temporary Water Resources Education Centre in Mong Kok since December 2012 to enhance young people's knowledge about water conservation through the use of exhibits, live demonstrations and interactive games. By the end of 2014, the Centre has received nearly 16,000 visitors, mostly students. Based on our survey, 86% of students and 99% of teaching staff and parents who visited the Centre considered the visits to be beneficial in raising their awareness of water conservation. A permanent centre will be accommodated in a new WSD building in Tin Shui Wai by the end of 2018 tentatively. The new premises for the Centre will triple the size of the temporary cente in Mong Kok and is specially designed with enhanced contents on water resources and cater for a wider spectrum of visitors.

社區推廣

除在全港學校及其他行業推廣節約用水外，本署亦推出新活動，從教育機構走向廣泛社區。

為使香港大眾深入了解節水的有效方法，我們建立了靈活的巡迴展覽平台，派出水務署流動展覽車定期穿梭各區，舉行多個趣味互動展覽。二零一三年十一月至二零一五年二月，兩部流動展覽車已到訪全港各區共200個屋苑。

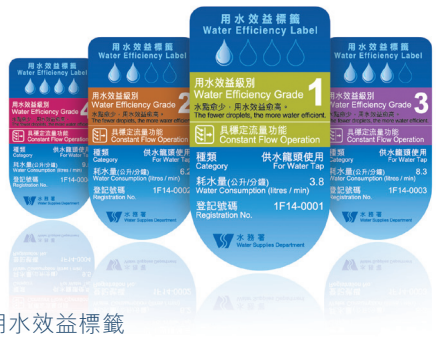
Promotions Extended to the Community

Building on our promotions of water conservation in schools and other sectors throughout the Territory, the WSD has also started initiating activities that now go beyond educational institution out to the wider community at large.

硬件應用

我們亦致力推廣使用水龍頭及花灑節流器等硬件減低耗水量。二零一四年八月起，我們推動了一系列項目，為公共屋邨、政府大樓及學校安裝節流器。截至二零一五年九月底，我們在20個公共屋邨、1,000座政府大樓及250間中小學及大專院校安裝超過80,000個節流器。

我們亦推行了「自願參與用水效益標籤計劃」，向消費者說明常見水管設備及耗水設備的效益，協助他們選擇最佳節水產品。現時本署已就五類相關產品推行張貼標籤計劃申請，包括淋浴花灑、水龍頭、洗衣機、小便器和節流器。我們正研究強制新建樓宇選用具用水效益的水龍頭和花灑等設備的可行性。



用水效益標籤
Water Efficiency Labels

智慧城市

智管網

本署計劃透過在供水網絡的區域檢測區及部分區域檢測區內的相關水壓管理區分階段安裝監控及感應設備，在本港建立智管網，讓我們以最有效、高效能及可持續的方式持續監控、管理、運營及維護網絡。

So that general Hong Kong residents can gain a deeper insight into how to better conserve water, we have set up an easily accessible roving exhibition platform by means of the WSD Mobile Showrooms that make regular visits from district to district and feature a host of interesting interactive exhibits. From November 2013 to February 2015, two Mobile Showroom vehicles had made stops in every district throughout Hong Kong, visiting a total of 200 housing estates.

Application of Hardware

We have also dedicated efforts on the application of hardware like flow controllers on water taps and showers to help reduce water consumption. Since August 2014, we have initiated a series of programmes to install flow controllers in public rental housing estates, government buildings and schools. By the end of September 2015, we have installed over 80,000 flow controllers in 20 public housing estates, 1,000 government premises and 250 schools and tertiary educational institutions.

We have also implemented the Voluntary Water Efficiency Labelling Scheme to advise consumers about the efficiency of common types of plumbing fixtures and water-consuming appliances in order to help them make the best product choices for water conservation. To date, the WSD has launched the scheme for five types of water devices for registration, namely showers for bathing, water taps, washing machines, urinal installations and flow controllers. We are now studying the option to mandatory use of water efficient appliances such as water taps and showers to be installed in new buildings.

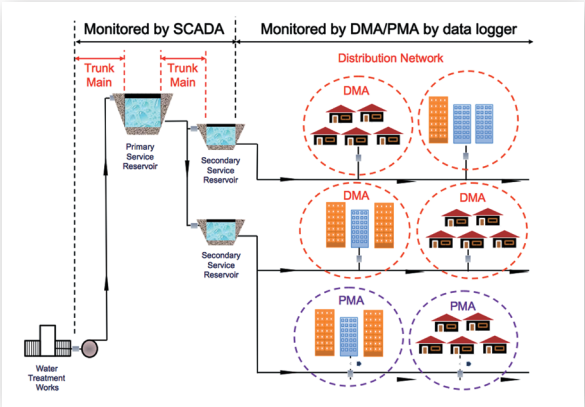
Smart City

Water Intelligent Network (WIN)

We plan to establish a Water Intelligent Network (WIN) in Hong Kong through installation in phases of network monitoring and sensing equipment within District Metering Areas (DMAs) and associated Pressure Management Areas (PMAs) in some DMAs in the water supply network. This will enable the network to be continuously monitored, managed, operated and maintained in the most effective, efficient and sustainable way.

署長的話

Director's Statement



我們將設立約2,000個區域檢測區／水壓管理區，用作智能管網監察。監控及感應設備所收集的數據將用作決定最有效的網絡管理方法，以維持整體運作穩健。

智能用水

為積極響應政府將香港建設成環保及善用資源城市的新措施，我們推出了智能水錶項目。

智能水錶自動提供實時讀數及過往用水記錄，有助改善供水規劃及管理。此外，智能水錶的用戶將可透過互聯網或手機應用程式查詢耗水量，有助他們養成良好的節水習慣及修理滲漏。

推廣此項技術的過程中，我們進行了試驗研究並確定所有相關技術要求。我們致力於新建樓宇安裝智能水錶，首批安裝區域為包括啟德在內的安達臣道及九龍東發展區。

林天星工程師，JP
水務署署長

二零一五年十月十五日

A total of nearly 2,000 DMA/PMAs will be established to enable intelligent network performance monitoring. Data collected from the monitoring and sensing equipment will be used to determine the most effective network management measures in order to maintain its overall operational health.

Smart Meter

In order to actively respond to the government's latest initiative to develop Hong Kong into a green and resource-efficient city, we have put forward a Smart Metering Initiative.

Smart metering provides automatic and essentially real-time reading of water meters and historical consumption data to enable better planning and management of water supplies. It also supplies consumption data that can be made available to consumers through the Internet or a mobile phone app for their reference to help them establish good water conservation habits and rectify inside service leakage.

As we move forward with this technology, we have conducted a pilot study and established all the technical requirements. We aim to install smart water meters in new building sites, the first of which will be the Anderson Road and Kowloon East development including Kai Tak area.

Ir LAM Tin Sing, Enoch, JP
Director of Water Supplies

15 October 2015

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助理署長／發展
Assistant Director/
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Assistant Director/
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林天星工程師 , JP
Ir LAM Tin Sing, Enoch, JP
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梁永廉工程師 , JP
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Assistant Director/
New Works

李尹璇先生
Mr LI Wan Suen, Clement
部門秘書
Departmental Secretary

主要工作表現指標

Key Performance Indicators

指標 Indicators	財政年度（百分比）Financial Year (Percentage) 12/13	13/14	14/15
食水水質 – 上至供水接駁位置 [100%符合世界衛生組織在2011年制定的《飲用水水質準則》#] Fresh Water Quality – up to the connection points [100% compliant with WHO's "Guidelines for Drinking-water Quality"(2011#)]	100	100	**100**
鹹水水質 – 上至供水接駁位置 [96%符合水務署所定的水質指標] Salt Water Quality – up to the connection points [96% compliant with WSD Water Quality Objectives]	符合指標 complied with	符合指標 complied with	**符合指標 complied with**
食水供水水壓（15至30米）λ Fresh Water Supply Pressure (15 – 30 metres)λ	100	100	**100**
鹹水供水水壓（15米）λ Salt Water Supply Pressure (15 metres)λ	100	100	**100**

指標 Indicators	財政年度（百分比）Financial Year (Percentage) 12/13	13/14	14/15
到場處理故障投訴所需的時間 Response time for Attendance to Fault Complaints			
食水供應故障^（在半天內） Fresh Water Supply Fault^ (within half a day)	99.97	100	**100**
其他（在一個工作天內） Others (within a working day)	99.97	100	**100**
因預算進行的工程而暫停供水的時間長度（97%於八小時內） Duration of Suspension of Water Supply for Planned Works (97% within 8 hours)	符合指標 complied with	符合指標 complied with	**符合指標 complied with**
水錶準確程度@（偏差程度不超過 ±3%） Accuracy of Water Meters@ (inaccuracy not exceeding ± 3%)	96.0	96.4	**96.7**
初步回覆市民的來信（十個曆日） Interim Reply to Correspondence from the Public (10 Calendar Days)	99.9	99.96	**99.91**

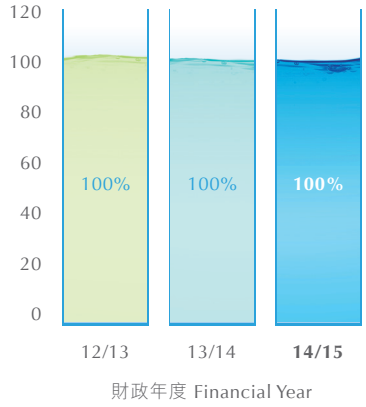
\# 已於二零一二年八月採納世界衛生組織在二零一一年制定的準則。
The 2011 WHO Guideline standards were adopted in August 2012.

λ 配水系統的最小剩餘水壓（或水壓幅度），在系統的盡頭除外。
Minimum residual pressure (or pressure range) in the distribution systems except at their extremities.

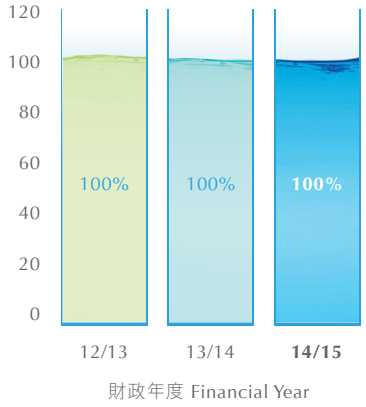
^ 包括食水供應中斷、食水受污染及內部食水管爆裂而可能導致水浸的情況。
Including cases of no fresh water supply; polluted fresh water supply; and internal fresh water pipe burst likely to cause flooding.

@ 在驗錶時，如水錶的偏差程度不超過 ±3%，水錶即視作運作正常。
Water meters are deemed to register correctly if their inaccuracy does not exceed ± 3%

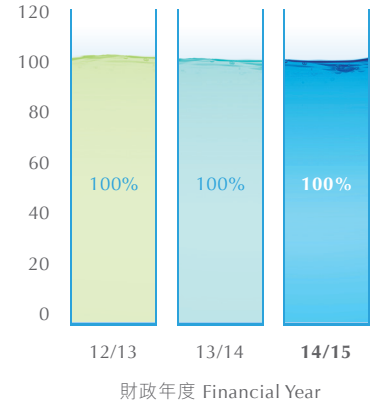
食水水質
Fresh Water Quality



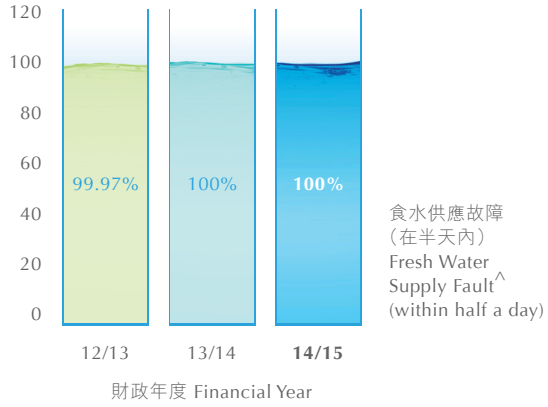
食水供水水壓
Fresh Water Supply Pressure

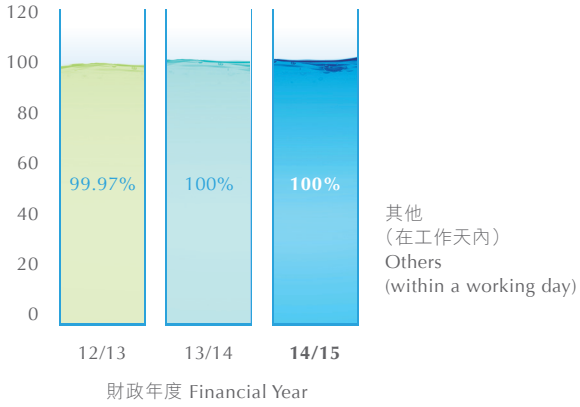


鹹水供水水壓
Salt Water Supply Pressure

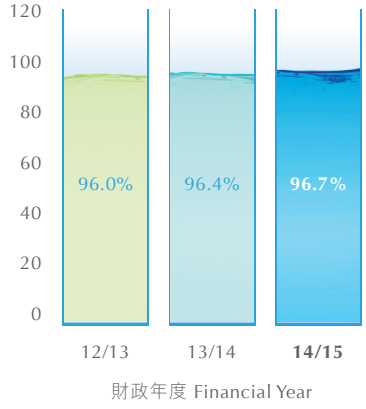


到場處理故障投訴的時間
Response Time for Attendance to Fault Complaints

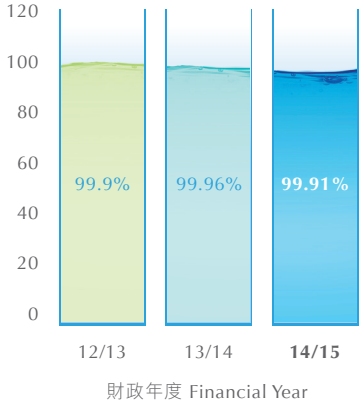




水錶準確程度
Accuracy of Water Meters



初步回覆市民的來信
Interim Reply to Correspondence from the Public



全面水資源管理策略

Total Water Management Strategy

於二零零八年發佈的「全面水資源管理策略」為我們持續使用珍貴的水資源提供堅實基礎。本署的宣傳教育活動從學校推廣至整個社區，致力促進節約用水。我們成功舉辦「齊來慳水十公升」運動宣傳節約用水，並向參與家庭派發節流器，受到市民踴躍支持。此外，本署正為已挑選的公共屋邨、政府大樓以及學校安裝節流器。除減少配水系統的用水流失、擴大海水供應系統、鼓勵污水再造及規劃海水化淡廠等持續推行的措施外，本署正實施水資源供求管理措施，幫助香港應對各種挑戰，包括人口及經濟增長導致的用水需求增加，因氣候變化影響本地及東江流域降雨量而導致乾旱風險增加及降雨量按年波幅擴大，以及面臨惠州、東莞及深圳等廣東省主要城市共4千萬人口對東江水資源的競爭。

The Total Water Management strategy released in 2008 provides a firm foundation for us to move towards sustainable use of our precious water resources. We have made great strides to promote water conservation by extending our promotional and educational activities from schools into the community at large. We successfully rolled out the "Let's Save 10L Water" campaign to promote water conservation and distributed flow controllers to participating domestic households. Apart from this scheme which has received an overwhelming response from the public, we have also commenced with the installation of flow controllers for selected public housing estates as well as government buildings and schools. Along with other on-going initiatives, including reducing water loss along the distribution system, expanding the salt water supply system, encouraging water recycling and planning for a future desalination plant, the water demand and supply management measures we are now implementing are helping Hong Kong prepare for various challenges which include increase in water demand due to population and economic growth, increasing risk of drought events and larger variability in year-to-year rainfall due to climate change which would affect the yield both locally and in the basin of Dongjiang (DJ), and competition for DJ water resources among other major cities in Guangdong, including Huizhou, Dongguan and Shenzhen, serving altogether 40 million people.

策略回顧

香港水資源正面臨上述諸多挑戰，為確保珍貴水資源的可持續使用，同時適時引入新措施加強本署的適應能力，為應對不明朗因素及挑戰做好準備，本署於二零一四年底委任顧問，對全面水資源管理策略進行檢討。檢討結果將有助我們制訂長期水資源管理策略，應對未來挑戰及不明朗因素。

Strategy Review

Hong Kong's water resources are facing a number of challenges as mentioned above. In order to ensure sustainable use of our precious water resources and to introduce in a timely manner new initiatives to strengthen our resilience and preparedness against uncertainties and challenges, we appointed consultants in late 2014 to conduct a review of our Total Water Management Strategy. The review results will help us formulate our long-term water management strategy in addressing future challenges and uncertainties.

確保長期供水安全

Securing Longer Term Water Supply

目前，香港供水系統有三個分支，包括本地集水區收集的雨水、從廣東輸入的東江水及沖廁用海水，於二零一四年分別佔12.3億立方米總耗水量的19%、59%及22%。憑藉這三個水源，香港多年來一直擁有可靠的供水。

然而，為使香港能充分應對氣候變化，人口及經濟快速增長帶來的食水需求增加，以及珠江三角洲地區水資源競爭等挑戰，本署致力透過節約用水控制用水需求增長，並探索受氣候影響較小的海水化淡及再造水作為可替代水源。隨著該等措施的推行，本署正致力建設六個分支的供水結構，該結構由現有三個來源-原水、輸入的東江水及沖廁用海水，以及三個新增來源-化淡海水、再造水和洗盥污水再造及雨水收集構成。這六個供水來源將成為提升香港供水安全及穩健度的重要支柱。

Currently, Hong Kong has a 3-pronged water supply system, comprising rainwater from local catchments, imported water from Dongjiang in Guangdong and seawater for toilet flushing. Their contributions to the total water consumption of 1,230 million cubic meters in 2014 were 19%, 59% and 22% respectively. With these three water sources, Hong Kong has been enjoying reliable water supply over the years.

Nevertheless, to better prepare Hong Kong for the challenges of climate change and the increasing demand for fresh water due to rapid population and economic growth, and competition for water resources in the Pearl River Delta region, we have been striving to contain water demand growth through water conservation and to exploit alternative water resources which are less susceptible to climate change, including seawater desalination and water reclamation. With the implementation of these measures, we are moving towards the establishment of a 6-pronged water supply structure consisting of the existing three sources – local yield, imported Dongjiang water and seawater for flushing, supplemented by three new sources – desalinated water, reclaimed water and recycled grey water and rainwater harvesting. These six water supply sources will be the pillars supporting Hong Kong with enhanced water security and resilience into the future.

確保長期供水安全

Securing Longer Term Water Supply

本地集水

集水區佔香港面積近三成，遍佈全港17個水塘。一般而言，收集的雨水大多不受污染，然而，為安全起見，本署採取額外措施，包括進行定期巡查、檢查水質及對集水區進行必要維修和清除泥石等。本地雨水收集約佔總食水用量二至三成。

擴大海水沖廁應用

除飲用水源外，本署同樣重視海水沖廁應用。二零一五年，海水供應系統在新界西北部投入使用，為屯門東、元朗及天水圍地區提供海水沖廁，使香港海水供應覆蓋率增至全港八成半人口。

Local Yield

All across Hong Kong, covering nearly 30% of the Territory, are rainfall catchment areas with 17 impounding reservoirs. In general, rainwater is largely uncontaminated. However, as additional measures for safety, the Department makes regular inspections, checks water quality, carries out necessary maintenance and removes debris in the catchwaters. Local yield generally accounts for about 20 to 30% of our total fresh water consumption.

Expansion of Salt Water Flushing Application

In addition to potable water sources, we also place great importance on the application of sea water for toilet flushing. In 2015, we commissioned the salt water supply system for the Northwest New Territories to provide seawater for flushing in the Tuen Mun Town East, Yuen Long and Tin Shui Wai areas. This marks an expansion of Hong Kong's seawater supply coverage to 85% of the population.

海水化淡

本署時刻關注與供水管理有關的事宜，並積極探討所有可行方案尋找新的水資源，以便更有效減輕氣候變化引致未能預計的影響。逆滲透原理的海水化淡技術證實可製造符合世衛《飲用水水質指引》標準的飲用水，因此本署認為海水可作為香港的可靠飲用水源。

有見及此，本署於二零一二年十二月在將軍澳第137區展開海水化淡廠的策劃及勘查研究，並於二零一五年三月底大致完成。為確保極端氣候下的可靠供水，擬建海水化淡廠的初期日均產能為135,000立方米，佔全港總食水用量約半成。並預留擴建空間，讓最終日均產能可達到270,000立方米。研究已確定整體技術的可行性，包括項目能符合環保的要求。海水化淡廠的初步設計已經完成，以最佳整體使用週期成本為重點，估計擬建海水化淡廠的單位食水生產成本約為每立方米12至13港元（按二零一三年物價水平計算），與海外採用逆滲透原理海水化淡技術生產的食水單位成本相若。本署致力推展第一階段的海水淡化廠，日均產能達135,000立方米，以期能盡早於二零一七或一八年開始施工。

Seawater Desalination

The Department is always concerned about issues surrounding water supply management, and we actively explore all viable options for obtaining new water resources that will better mitigate the unknown consequences of climate change. With proven desalination technology using reverse osmosis, which can produce potable water that complies with WHO Guidelines for Drinking-water Quality, we consider seawater as a reliable drinking water source for Hong Kong.

With this in mind, we commissioned a planning and investigation study for a desalination plant at Tseung Kwan O Area 137 in December 2012, which was largely completed at the end of March 2015. To maintain the reliability of water supply in extreme weather, the proposed desalination plant will have an initial capacity of 135,000 cubic metres per day, which is about five per cent of the fresh water consumption in Hong Kong. Provisions will be made for future expansion, allowing ultimate water production capacity to reach 270,000 cubic metres per day when necessary. The study has confirmed the overall technical feasibility including the environmental viability of the project. A preliminary design of the plant has been formulated with due emphasis on an optimal whole life cycle cost. The estimated unit water production cost of the proposed desalination plant is about $12 to $13 per cubic metre (at 2013 price levels) which is comparable with the range of overseas unit costs to produce fresh water by seawater desalination using reverse osmosis technology. We aim to commence the construction of the first stage of the plant with an output capacity of 135,000 cubic metres per day early in 2017 or 2018.

確保長期供水安全

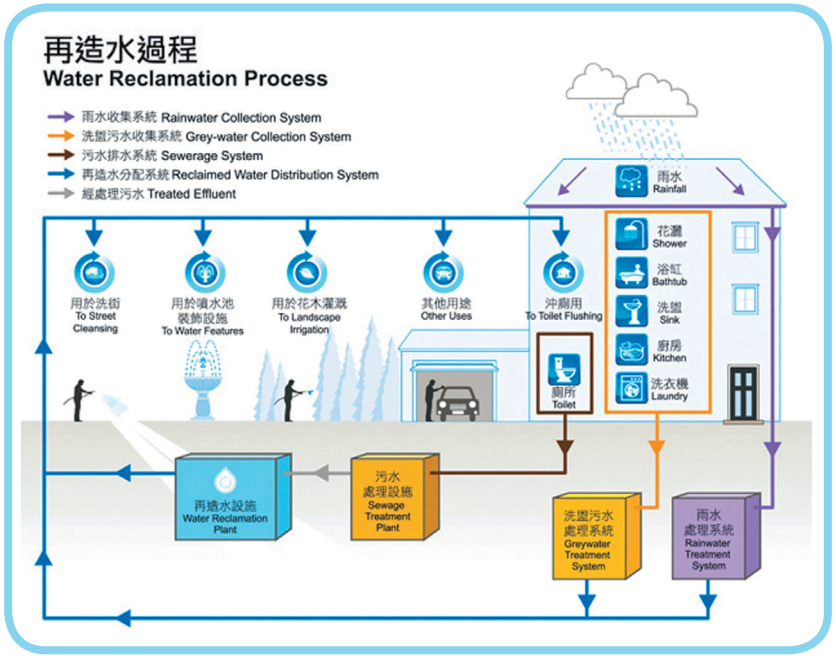
Securing Longer Term Water Supply

再造水

顧問正對再造水供應的財務及法律問題進行研究。本署亦開始分階段設計基建，並致力於二零二二年向上水、粉嶺及古洞北和粉嶺北新發展地區提供石湖墟污水處理廠經三級處理的再造水作非飲用用途。供應再造水最終可望每年為香港節省約2,100萬立方米的食水。

Water Reclamation

A study on the financial and legal aspects of reclaimed water supply is currently being undertaken by consultant. We have also started designing in phases the infrastructure and target to commence in 2022 the supply of reclaimed water converted from tertiary treated sewage effluent at the Shek Wu Hui Sewage Treatment Works to Sheung Shui, Fanling and New Development Areas in Kwu Tung North and Fanling North for non-potable applications. The supply of reclaimed water will ultimately save Hong Kong about 21 million cubic metres of fresh water each year.



洗盥污水再造及雨水收集

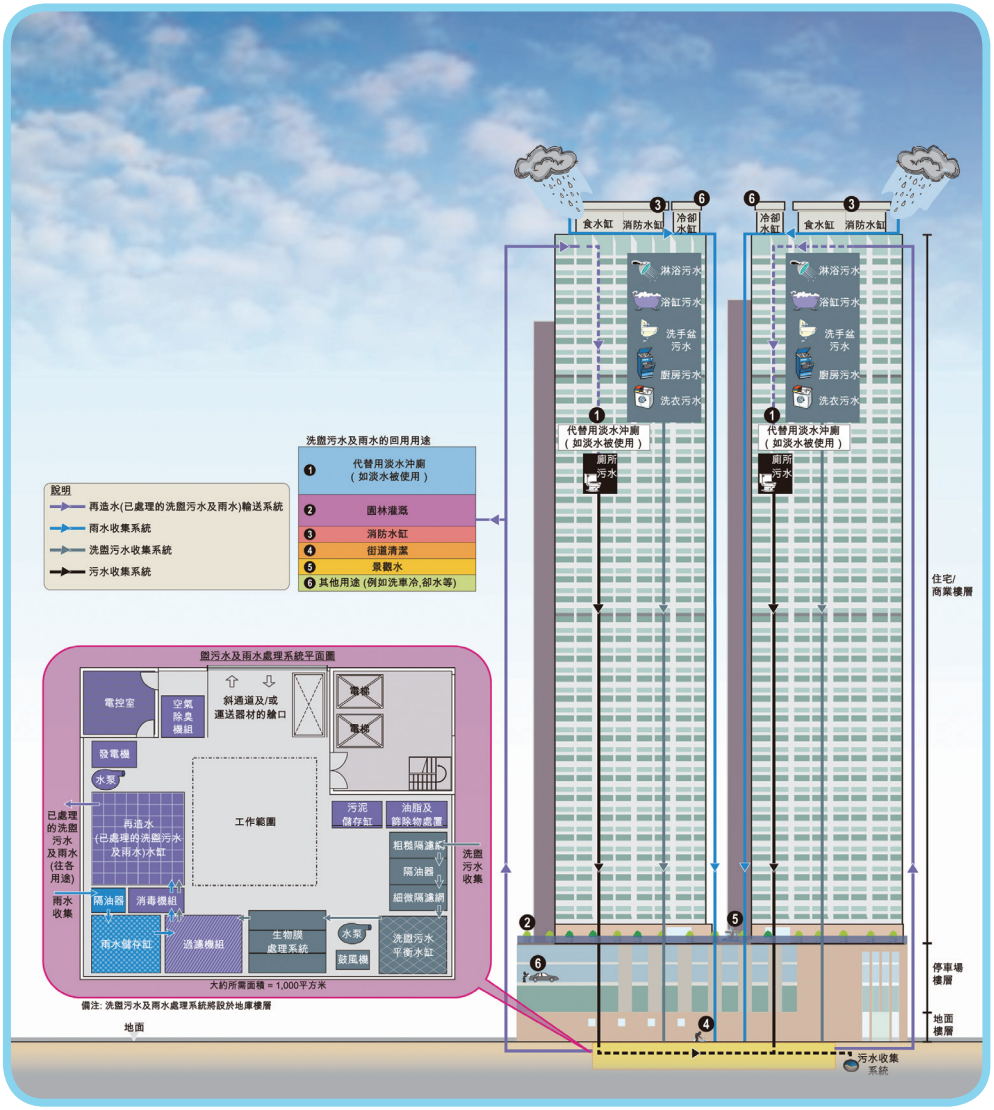
從浴室、洗手盆和廚房洗滌盆等地方收集得來質素較低的水稱為洗盥污水，洗盥污水與收集的雨水經處理後可予以重用，作沖廁及灌溉等非飲用用途。

Grey Water Recycling and Rainwater Harvesting

Lower quality water collected from baths, showers, wash basins and kitchen sinks is known as grey water. Along with harvested rainwater, these supplies can be treated and reused for non-potable purposes such as toilet flushing and irrigation.

我們已就雨水收集和洗盥污水再造系統訂立詳細指引，讓新建政府大樓在合理可行的情況下安裝處理和再造設施，通過雨水收集或洗盥污水再造系統減少以食水作非飲用用途。發展局和環境局於二零一五年四月共同發佈的環保政府大樓技術通告已納入有關指引。水務署正與相關部門通力合作，就安達臣道石礦場發展區實施中央洗盥污水再造系統試驗計劃進行可行性研究。

We have formulated detailed guidelines on the implementation of rainwater harvesting and grey water recycling systems so that new government buildings with the potential of reducing their fresh water demand for non-potable applications through rainwater harvesting or grey water recycling system will be able to install on-site treatment and recycling facilities as far as reasonably practicable. The guidelines have been incorporated in the joint Development Bureau and Environment Bureau Technical Circular in Green Government Buildings issued in April 2015. In collaboration with relevant departments, WSD is studying the feasibility of implementing a pilot scheme of centralised greywater recycling system in the Anderson Road Quarry development.



確保長期供水安全

Securing Longer Term Water Supply

供水危機管理

為確保全港供水可靠及充足，本署務須時刻作好準備應對任何影響供水的不可預見問題。為此，我們已制訂一個危機管理計劃和多個應變計劃，以隨時準備快速調配資源及協調各個緊急行動。

此外，為應對氣候變化對水資源可能產生的影響，我們已制訂一個乾旱應變計劃作為適應措施，確保用水安全，即使在嚴重乾旱情況下仍可滿足本港的基本用水需要。乾旱應變計劃旨在於本港或中國內地遭遇可能即時影響本港食水供應的嚴重旱情下，讓我們隨時準備就緒，應對緊急情況及有效調配資源。

水質及健康標準

廣東當局已採取有效措施，確保輸港的東江水水質符合《國家地表水環境質量標準》。有關措施和項目包括興建新污水處理廠、遷走具污染性的工廠和農業、鋪設專用輸水管道、東江水水量水質監察及控制系統，以及在深圳水庫設立生物硝化廠。此外，我們亦在木湖抽

Water Supply Crisis Management

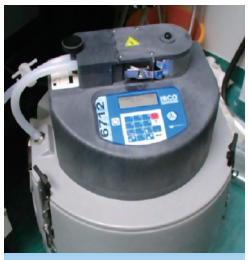
To ensure reliable and adequate water supply for Hong Kong, it is essential for the Department to prepare for any unforeseen problems in the water supply system. For this reason, we have a crisis management plan and several contingency plans drafted to maintain a state of readiness for the rapid mobilisation of resources and coordination of emergency actions.

In addition, to cater for the possible impact of climate change on water resources, a Drought Contingency Plan (DCP) is in place as an adaptive measure to ensure water security to meet the basic needs of Hong Kong in the event of a severe drought. The DCP was formulated to guarantee our readiness to respond and allow us to efficiently mobilise resources in the event of severe drought either in Hong Kong or on the Mainland, which could affect the fresh water supply in Hong Kong.

Water Quality and Health Standards

Guangdong authorities have taken effective steps to ensure that the quality of Dongjiang water that reaches Hong Kong meets all relevant national environmental quality standards. This has been achieved through a combination of measures and projects, including the construction of new sewage treatment plants, removal of polluting factories and farms, commissioning of dedicated aqueducts, the Dongjiang Water Quantity and Quality Monitoring and Control

氣味測量計
Olfactometer



斑馬魚技術探測水質
Zebrafish Method to Detect Abnormalities in Raw Water

水站設有在線*水質監察系統*，該系統透過先進的監控及資料收集系統運作，全天二十四小時密切測量輸港的東江水水質。我們繼續實施*水安全計劃*，以控制和預防從水源到配水過程中出現飲用水受污染的風險，對本港飲用水供應的水質嚴格把關，保障公眾的健康。本署亦繼續運用創新的斑馬魚技術探測輸港的東江原水的異常情況。透過密切監察斑馬魚的行為，本署能夠快速確定潛在水質問題，並採取適當應對措施。為加強水質監察，本署亦特別設計一款結合剖面感官分析簡化版技術的氣味測量計，這項內部研發的技術從味道及氣味方面進行水質評估，並快速探測水質異常情況，以便在濾水廠採取有效控制措施，確保飲用水水質達致用戶可接受水平。本署一直密切關注世界衛生組織《飲用水水質指引》的最新發展及修訂，並承諾香港飲用水符合有關標準。我們正按照世界衛生組織在二零一一年制訂的指引監測香港的食水水質。

System, and the on-going operations of the bio-nitrification plant at the Shenzhen Reservoir. Moreover, we also maintain an on-line *Water Quality Monitoring System* that runs via an advanced SCADA system at the Muk Wu Pumping Stations to closely gauge the quality of imported Dongjiang water around the clock. We continue to implement a *Water Safety Plan* to control and prevent any risks of contamination of drinking water from sources to distribution, and will diligently safeguard the quality of the drinking water supply in Hong Kong for public health protection. The Department also continues to use the innovative Zebrafish method to detect abnormalities in the Dongjiang raw water supplied to Hong Kong. By closely monitoring the behaviour of the Zebrafish , the Department can quickly spot any potential water quality problems and take appropriate countermeasures. To enhance water quality monitoring, the Department has also custom designed an olfactometer for use in conjunction with the simplified Flavour Profile Analysis, which is an in-house developed technique for taste and odour assessment in water in order to rapidly detect abnormalities for implementation of effective control measures at water treatment works to ensure that the quality of drinking water is acceptable to consumers. The Department also stays current concerning the latest developments and revisions to the Guidelines for Drinking-water Quality published by the World Health Organization (WHO) which is the standard that WSD has pledged to comply with for the drinking water in Hong Kong. Currently, we are monitoring the quality of drinking water in Hong Kong in accordance with the latest WHO's Guidelines published in 2011.

確保長期供水安全

Securing Longer Term Water Supply

二零一零年至二零一四年全年供水量

Annual Quantity of Raw Water Supply 2010-2014

百萬立方米 million cubic metres

二零一零年至二零一四年總平均日耗水量（淡水＋海水）

Total Average Daily Consumption (FW + SW) 2010-2014

百萬立方米 million cubic metres

二零一零年至二零一四年全年降雨量

Annual Rainfall 2010-2014

毫米 millimetres

註：長期平均降雨量為2,399毫米 Note : Long Term Mean Rainfall is 2,399 millimetres

二零一零年至二零一四年全年集水量

Annual Yield 2010-2014

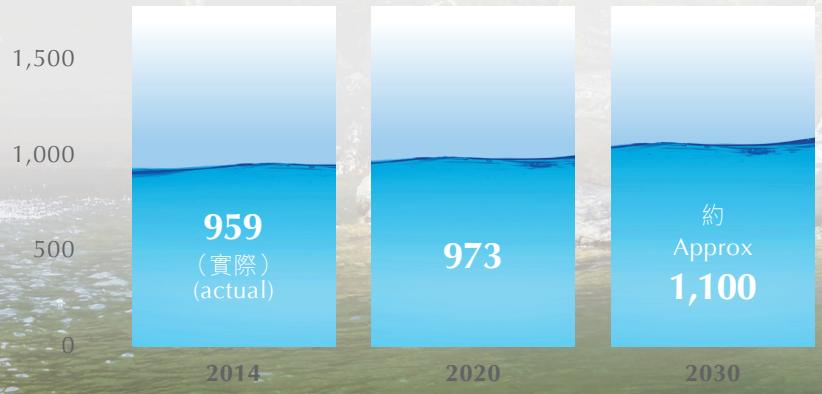
百萬立方米 million cubic metres

註：長期平均集水量為295百萬立方米 Note : Long Term Mean Yield is 295 million cubic metres

二零一五年至二零三零年食水需求預測（百萬立方米）

Fresh Water Demand Forecast Projection 2015-2030 (MCM)

預期 Forecast



確保長期供水安全

Securing Longer Term Water Supply

二零一四年按用水類別劃分的食水用量（百萬立方米）佔總量百分比

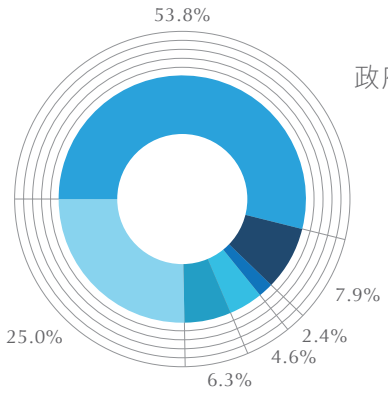
Annual fresh Water Consumption 2014 by Sectors in Million Cubic Metres (MCM) and Percentage of Total

百萬立方米 million cubic metres (mcm)

53.8%
住宅用水 Domestic
516 百萬立方米 mcm

7.9%
臨時淡水沖廁 Flushing
76 百萬立方米 mcm

2.4%
建築及船舶用水 Construction & Shipping
23 百萬立方米 mcm



4.6%
政府用水 Government Establishments
44 百萬立方米 mcm

6.3%
工業用水 Industrial
60 百萬立方米 mcm

25.0%
服務業及商業用水 Service Trades
240 百萬立方米 mcm

食水總用水量 Total Fresh Water Consumption **959** 百萬立方米 mcm

二零一零年至二零一四年全年食水用水量（按用水類別劃分）

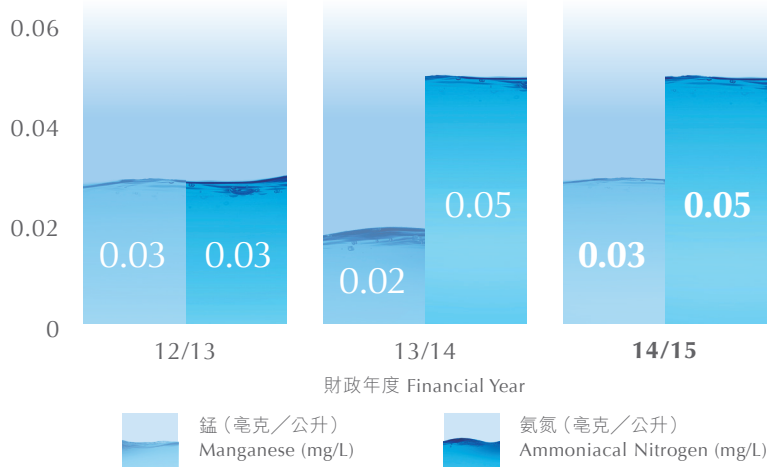
Annual Fresh Water Consumption (by sectors) 2010-2014

百萬立方米 million cubic metres (mcm)

年份 Year	2010	2011	2012	2013	2014
住宅用水 Domestic	509	498	505	504	**516**
工業用水 Industrial	57	58	59	58	**60**
服務業及商業用水 Service Trades	237	236	236	234	**240**
政府用水 Government Establishments	42	41	41	41	**44**
建築及船舶用水 Construction & Shipping	12	14	18	20	**23**
臨時淡水沖廁 Flushing	79	76	76	76	**76**
食水總用水量 Total Fresh Water Consumption	936	923	935	933	**959**

水源化驗樣本總數
No. of Water Samples Taken

東江原水內平均氨氮及錳水平
Average Ammoniacal Nitrogen and Manganese Levels in Dongjiang Water



培養節約用水文化

Fostering Water Conservation Culture

提倡節約用水

「齊來慳水十公升」運動

「齊來慳水十公升」運動受到市民踴躍支持，截至二零一五年三月底，超過130,000個參與家庭免費獲贈節流器。是次活動圓滿舉行，我們謹向所有支持活動的人士及組織，包括區議員辦事處、非政府組織、工商業團體、教育機構、屋苑管理辦事處、長者中心及其他與我們合力推廣香港節約用水文化的人士衷心致謝。

Making Water Conservation Count

"Let's Save 10L Water" Campaign

The "Let's Save 10 Litres Water" Campaign has received an enthusiastic response from the public. As of the end of March 2015, over 130,000 participating households have been provided complimentary flow controllers. In light of this success, we would like to extend our sincere thanks to all of the supporting personnel and organisations, including the District Council Members' Offices, non-governmental organisations, trade and industrial groups, educational institutions, housing estates management offices, elderly centres and others who have joined hands with us in developing a water conservation culture in Hong Kong.

推廣節水器具

二零零九年，本署開始實施自願參與的「用水效益標籤計劃」，鼓勵用戶使用節水器具及設備。計劃從起初對沐浴花灑進行標籤，至現在發展至包括水龍頭、洗衣機、小便器用具和節流器在內。本署將於二零一六年就雙掣式水廁納入「用水效益標籤計劃」進行研究。

本署正在制訂計劃，強制要求新建樓宇和進行大規模翻新的物業使用節水產品。

在政府大樓、學校及公共屋邨加裝節水裝置

本署已為16個公共屋邨24,000個租戶安裝花灑和水龍頭的節流器，該等屋邨的耗水數據顯示節流器可有效幫助租戶減少用水。同時，在政府大樓和學校加裝節水設備的第一及第二階段工程完成後，我們在前兩期工程並未涵蓋的範圍展開第三階段工程，安裝節流器。

Promoting Water-efficient Appliances

In 2009, the Department began implementing the voluntary Water Efficiency Labelling (WELS) Scheme to encourage consumers to use appliances and equipment that conserve water. From the initial labelling of showers for bathing, the scheme has now expanded to include water taps, washing machines, urinal equipment and flow controllers. We will also commission a study in 2016 for extending the WELS coverage to include dual-flush water-closet.

The Department is formulating plan to implement mandatory use of water efficient products in new developments and existing buildings undergoing major renovation.

Retro-fitting Government Buildings, Schools and Public Housing Estates with Water-saving Devices

The Department has installed flow controllers on the taps and showers of about 24,000 households at 16 public housing estates. Water consumption statistics of these estates have shown that the flow controllers are effective in helping households reduce water consumption. Moreover, following completion of the first and second phases of retrofitting plumbing fixtures with water-saving devices in government buildings and schools, we have been proceeding with a third phase to install flow controllers in government buildings and schools not covered under the previous two phases.

培養節約用水文化

Fostering Water Conservation Culture

提高公眾節水意識

從校園開始

從二零零九年一月起，水務署舉辦「節約用水 – 從家開始」宣傳活動和路演、「校園用水考察」活動及臨時「水資源教育中心」導賞參觀，教育小學生有關珍貴的水資源，講解香港供水歷史，並鼓勵學生實行節約用水的方法。截至二零一五年三月，本署已舉辦465場路演，70次用水考察及733次導賞參觀，分別吸引逾140,000人、2,400人及22,600人參加。

「保護水資源大使選拔賽」是重點宣傳活動，旨在鼓勵青少年珍惜水資源，並提醒他們身邊的同學和親友身體力行節約用水。大使選拔以學生提交的家庭成員人數及家庭用水量數據為基礎，評估參賽者的節水成效。來自35間小學逾4,500名學生參與了本年度比賽。

Raising Public Awareness

Starting from Schools

Since January 2009, the WSD has been organising the "Water Conservation Starts from Home" promotional campaign and conducting roadshows, "School Water Audit" activities and guided tours to the temporary "Water Resources Education Centre" for primary schools to educate students about the scarcity of water resources, explain to them the history of Hong Kong's water supply, and encourage them to apply water-saving practices. As of March 2015, 465 roadshows, 70 water audits and 733 guided tours were held with more than 140,000, 2,400 and 22,600 participants, respectively.

The "Water Conservation Ambassadors Selection Scheme" is the highlight activity of the promotional campaign that encourages youngsters to cherish water and to remind their classmates, family members and friends to participate in water conservation. The ambassadors are selected based on their achievement in conservation evaluated using the data submitted by the students, viz the number of household members and their domestic water consumption. Over 4,500 students from 35 primary schools have participated in this year's scheme.

為進一步向青少年及大眾推廣節約用水，水務署在二零一三年舉行「珍惜水資源」水務設施繪畫比賽，比賽分為中學組和公開組，鼓勵所有參與者以本地水務設施為創作元素，透過藝術宣傳「珍惜水資源」的理念。比賽反應熱烈，總共收到近900份作品，其中六成的作品來自中學組，顯示青少年節約用水意識高。頒獎典禮於二零一四年六月假柴灣青年廣場舉行，53幅得獎作品和部分參賽作品將於二零一四年六月至九月在全港各區巡迴展出。展出地點包括：青年廣場、屯門大會堂、荃灣大會堂、九龍公園及各區政府辦事處。

To further promote water conservation among youngsters and to the members of the public, the WSD launched the "Cherish Water Resources" Waterworks Installations Drawing Competition in 2013, with a secondary school category and open category. The competition encourages all participants to convey the concept of "Cherish Water Resources", using Hong Kong's waterworks installations as the creative element to promote water conservation through an artistic medium. The Competition's feedback was extremely positive with nearly 900 entries received for both categories. 60% of the entries were from the secondary school category, signifying that youngsters have become highly aware of the importance of water conservation. An award presentation ceremony was held in June 2014 at Youth Square in Chai Wan, and roving exhibitions featuring 53 winning entries and other selected entries were held from June to September 2014. Exhibition venues included: Youth Square, Tuen Mun Town Hall, Tsuen Wan Town Hall, Kowloon Park and Government Offices at various districts.

培養節約用水文化

Fostering Water Conservation Culture

水務講座
Water Supplies Seminar

公開講座和展覽

從二零一三年三月起，水務署在全港多個購物商場及屋苑舉辦「惜水愛地球」巡迴展覽，將節水宣傳活動從學校擴大至社區。截至二零一四年五月，我們舉辦共78場巡迴展覽，合共607個展覽日。

除舉辦「惜水愛地球」巡迴展覽外，水務署亦運用較便捷的流動展覽平台 – 「惜水愛地球」流動展覽車，以趣味互動的展品加強公眾的節約用水意識。首輛流動展覽車在二零一三年十一月至二零一四年八月期間探訪港島和九龍各區多個屋苑，而第二輛流動展覽車則在二零一四年四月至二零一五年二月期間前往新界各區屋苑。這兩部流動展覽車共探訪了200個屋苑。

Public Lectures and Exhibitions

Since March 2013, the WSD has expanded its water conservation promotional efforts from schools to the wider community at large by organising the "Save Water • Cherish the World" roving exhibition at shopping malls and housing estates throughout Hong Kong. As of May 2014, 78 roving exhibitions were held, accounting for 607 exhibition days in total.

Apart from the "Save Water • Cherish the World" roving exhibition, the WSD also made use of a more accessible mobile exhibition platform – the "Save Water • Cherish the World" Mobile Showroom to strengthen the public's awareness of water conservation through interactive and interesting exhibits. The first Mobile Showroom visited housing estates throughout Hong Kong Island and Kowloon districts from November 2013 to August 2014, while a second Mobile Showroom was sent to housing estates in the New Territories districts from April 2014 to February 2015. These two Mobile Showrooms have already visited a total of 200 housing estates.

酒店業及飲食業一向屬高用水量的行業，因此，水務署全力支持水資源及供水水質事務諮詢委員會（水諮會）在二零一四年十一月假香港科學館舉行「酒店業及飲食業節約用水研討會」，為業界提供一個平台以交流酒店業及飲食業在用水管理、節水措施、節水系統設計及技術等之經驗及心得，進一步推動業界節約用水的文化。

Hotel and catering are two industries that operate on high water consumption. For this reason, the WSD fully supported the Advisory Committee on Water Resources and Quality of Water Supplies (ACRQWS) in organising the "Water Conservation Forum for Hotel and Catering Industries" at the Hong Kong Science Museum in November 2014 to provide a platform for industry practitioners to share their experiences and explore current best practices on water use management, water-saving measures as well as water-saving systems design and technology in order to promote a culture of water conservation in these industries.

用水效益檢討

本署已完成對泳池、公園、街市、廁所和垃圾收集站等政府管理設施的用水效益檢討，並發佈最佳用水指引。有關懲教所及私人業界中酒店及餐飲業的用水效益檢討進展順利，將於二零一五年年底完成。推行用水效益檢討的主要目標是降低整體耗水量。檢討程序讓我們掌握以事實為基礎的工具，在制訂節約用水建議之餘，更有助我們保持一貫的公眾服務水平。

Water Efficiency Review

We have completed water efficiency reviews and issued best water-use guidelines for government-managed swimming pools, parks, markets, toilets and refuse collection points. Water efficiency reviews for correctional institutions as well as for hotel and catering operations in the private sector are well underway and will be completed by the end of 2015. Our primary objective is to reduce overall water consumption. The review process gives us fact-based tools to formulate water-saving recommendations without having to compromise the overall level of services.

培養節約用水文化

Fostering Water Conservation Culture

防止非法取水

本署負責執行《水務設施條例》，並對違法人士採取法律行動。因此，根據《水務設施條例》，除非水務署批准，否則未經水錶量度取水屬違法行為。為協助阻止和打擊這些違法活動，本署於二零一三年增加檢控組的人手，加強執法行動。結果，二零一四年共有突擊檢查1,235宗，較前一年增加約74%，而定罪個案亦增加約41%至113宗。宣傳方面，我們加快推出多個關於防止非法取水的教育和宣傳計劃，服務對象除本署內外的政府職員之外，亦包括市民大眾，公眾參與的活動包括濾水廠開放日及學校巡迴探訪等。此外，本署透過《警訊》文章、港鐵車站廣告、研討會、水費通知和新聞報道等途徑進行宣傳推廣。二零一四年，本署將接獲懷疑非法取水投訴後在一個工作天內展開調查行動的服務目標設定為85%，並達到有關目標。

Preventing Illegal Water Use

The Department is responsible for administering the Waterworks Ordinance (WWO) and taking legal action against offenders. To this end, it is an offence under the WWO to draw water without metered except with the permission of the Water Authority. To help deter and combat any illegal use of water, the Department's Prosecution Unit was strengthened in 2013 in order to enhance enforcement action. As a result, the number of surprise inspections in 2014 increased by about 74% to 1,235 cases compared to 2013. The number of convictions in 2014 also increased by about 41% to 113 cases. In terms of publicity, we have accelerated a number of education and information programmes on preventing the illegal use of water not only to Government officers within and outside the Department but also to the public during events such as Treatment Works Open Day and school tours, plus articles in Police Magazine, advertisements in MTR stations, and at seminars, notices on water bills and in newspaper reports. In 2014, we also set a new 85% performance target of initiating an investigation after receiving a complaint on suspected illegal use of water within one working day, and that target has been achieved.

改善供水網絡

在過去近15年間，本署在減少水管爆裂方面取得明顯成效，水管爆裂宗數由二零零零至零一年度的2,500宗下降至二零一四至一五年度僅169宗，主要歸功於本署在15年內更換及修復接近3,000公里的水管項目（全港水管總長度接近8,400公里），因而大幅提高了供水的可靠程度。

我們目前採用全球最先進的建造方法和技術進行工程。在合適情況下，我們採用無坑建造法，包括內喉緊貼法、原位內搪喉管法、水管推頂法和橫定向鑽挖法，以便減少路面施工的阻塞和對公眾的滋擾。

在鄉郊地區，水務署亦已於二零一三年十月開始更換大嶼山和長洲的海底水管。為此，我們採用橫定向鑽挖法在海床岩層鋪設管道，盡量減少對環境的整體影響，同時避免干擾海陸考古地點和海上交通。有關項目的工作仍在繼續，我們致力於二零一六年五月竣工。

Improving the Supply Network

Over the past nearly 15 years, the Department has made dramatic improvements in reducing water main bursts from 2,500 in 2000/01 to just 169 in 2014/15. This has been accomplished in large part through the success of our 15-year programme of replacement and rehabilitation of nearly 3,000 km (among a total of near 8,400 km of pipelines all across Hong Kong) of water mains, resulting in significantly higher water supply reliability.

In carrying out this work, we apply the world's most advanced construction methods and technologies. Where applicable, we use trenchless construction, including close-fit lining of existing mains, cure in-place pipes, pipe jacking and horizontal directional drilling to help reduce above ground construction and limit disturbances to the public and traffic.

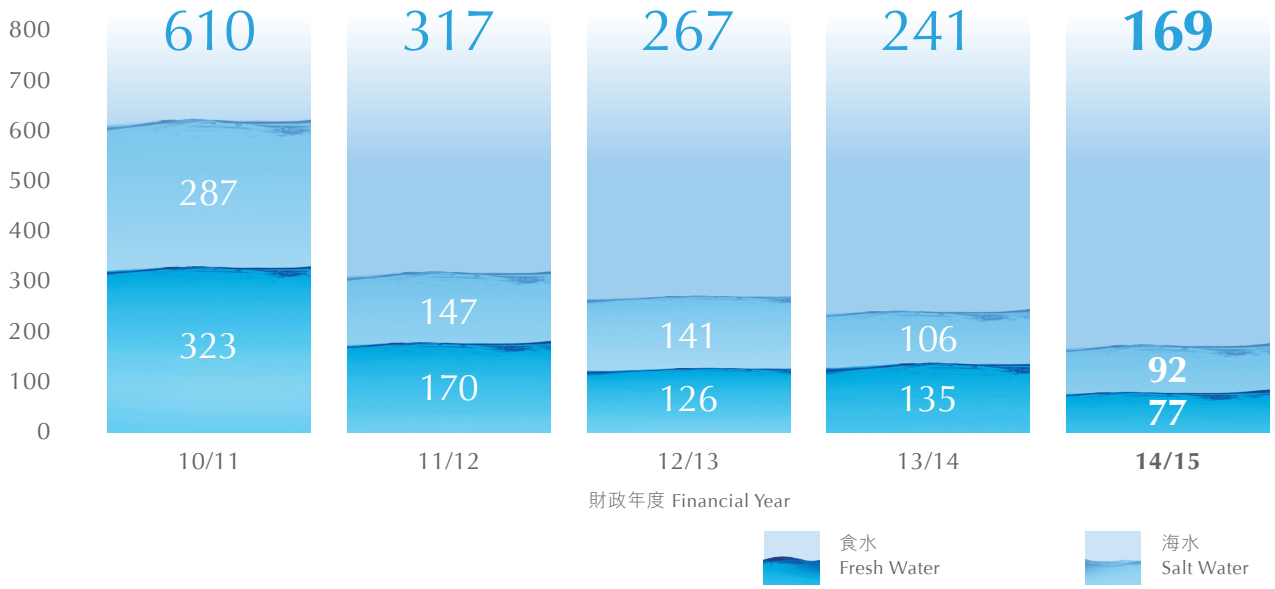
Outside of the urban areas, the WSD also began replacing the undersea pipeline between Lantau and Cheung Chau islands in October 2013. To do this we employed horizontal directional drilling (HDD) to lay the pipeline at the seabed rock level to help minimise overall environmental impact as well as avoid disrupting marine and terrestrial archaeological sites and marine traffic. The HDD works are still in progress and we have set May 2016 as our target date for completion.

培養節約用水文化

Fostering Water Conservation Culture

水管爆裂修理個案統計數字

Statistics on Mains Bursts



測漏統計數字

Statistics on Leak Detection

食水 Fresh Water

各財政年度所進行的測漏工作

Tests Conducted Per Financial Year

	2010/11	2011/12	2012/13	2013/14	**2014/15**
最低晚間流量測試次數 No. of Minimum Night Flow Tests	241	174	139	92	**63**
分段流量測漏次數（或滲漏測試） No. of Step Tests (or Leakage Tests)	27	25	13	15	**7**
音聽視察次數 No. of Sounding & Visual Inspections	3,177	3,221	3,282	2,918	**4,121**
經發現的滲漏個案數目 No. of Leaks Detected	1,846	2,006	1,432	1,237	**1,448**
估計每日可節省的食水量（立方米／日） Estimated Quantity of Fresh Water Saved (cubic metres/day)	75,299	79,531	57,128	47,872	**42,125**

海水 Sea Water

各財政年度所進行的測漏工作
Tests Conducted Per Financial Year

	2010/11	2011/12	2012/13	2013/14	**2014/15**
音聽視察次數 No. of Sounding & Visual Inspections	304	532	516	488	**1,212**
經發現的滲漏個案數目 No. of Leaks Detected	124	154	127	116	**197**
估計每日可節省的海水量（立方米／日） Estimated Quantity of Sea Water Saved (cubic metres/day)	29,918	21,719	35,040	19,881	**30,561**

用水流失管理措施

本署定期進行音聽視察、噪聲測井、最低晚間流量測試和分段流量測漏，以探測漏水情況，並應用最新區域監控及水壓管理技術，加強控制用水流失。我們全力檢測可疑漏水情況，以便即時採取措施避免進一步流失並防止情況惡化，以致水管爆裂。

本署已將部分測漏工作外判予專業承建商，定期對全港的水務署水管進行有效檢測，同時我們以評估表現的方式鼓勵承建商進行更多檢測。迄今為止，元朗、屯門、荃灣、沙田、大埔、上水和西貢均採用評估表現的方式由專業承建商進行檢測。

Water Loss Management Initiatives

The Department conducts regular leak detection through audio and visual inspections, noise logging, minimum night flow tests and step tests. The control of water loss has also been strengthened through the application of the latest district monitoring and pressure management technologies. We are doing our best to detect suspected leaks as early as possible in order to take immediate action to cut further losses and stop the deterioration that leads to water main bursts.

Some leak detection work has been outsourced to specialist contractors to maintain effective regular leak detection for all of the WSD's water mains in Hong Kong. We have also adopted a performance-based approach to motivate contractors to detect more leaks. To date, a number of the water mains in Yuen Long, Tuen Mun, Tsuen Wan, Shatin, Tai Po, Sheung Shui and Sai Kung have been inspected by the specialist contractors using the performance-based approach.

水務基建設施
Waterworks Infrastructure

改善水務基建設施及提升運作效率，讓香港享有更可靠的供水系統。

智管網

本署計劃安裝感應器，在供水網絡中建立區域檢測區和相關水壓管理區，逐步建立智管網。全港智管網將設有約2,000個區域檢測區，屆時感應器收集的供水網絡狀況相關數據，將由電腦系統進行智能的（及在必要時進行實時的）網絡表現分析。

Hong Kong enjoys the benefits of a water supply that boasts greater reliability as a result of improved waterworks infrastructure and increased operational efficiencies.

Water Intelligent Network (WIN)

The Department plans to progressively implement the Water Intelligent Network (WIN) by installing sensors for the establishment of District Metering Areas (DMAs) and associated Pressure Management Areas (PMAs) in the water supply network. There will be about 2,000 DMAs throughout the entire territory under WIN. A computer system will be put in place to enable intelligent (and where necessary real-time) network performance analysis of the data collected from the sensors for monitoring the conditions of the water supply networks.

本署繼續在17個主要供水區的12個配水系統中安裝流量錶和水壓管理設備及儀器，而對其餘主要供水區進行的勘查研究已經結束，本署計劃推進有關工作，進入具體的設計階段。截至二零一五年三月，我們成功設立700多個區域檢測區，其中165個為水壓管理區。我們計劃最終在全港設立約2,000個區域檢測區／水壓管理區。隨著越來越多的區域檢測區和水壓管理區投入服務，我們得以不斷監測流量、水壓及晚間最低流量，減低了現場晚間流量測試的需要。

The Department has continued to install flow meters and pressure management equipment as well as instrumentation within the distribution systems in twelve of the seventeen major supply zones. For the remaining major supply zones, the investigation studies have been completed and we plan to go forward and begin the detailed design stage. As of March 2015, we have successfully installed some 700 District Metering Areas (DMA) with 165 of them serving as Pressure Management Areas (PMA). Ultimately, we plan to establish about 2,000 DMA/PMAs in Hong Kong. With more of these DMA/PMAs commissioned, we will be able to continuously monitor the daily flow, pressure and minimum night flow. This will obviate the need to carry out separate minimum night flow testing on site.

提升供水能力

供水是基建設施的基石，對支援香港未來發展極其重要，因此，我們正計劃在東涌建設新配水庫，以應對因即將在北大嶼山展開的主要項目（包括餘下的東涌擬定發展項目和第三條機場跑道項目）而增加的用水需求。

為應對新界上水、粉嶺和大埔不斷出現的住宅發展項目，本署將興建新配水庫，同時搭建配套的幹管配水系統，以滿足用水需求增加。上水和粉嶺部分擬建項目將採用特殊設計，以便將來更改成再造水系統作沖廁用途。

Expanding Water Supply Capacity

As a major infrastructural cornerstone, water supply is critical to support Hong Kong's future development. For this reason, new service reservoirs in Tung Chung are now being planned to cope with the increase in water demand resulting from upcoming major developments in North Lantau, including the proposed remaining development projects in Tung Chung and the future third airport runway project.

To deal with expanding housing developments in Sheung Shui, Fanling and Tai Po in the New Territories, new service reservoirs with associated trunk and distribution systems will be constructed to meet the increasing water demands there. Part of the proposed works in the Sheung Shui and Fanling areas will be specially designed so that they can be easily converted to form part of the future reclaimed water supply system for flushing.

水務基建設施
Waterworks Infrastructure

大埔濾水廠
Tai Po Water Treatment Works

濾水廠設施升級

沙田濾水廠和大埔濾水廠正分別處於大幅擴容的具體設計及興建中。這兩座濾水廠是處理原水的重要中心，原水經處理後會分配至全港各地。沙田濾水廠將進行原地重置工程，而大埔濾水廠將進行大規模的擴容擴建工程。兩個項目將有助確保我們有足夠能力為公眾供應最高水質標準的飲用水。本署正在分期審慎地進行有關項目，以配合全港與日俱增的用水需求。

總成本約為60億港元的大埔濾水廠設施升級工程分兩期進行，工程完成後，濾水量將由每日250,000立方米增至800,000立方米。第一期工程已告竣工，目前每日濾水量為400,000立方米。第二期工程於二零一三年動工，於二零一七年投入服務後，最終濾水量將增至每日800,000立方米。沙田濾水廠的原地重置工程預計於二零一五年年底展開，將於二零二三年投入服務。

Upgrading Water Treatment Facilities

The Sha Tin and Tai Po Water Treatment Works are currently in the detailed design and construction stages respectively to allow major capacity increases. These two facilities are important centres for the treatment of raw water prior to its distribution across Hong Kong. Re-provisioning work will be carried out at the Sha Tin plant while Tai Po will undergo a major expansion of its capacity and operations. Both projects will help ensure adequate capacity to produce the highest levels of potable water for the public. These projects are being delivered in phases to match closely with the greater demand for water throughout the Territory.

Once the two-phase, about HK$6 billion facilities upgrade is completed at the Tai Po Water Treatment Works, its overall capacity will increase from 250,000 to 800,000 cubic metres per day. Phase one has been completed and is now processing 400,000 cubic metres of water per day. Phase two begun in 2013 will see an eventual capacity increase to 800,000 cubic metres per day by its commissioning date in 2017. The on-site reprovisioning of the Sha Tin facility is scheduled for commencement in late 2015 and will be commissioned sometime by the year 2023.

沙田濾水廠之澄清池
Clarifier at Sha Tin Water Treatment Works

更換及修復工程

為減少水管滲漏情況，本署現正對全港總長8,400公里的水管中約3,000公里的舊水管實施更換及修復計劃。預計工程將於二零一五年年底基本完成。

Replacement and Rehabilitation Works

To reduce leakage, the Department is implementing a territory-wide Replacement and Rehabilitation (R&R) programme to replace and rehabilitate about 3,000km of aged water mains out of Hong Kong's 8,400km of water mains. The work is expected to be largely complete by the end of 2015.

提升水務運作效率

本署已完成有關主要濾水廠的監測和控制設施升級的檢討。主要濾水廠的手動控制設備將由遙距控制設備操作，以提高整體運作效率。

Improving Waterworks Operational Efficiencies

We have completed a review focusing on the enhancement of the monitoring and control facilities of our major treatment works in which the existing manual control equipment will be mechanised with remote control facilities in order to enhance overall operational efficiency.

水務基建設施

Waterworks Infrastructure

我們繼續提升四個區域監控及資料收集系統，以監測及控制抽水站和配水庫等供水設施。各區的集中控制中心設有後備控制中心，以提升供水網絡運作的可靠度。新界西區及港島地區的監控及資料收集系統和相關資訊系統升級工作已經完成。餘下的九龍地區及新界東區監控及資料收集系統預計分別於二零一五年年底及二零一六年年底完成。

We have continued our work to upgrade the four regional SCADA systems that are used to monitor and control water supply facilities including pumping stations and service reservoirs. In each region, the centralised control centre will be backed up with an alternative control centre to improve the operational reliability of the water supply network. The upgrading of the SCADA systems for the New Territories West Region and the Hong Kong & Island Region and the SCADA Information System are now completed. The remaining SCADA systems for the Kowloon Region and the New Territories East Region are scheduled for completion by the end of 2015 and 2016, respectively.

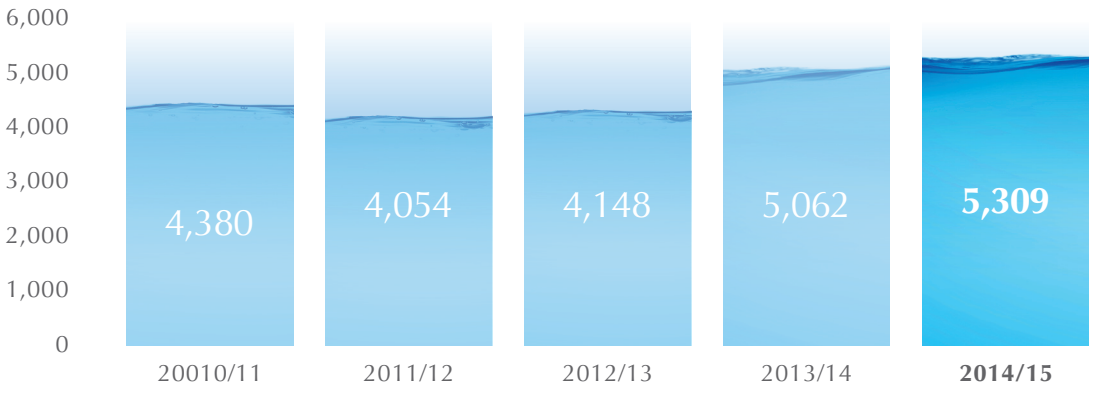
除氯系統是一種防護裝置，有助在罕見的系統故障期間防止氯氣釋放至大氣層，保持濾水廠時刻安全運作。完成銀鑛灣濾水廠的除氯系統現代化及更換工程後，本署於二零一四／一五年著手更新油柑頭濾水廠。本署亦會對北港濾水廠和其他主要濾水廠設施進行類似更新工程，確保濾水廠安全可靠地運作。

Chlorine scrubbers, which prevent chlorine gas from leaking into the atmosphere in the unlikely event of a system failure, are protective devices to keep water treatment works operating safely at all times. Following the completion of the modernisation and replacement of the chlorine scrubber system at the Silver Mine Bay Water Treatment Works, upgrading at the Yau Kom Tau Water Treatment Works got underway as well in 2014/15. Similar upgrading projects will be initiated at the Pak Kong Water Treatment Works and other key water treatment facilities to ensure reliable and safe operations.

資本投資

Capital Investment

（百萬元）($million)



優化供水設施

水務署致力妥善管理所有供水基建設施的使用周期，務求在可接受的風險框架內，使服務效能達至最具成本效益的水平。

近年來，隨著建築信息模擬技術的一日千里，令多個建築項目實現成本效益，水務署進行了試驗研究，探索應用建築信息模擬技術對資產管理領域的潛在裨益。根據此項研究，大埔海水抽水站和鋼綫灣海水抽水站獲選試用建築信息模擬技術進行資產管理。試驗研究於二零一四年中展開，預計於二零一五年中完成。

Optimising Waterworks Assets

At the WSD, one of our primary goals is to manage the life cycles of all water services infrastructure in order to achieve the optimal level of service in the most cost-effective manner within an acceptable risk framework.

With the rapid advancement of Building Information Modelling (BIM) technology in recent years and its success in bringing about the cost-effective delivery of construction projects, the WSD has taken the initiative through a pilot study to explore the potential benefits of BIM applications in the asset management. Under this study, the Tai Po Salt Water Pumping Station and Telegraph Bay Salt Water Pumping Station were selected for the pilot study on trial use of BIM for asset management. The pilot study began in mid 2014 and is set for completion in mid-2015.

水務基建設施

Waterworks Infrastructure

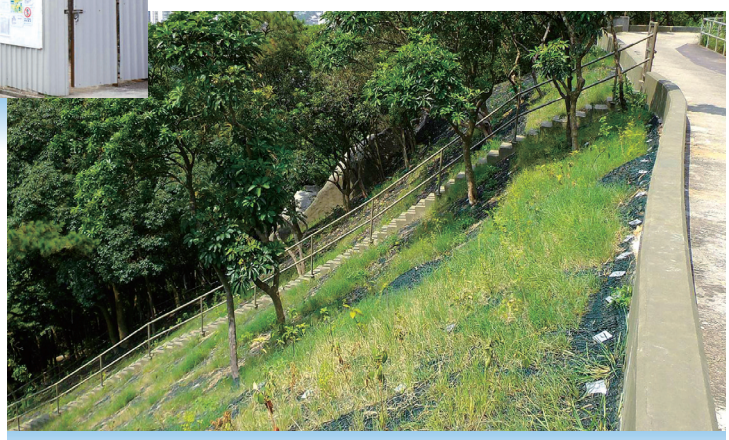
我們於去年完成四項地面資產管理計劃，每項以一個分區為重點，就接近900個水務設施的表現及實際狀況進行評估。如發現有需要進行改善工程，有關工程計劃便會在期內優先實施。本署員工按照維修保養責任定期監察6,500個斜坡，於去年對重要水務設施附近的約80個斜坡展開後續預防性保養及提升工程。本署進行的工程包括打泥釘、斜坡表面加固、在斜坡護面的牆腳栽種植物、改善排水系統、提供安全通道走廊、栽種植被等。各項措施均有助大大減低山泥傾瀉的風險及山泥傾瀉對生命和財產的威脅。

During the past year we completed four surface asset management plans, one for each of the four Regions, which identify the performance and physical condition of nearly 900 waterworks installations. Once an area of improvement has been identified, we prioritise this for implementation during the ensuring years. Our staff routinely inspects 6,500 slopes that fall under our maintenance responsibility. Last year we carried out subsequent preventive maintenance and upgrading work for nearly 80 slope features mainly near important installations of WSD. This work included soil-nailing, slope surface stabilisation, construction of toe planter walls, improvements to drainage systems, providing safe access corridors, planting and other measures. The result of all these efforts has been a dramatic decrease in the risk of landslides as well as the danger they pose to life and property.

我們亦定期進行監察，檢討配水庫和水塘的安全和穩定性，並就維修工程提出建議，確保配水庫和水塘完善。去年，本署內部員工和外聘顧問分別完成103份詳盡檢查報告和33份獨立檢查報告。

We also regularly conduct inspections to review the safety and stability of service reservoirs and impounding reservoirs, making recommendations for maintenance work to ensure each reservoir's integrity. During the past year, we completed 103 detailed inspection reports as well as 33 independent inspection reports by our internal staff and external advisors, respectively.

The project for implementing Reliability Centred Maintenance for two key pumping stations as well as a water treatment works installation has been completed. In order to develop more comprehensive templates of maintenance strategies for various kinds of waterworks installations, additional projects for two more pumping stations will be conducted in the coming year.



兩個主要抽水站及濾水廠設備以可靠性為主的維修計劃現已完成。來年，本署將對另外兩個抽水站實施工程，為各種水務設施制訂更加全面的維修策略模板。

為制訂全面的水廠舊設備更換計劃，我們已完成12個抽水站的狀況評估，並將於明年對另外16個設施進行評估。

本署採用光纖布拉格光柵感觸系統進行實地試驗，監測長達200米的東江輸水管其中一段的結構完整性，同時建立電腦系統，以追蹤實地監測試驗的原始數據，包括水管受力、溫度及水壓等物理參數。我們分析了過去兩年收集的檢測數據，確定水管受力閥值，並設計分為兩級的觸發機制，進行持續監測，以預防水管爆裂及滲漏。

To formulate a comprehensive replacement programme for aged plant equipment, condition assessments for 12 pumping stations have been completed with assessments for another 16 installations to be carried out in the coming year.

An optical Fibre Bragg Grating (FBG) sensory system has been implemented for on-site trial monitoring of the structural integrity of a 200-metre long underground Dongjiang water pipe section. A computational system has also been established for tracking raw data collected from the on-site trial monitoring (i.e. physical parameters, including pipe strains, temperature and water pressure). Having analysed the monitoring data collected over the past two years, threshold values of pipe strain were determined and a two-level triggering mechanism was designed for on-going monitoring with the aim of preventing bursts and leaks.

財務及水費

Finance and Water Charges

水費

與世界其他主要城市相比，香港用戶為優質食水所繳付的費用相對低廉，除了一九九六年六月修訂的非本地船隻用水收費外，水費自一九九五年二月至今亦一直維持不變。

WATER CHARGES

Water consumers in Hong Kong pay less for high quality fresh water than their counterparts in most major cities around the world. Water charges have not been revised since February 1995 (other than the charge for non-local vessels which was last revised in June 1996).

收費幅度

住宅用戶的食水水費（沖廁用水除外）按以下四級制，以四個月為期計算：

SCALE OF CHARGES

Fresh water for domestic use (other than flushing) is charged at four-month period rates set out in a four-tier system as follows.

	每單位（1立方米）收費 Charging rate per unit of one cubic metre
第一級 — 首12個單位 Tier 1 for the first 12 units	免費 Free
第二級 — 繼後的31個單位 Tier 2 for the next 31 units	$4.16（註一）(Note 1)
第三級 — 再繼後的19個單位 Tier 3 for the next 19 units	$6.45（註二）(Note 2)
第四級 — 餘下單位 Tier 4 for the remainder	$9.05（註三）(Note 3)

作其他用途的食水，會根據其用途按下表所列收費：

Fresh water for other uses is charged at different rates as follows based on the purpose of consumption.

用途 Purpose	每單位（1立方米）收費 Charging rate per unit of one cubic metre
商業 Trade	$4.58（註四）(Note 4)
建築 Construction	$7.11（註五）(Note 5)
航運（非本地船隻） Shipping (Non-local Vessels)	$10.93（註六）(Note 6)
航運（本地船隻） Shipping (Local Vessels)	$4.58（註七）(Note 7)
航運以外用途（非本地船隻），並以預付票繳交水費 Any purpose other than Shipping (Non-local Vessels) where payment is made against a prepaid ticket	$4.58（註七）(Note 7)
沖廁水每四個月的收費率 Flushing per 4 month period	
— 首30個單位 for the first 30 units	免費 Free
— 餘下單位 for the remainder	$4.58（註七）(Note 7)

註一： 一九七九年推出水費分級制度時，第二級收費為大致可收回每單位的淨生產成本，即每單位的總生產成本（包括固定資產平均淨值的目標回報率）減去每單位的差餉補貼，並按照水錶記錄的總耗水量計算。在其後的水費檢討，由於對所有級別實施統一加費幅度，以收回整體水務經營成本，因此第二級的建議收費並不等同於當時每單位的淨生產成本。於二零一四至一五年度，每單位的淨生產成本為11.0元，遠超4.16元的收費水平，主要因為水費自一九九五年起並無任何變動。

Note 1: When the tariff structure was introduced in 1979, the charge for the second tier was to recover approximately the net unit production cost, which meant the full unit production cost (including a target rate of return on ANFA) less the average contribution from rates per unit, calculated based on the quantity of the metered consumption. In the subsequent tariff reviews, the proposed charging rate for the second tier was not equal to the prevailing net unit production cost because a uniform rate of increase for all tiers was adopted taking the waterworks operating costs as a whole. In 2014-15, the net unit production cost is $11.0, which is materially higher than the charging rate of $4.16, mainly because water tariffs have not been changed since 1995.

註二： 一九七九年推出水費分級制度時，第三級收費為大致可收回每單位的總生產成本，即每單位的平均生產成本（包括固定資產平均淨值的目標回報率），並按照水錶記錄的總耗水量計算。在其後的水費檢討，由於對所有級別實施統一加費幅度，以收回整體水務經營成本，因此第三級的建議收費並不等同於當時每單位的總生產成本。於二零一四至一五年度，每單位的總生產成本為15.1元，遠超6.45元的收費水平，主要因為水費自一九九五年起並無任何變動。

Note 2: When the tariff structure was introduced in 1979, the charge for the third tier was to recover approximately the full unit production cost which meant the average production cost per unit (including a target rate of return on ANFA), calculated based on the quantity of the metered consumption. In the subsequent tariff reviews, the proposed charging rate for the third tier was not equal to the prevailing full unit production cost because a uniform rate of increase for all tiers was adopted taking the waterworks operating costs as a whole. In 2014-15, the full unit production cost is $15.1, which is materially higher than the charging rate of $6.45, mainly because water tariffs have not been changed since 1995.

註三： 第四級收費定價比第三級收費高出約40%，目的是不鼓勵過量及浪費用水。

Note 3: The fourth tier is set at about 40 per cent higher than the third tier to discourage extravagant and wasteful use of water.

註四： 一九九二年前，商業用途的收費與住宅用戶第二級收費相同。自一九九二年起，商業用途的收費修訂至高於住宅用戶第二級收費水平，旨在減少對非住宅用戶的補貼。

Note 4: Prior to 1992, the charging rate for trade purpose was equal to the second tier rate for domestic purpose. Commencing from 1992, the charging rate for trade purpose was set higher than the second tier rate for domestic purpose mainly for reducing the subsidy to non-domestic consumers.

註五： 一九九二年前，建築用途的收費與住宅用戶第三級收費相同。自一九九二年起，建築用途的收費修訂至高於住宅用戶第三級收費水平，旨在減少對非住宅用戶的補貼。

Note 5: Prior to 1992, the charging rate for construction purpose was equal to the third tier rate for domestic purpose. Commencing from 1992, the charging rate for construction purpose was set higher than the third tier rate for domestic purpose mainly for reducing the subsidy to non-domestic consumers.

註六： 航運（非本地船隻）收費於一九九六年作出修訂，當時收費水平訂為高於每單位總生產成本的40%，目的是不鼓勵非本地船隻在香港取水。

Note 6: The charging rate for shipping (non-local vessels) was last revised in 1996, setting at 40% above the full unit production cost at that time for discouraging the taking of water in Hong Kong.

註七： 此等收費與商業用途收費相同。

Note 7: These charging rates were set at the rate equal to the charging rate for trade purpose.

鹹水沖廁費用全免。

Sea water for flushing is supplied free of charge.

水務經營帳目自一九九八年至九九年度起已錄得虧損，需依靠政府一般收入補助。二零一四至一五年度錄得虧損10.15億港元，成本回收率為88.8%。政府會繼續定期檢討水費，審慎考慮各項因素，包括承擔能力、水務設施的財政狀況、當時的經濟狀況，以及立法會議員的意見。

Waterworks operations have seen deficits since 1998-99 which means that it is subsidised by general government revenues. In 2014-15, the deficit was $1,015.0M and the cost recovery rate was 88.8%. The Government continues to review the water tariff periodically, taking into consideration a number of factors, including affordability, financial performance of waterworks operations, the prevailing economic situation and the views of Legislative Council members.

除水費外，水務設施規例（第102A章）亦列明25項法定收費項目。我們一直遵照政府的「用者自付」原則檢討這些收費項目，以符合有關原則下收回一切服務供應成本的目標。於年內，我們已修訂25項法定收費項目，有關修訂自二零一五年一月一日起生效。

Other than water charges, there are 25 statutory fee items stipulated in the Waterworks Regulations (Cap. 102A). We have been periodically reviewing these fee items in accordance with the Government-wide "user pays" principle which aims to recover the full cost of providing services. During the year, 25 statutory fee items have been revised effective from 1 January 2015.

水費收入總覽

於二零一四至一五年度，約14%住宅用戶毋須支付任何水費；42%達到第二級水費，需繳付每單位4.16元水費；20%需繳付第三級水費，即每單位6.45元；餘下24%需繳付第四級水費，即每單位9.05元的水費。於二零一四至一五年度，260萬住宅用戶（包括無須繳付水費之用戶）每月平均水費為47元。根據政府統計處的住戶開支統計調查，水費開支約相等於住戶每月平均開支的0.3%。

PROFILES OF THE REVENUE FROM WATER CHARGES

During the year 2014-15, about 14 per cent of domestic customers were not required to pay water charges, 42 per cent were paying up to the tier 2 rate of $4.16 per unit, 20 per cent were paying up to the tier 3 rate of $6.45 per unit and 24 per cent were paying up to the tier 4 rate of $9.05 per unit. For the 2.6 million domestic customers, the average water charge in 2014-15, including those not required to pay any charge, was $47 per month. According to the Census & Statistics Department household expenditure survey, the water charge amounts to about 0.3 per cent of the average monthly household expenditure.

財務及水費

Finance and Water Charges

過去五年按用戶類別劃分的水費收入分析如下：

An analysis of the water charges by sector over the past five years is as follows.

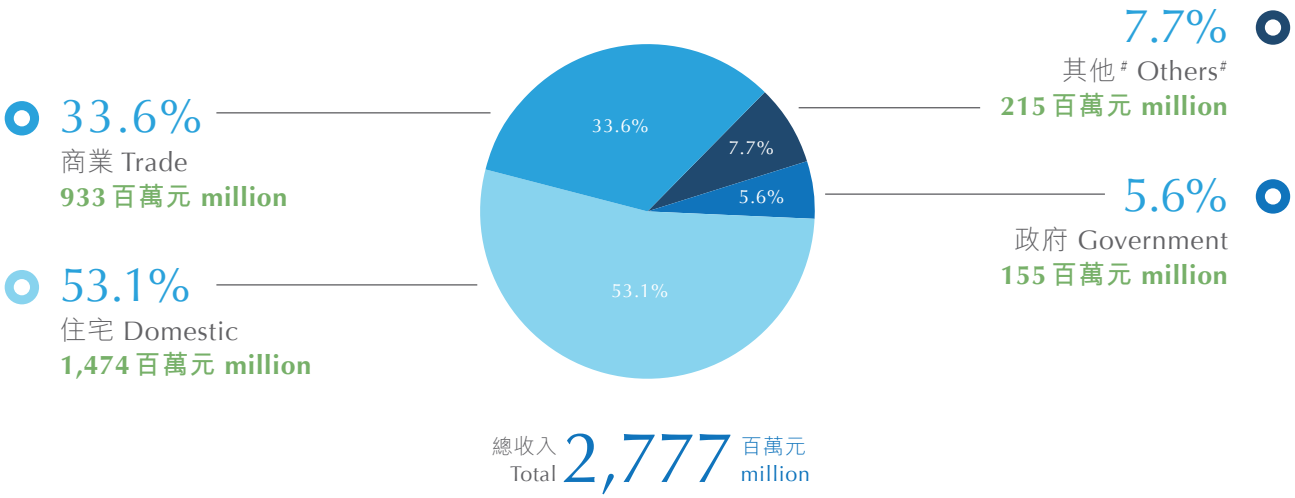
百萬元 $M	10/11	11/12	12/13	13/14	14/15
商業 Trade	896	913	905	903	**933**
住宅 Domestic	1,408	1,414	1,437	1,452	**1,474**
政府 Government	163	155	156	159	**155**
其他 # Others#	160	175	185	201	**215**
總收入 Total	2,627	2,657	2,683	2,715	**2,777**

包括沖廁用淡水

including fresh water for flushing

二零一四／一五年度水費收入（按用戶類別劃分，以百分比顯示）

Water Charge (% by Sectors) 2014/15



包括沖廁用淡水

including fresh water for flushing

收入及開支分析

水費收入包括一般水費、各項收費、牌費，以及代客戶進行工程的收費。在編製水務賬目時，會以應計賬目基準呈列財務表現及狀況，其中包括各項非現金收入項目，主要為差餉補貼、免費用水補貼及政府用水。總運作成本主要包括員工費用、購買東江水支出、折舊、運作、行政及其他費用。過去五年的收入及開支分析如下：

ANALYSIS OF REVENUE AND EXPENDITURE

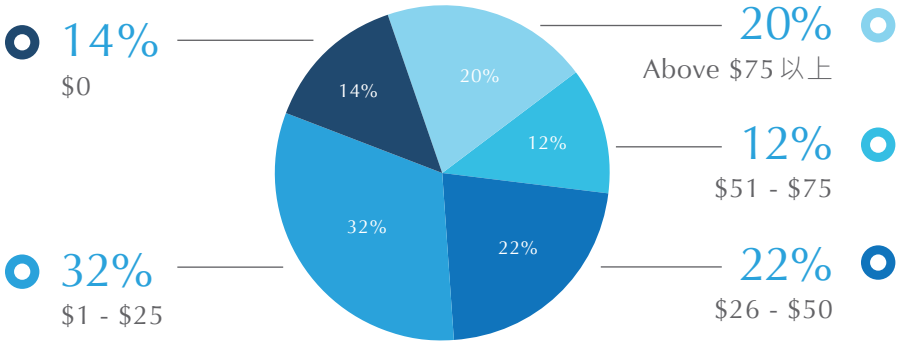
The revenue collections include chargeable water supplies, fees, licences, and reimbursable work. In preparing the Waterworks Operating Accounts which present the financial results and positions on an accrual accounts basis, the revenues include non-cash items, mainly contribution from rates, contribution from free allowance, and water supplies for government usage. The total operating costs include mainly staff costs, purchase costs of Dongjiang water, depreciation, operating charges, plus administration and other expenses. An analysis of the revenue and expenditure over the past five years is as follows.

收入
Revenue
（百萬元）($million)

財政年度 Financial Year	10/11	11/12	12/13	13/14	**14/15**
一般水費 Chargeable Supplies	2,463.9	2,502.6	2,527.2	2,555.8	**2,622.0**
差餉補貼 Contribution from Rates	2,692.3	2,947.4	3,561.0	3,970.6	**4,263.4**
免費用水補貼 Contribution from Free Allowance	1,112.8	1,173.4	912.4	918.7	**962.7**
政府用水 Supplies to Government Establishments	163.2	154.5	156.2	159.0	**155.1**
各項收費及其他 Fees, charges and others	22.3	29.0	31.0	26.5	**28.9**
總額 **Total**	6,454.5	6,806.9	7,187.8	7,630.6	**8,032.1**

財務及水費
Finance and Water Charges

二零一四／一五年度住宅用戶每月水費分佈圖
Distribution of Household Average Monthly Bill 2014/15



開支
Expenditure
（百萬元）($million)

財政年度 Financial Year	10/11	11/12	12/13	13/14	**14/15**
員工費用 Staff costs	1,300.4	1,401.3	1,486.0	1,528.7	**1,586.6**
運作、行政及其他費用 Operating, Administration & Other Expenses	1,635.6	1,680.3	1,698.3	1,747.9	**1,841.0**
東江水 Dongjiang water	3,200.0	3,397.1	3,594.5	3,802.2	**4,031.2**
折舊 Depreciation	1,273.8	1,353.5	1,416.7	1,482.7	**1,588.3**
總額 Total	7,409.8	7,832.2	8,195.5	8,561.5	**9,047.1**

本署致力以符合成本效益的方式提供服務，並大力投資在固定資產、設備、資訊科技及人力資源方面，藉此提高運作效益及員工生產力，務求滿足市民對更優秀服務的期望。社會大眾以及我們的用戶可以放心，我們會實行嚴謹的財務紀律，在提供優質服務滿足用戶需要之餘，不忘提升成本效益，這方針是我們實踐抱負和使命的憑藉。

The Department is committed to providing services as cost effectively as possible. We have made substantial investments in fixed assets, equipment, information technology and human resources to improve operational efficiency and staff productivity to meet the demands for a higher quality of services by the public. Our customers and the public at large can rest assured that we will exercise strict financial discipline and be very cost conscientious in delivering our quality services to meet the demand of our customers. This is our underlying approach in achieving our vision and missions.

可持續運作

Sustainable Operations

經驗及準確理解供水所需的條件是我們維持可持續運作的重要元素。

本署致力：

- 嚴格遵守環保規例
- 善用能源和燃料
- 限制氣體排放
- 盡量減少辦公室用品的消耗
- 盡量減少處理食水過程中使用的化學品
- 盡量減少供水系統的用水流失量
- 盡量減少建築工程對環境造成的影響
- 減少化驗室、工場和濾水廠的固體、液體及化學廢物
- 盡量減少污水排放，並盡可能循環再用
- 減少抽水站發出的噪音
- 提倡安裝綠化屋頂
- 提倡使用再造紙

關注環境

本署的抱負是致力滿足客戶對優質供水服務的需求，務求每天取得卓越表現。作為以上承諾的一部分，我們願意承擔對維持環境清潔應負的責任。為此，本署的設計及建設科肩負重任，力求盡量減低水務規劃、設計及建設對環境造成的任何影響。自二零一三年年初至今，設計及建設科一直奉行嚴格規約，作為按照ISO 14001所制訂環境管理體系的一部分。環境管理體系要求：「為已規劃及新增的工程項目、發展項目、產品及服務提供供水服務時，妥善做好環境管理工作」。於二零一三年十月，設計及建設科獲頒ISO14001: 2004環境管

Experience and a precise understanding of what is required in terms of viable water supplies are key elements that enable us to operate in a sustainable manner.

The Department is committed to:

- working in strict compliance with environmental regulations
- optimising the use of energy and fuel consumption
- limiting gaseous emissions
- minimising the consumption of glossary items in offices
- minimising the use of chemicals in the water treatment process
- minimising water loss across the distribution system
- minimising environmental impacts that can arise from construction work
- reducing the quantities of solid, liquid and chemical wastes generated by our laboratories, workshops and treatment works
- minimising the discharge of effluent and where possible recycle effluent
- reducing noise generated from pumping stations
- encouraging the setting up of green roofs
- encouraging the use of recycled paper

Environmental Focus


Certificate No. CC 5722

CERTIFIED COMPANY

HKQAA

This is to certify that the Environmental Management System of

WATER SUPPLIES DEPARTMENT
New Works Branch

(The other certification locations are listed in Appendix)

complies with the requirements of ISO 14001 : 2004 environmental management system standard, applicable to:

Deliver engineering projects for the provision of water supplies

(SACE 34.00)

The certification remains valid subject to satisfactory maintenance of the system which will be monitored by Hong Kong Quality Assurance Agency

Signed for and on behalf of
HONG KONG QUALITY ASSURANCE AGENCY

Chief Executive Officer

Director

The vision of the Department is to excel each day at satisfying the needs of providing water services to our customers. As part of that commitment, we fully appreciate the responsibilities we have toward maintaining a clean environment. For this reason, the New Works Branch of the Department is tasked to ensure that all impacts to the environment will be minimised in planning, designing and building waterworks. Since early 2013, The New Works Branch has followed a strict protocol as part of the Environmental Management System (EMS) in accordance with ISO Standard 14001. The EMS mandate is:

理體系標準認證，有關認證適用於供水工程項目交付。其後本署制訂多項環境管理計劃，並每年進行檢討，以幫助實現環境目標。

"Environmental management while providing water supply services from planned and new engineered projects, developments, products and services.". In October of 2013, the New Works Branch obtained ISO14001: 2004 Environmental Management System Standards certification applicable to the delivery of engineering projects for the provision of water supplies. A host of environmental management programmes have subsequently been developed and reviewed annually to assist in achieving our environmental objectives and targets.

嶄新技術和設備

透過「遺傳基因演算法」安排食水泵的運作

本署正研究多項技術，善用供水及配水系統操作水泵所需的能源。本署與英國艾克斯特大學水系統中心和本地工程界合作，繼續優化北港濾水廠的網上水泵控制遺傳基因法。是次試驗項目採用實時水力模式將安排食水泵運作的遺傳基因演算法測試拓展至沙田海水供應系統。

New Technology and Equipment

Pump Scheduling with Genetic Algorithm (GA)

Technologies that optimise the energy required to operate pumps throughout the supply and distribution systems are currently being studied. In partnership with the Centre for Water Systems at the University of Exeter in the United Kingdom and the local engineering sector, we are continuing to refine the GA methodology of on-line pump control at the Pak Kong Water Treatment Works. Testing of genetic algorithms to schedule the operation of fresh water pumps based on real-time hydraulic models in this pilot project will be extended to the salt water supply system in Sha Tin.

熱成像安全監測系統

熱成像安全監測系統試驗項目已成功實行，並在北港濾水廠取得顯著成效。項目實施目的在於減少安全設施和地區照明的耗電量，同時盡量減輕對附近居民的光污染。

Thermal Vision based Security Surveillance System

A pilot thermal vision-based security surveillance system has been successfully implemented with promising results at Pak Kong Water Treatment Works. It aimed at reducing the electricity consumption of security installations and area lighting as well as to minimise the nuisance of light pollution on the residents living nearby.

可持續發展

騰出一個分區辦事處，善用土地資源造福社群

本署的旺角洗衣街辦事處已為公眾服務逾60年，為本港廣大市民所熟悉。該辦事處設有客戶諮詢中心和新界西分區辦事處。根據規劃署二零零九年完成的旺角購物區地區改善計劃，我們決定搬遷該分區辦事處。搬遷後，現址可作其他用途。新分區辦事處將遷往天水圍一幢樓宇，建築工程預計將於二零一七至一八年度竣工。

將水務設施遷往岩洞

為配合政府增加土地供應的政策，發展岩洞是滿足社會發展需要的可行方法。政府已提出方案搬遷現有設施至岩洞或在岩洞安裝新設施，以便騰出現址作房屋或其他用途，滿足本港長遠的社會及經濟需要。鑽石山食水配水庫及鑽石山海水配水庫已確定適合搬遷至岩洞。本署正就建議搬遷項目進行可行性研究。

延伸海水供應系統，節約寶貴的食水

華富邨、貝沙灣和數碼港的海水供應已實施多年。本署亦於二零一五年完成薄扶林區試驗性外判安排研究工作，而有關將沖廁用水由食水轉為海水的工程仍然繼續。新界西北部（包括屯門東、元朗及天水圍）的海水供應建築工程已於二零一五年年初竣工，而另一份向新界西北部提供沖廁海水的顧問合約於二零一五年三月生效。此外，東涌的新海水供應項目現處於規劃階段。

Sustainable Development

Releasing a regional office to optimise land use for the public's benefit

Our office at Sai Yee Street, Mong Kok is well known to many Hong Kong citizens as it has been serving the public over 60 years. It houses not only one of our Customer Enquiry Centres, but also serves as the Department's New Territories West Regional Office. Relocation of this regional office has been identified as an improvement proposal in the Area Improvement Plan for the Shopping Area of Mong Kok (AIP), which was undertaken by the Planning Department and completed in 2009. Following the office's relocation, the site can be released for other gainful uses. A new building is being constructed in Tin Shui Wai to reprovision the Regional Office. Construction works is scheduled to complete by 2017-18.

Caverning of Waterworks Installations

In line with the Government's policy of increasing land supply, rock cavern development is a practical approach to meet the development needs of our society. The Government has initiated proposals to relocate existing facilities to or accommodating new facilities in caverns so that released sites can be used for housing or other uses to meet Hong Kong's long- term social and economic needs. The Diamond Hill Fresh Water Service Reservoir and Diamond Hill Salt Water Service Reservoir were identified as suitable facilities for relocation to caverns. A feasibility study is currently being carried out for the proposed relocation project.

Extending the salt water supply system to save precious fresh water

Salt water delivery to Wah Fu Estate, Bel-Air and Cyberport has been in effect for a number of years. The Department also completed a consultancy on trial outsourcing arrangement in 2015 and conversion to salt water flushing in Pok Fu Lam area is still ongoing. The construction work for the salt water supply system for the northwest New Territories, serving Tuen Mun East, Yuen Long and Tin Shui Wai were completed in early 2015, and another consultancy agreement on conversion to salt water flushing in the northwest New Territories began in March 2015. Moreover, a new salt water supply project at Tung Chung is currently in the planning stage.

樹木管理及樹木風險評估

為綠化我們的城市，保持斜坡、集水區、水塘和通道等水務設施的健康及可持續景觀，本署一直努力不懈，確保公眾得以享用，並維持環境的原生態。我們繼續實施全面的樹木風險評估和管理計劃，確保識別存在結構或健康問題的樹木，及時減低相關風險，並會對有問題的樹木進行定期監測和檢查。倘若當前並無有效措施將樹木風險降至可接受水平，則只能移除樹木，並另外種植樹木，彌補景觀損失。在可行情況下，我們會對現有樹木加以保護，選擇種植能保護生態和節約用水的本土樹木，並進行花卉主題種植，美化景觀。

Tree Management and Tree Risk Assessment

We have long made contributions to making our city greener as well as maintaining healthy and sustainable landscaping within WSD's installations, including slopes, catchments, impounding reservoirs and access roads to ensure the public's enjoyment and to maintain a pristine environment. We have continued to implement a comprehensive tree risk assessment and management scheme to ensure that trees with structural or health problems are being identified for timely risk mitigations and are undergoing regular monitoring and inspections for problematic trees identified. In cases where no effective measures are present to reduce tree risks to an acceptable level, tree removal is the last resort and replacement tree planting is initiated to compensate for the landscaping loss. Where it was practical, we would incorporate existing tree preservation and protection, implement plant selection of native species for ecological conservation and water saving, and carry out theme planting of flowering species for landscape works.

使用及節約能源

作為全港其中一個最大的耗電用戶，我們時刻緊記在探索再生能源的同時，仍需不斷減少能源消耗。我們一直推行各項能源管理計劃，在整個為用戶供水的過程中善用能源，並已取得顯著節能成效。最有效的節能措施包括向市民推廣節約用水，並且及時維修保養及更換機器及電力設備。儘管二零一四至一五年度因原水減少，抽水量增加導致整體耗電量增加，我們仍會致力改善主要水務設施的能耗表現，並繼續維持水務署辦公室及水務設施的綠化管理。

海浪推動刷網裝置

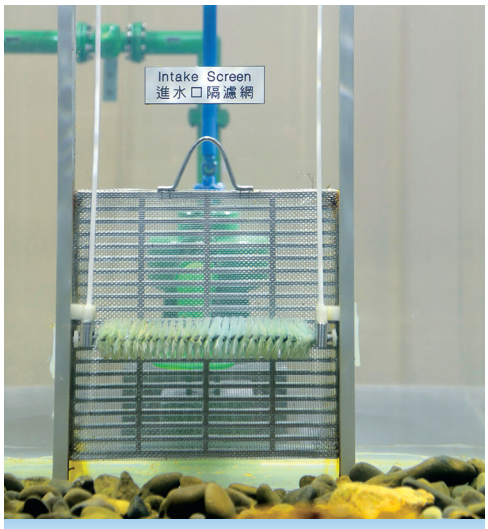
本署員工開發海浪推動清潔裝置，借助浪潮防止海旁抽水站的海水進水口濾隔有海洋生物依附生長，此舉大幅節省人力及能源成本。目前，約半數海旁抽水站已安裝設備，最終所有海旁抽水站均會設有相關裝置。

Energy Use and Savings

As one of the largest consumers of electricity in Hong Kong, we are mindful of the need to continue reducing energy consumptions while exploring renewable energy options. Through a host of on-going energy management programmes, we have reaped significant energy savings by optimising our energy use across the entire chain of operations for supplying water to customers. The most effective energy saving measures include promotion of water conservation within the community along with timely maintenance and replacement of mechanical and electrical equipment. Although an increase in the overall electricity consumption was recorded as a result of lesser local yield and more pumping in 2014/15, we will strive to improve the energy performance of our major assets and maintain green housekeeping of waterworks offices and installations continuously.

Wave-powered Cleaning Device

Our staff members have developed an innovative Wave-powered Cleaning Device by using tidal waves to prevent growth of marine organisms on the intake screens of seafront salt water pumping stations, which has resulted in significant manpower and energy savings. About half of our seafront salt water pumping stations have been installed with this device and ultimately it will be extended to all seafront salt water pumping stations.



ISO 50001 能源管理

自二零一四年年初起，本署按照ISO 50001: 2001規定訂明能源政策及目標、全面的能源實施計劃以及持續監測和改善機制，以加強能源管理系統。二零一四年十二月，本署獲得ISO 50001能源管理系統認證，涵蓋香港特別行政區的集水、儲水、運水、濾水、分配水源及食水和海水供應方面。我們是首個獲得此項認證的香港政府部門。

以環氧樹脂塗料提升抽水效率

我們在六個原水／食水水泵的內層加添樹脂塗料作試驗，以提高抽水效率。

ISO 50001 Energy Management

Since early 2014, we have strengthened our Energy Management System in accordance with the requirements of ISO 50001: 2001 standard by establishing clear energy policies and targets, formulating a comprehensive energy-measurement plan, and setting up a mechanism for continuous monitoring and improvement. In December 2014, the Department was awarded the ISO 50001 Energy Management System certification covering the collection, storage, transfer, treatment, distribution and supply of fresh water and sea water within the Hong Kong SAR. We are the first government department in Hong Kong to have obtained this certification.

Using ceramic epoxy coating to improve pump efficiency

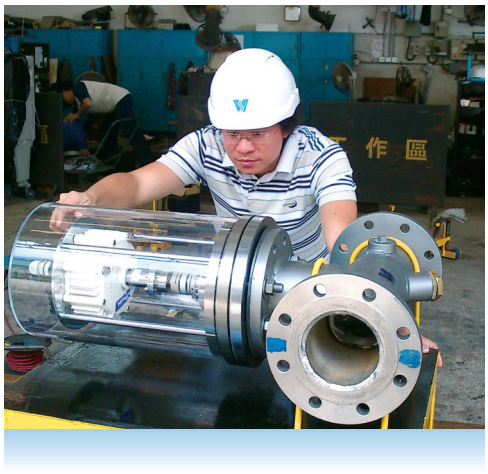
Ceramic coating has been applied on trial basis to the internal surfaces of six raw/fresh water pumps in a bid to improve the pumping efficiency.

可持續運作
Sustainable Operations

水電站
屯門濾水廠首個滑輪發電機順利投入服務後，本署已展開第二期工程，於二零一六至一七度年著手安裝第二部渦輪發電機。此外，我們正就沙田濾水廠等具備充足剩餘水壓的水務設施進行研究，探討安裝類似水電站的可行性，從而進一步善用綠色能源，幫助減少電力開支及碳排放量。

水電站配套控制設備
本署與香港理工大學合作研發的水電站配套控制設施目前正在安裝，將為地下水管中進行區域檢測及壓力管理的監測設備持續供電。這項創新設計將大大提高區域監測數據傳輸頻率，提升數據分析效率。

在創新及科技基金支持下，香港理工大學進一步開發應用於600毫米大型口徑水管的設備。應用於250毫米口徑的設備原型已通過測試，效果良好，準備接受實地試驗。



變速抽水
變速抽水是現有及新建抽水站中的重要節能措施。華富海水抽水站已展開試驗項目，並向相關供水區供應沖廁海水，而建議重置的夏慤道食水抽水站等新建設備亦將採用類似設計。

Hydropower plant
After the successful commissioning of the first hydropower turbine generator at Tuen Mun Water Treatment Works, the Department has now proceeded to Phase II of the project to install the second turbine generator by 2016/17. In addition, we are exploring the feasibility of installing similar hydropower plants at other waterworks installations with sufficient residual head at the intake such as the Sha Tin Water Treatment Works to further promote the utilisation of available green energy to help reduce electricity costs and carbon emissions.

In-line hydropower harnessing devices
In-line hydropower harnessing devices developed in collaboration with the Hong Kong Polytechnic University are being installed to provide a continuing electricity supply to the monitoring equipment installed on the underground pipelines for district metering and pressure management. This innovative design can greatly increase the frequency of data transmission in district metering to enhance the efficiency of the data analysis.

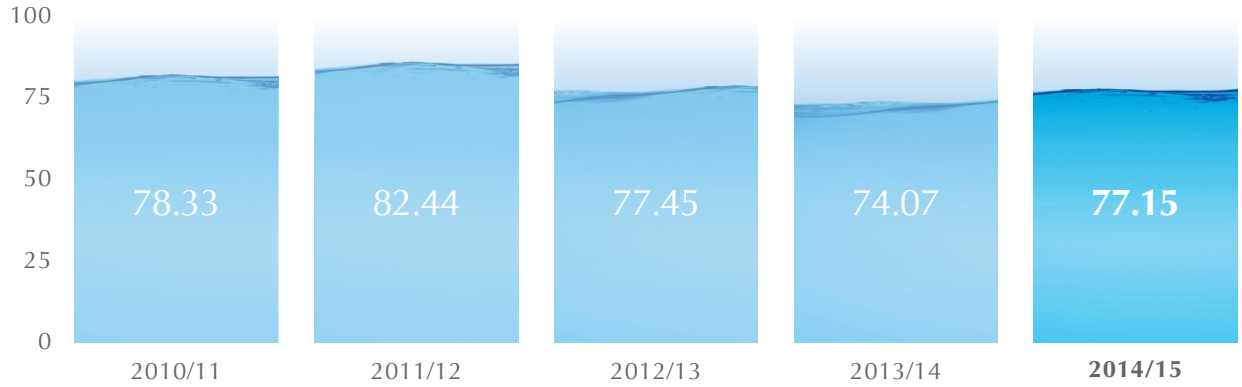
Further development of the devices for applications in larger pipelines up to 600mm in diameter has been carried out by the Hong Kong Polytechnic University under ITC Funding. A 250mm diameter prototype has been successfully tested with promising results and is ready for on-site trials.

Implementation of variable speed pumping
Variable speed pump operation is one of the key initiatives that can cut energy consumption in pumping for both existing and new pumping stations. A pilot scheme has been implemented at the Wah Fu Salt Water Pumping Station for supplying seawater for toilet flushing in the related supply zone. A similar design will also be adopted for new installations such as the new proposed reprovisioned Harcourt Road Fresh Water Pumping Station.

人均耗電量（食水及原水）

Per Capita Electricity Consumption (Fresh Water and Raw Water)

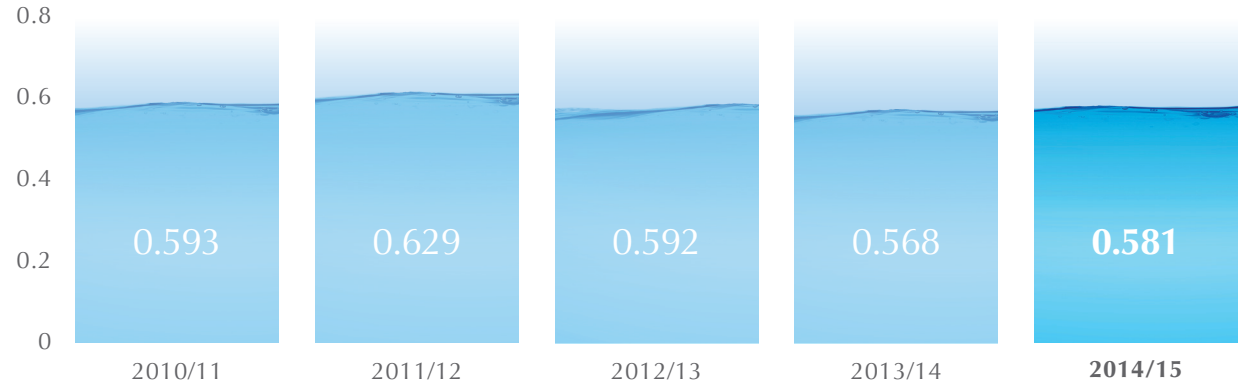
千瓦時／每人／每年 kWh/head/year



每單位耗電量（食水及原水）

Unit Electricity Consumption (Fresh Water and Raw Water)

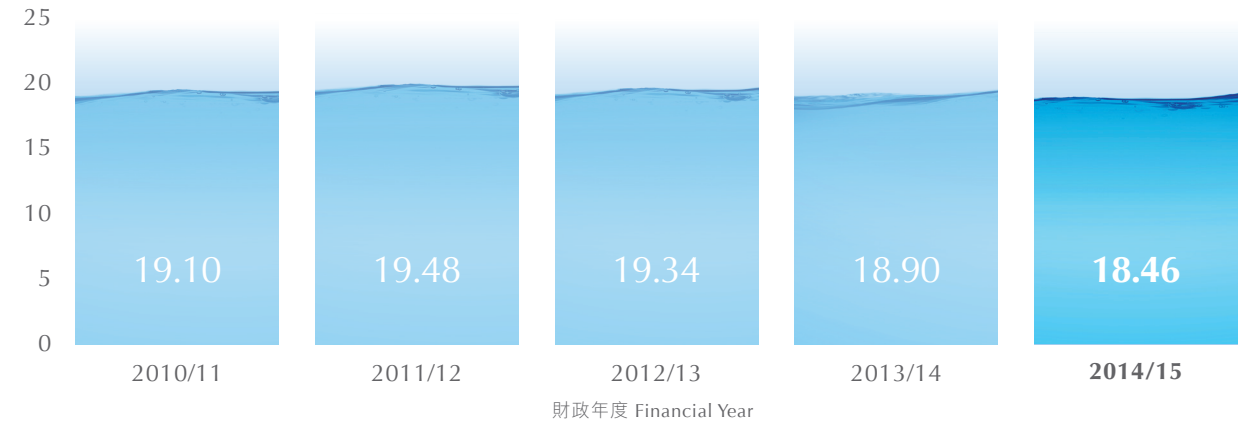
千瓦時／立方米 kWh/m³



人均耗電量（海水）

Per Capita Electricity Consumption (Sea Water)

千瓦時／每人／每年 kWh/head/year



每單位耗電量（海水）
Unit Electricity Consumption (Sea Water)

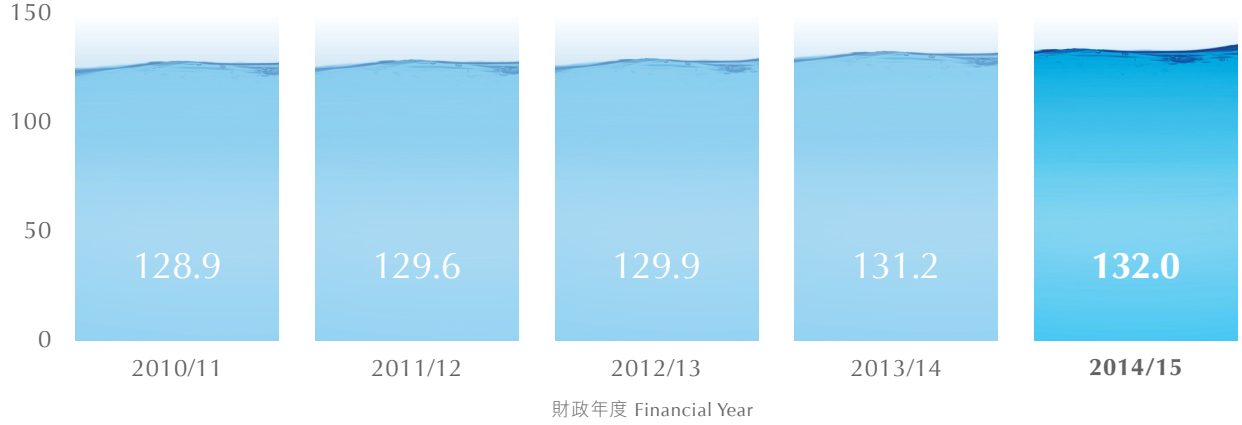
千瓦時／立方米 kWh/m³

辦公室每單位樓面面積的耗電量
Office Electricity Consumption Per Unit Floor Space

千瓦時／平方米 kWh/m²

人均住宅食水耗用量
Per Capita Domestic Fresh Water Consumption

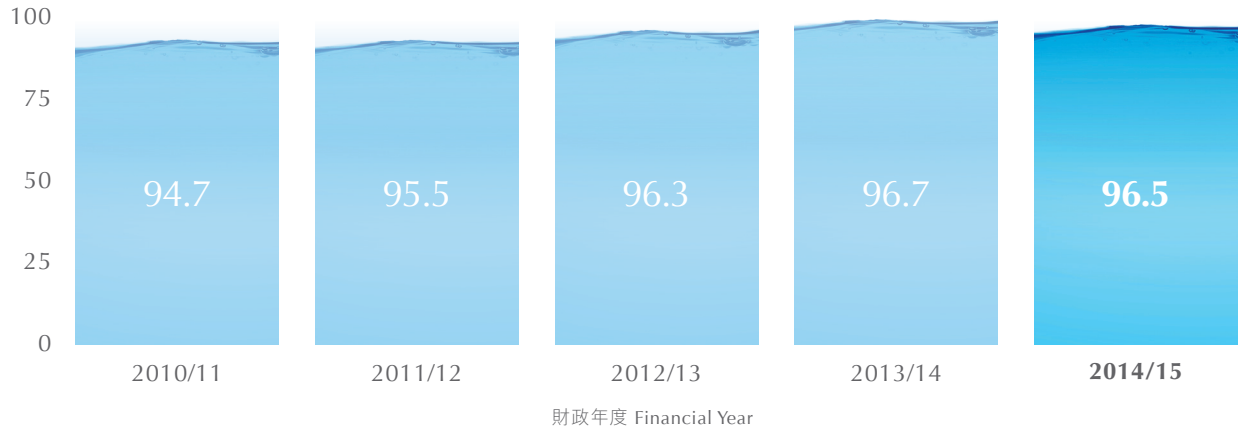
公升／日 Litres/day



人均沖廁水耗用量（食水及海水）

Per Capita Flushing Water Consumption (Fresh Water & Sea Water)

公升／日 Litres/day

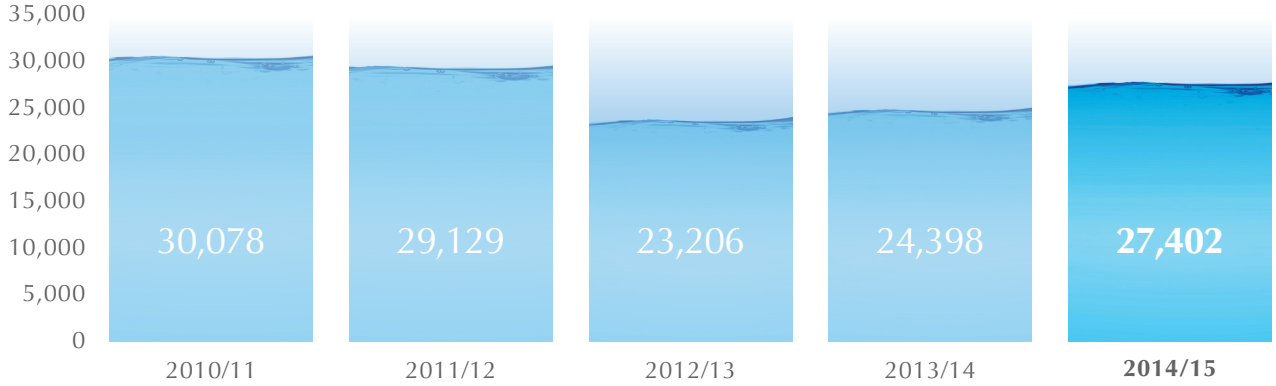


財政年度 Financial Year

耗紙量

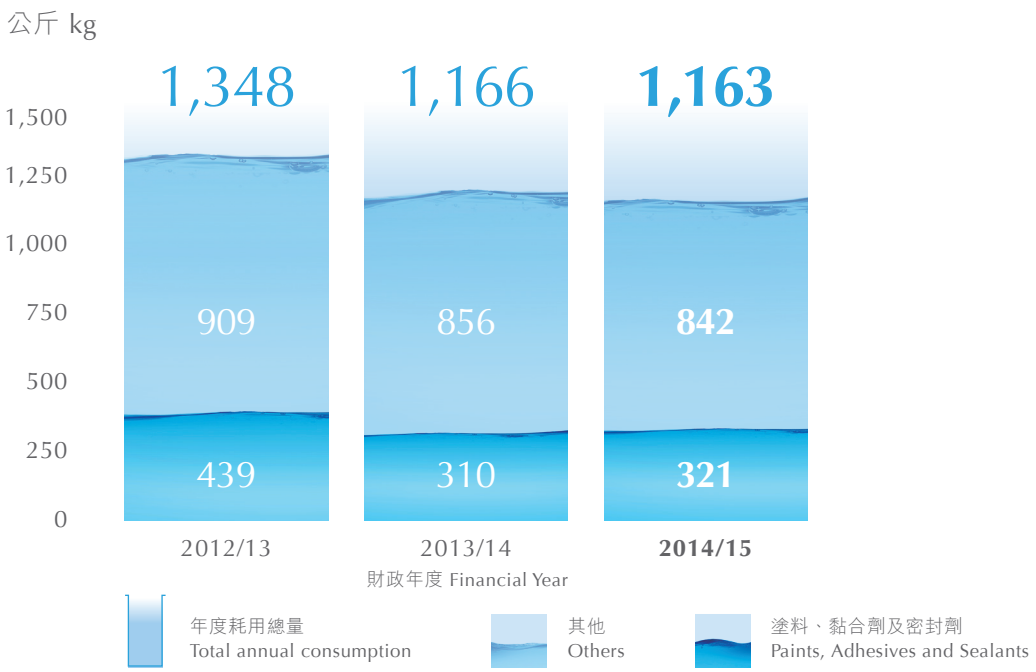
Paper Consumption

令 Reams



財政年度 Financial Year

內部工作所需揮發性有機化合物耗用量
VOC Consumption for In-house Work



公用集調車輛資料
Information on Pool Transport

	公務用車數量 No of Government Vehicles in Operation:			總燃料耗用量（公升） Total Fuel Consumption (Litres)			總車程（公里） Total mileage (km)		
	12/13	13/14	**14/15**	12/13	13/14	**14/15**	12/13	13/14	**14/15**
柴油 Diesel	18	16	**16**	28,121	22,569	**18,581**	138,193	116,082	**85,058**
汽油 Petroleum	201	190	**186**	533,795	534,972	**534,440**	3,538,662	2,732,005	**2,641,642**
混合（汽油／電力） Hybrid (Petrol/Electric)	20	18	**18**	15,897	15,265	**14,920**	260,951	246,496	**239,631**
液化石油氣 LPG	8	13	**13**	36,167	35,187	**53,802**	109,775	107,640	**157,962**
電力 Electricity	4	9	**13**	–	–	**–**	32,900	74,572	**82,740**

廢氣排放
Emissions

(以公噸計) (Figures in Tonnes)	二氧化碳 CO2			二氧化硫 SO2			氮氧化物 NOx			可吸入懸浮粒子 RSP		
	12/13	13/14	14/15	12/13	13/14	14/15	12/13	13/14	14/15	12/13	13/14	14/15
直接廢氣排放：Direct Emissions												
公務用車（柴油）Vehicle fleet (Diesel)	74	59	48	–	–	–	1	1	–	–	–	–
公務用車（汽油）Vehicle fleet (Petrol)	1,297	1,299	1,216	–	–	–	1	1	1	–	–	–
公務用車（液化石油氣）Vehicle fleet (LPG)	61	59	88	–	–	–	–	–	–	–	–	–
間接廢氣排放：Indirect Emissions												
耗用電（九龍及新界）Electricity Consumed (Kowloon and New Territories)	351,277	371,581	391,276	204	209	250	398	455	482	13	13	15
耗用電（港島）Electricity Consumed (Hong Kong Island)	56,179	50,394	51,587	27	17	17	58	52	56	1	1	1
總量 Total	406,619	423,392	444,215	230	226	267	462	509	539	14	14	16

專注客戶服務

Focusing on Customer Service

作為一個以客為本的機構，我們盡量向公眾提供不同渠道，確保用戶能迅速與我們聯絡，從而清楚得知各區水務工作的進展情況。

As a customer focused organisation, we make ourselves as accessible as possible to the public to ensure that our customers can reach us quickly and, in turn, are clearly informed of any water-related developments in their districts.

保持溝通

客戶電話諮詢中心服務意見調查

本署於一九九八年首次對客戶電話諮詢中心的服務進行意見調查，並於二零零零年（於一九九九年建立現時的客戶電話諮詢中心後）及二零零八年再次進行調查，旨在評估客戶意見及滿意度。作為水務署致力滿足客戶需要的措施，最重要是透過檢討及監察客戶對服務各方面的滿意度，精益求精，不斷改善客戶電話諮詢中心服務。為此，本署聘請專門的客戶意見調查公司，於二零一四年十月進行新一輪調查。在確定調查問卷後，於二零一五年一月及二零一五年三月分別展開試驗調查和主要調查的實地工作。我們預計行政摘要及報告將於二零一五年最後季度完成。

Staying in Touch

Opinion Survey on Customer Telephone Enquiry Centre (CTEC) Services

Customer opinion surveys on the CTEC's services to assess the views and satisfaction level of customers was first conducted in 1998 and repeated in 2000 (after the establishment of the present CTEC in 1999) and in 2008. As one of the measures for achieving the WSD's commitment to excellence in satisfying customers' needs, it is vital to keep track of the continuous improvement of the CTEC's services by reviewing and monitoring the satisfaction level of customers on various aspects of these services. To this end, the WSD hired a specialist customer opinion survey firm to carry out a new round of research again in October 2014. After the survey questionnaire was finalised, the pilot survey and the main survey fieldwork were completed in January 2015 and March 2015, respectively. We expect the Executive Summary and Report of the survey will be finalised during the last quarter of 2015.

智能手機流動應用程式

於二零一四年四月，水務署正式推出具備多種功能（包括查閱水務署的重要資訊、暫停供水通告及帳單資訊，以及聯絡本署）的《WSD Mobile App》。

Mobile App for Smartphones

In April 2014, the WSD officially launched the "WSD Mobile App" which provides various functions including viewing important information from the WSD, water suspension notices and billing information, and making contact with us.

電子帳單

我們於二零一四年十二月精簡並提升電子帳單服務，包括在付款到期日前向電子帳單客戶發出提醒，使服務更方便快捷。我們推出了推廣電子帳單服務的措施，自二零一四年十二月起，每個新註冊電子帳單客戶均可獲贈水龍頭節流器一對。截至二零一五年三月三十一日，34,400名用戶已選擇以電子方式接收水費帳單，比去年同期增加25,000名或266%。

e-bill Services

In December 2014, the e-bill services were streamlined and enhanced for improving user friendliness and convenience, including sending a reminder to e-bill customers before payment due date. As one of the measures to promote e-bill services, each newly registered e-bill customer was given a pair of flow controllers for water taps since December 2014. As of 31 March 2015, 34,400 customers have opted to receive their water bills electronically, which has increased by 25,000 or 266%, in comparison with the same time last year.

專注客戶服務

Focusing on Customer Service

方便用戶繳費

本署將於二零一五年年底提供電子帳單遞交及付款服務，這是由香港金融管理局推出的一站式服務，用戶可透過網上銀行戶口接收、管理及安排繳納電子帳單的。此外，我們計劃透過智能手機向用戶提供二維碼，方便他們在便利店繳交水費而無需出示印刷版的水費單，藉此加強服務。

Facilitating Bill Payments

We are going to provide the Electronic Bill Presentment and Payment (EBPP) Service in late 2015, which is a one-stop platform launched by the Hong Kong Monetary Authority for users to receive, manage and schedule payments for electronic bills through internet banking accounts. Furthermore, we are planning to enhance our service by providing a QR code to customers via smart phones to facilitate them to make payments at convenience stores without the need to present their paper water bills.

水錶及讀數

本署積極更換已達指定使用年期的水錶。於二零一四至一五年度，我們分別更換了190,000個和2,000個小型及大型舊水錶。因此，於本年年底仍在使用的小型及大型舊水錶的比例分別只有3.8%和2.3%，正在使用而讀數準確度符合理想水平的水錶比例則由二零一三至一四年度的96.4上升至96.7。

Meters and Readings

The Department has been actively replacing water meters that have reached their designed service lives. During 2014/15 we replaced about 190,000 and 2,000 of old small and large meters, respectively. As a result, there will only be 3.8% of old small meters and 2.3% of old large meters remaining in operation by the end of the financial year. As a consequence, the percentage of those meters now operating at their desired accuracy has risen to 96.7 from the 96.4 for the period 2013/14.

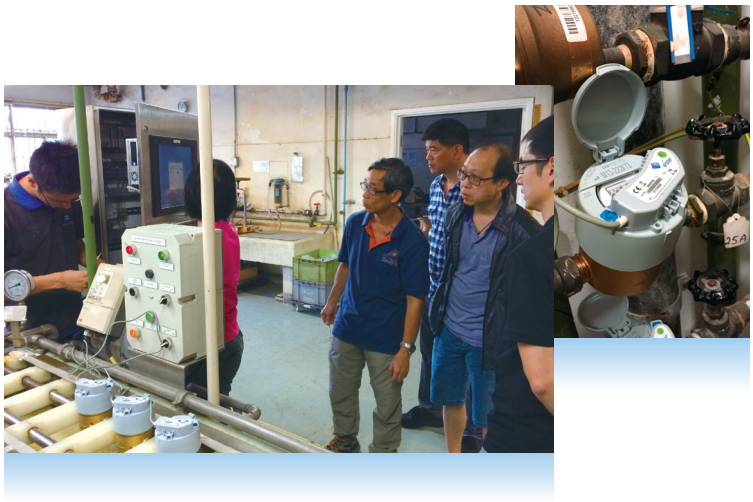
自動抄錶試驗計劃

我們在深水埗元州邨、上水紀律部隊宿舍及上水的祥龍圍邨的部分住宅樓宇推行自動抄錶試驗計劃，以審視水錶自動抄錶系統在高樓大廈的技術表現。從目前收集的水錶數據及我們的初步分析來看，自動抄錶系統表現良好。本署亦將探討於新選址實施自動抄錶系統的可行性及成本效益，為自動抄錶系統的未來發展奠定方向。

讓用戶取得最新資訊

客戶聯絡小組

客戶聯絡小組於一九九三年七月成立，由水務署副署長擔任主席，並由三十名來自社區各界人士組成。客戶聯絡小組會議每四個月舉行一次。小組成員已就供水服務提出許多具建設性的意見及建議，成為水務署及客戶之間有效的溝通渠道。去年，小組成員曾參觀水資源教育中心及馬鞍山濾水廠，並聽取了關於「二零一三年客戶諮詢中心服務意見調查結果」、「用水效益標籤計劃新用具 – 節流器」、「淡水冷卻塔安裝」、「電子帳單服務簡化版」、「香港海水化淡」、「薄扶林及新界西北部沖廁用水由食水轉為海水」的講解。



Automatic Meter Reading (AMR) Pilot Scheme

We have launched an AMR pilot scheme for selected residential buildings in Un Chau Estate in Sham Shui Po, the Sheung Shui Disciplined Services Quarters and Cheung Lung Wai Estate in Sheung Shui in order to review the technical performance of the AMR system in high rise buildings. From the metering data collected so far and our initial analysis, the performance of the AMR system is promising. We will also explore the feasibility and cost-effectiveness of implementing the AMR system in new sites with a view to setting the direction for future development of the AMR system.

Keeping Customers Informed

The Customer Liaison Group

The Customer Liaison Group (CLG) was formed in July 1993 and is chaired by the Deputy Director of Water Supplies and comprises thirty members from different sectors of the community. The CLG meetings are held once every four months. Many constructive views and suggestions concerning water supply services have been put forward by the Group's members and this has served as an effective communication channel between the Department and our customers. During the past year, members have visited the Water Resources Education Centre and Ma On Shan Water Treatment Works. Presentations were also given to members on "results of 2013 Opinion Survey on Customer Enquiry Centre Services", "new items included in the Water Efficiency Labelling Scheme – Flow Controllers", "installation of Fresh Water Cooling Towers", "simplified e-bill services", "seawater desalination in Hong Kong" and "conversion of the flushing supply from fresh water to salt water in the Northwest New Territories and Pok Fu Lam".

家用水質

大廈優質供水認可計劃 – 食水

為用戶供水之前，本署於每個階段均會按照嚴格的國際指引，對供水進行大量水質測試，確保供水安全、適合飲用。然而，食水送至內部供水系統後，大廈業主便有責任維持供水清潔安全。為此，我們推出大廈優質食水供應計劃，這項計劃覆蓋住宅用戶、商業及工業樓宇，迄今已向大廈業主／物業管理公司頒發4,004張金、銀、藍證書，以表揚他們對維持內部優質食水供水系統作出的努力。

Water Quality in the Home

Quality Water Supply Scheme for Buildings – Fresh Water

Following strict international guidelines, the Department carries out extensive testing of the water quality at every stage until it reaches the connection point to the customers in order to ensure a safe, drinkable water supply. However, once the water supply is within the internal plumbing system, the owners of the property must assume responsibility for keeping it clean and safe. For this reason we have developed the subject scheme for buildings, which covers domestic as well as commercial and industrial buildings. To date 4,004 Gold, Silver and Blue certificates have been awarded to building owners/management companies in recognition of their dedication to maintaining the quality of their internal fresh water plumbing systems.

大廈優質供水認可計劃 – 沖廁水

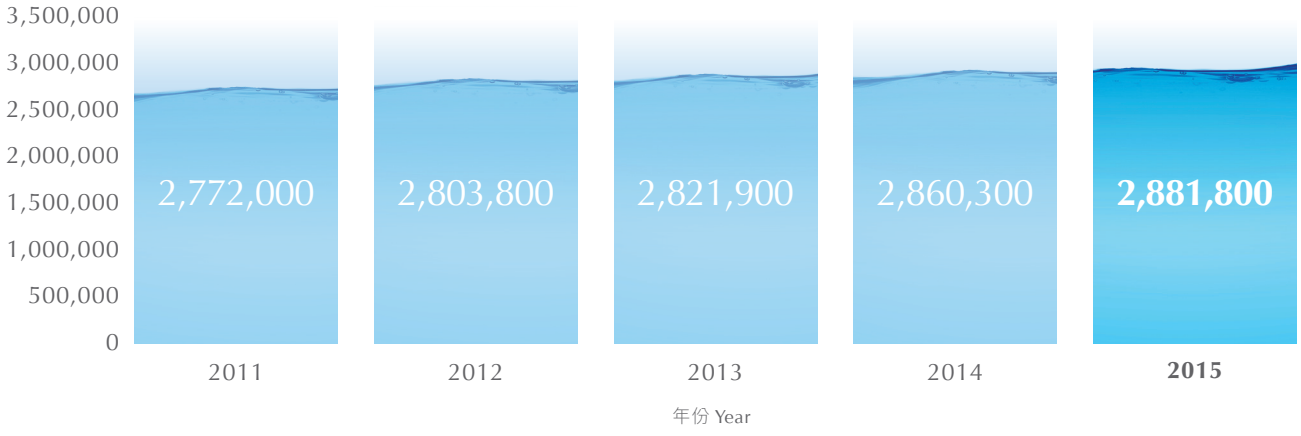
此項計劃旨在鼓勵大廈業主妥善維修保養樓宇的內部沖廁系統，有助減少因沖廁系統保養欠佳而出現的停止供水情況。此項計劃亦覆蓋住宅用戶、商業及工業樓宇。水務署至今已向大廈業主／物業管理公司頒發1,190張藍證書，以表揚他們對內部沖廁系統進行優質保養維修。

Quality Water Supply Scheme for Buildings – Flushing Water

This scheme is aimed at encouraging proper maintenance of internal flushing systems in buildings. This scheme is to reduce failures in flushing water supplies due to poorly maintained systems in buildings. This scheme also covers domestic as well as commercial and industrial buildings. So far the WSD has awarded 1,190 Blue certificates to building owners/management companies in recognition of the high quality maintenance of their internal flushing plumbing systems.

客戶數目（截至二零一五年三月三十一日）

Number of Accounts (as at 31 March 2015)



開創未來
Shaping Our Future

本署致力培育一支出色的管理團隊，同時推行工作場地計劃，藉以提升在所有供水環節供應優質食水的能力。

培訓

水務署已培育一支富有才幹和竭誠盡力的工作隊伍，並安排他們在本署各級部門任職。我們為(4,408) 名員工安排深入培訓計劃和跨部門研討會，確保我們能持續滿足並超越用戶的需要和期望。本年度，我們繼續提供培訓，以加強或提升員工的技術知識和管理能力，培訓內容尤其集中在濾水、安全性及資訊科技方面，亦提供改善員工語言能力的項目。為此，我們已提供共12,567個工日的培訓，成本達280萬港元。在減低工作地點意外方面，統計數字顯示，水務工程合約意外率一直處於較低水平。事實上，我們的意外率遠低於政府就公共工程合約所定的安全上限。我們亦已為

The Department is dedicated to the development of a strong managerial leadership team while at the same time initiating workplace programmes to improve competencies that involve all phases of providing high quality water supplies.

Training

The WSD has nurtured a talented and highly dedicated workforce that extends across the entire range of the Department's operations. We schedule in-depth training schemes along with inter-branch seminars for our (4,408) staff members to make sure that we continue to meet and exceed the needs and expectations of our customers. This year, we continued to provide training programmes to enhance or upgrade the technical knowledge and managerial skills of our staff members, particularly in the area of water treatment, safety, and information technology as well as programmes to improve their language proficiency. To this end, we have conducted a total of 12,567 training days at a cost of HK$2.8 million. With respect to lowering workplace accidents, the statistics show that we are maintaining a consistently low rate of cases on waterworks contracts. In fact, we are well below the safety limits designated by the Government for public works

員工提供逾1,800個工日的培訓及分享會，涵蓋不同主題，包括專門技術、法律知識、客戶服務技能及其他題目，藉以提升對公眾提供的用戶服務。

於二零一零年，本署設立技術轉移工作坊及培訓小組，以便提高員工對水處理最新發展的認識。我們舉辦研討會及定期技術考察，了解設計、合約管理、濾水程序和濾水廠運作。年內，211名員工參加三場知識分享會，並三次前往本地濾水廠和本署及其他部門的建築地盤進行技術考察。本署的工程顧問及承建商會繼續與員工分享先進的技術知識。

由於濾水廠運作為專門範疇，而且各濾水廠的濾水程序及濾水廠設施不盡相同，根據於二零一四年／二零一五年在馬鞍山濾水廠、牛潭尾濾水廠及小蠔灣濾水廠推行的試驗計劃，本署為前線員工安排實地培訓，以轉移不同濾水廠運作的經驗及技術。其他主要濾水廠的培訓將於二零一五／二零一六年開辦。

contracts. We have also conducted over 1,800 man-day training and sharing sessions for our staff to improve our customer services for the public, covering different aspects, including technical knowhow, legal knowledge, customer service skills, and other topics.

In 2010, the Department formed a technology transfer workshop and training group to help increase knowledge of our staff about the latest developments in water treatment. We held seminars and scheduled technical visits to learn about design, contract management, treatment processes and treatment plant operations. During the year, 211 staff participated in knowledge-sharing at three seminars and three technical visits to water treatment plants as well as construction sites of our department and other departments. Our engineering consultants and contractors continue to share their advanced technical knowledge with our staff.

Because treatment works operations are very specialised, and the treatment processes as well as the plant facilities are not the same in each treatment works, on-site training has been arranged for frontline staff in order to achieve a transfer of experience and technical know-how for operation of different treatment works under a pilot scheme comprising Ma On Shan, Ngau Tam Mei and Siu Ho Water Treatment Works in 2014/15. Further training on other major treatment works will be organised in 2015/16.

培育一支盡心盡力的工作隊伍

我們亦致力在本署各級管理層與員工之間建立穩健而有效的溝通渠道。為此，部門協商委員會及轄下小組委員會提供多個有效平台，供全體員工就共同關切的事項交換意見。本署安排定期與工會舉行會議，而高級人員亦定期到訪各辦事處及工作場地，以加深了解各個進行中的項目及激勵員工。本署期望所有主管人員在履行職責時將提高生產力及改善服務作為第一要務。為此，本署已推出多項激勵計劃，鼓勵員工出謀劃策，務求改善服務及提升工作效率。有關創新建議經試行、試驗及實施後，明顯提升了我們的服務質素和運作效率。

年內，員工為協助全面提升本署運作達致卓越表現而提出許多意見和建議，本署亦已仔細考慮有關建議，並在可行情況下付諸實行。

Fostering a committed workforce

We are also working hard to expand the strong and effective communication channels that exist between managers and staff throughout the Department. In this regard, the Departmental Consultative Committee and its sub committees have provided useful forums to create an open exchange of ideas on issues of common concern for all staff members. The Department schedules regular meetings with staff unions and senior officers make regular visits to individual offices and work sites to become more knowledgeable about various on-going projects and to help motivate staff. All supervisors are expected to make productivity enhancements and service delivery improvements a top priority as part of their duties. To this end, the Department has introduced a number of motivation schemes to encourage staff to contribute their ideas and opinions on how to improve service delivery and foster greater work efficiency. As a consequence, new innovative ideas are being tried, tested and implemented, significantly helping our operations achieve impressive service and operational improvements.

The large number of ideas and suggestions submitted by staff during the year to help raise the overall excellence of our operations has been carefully considered and, where feasible, the ideas have been implemented.

向合作伙伴學習

我們與眾多頂尖學術機構和私營公司一同研究及發展多個項目，從而加強了雙方在技術發展和新技術應用方面的合作。本署積極培養創新文化，致力加強各級員工的信心。

部門職位互調計劃

自二零零九年起，水務署參與自願性「職位互調計劃」，將本署的工程師調派至土木工程拓展署，以擴闊他們的眼界和工作思路。「職位互調計劃」成效顯著，現已踏入第六年，成功互調25 對工程師。本署所有部門的工程師都可申請其中一類職位互調，一般為期兩年。從自願性「職位互調計劃」的經驗所得，水務署及土木工程拓展署自二零一四年十一月起向二零零八年起獲委任的工程師實施部門指令職位互調。首次部門指令職位互調計劃已推行，成功互調兩對工程師。每項互調一般為期三年。職位互調經驗有利於員工的事業發展，並為他們提供一個獨特環境，讓他們展現決斷行事的能力和才能。

Learning from partnerships

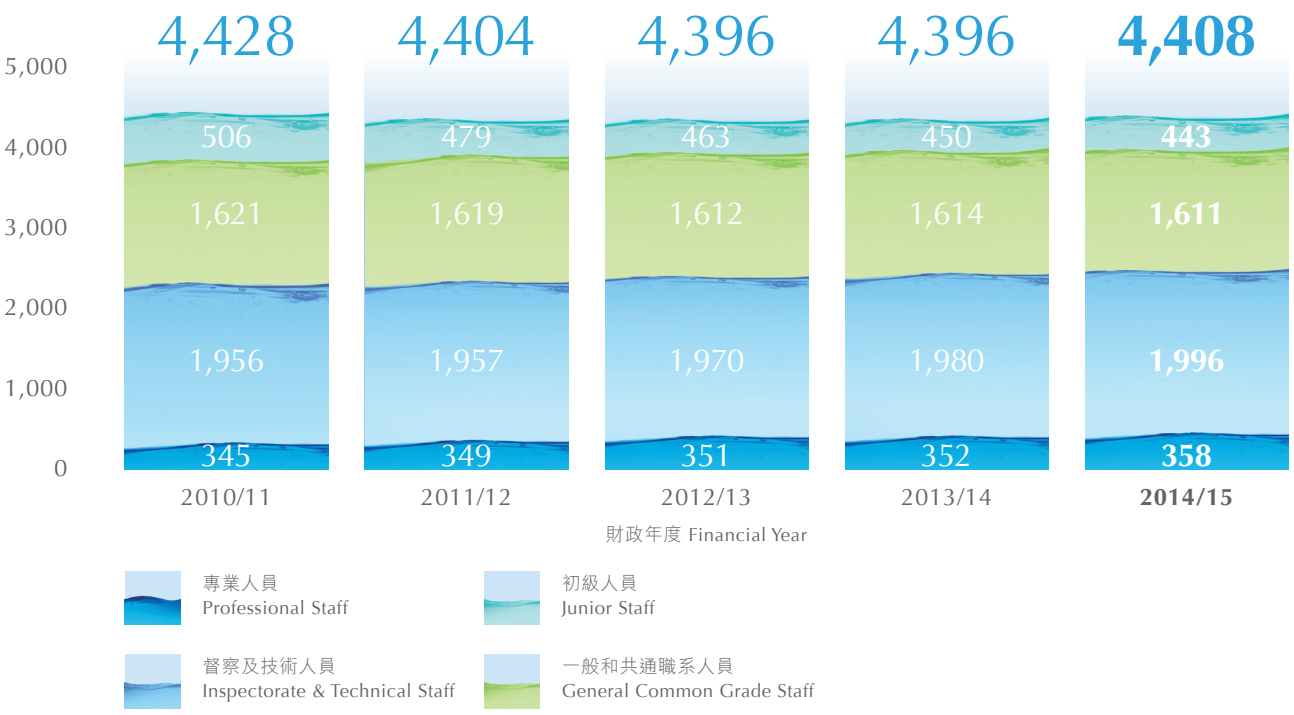
We have formed a great many partnerships with academic institutions and private sector firms on research and development projects. This has led to strengthened collaborative relationships on technological developments and newly developed applications. The Department actively cultivates a culture of innovation and we have worked hard to bolster confidence throughout the organisation.

Departmental Cross Postings

Since 2009, the WSD has participated in a Voluntary Cross Posting Scheme (VCPS) that seconds engineers from our Department to the Civil Engineering and Development Department (CEDD) in order to expand their overall exposure and broaden their work perspectives. This successful scheme, now in its sixth year, has matched 25 pairs of engineers. Engineers from all sections of the Department can apply for cross-posting for a term which normally spans two years. Based on the experience gained in VCPS, the WSD and CEDD have since November 2014 implemented the Management Initiated Cross Posting (MICP) for engineers who have been appointed since 2008. The first launch of MICP, comprising two pairs of engineers, has been arranged. The duration of each MICP is normally three years. This cross-posting experience helps the career development of staff and offers a unique environment for staff to display their personal initiative and individual capabilities.

開創未來
Shaping Our Future

員工編制
Staff Establishment



培訓工日
Training Man-days

建立團隊

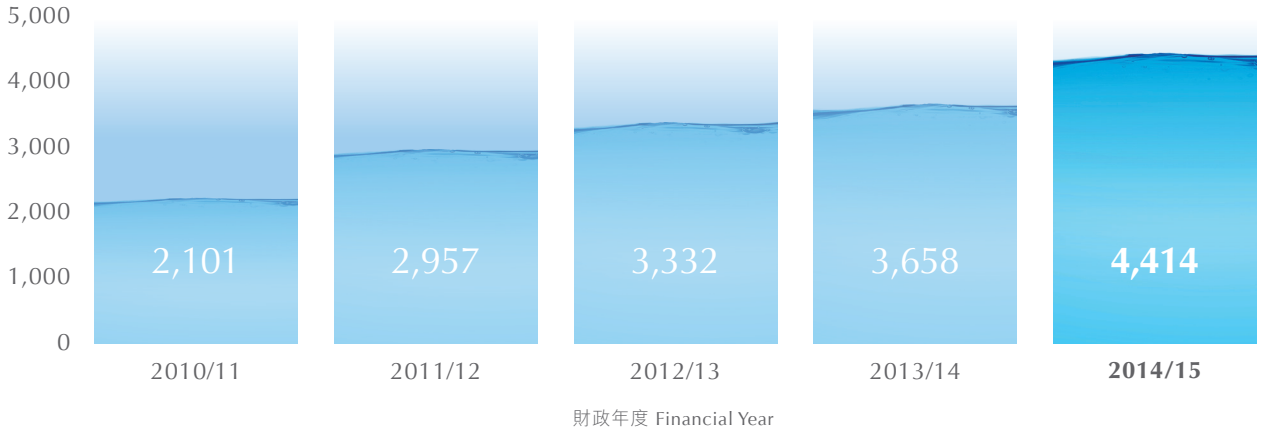
為協助員工更妥善維持工作與生活的平衡，水務署過去一年舉行了各色各樣的體育活動，超過400名員工參與其中。我們亦邀請員工參與其他團體舉辦的各項體育活動，例如部門際乒乓球比賽、部門際高爾夫友誼杯、建造業運動會、二零一四年工商機構運動會，以及其他相關的活動。以上各項活動均有助本署建立更深厚的團隊精神之餘，亦有助促進員工養成健康的生活習慣。

Team Building

To encourage a greater work-life balance among staff members, the WSD arranged a series of different sporting events with more than 400 participants taking part over the past year. Staff members were also invited to participate in sports events organised by outside parties such as the Inter-departmental Table Tennis Tournament, Inter-departmental Golf Friendship Cup, Construction Industry Sports Day, Corporate Games 2014 and other related events. All of these activities have greatly contributed to building better team spirit as well as fostering healthier life styles among our employees.

水務署義工工時數目

No. of Man-hours for WSD Volunteers



開創未來

Shaping Our Future

義務工作

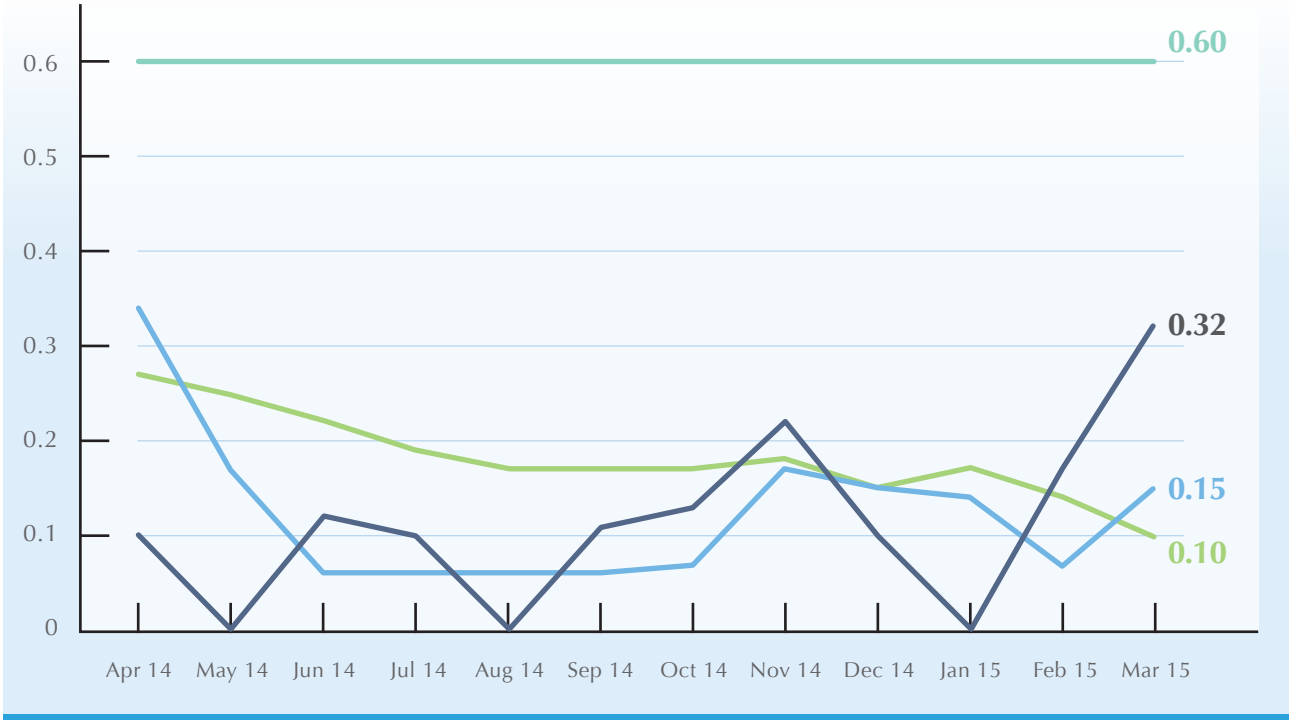
本署人員一如既往積極參與義務工作，履行對社會的承諾。於年內，我們的義工參加了超過104項慈善活動，當中包括籌款活動、探訪老人院及協助殘疾人士。員工義務工作時數合計達4,414小時，有20名員工獲得個人金、銀、銅嘉許狀，表揚他們對以社區為本慈善工作的貢獻。

Voluntary Work

Staff volunteers showed their on-going commitment to the community by taking part in more than 104 charity events during the year. These included fund raising efforts, visiting the homes of the elderly and assisting the disabled. A total of 4,414 community service hours were spent by staff, and 20 received individual Gold, Silver and Bronze awards in recognition of their dedication to community-focused charity work.

二零一四／一五年度水務工程合約意外率

Accident Rates for Waterworks Contracts 2014/15



獎項和嘉許

本署在本港及國際均獲得多個獎項，以認同我們在服務、創新及人力發展方面的成就。

本署於二零一四／一五年度獲得的獎項包括：

1. 二零一四年度申訴專員嘉許獎公職人員獎

2. 二零一四至一五年度香港公益金「僱員募捐計劃」：

    - 「僱員樂助計劃」政府部門最高籌款獎第三名

Awards and Recognition

The Department has received a number of awards, both locally and globally, that recognise our work in the areas of service, innovation and manpower development.

The awards received by the Department in 2014/15 include:

1. The Ombudsman's Awards 2014 for Officers of Public Organisations

2. The Community Chest' Employee Contribution Programme 2014/15:

    - CARE Scheme (Civil Service Category) – 3rd Highest Donation

3. 公務員事務局局長嘉許狀

4. 二零一四至一五年度職業健康大獎：工作壓力管理大獎（優異獎）

5. 第十三屆香港職業安全健康大獎：

- 安全表現大獎
- 指差呼稱大獎
- 安全文化大獎
- 安全推廣大獎
- 安全改善項目大獎

6. 二零一四至一五年度建造業安全獎勵計劃安全問答比賽大獎

7. 公務員事務局公務員優質服務獎勵計劃：

- 部門精進服務獎（大部門組別）– 銅獎
- 隊伍獎（內部支援服務）– 金獎（能源管理組 – 海浪推動刷網裝置）
- 隊伍獎（內部支援服務）– 銀獎（水質科學部 – 生物感應預警系統）
- 隊伍獎（內部支援服務）– 銅獎（工程拓展組 – 內聯閉式水力發電系統）

8. 隊伍獎（內部支援服務）– 特別嘉許（創新意念）[能源管理組 – 海浪推動刷網裝置]

3. Civil Service Bureau, The Secretary for the Civil Service's Commendation Award

4. Occupational Health Award 2014/15: Work Stress Management Best Practices Award (Merit)

5. 13th Hong Kong Safety and Health Award

- Safety Performance Award
- Point and Calling Award
- Safety Culture Award
- Safety Promotion Award
- Safety Enhancement Program Award

6. Group and Safety Quiz Competition Awards for the Construction Industry Safety Award Scheme 2014/15

7. Civil Service Bureau, Civil Service Outstanding Award Scheme:

- Departmental Service Enhancement Award (Large Department) – Bronze Prize
- Team Award (Internal Service – Gold Prize (Wave Powered Cleaning System by the Energy Management Unit)
- Team Award (Internal Service – Silver Prize (Biosensing Alert System by the Water Science Division)
- Team Award (Internal Service – Bronze Prize (Inline Hydroelectric Generating System in Confined Conditions by the Project Development Unit)

8. Team Award (Internal Service – Special Citation (Innovation) [Wave-powered Cleaning System by the Energy Management Unit]

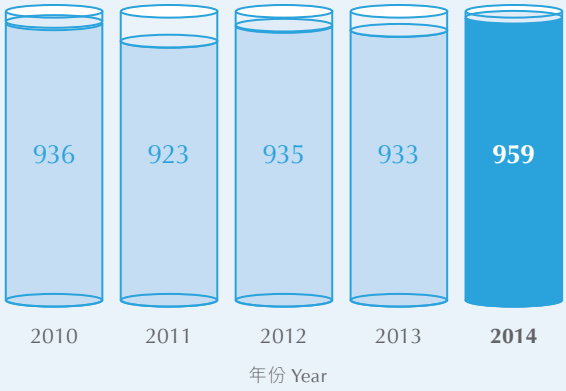

Water Supplies Department
水務署
caringorganisation
Mission
CARING
Caring for the Community
關懷社區
Caring for the Employees
關懷員工
Caring for the Environment
關懷環境
HKCSS
Years of Award: 2007 - 2015
銅獎
Bronze Award
CORPORATE AND EMPLOYEE CONTRIBUTION PROGRAMME
PRESENTED TO
水務署
Water Supplies Department
ERB
人才企業嘉許計劃
Manpower Developer Award Scheme
Congratulations to
水務署
Water Supplies Department
On renewing the honour of Manpower Developer
2013 - 2017
Awarded by the Employees Retraining Board
CEEQUAL
Sustainability Assessment, Rating and Awards Scheme for Civil Engineering, Infrastructure, Landscaping and the Public Realm
Salt Water Supply System for Pok Fu Lam Area
Sustainability Performance Assessment
Whole Team Award
Sustainability Performance Rating: GOOD
Assessed using CEEQUAL Version 5 for Projects, 2012
Achieved by
Client
Designer
Contractor
Assessor
Verifiers
Date
May 2014
Chairman
CEEQUAL Ltd
This is to certify that
Water Supplies Department
was admitted as an
INTERNATIONAL PARTNER ORGANISATION
of
The Chartered Institution of Water and Environmental Management
From 1st January 2014 To 31st December 2014
President
Chair of the Trustee Board
ERB
人才企業嘉許計劃
Manpower Developer Award Scheme
Congratulations to
水務署
Water Supplies Department
On receiving the honour of Manpower Developer
2013 – 2017
Awarded by the Employees Retraining Board
香港公益金
THE COMMUNITY CHEST
Employees Contribution Programme
2014 / 2015
CARE Scheme
Civil Service Category
3rd Highest Donation Award
Water Supplies Department

附錄
Appendices

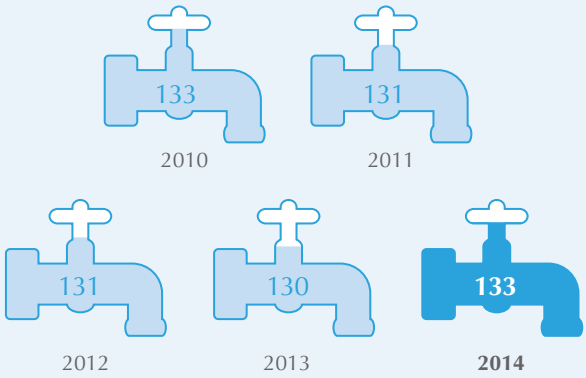
附錄一 Appendix I

全年食水耗用量及人均用水量*
Annual Fresh Water Consumption and Per Capita Consumption*

全年食水用水量
Annual Fresh Water Consumption
百萬立方米 million cubic metres



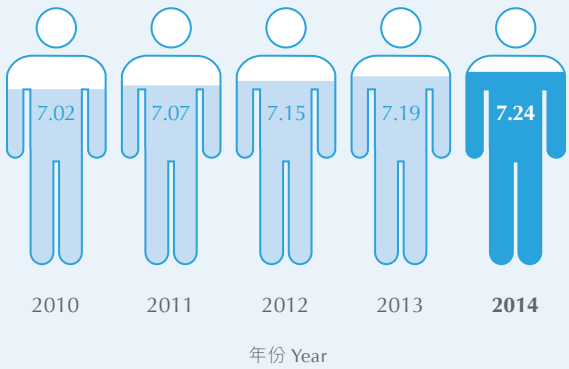
人均用水量
Per Capita Consumption
立方米/每年 cubic metres per year



附錄二 Appendix II

全港人口及獲食水供應人口*
Population in HK and Population Served with Fresh Water*

全港人口
Population in Hong Kong
百萬 million

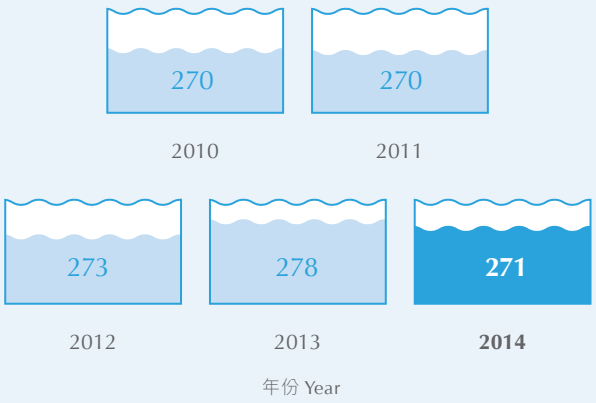


獲食水供應人口
Population Served with Fresh Water
百萬 million

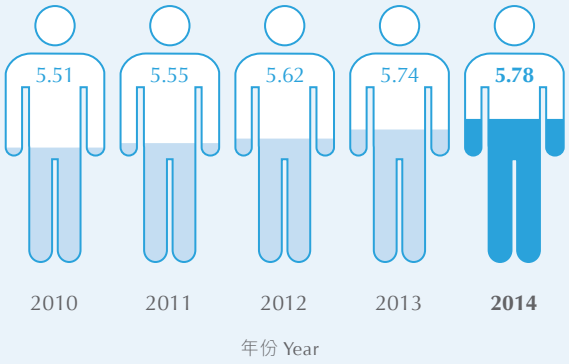
附錄三 Appendix III

全年海水耗用量及獲海水供應人口*
Annual Sea Water Consumption and Population Served with Sea Water*

全年海水用水量
Annual Sea Water Consumption
百萬立方米 million cubic metres



獲海水供應人口
Population Served with Sea Water
百萬 million



* *根據二零一一年人口普查統計結果得出的人口基準，二零零七年年中至二零一一年年中的人口數字已予以修訂，該修訂已採用計算先前人口數字時還未備妥的人口變動數字。從二零零七年起的人均耗水量及獲供水人口數字已相應作出修訂。*

* *Based on the population benchmark from the results of the 2011 Population Census, the population figures from mid-2007 to mid-2011 have been revised. The revision has incorporated more estimates of population changes that were not yet available at the time when the previous population figures were prepared. Consequently, the per capita consumption figures and population served from 2007 onwards have been revised.*

附錄四 Appendix IV

客戶查詢及申請服務的統計數字
Statistics on Customer Enquires and Requests for Services

個案數目 Number of Requests	2010	2011	2012	2013	**2014**
書面查詢／申請 Letter	279,676	318,986	295,016	212,566	**205,630**
電話查詢／申請 Telephone	888,857	901,758	896,956	897,424	**850,050**
親身查詢／申請 Counter	348,988	398,985	395,238	329,767	**317,851**
總數 Total	1,517,521	1,619,729	1,587,210	1,439,757	**1,373,531**

附錄五 Appendix V

客戶投訴的統計數字
Statistics on Customer Complaints

年份 Year	2010	2011	2012	2013	**2014**
與帳戶有關的投訴 # Account-Related #	78	92	135	136	**149**
與帳戶無關的投訴 Non-Account-Related	7,763	7,169	6,546	6,537	**7,390**
總數 Total	7,841	7,261	6,681	6,673	**7,539**

\# *由區議會，立法會及申訴專員轉介與帳戶有關的投訴。*

\# *Account-related complaints from District Councils, Legco and Ombudsman.*

附錄六 Appendix VI

二零一四／一五年度繳費方式的統計數字
Statistics on Mode Payment 2014/15

繳費方式 Mode of Payment	交易數目 No. of Cases	百分比 Percentage (%)
親身繳費 In person	3,745,200	50.0
郵寄 By post	95,600	1.3
自動轉帳 Autopay	860,800	11.5
繳費聆 Payment by Phone Service (PPS)	842,500	11.2
自動櫃員機 ATM	415,200	5.5
網上繳費 Internet	1,531,700	20.5
總數 TOTAL	7,491,000	100

附件
Annexes

附件一 Annex I

水務署向公眾提供的刊物目錄

除另有註明外，所有刊物均可在水務署網頁瀏覽，並備有中英文本。

刊物

可在網上政府書店購買的刊物

- 《香港水務》
- 《香港水務設施條例》及《水務設施規例》

小冊子及單張

在各客戶諮詢中心免費派發的小冊子或單張

- 服務承諾
- 水務簡訊
- 用戶指南
- 食水系統維修指引
- 大潭水務文物徑
- 清洗食水水箱指引
- 耗水量偏高用戶須知
- 緊記僱用持牌水喉匠
- 水的真相
- 香港水塘釣魚樂
- 如何申請供水
- 安裝家庭用貯水式電熱水器須知
- 私人屋邨／樓宇的供水問題及內部供水系統的維修保養
- 水錶測試實驗所
- 正確使用大廈消防喉轆
- 大廈優質供水認可計劃 – 食水及沖廁水
- 根據香港法例第102章水務設施規例第30條規定的水錶測試

List of WSD Publications Available to the Public

All publications are available on the WSD homepage and in both English and Chinese except where indicated.

Publications

Available at the online Government Bookstore

- Hong Kong's Water
- Waterworks Ordinance and Regulations

Pamphlets/Leaflets/Booklets

Available free at all Customer Enquiry Centres

- Performance Pledge
- Waterlink Newsletter
- Consumer Guide Book
- Fresh Water Plumbing Maintenance Guide
- Tai Tam Waterworks Heritage Trail
- A Guide to Cleansing of Fresh Water Storage Tanks
- Advice for Consumers on High Consumption
- Employment of Licensed Plumbers
- Facts About Water
- Fun of Fishing in Hong Kong Reservoirs
- How to Apply for Water Supply
- Installation of Electric Thermal Storage Type Water Heater for Domestic Purpose
- Maintenance of Water Supply Systems in Private Housing Estates/Buildings
- Meter Testing Laboratory
- Proper Use of Fire Fighting Hose Reels in Buildings
- Quality Water Supply Scheme for Buildings – Fresh Water & Flushing Water
- Testing of Meters under Waterworks Regulation 30, Chapter 102

- 濾水器的使用
- 供水故障投訴
- 香港的食水處理及水質控制
- 飲食業（食肆）廚房申請供水指引

- 電子服務*
- 水務署部門單張*

* *未在水務署網頁提供*

- The Use of Water Purifiers/Filters by Consumers
- Water Supply Technical Fault Complaints
- Water Treatment and Quality Control in Hong Kong
- Guidelines on Water Supply Application for Food Business (Restaurant/Kitchen)

- Electronic Services*
- Departmental Leaflet*

* *Not available on WSD homepage*

可要求索取或在水務署總部提供的小冊子或單張

- 水務便覽
- 香港的全面水資源管理
- 紅潮對沖廁海水水質的影響
- 「小水點的奇妙旅程」
- 馬鞍山濾水廠
- 牛潭尾濾水廠
- 北港濾水廠
- 沙田濾水廠
- 小蠔灣濾水廠
- 大埔濾水廠
- 大潭篤原水抽水站
- 「切勿非法取水」
- 禁止在水塘游泳或跳水*
- 《WSD Mobile App》智能電話應用程式*
- 「切勿安裝違規淡水冷卻塔」海報及單張
- 「節約用水 從家開始」海報及單張（以中文、英文、印尼文、菲律賓文和泰文五種語言印製）
- 用戶責任
- 「沖廁用水嚴禁作其他用途」警告字樣標貼紙
- 「消防用水嚴禁作其他用途」警告字樣標貼紙
- 「珍惜每點滴」標貼
- 「定期檢查維修慎防食水滲漏」海報

Available Upon Request or Available at WSD Headquarters

- Key Facts
- Total Water Management in Hong Kong
- Effect of Red Tides on Seawater for Toilet Flushing
- Little Drop's Marvellous Journey
- Ma On Shan Water Treatment Works
- Ngau Tam Mei Water Treatment Works
- Pak Kong Water Treatment Works
- Sha Tin Water Treatment Works
- Siu Ho Wan Water Treatment Works
- Tai Po Water Treatment Works
- Tai Tam Tuk Raw Water Pumping Station
- Unlawful Taking of Water is Prohibited
- No Swimming or Diving in Reservoirs*
- WSD Mobile App*

- Poster and Leaflet on "Do not Install Unauthorized Fresh Water Cooling Tower"
- Poster and Leaflet on "Water Conservation Starts from Home" in 5 Languages (Chinese/English/Indonesian/Tagalog/Thai)

- Consumer's Responsibility
- Warning Sticker – Misuse of Flushing Water

- Warning Sticker – Misuse of Fire Services Water

- Sticker – "Treasure every drop"
- Poster on "Inspect and maintain plumbing regularly to prevent water leaks"

附件

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- 「大廈優質供水認可計劃」海報
- 「珍惜點滴 積聚未來」海報
- 「參與節約用水 — 齊縮短沐浴時間」海報
- 發給業界的「用水效益標籤計劃 – 沐浴花灑」單張*
- 發給公眾的「用水效益標籤計劃 – 沐浴花灑」單張
- 發給業界的「用水效益標籤計劃 – 水龍頭」單張*
- 發給公眾的「用水效益標籤計劃 – 水龍頭」單張
- 發給業界的「用水效益標籤計劃 – 洗衣機」單張*
- 發給公眾的「用水效益標籤計劃 – 洗衣機」單張
- 發給業界的「用水效益標籤計劃 – 小便器用具」單張
- 發給公眾的「用水效益標籤計劃 – 節流器」單張
- 發給公眾的「選用貼有用水效益標籤的節流器」單張
- 發給業界的「節流器的用水效益標籤計劃」單張*

* *未在水務署網頁提供*

- Poster on "Quality Water Supply Scheme for Buildings"
- Poster on "Save Water for the Future Every Drop Counts"
- Poster on "Save Water Take Shorter Showers"
- Leaflet to Trade on "Water Efficiency Labelling Scheme – Showers for Bathing"*
- Leaflet to Public on "Water Efficiency Labelling Scheme – Showers for Bathing"
- Leaflet to Trade on "Water Efficiency Labelling Scheme – Water Taps"*
- Leaflet to Public on "Water Efficiency Labelling Scheme – Water Taps"
- Leaflet to Trade on "Water Efficiency Labelling Scheme – Washing Machines"*
- Leaflet to Public on "Water Efficiency Labelling Scheme – Washing Machines"
- Leaflet to Trade on "Water Efficiency Labelling Scheme – Urinal Equipment"
- Leaflet to Public on "Water Efficiency Labelling Scheme on Flow Controllers"
- Leaflet to Public on "Choose Flow Controllers with WELS labels"
- Leaflet to Trade on "Water Efficiency Labelling Scheme on Flow Controllers"*

* *Not available on WSD homepage*

只在水務署網頁提供的刊物

- 《樓宇內部供水設備防 蝕喉管物料 – 一般資料》
- 《樓宇內部供水設備防 蝕喉管物料 – 安裝須知》
- 《香港水務標準規格 — 樓宇內水管裝置適用》
- 各水務署通函
- 樓宇水管裝置手冊
- 《水務署年報》

Available on WSD Homepage Only

- General Information on the Use of Different Types of (Corrosion Resistant Pipe) Materials as Inside Service in Buildings
- Installation Notes of Different Types of Corrosion Resistant Pipe Materials as Inside Service in Buildings
- Hong Kong Waterworks Standard Requirements for Plumbing Installation in Buildings
- WSD Circular Letters
- Handbook on Plumbing Installation for Buildings
- Annual Report – Water Supplies Department

附件二 Annex II

客戶諮詢中心

港島

- **灣仔客戶諮詢中心**
  灣仔告士打道7號入境事務大樓1樓

九龍

- **旺角客戶諮詢中心**
  旺角洗衣街128號地下

新界

- **大埔客戶諮詢中心**
  大埔汀角路1號大埔政府合署4樓

- **沙田客戶諮詢中心**
  沙田上禾輋路1號沙田政府合署3樓

- **屯門客戶諮詢中心**
  屯門屯喜路1號屯門政府合署7樓

Customer Enquiry Centres

Hong Kong

- **Wan Chai Customer Enquiry Centre**
  1/F Immigration Tower, 7 Gloucester Road, Wan Chai

Kowloon

- **Mong Kok Customer Enquiry Centre**
  G/F 128 Sai Yee Street, Mong Kok

New Territories

- **Tai Po Customer Enquiry Centre**
  4/F Tai Po Government Offices, 1 Ting Kok Road, Tai Po

- **Sha Tin Customer Enquiry Centre**
  3/F Sha Tin Government Offices, 1 Sheung Wo Che Road, Sha Tin

- **Tuen Mun Customer Enquiry Centre**
  7/F Tuen Mun Government Offices, 1 Tuen Hi Road, Tuen Mun

附件三 Annex III

二零一四年四月至二零一五年三月的食水水質
Drinking Water Quality for the Period of April 2014 – March 2015

甲部. 微生物含量
Part A. Microbiological quality

一般事項
General Points

- 香港是世界上享有最安全食水的地區之一。自二零一二年八月起，水務署已按照世界衛生組織在二零一一年制定的《飲用水水質指引》（世衛2011），監測香港的食水水質。世衛就食水內所含物質建議一套準則值，即使體重達60公斤的用戶在70年內每日飲用兩公升載有準則值物質含量的食水，亦不會對健康構成重大影響。
- Hong Kong enjoys one of the safest water supplies in the world. Since August 2012, we have commenced to monitor the quality of our drinking water according to the World Health Organization's (WHO) Guidelines for Drinking-water Quality (2011). The WHO recommends a set of Guideline Values (GVs) representing the concentration of constituents in drinking water that will not result in any significant health risk to a consumer weighing 60 kg over a lifetime consumption of 2 litres per day for 70 years.

- 如發生嚴重污染的情況，水務署會聯同衛生署採取行動。如有需要，我們會通知公眾採取適當的措施。
- In extreme cases of contamination, we will take concerted actions with the Department of Health. The public will be informed to take appropriate measures if necessary.

- 我們在濾水廠、配水庫、供水接駁位置和用戶水龍頭抽取食水樣本，並由合資格的水務署人員在現場和水務署轄下的化驗室進行分析。
- Samples were taken at water treatment works, service reservoirs, connection points and consumer taps and analysed at site and in WSD's laboratories by WSD's qualified staff.

- 在這段期間，水務署抽取了逾26,000個經處理的食水樣本作微生物含量分析。
- During this period, over 26,000 treated water samples were taken for microbiological analyses.

- 這段期間內的食水水質完全符合世衛在二零一一年制定的《飲用水水質指引》。
- The drinking water quality for this period fully complied with the World Health Organization's Guidelines for Drinking-water Quality (2011).

- 按國際慣例，達標與否是根據水質監測數據的全年平均值而定。
- Compliance is based on the annual average of monitoring data in accordance with international practices.

微生物含量

Microbiological quality

參數 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015) 最低值 Minimum	最高值 Maximum	平均值 Average	世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
埃希氏大腸桿菌 E. coli	菌落數*／100毫升 cfu* per 100 mL	0	0	0	0	✓
總大腸桿菌群# Total Coliforms#	菌落數*／100毫升 cfu* per 100 mL	0	0	0	–	–
隱孢子蟲@ Cryptosporidium@	卵囊數量／公升 no. of oocyst per L	0.00	0.00	0.00	–	–
賈第蟲@ Giardia@	孢囊數量／公升 no. of cyst per L	0.00	0.00	0.00	–	–

* 菌落數

\# 世衛2011並沒有為總大腸桿菌群制訂與健康有關的準則值。

@ 雖然世衛沒有就食水所含的隱孢子蟲或賈第蟲制訂與健康有關的準則值，但水務署亦有監測這些微生物。每公升0.00的監測數據代表在不少於100公升經處理的食水樣本中，檢測不到卵囊或孢囊。

* colony forming unit (cfu)

\# WHO 2011 has not established health-related GV for Total Coliforms.

@ Although the WHO has not established any health-related GV for Cryptosporidium or Giardia in drinking water, we also monitor Cryptosporidium and Giardia in our drinking water. The monitoring data of 0.00 per litre represents no oocyst or cyst detected in a volume of not less than 100 litres of treated water sample.

乙部．世界衛生組織在二零一一年制定的《飲用水水質指引》中所列對健康有影響的化學物質
Part B. Chemicals of health significance as described by World Health Organization's Guidelines for Drinking-water Quality 2011

一般事項
General Points

- 香港是世界上享有最安全食水的地區之一。自二零一二年八月起，水務署已按照世界衛生組織在二零一一年制定的《飲用水水質指引》（世衛2011），開始監測香港的食水水質。世衛就食水內所含物質建議一套準則值，即使體重達60公斤的用戶在70年內每日飲用兩公升載有準則值物質含量的食水，亦不會對健康構成重大影響。
- Hong Kong enjoys one of the safest water supplies in the world. Since August 2012, we have commenced to monitor the quality of our drinking water according to the World Health Organization's (WHO) Guidelines for Drinking-water Quality (2011). The WHO recommends a set of Guideline Values (GVs) representing the concentration of constituents in drinking water that will not result in any significant health risk to a consumer weighing 60 kg over a lifetime consumption of 2 litres per day for 70 years.

- 世衛會就該些物質建議臨時準則值（請參閱附註四）。
- Some GVs are recommended by WHO as provisional GVs (See Note 4).

- 即使食水中某些物質含量偶爾比世衛所定的準則值為高，亦不反映食水不適宜飲用，因為準則值在制定時，已預留了很大的安全容差。
- Occasional deviations above the WHO GVs do not mean that the water is unsuitable for consumption. Large safety margins have been allowed for in the derivation of the GVs.

- 如發生嚴重污染的情況，水務署會聯同衛生署採取行動。如有需要，我們會通知公眾採取適當的措施。
- In extreme cases of contamination, we will take concerted actions with the Department of Health. The public will be informed to take appropriate measures if necessary.

- 我們在濾水廠、配水庫、供水接駁位置和用戶水龍頭抽取食水樣本，並由合資格的水務署人員在現場和水務署轄下的化驗室進行分析。
- Samples were taken at water treatment works, service reservoirs, connection points and consumer taps and analysed at site and in WSD's laboratories by WSD's qualified staff.

- 這段期間內的食水水質完全符合世衛在二零一一年制定的《飲用水水質指引》。
- Based on water samples taken during this period, the testing results revealed that the drinking water quality for this period complied with the World Health Organization's Guidelines for Drinking-water Quality (2011).

- 按國際慣例，達標與否是根據水質監測數據的全年平均值而定。
- Compliance is based on the annual average of monitoring data in accordance with international practice.

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015) 最低值 Minimum	最高值 Maximum	平均值 Average	世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
丙烯酰胺 Acrylamide	微克／公升 µg/L	< 0.4	< 0.4	< 0.4	0.5	✓
草不綠 Alachlor	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20	✓
涕滅威 Aldicarb	微克／公升 µg/L	< 2.5	< 2.5	< 2.5	10	✓
艾氏劑和異艾氏劑 Aldrin and Dieldrin	微克／公升 µg/L	< 0.008	< 0.008	< 0.008	0.03	✓
銻 Antimony	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	0.02	✓
砷 Arsenic	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	0.01 (A,T)	✓
莠去津和其氯均三秦代謝物 Atrazine and its chloro-s-triazine metabolites	微克／公升 µg/L	< 25	< 25	< 25	100	✓
鋇 Barium	毫克／公升 mg/L	0.003	0.024	0.015	0.7	✓
苯 Benzene	微克／公升 µg/L	< 2.5	< 2.5	< 2.5	10	✓
苯并(a)芘 Benzo(a)pyrene	微克／公升 µg/L	< 0.0020	< 0.0020	< 0.0020	0.7	✓
硼 Boron	毫克／公升 mg/L	< 0.02	0.05	0.03	2.4	✓
溴酸鹽 Bromate	微克／公升 µg/L	< 2.5	< 2.5	< 2.5	10 (A,T)	✓
一溴二氯甲烷 Bromodichloromethane	微克／公升 µg/L	< 15	16	< 15	60	✓
溴仿 Bromoform	微克／公升 µg/L	< 25	< 25	< 25	100	✓
鎘 Cadmium	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	0.003	✓
夫喃丹 Carbofuran	微克／公升 µg/L	< 1.2	< 1.2	< 1.2	7	✓

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015) 最低值 Minimum	最高值 Maximum	平均值 Average	世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
四氯化碳 Carbon tetrachloride	微克／公升 µg/L	< 0.50	< 0.50	< 0.50	4	✓
氯酸鹽 Chlorate	微克／公升 µg/L	< 175	< 175	< 175	700 (D)	✓
氯丹 Chlordane	微克／公升 µg/L	< 0.050	< 0.050	< 0.050	0.2	✓
氯 Chlorine	毫克／公升 mg/L	< 0.1	1.4	0.7	5 (C)	✓
亞氯酸鹽 Chlorite	微克／公升 µg/L	< 50	< 50	< 50	700 (D)	✓
氯仿 Chloroform	微克／公升 µg/L	< 50	< 50	< 50	300	✓
綠麥隆 Chlorotoluron	微克／公升 µg/L	< 7.5	< 7.5	< 7.5	30	✓
毒死蜱 Chlorpyrifos	微克／公升 µg/L	< 7.5	< 7.5	< 7.5	30	✓
鉻 Chromium	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	0.05 (P)	✓
銅 Copper	毫克／公升 mg/L	< 0.003	0.053	< 0.003	2	✓
青乙酰肼 Cyanazine	微克／公升 µg/L	< 0.15	< 0.15	< 0.15	0.6	✓
2,4-滴 2,4-D (or 2,4-dichlorophenoxyacetic acid)	微克／公升 µg/L	< 7.5	< 7.5	< 7.5	30	✓
丁基-2,4-二氯酚羟基醋酸 2,4-DB (or 4-(2,4-dichlorophenoxy) butyric acid)	微克／公升 µg/L	< 22	< 22	< 22	90	✓

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015)			世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
		最低值 Minimum	最高值 Maximum	平均值 Average		
滴滴涕和代謝物 DDT and metabolites	微克／公升 µg/L	< 0.50	< 0.50	< 0.50	1	✓
二（2-乙基己基）鄰苯二甲酸鹽 Di (2-ethylhexyl) phthalate	微克／公升 µg/L	< 2	< 2	< 2	8	✓
二溴乙腈 Dibromoacetonitrile	微克／公升 µg/L	< 25	< 25	< 25	70	✓
二溴氯甲烷 Dibromochloromethane	微克／公升 µg/L	< 25	< 25	< 25	100	✓
1,2-二溴-3-氯丙烷 1,2-Dibromo-3-chloropropane	微克／公升 µg/L	< 0.25	< 0.25	< 0.25	1	✓
1,2-二溴乙烷 1,2-Dibromoethane	微克／公升 µg/L	< 0.10	< 0.10	< 0.10	0.4(P)	✓
二氯乙酸鹽 Dichloroacetate	微克／公升 µg/L	< 12	19	< 12	50 (D)	✓
二氯乙腈 Dichloroacetonitrile	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20 (P)	✓
1,2-二氯苯 1,2-Dichlorobenzene	微克／公升 µg/L	< 250	< 250	< 250	1000 (C)	✓
1,4-二氯苯 1,4-Dichlorobenzene	微克／公升 µg/L	< 75	< 75	< 75	300 (C)	✓
1,2-二氯乙烷 1,2-Dichloroethane	微克／公升 µg/L	< 7.5	< 7.5	< 7.5	30	✓
1,2-二氯乙烯 1,2-Dichloroethene	微克／公升 µg/L	< 12	< 12	< 12	50	✓
二氯甲烷 Dichloromethane	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20	✓
1,2-二氯丙烷 1,2-Dichloropropane	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	40 (P)	✓
1,3-二氯丙烯 1,3-Dichloropropene	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20	✓

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015) 最低值 Minimum	最高值 Maximum	平均值 Average	世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
2,4-滴丙酸 Dichlorprop (or 2,4-DP)	微克／公升 µg/L	< 25	< 25	< 25	100	✓
樂果 Dimethoate	微克／公升 µg/L	< 1.5	< 1.5	< 1.5	6	✓
1,4-二噁烷 1,4-Dioxane	微克／公升 µg/L	< 12.5	< 12.5	< 12.5	50	✓
乙二胺四乙酸 Edetic acid (EDTA)	微克／公升 µg/L	< 50	< 50	< 50	600	✓
異狄氏劑 Endrin	微克／公升 µg/L	< 0.15	< 0.15	< 0.15	0.6	✓
表氯醇 Epichlorohydrin	微克／公升 µg/L	< 0.4	< 0.4	< 0.4	0.4 (P)	✓
乙苯 Ethylbenzene	微克／公升 µg/L	< 75	< 75	< 75	300 (C)	✓
2,4,5-涕丙酸 Fenoprop (or 2,4,5-TP)	微克／公升 µg/L	< 2.2	< 2.2	< 2.2	9	✓
氟化物 Fluoride	毫克／公升 mg/L	< 0.10	0.64	0.48	1.5	✓
六氯丁二烯 Hexachlorobutadiene	微克／公升 µg/L	< 0.15	< 0.15	< 0.15	0.6	✓
羥基化莠去津 Hydroxyatrazine	微克／公升 µg/L	< 50	< 50	< 50	200	✓
異丙隆 Isoproturon	微克／公升 µg/L	< 2.2	< 2.2	< 2.2	9	✓
鉛 Lead	毫克／公升 mg/L	< 0.001	< 0.001	< 0.001	0.01 (A,T)	✓
林丹 Lindane	微克／公升 µg/L	< 0.50	< 0.50	< 0.50	2	✓

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015) 最低值 Minimum	最高值 Maximum	平均值 Average	世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
2-甲基-4-氯苯氧基乙酸 MCPA (or 4-(2-methyl-4-chlorophenoxy) acetic acid)	微克／公升 µg/L	< 2.0	< 2.0	< 2.0	2	✓
2-甲基-4-氯丙酸 Mecoprop (or MCPP)	微克／公升 µg/L	< 2.5	< 2.5	< 2.5	10	✓
汞 Mercury	毫克／公升 mg/L	< 0.00005	< 0.00005	< 0.00005	0.006	✓
甲氧滴滴涕 Methoxychlor	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20	✓
甲氧毒草安 Metolachlor	微克／公升 µg/L	< 2.5	< 2.5	< 2.5	10	✓
微囊藻毒素-LR（總） Microcystin-LR (total)	微克／公升 µg/L	< 0.5	< 0.5	< 0.5	1 (P)	✓
禾草特 Molinate	微克／公升 µg/L	< 1.5	< 1.5	< 1.5	6	✓
一氯胺 Monochloramine	毫克／公升 mg/L	< 1.0	< 1.0	< 1.0	3	✓
一氯醋酸鹽 Monochloroacetate	微克／公升 µg/L	< 10	< 10	< 10	20	✓
鎳 Nickel	毫克／公升 mg/L	< 0.001	0.015	0.006	0.07	✓
硝酸鹽（以 NO_3^- 計） Nitrate (as NO_3^-)	毫克／公升 mg/L	< 2.5	14	5.1	50	✓
次氨基三乙酸 Nitrilotriacetic acid	微克／公升 µg/L	< 50	< 50	< 50	200	✓
亞硝酸鹽（以 NO_2^- 計） Nitrite (as NO_2^-)	毫克／公升 mg/L	< 0.004	0.006	< 0.004	3	✓
N-亞硝基二甲胺 N-Nitrosodimethylamine	微克／公升 µg/L	< 0.025	< 0.025	< 0.025	0.1	✓

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015) 最低值 Minimum	最高值 Maximum	平均值 Average	世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
二甲戊樂靈 Pendimethalin	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20	✓
五氯酚 Pentachlorophenol	微克／公升 µg/L	< 2.2	< 2.2	< 2.2	9 (P)	✓
硒 Selenium	毫克／公升 mg/L	< 0.003	< 0.003	< 0.003	0.04 (P)	✓
西瑪三嗪 Simazine	微克／公升 µg/L	< 0.50	< 0.50	< 0.50	2	✓
二氯異氰尿酸鈉（以氰尿酸計） Sodium dichloroisocyanurate (as cyanuric acid)	毫克／公升 mg/L	< 10	< 10	< 10	40	✓
苯乙烯 Styrene	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20 (C)	✓
2,4,5-涕 2,4,5-T (or 2,4,5-trichlorophenoxy acetic acid)	微克／公升 µg/L	< 2.2	< 2.2	< 2.2	9	✓
特丁律 Terbuthylazine	微克／公升 µg/L	< 1.8	< 1.8	< 1.8	7	✓
四氯乙烯 Tetrachloroethene	微克／公升 µg/L	< 10	< 10	< 10	40	✓
甲苯 Toluene	微克／公升 µg/L	< 175	< 175	< 175	700 (C)	✓
三氯乙酸鹽 Trichloroacetate	微克／公升 µg/L	< 25	< 25	< 25	200	✓
三氯乙烯 Trichloroethene	微克／公升 µg/L	< 18	< 18	< 18	20 (P)	✓
2,4,6-三氯酚 2,4,6-Trichlorophenol	微克／公升 µg/L	< 50	< 50	< 50	200 (C)	✓

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015) 最低值 Minimum	最高值 Maximum	平均值 Average	世衛2011準則值 WHO 2011 Guideline Value	達標 Compliance
氟樂靈 Trifluralin	微克／公升 µg/L	< 5.0	< 5.0	< 5.0	20	✓
鈾 Uranium	毫克／公升 mg/L	< 0.0002	0.0004	< 0.0002	0.03 (P)	✓
氯乙烯 Vinyl chloride	微克／公升 µg/L	< 0.2	< 0.2	< 0.2	0.3	✓
二甲苯 Xylenes	微克／公升 µg/L	< 125	< 125	< 125	500 (C)	✓

註：

（一） 以上是有關食水水質的摘要報告。

（二） 各數值是根據水務署水質科學部現行品質保證指引所訂的要求而編製。

（三） 水務署已就每個重金屬及微量有機化合物項目進行了100至大約600個樣本分析。

（四） 根據世衛2011：

P = 暫定準則值，因為健康數據庫內存在變化。

T = 暫定準則值，因為計算所得準則值低於通過實際處理方法或保護水源等方式所能達到的水平。

A = 暫定準則值，因為計算所得準則值低於所能達到的定量水平。

D = 暫定準則值，因為消毒程序可能令物質含量超過準則值。

C = 如該物質的含量等於或低於以健康為本的準則值，便有可能影響食水的外觀、味道或氣味，引起消費者投訴。

Note:

(1) This is a summary report on drinking water quality.

(2) All values are compiled in accordance with requirements stipulated by the current quality assurance protocol of the Water Science Division of WSD.

(3) For heavy metals and trace organics, 100- about 600 samples per parameter have been analysed.

(4) According to WHO 2011:

P = provisional guideline value because of uncertainties in the health database.

T = provisional guideline value as calculated guideline value is below the level that can be achieved through practical treatment methods, source protection, etc.

A = provisional guideline value as calculated guideline value is below the achievable quantification level.

D = provisional guideline value as disinfection may result in the guideline value being exceeded.

C = concentrations of the substance at or below the health-based guideline value may affect the appearance, taste or odour of the water, leading to consumer complaints.

丙部 . 輻射水平
Part C Radiological quality

一般事項
General Points

- 香港是世界上享有最安全食水的地區之一。水務署按照世界衛生組織在二零一一年制定的《飲用水水質指引》（世衛2011），監測香港的食水水質。

- Hong Kong enjoys one of the safest water supplies in the world. The Water Supplies Department (WSD) monitors the quality of drinking water according to the World Health Organization's (WHO) Guidelines for Drinking-water Quality (2011).

- 根據世衛的建議，食水的總 α 及總 β 活度的篩查水平分別為每公升0.5貝可和每公升1.0貝可。如食水的放射性活度低於篩查水平，便無須對個別放射性核素作進一步調查或詳細分析。

- According to the recommendations of the WHO, the screening levels for drinking water are 0.5 Bq/L for gross alpha activity and 1.0 Bq/L for gross beta activity, respectively, below which no further investigation or detailed analysis for specific radionuclides is required.

- 我們在濾水廠、分配網絡和用戶水龍頭抽取食水樣本，並由合資格的水務署人員在化驗室進行分析。

- Samples were taken at water treatment works, distribution networks and consumer taps and analysed in WSD's laboratories by WSD's qualified staff.

- 在這段期間，食水的放射性活度遠低於世衛在二零一一年建議的總 α 及總 β 活度篩查水平，有關食水可供安全飲用。

- During this period, the radioactivity level of drinking water was well below the screening levels for gross alpha and gross beta activities as recommended by the WHO 2011, and was safe for consumption.

輻射水平

Radiological quality

參數 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015)			世衛2011篩查水平 WHO 2011 Screening Level	低於篩查水平 Below Screening Level
		最低值 Minimum	最高值 Maximum	平均值 Average		
總 α 活度 Gross alpha activity	貝可／公升 Bq/L	< 0.1	< 0.1	< 0.1	0.5	✓
總 β 活度 Gross beta activity	貝可／公升 Bq/L	< 0.2	< 0.2	< 0.2	1.0	✓

註：

（一） 以上是有關食水水質的摘要報告。

（二） 總 α 及總 β 活度的報告值設定為世衛篩查水平的20%。

（三） 水務署對逾150個樣本作總 α 及總 β 活度的分析。

Note:

(1) This is a summary report on drinking water quality.

(2) Reporting values for gross alpha and gross beta activities are set at 20% of their respective WHO screening levels.

(3) Over 150 samples have been analysed for gross alpha and gross beta activities.

丁部．其他參數
Part D. Other parameters

參數 Parameter	單位 Unit	監測結果 Monitoring Data (04/2014 – 03/2015)		
		最低值 Minimum	最高值 Maximum	平均值 Average
pH值（水溫25°C時） pH at 25°C	pH	6.6	9.2	8.4
色度 Colour	Hazen unit	< 3	< 3	< 3
混濁度 Turbidity	NTU	< 0.1	3.0	0.3
導電率（水溫25°C時） Conductivity at 25°C	μS/cm	48	191	136
溫度 Temperature	°C	14.0	33.6	24.1
總鹼度（以 $CaCO_3$ 計） Total alkalinity (as $CaCO_3$)	毫克／公升 mg/L	9	35	22
總硬度（以 $CaCO_3$ 計） Total hardness (as $CaCO_3$)	毫克／公升 mg/L	<5	61	35
鈣 Calcium	毫克／公升 mg/L	0.8	19	12
鎂 Magnesium	毫克／公升 mg/L	0.34	2.1	1.4
氯化物 Chloride	毫克／公升 mg/L	< 5	16	9
硫酸鹽 Sulphate	毫克／公升 mg/L	4	25	14
正磷酸鹽（以 PO_4 計） Ortho-phosphates (as PO_4)	毫克／公升 mg/L	< 0.01	0.04	< 0.01
鐵 Iron	毫克／公升 mg/L	< 0.01	0.05	< 0.01

項目 Parameter	單位 Unit	監測數據 Monitoring Data (04/2014 – 03/2015)		
		最低值 Minimum	最高值 Maximum	平均值 Average
鋁 Aluminium	毫克／公升 mg/L	< 0.01	0.10	0.02
二氧化硅（以 SiO_2 計） Silica (as SiO_2)	毫克／公升 mg/L	1.8	15	10
錳 Manganese	毫克／公升 mg/L	< 0.01	0.03	< 0.01

註：

（一） 以上是有關食水水質的摘要報告。

（二） 各數值是根據水務署水質科學部現行的品質保證指引所訂的要求而編製。

Note:

(1) This is a summary report on drinking water quality.

(2) All values are compiled in accordance with requirements stipulated by the current quality assurance protocol of the Water Science Division of WSD.

附件四 Annex IV

水務監督 — 經營帳目
Water Authority – Operating Accounts

二〇一四／一五年度回顧 Review of the Year 2014/15

截至二〇一五年三月三十一日止的財政年度 For the year ended 31 March 2015

工作方面	Activities
按照水錶記錄的淡水耗水量上升2.2%至6.51億立方米	Metered fresh water consumption increased by 2.2% to 651 million cubic metres

財務表現	Financial Performance
收入上升5.3%	Revenue increased by 5.3%
開支上升5.7%	Expenditure increased by 5.7%
虧損由二〇一三／一四年度的9.309億元增至二〇一四／一五年度的10.150億元	Deficit increased from $930.9 million in 2013-14 to $1,015.0 million in 2014-15
按固定資產平均淨值計算的回報率維持-1.9%	Return on Average Net Fixed Assets remained at -1.9%

經營帳目 Operating Account

截至二〇一五年三月三十一日止的財政年度 For the year ended 31 March 2015

		註 Note	**2015** （百萬元） **$M**	2014 （百萬元） $M
收入	Revenue	2	**8,032.1**	7,630.6
開支	Expenditure	3	**9,047.1**	8,561.5
稅前虧損	**Deficit before taxation**		**(1,015.0)**	(930.9)
稅項	Taxation	1(e) & (f) and 4	**–**	–
稅後虧損	**Deficit after taxation**	1(j)	**(1,015.0)**	(930.9)

附註為這帳目的一部分。 The annexed notes form part of these accounts.

衡量財務表現的指標 Financial Performance Measures

截至二〇一五年三月三十一日止的財政年度 For the year ended 31 March 2015

		註 Note	2015 （百萬元） $M	2014 （百萬元） $M
固定資產平均淨值	Average net fixed assets (ANFA)	1(i) and 5	**53,712.0**	50,086.9
實際回報額	Actual return		**(1,015.0)**	(930.9)
目標回報額	Target return		**1,826.2**	1,703.0
按固定資產平均淨值計算的實際回報率	Actual return as % of ANFA	1(h)	**(1.9%)**	(1.9%)
按固定資產平均淨值計算的目標回報率	Target return as % of ANFA		**3.4%**	3.4%

附註為這帳目的一部分。 *The annexed notes form part of these accounts.*

資產負債表 Balance Sheet

二〇一五年三月三十一日結算 As at 31 March 2015

		註 Note	2015 （百萬元） $M	2014 （百萬元） $M
可動用淨資產	**Net assets employed**			
固定資產	**Fixed assets**	1(b) & (c) and 5	**55,554.6**	51,869.3
流動資產	Current assets	1(d) and 6	**2,567.7**	2,427.4
流動負債	Current liabilities	7	**(2,388.4)**	(2,243.2)
流動資產淨值	Net current assets		**179.3**	184.2
			55,733.9	52,053.5
財政來源	**Financed by**			
公共資本帳目	**Public capital account**	1(j) and 8	**55,733.9**	52,053.5

附註為這帳目的一部分。 *The annexed notes form part of these accounts.*

帳目附註

1. 會計政策

(a) 會計基礎

此帳目是根據歷史成本基礎來制定，並略加修訂以包括名義的收支。

(b) 固定資產

(i) 除政府收回的土地外，固定資產不包括水務設施和集水區位處的土地。至於政府收回的土地，其收回成本會包括在有關的工程成本內。

(ii) 至於工程項目，成本包括實際直接開支，和施工期間有關設計、規劃和監督等的員工費用。

(iii) 所有其他固定資產，除了建造中的資產以成本值計算外，均以其成本值減去累積折舊列出。

(c) 折舊

(i) 折舊是根據資產原值減去使用期末的剩餘值，採用直線攤銷法按其預計使用年期分期註銷。每年折舊率為：－

隧道、堤壩、收回土地及造林等	1%
土木工程	2%
喉管 － 淡水	2%
－ 鹹水	5%
機電工程、機器及設備	4%-14.29%
水錶	8.33%
電腦硬件、軟件及系統	10%
車輛	10%-20%

(ii) 建造中的資產並沒有折舊撥備。

Notes on the Accounts

1. Accounting Policies

(a) Basis of Accounting

The accounts have been prepared on the historical cost basis of accounting modified to include notional receipts and payments.

(b) Fixed Assets

(i) No cost is included for land which is occupied by installations or sterilised by catchment areas except that, where it has been resumed, the cost of resumption has been included in the capital cost of the project concerned.

(ii) For capital projects, the costs include the actual direct expenditure and staff costs for design, planning and supervision during the construction period.

(iii) All other fixed assets are stated at cost less accumulated depreciation except assets under construction which are stated at cost.

(c) Depreciation

(i) Depreciation is provided on a straight-line basis calculated to write off the cost of assets less residual value over their estimated useful lives. The annual rates of depreciation used are:–

Tunnels, dams, resumption and afforestation, etc.	1%
Civil engineering works	2%
Water mains – fresh	2%
– salt	5%
Mechanical/electrical works, plant and machinery	4%-14.29%
Meters	8.33%
Computer hardware, software and system	10%
Motor vehicles	10%-20%

(ii) No depreciation is provided on assets under construction.

(d) 存貨

存貨是以加權平均法，按成本值和可變賣淨值兩者中較低者列出。

(e) 稅項

名義利得稅乃按年度預期的應課溢利，以資產負債表結算日的現行稅率，及過往年度的應付稅項調整而作出所需要的撥備。由於水務監督於本年度沒有應課稅溢利，因此無需在帳目上作出名義利得稅的撥備。

(f) 遞延稅項

遞延稅項指就資產及負債帳面值與計算應課稅溢利所用相應稅基間之所有重大暫時差額而作出的適當確認。遞延稅項資產則於應課稅溢利有可能抵銷可扣稅暫時差額時予以確認。由於水務監督沒有應課稅溢利可用作抵銷可扣稅暫時差額，因此無需在帳目上就所有重大暫時差額作出遞延稅項撥備。

(g) 僱員福利

僱員福利包括薪金、酬金、退休金、房屋津貼和年假會被確認為對僱員當年度所提供之相關服務而列作的應計開支。

(h) 按固定資產平均淨值計算的實際回報率

按稅後溢利或虧損與固定資產平均淨值的比率計算。

(i) 固定資產平均淨值

這淨值是指總固定資產值減去累積折舊在期初及期末兩項數值的簡單平均數。

(d) Stocks

Stocks are stated at the lower of cost and net realisable value, using the weighted average cost method to the extent that it is material.

(e) Taxation

Notional profits tax is provided, where necessary, based on the expected taxable surplus for the year, using the tax rates prevailing at the balance sheet date, and any adjustments to tax payable in respect of previous years. No provision for notional profits tax has been made in the accounts as the Authority has no taxable surplus for the year.

(f) Deferred Tax

Deferred tax is recognised, where appropriate, for all material temporary differences between the tax bases of assets and liabilities and their carrying amounts in the accounts. Deferred tax assets are recognised to the extent that it is probable that taxable surplus will be available against which the temporary differences can be utilised. No provision for deferred tax in respect of all material temporary differences has been made in the accounts as the Authority has no taxable surplus against which the temporary differences can be utilised.

(g) Employee Benefits

Employee benefits including salaries, gratuities, pensions, housing benefits and annual leave are accrued and recognised as an expense in the year in which the associated services are rendered by employees.

(h) Actual Return on ANFA

This is calculated as a percentage of surplus/deficit after taxation to average net fixed assets (ANFA).

(i) Average Net Fixed Assets

The average net fixed assets (ANFA) represents the simple average of the opening and closing value of total fixed assets less aggregate depreciation.

(j) 虧損

由於水務監督沒有獨立的法定身份，其財政資源或虧損均視為政府一般收入的一部分。而有關虧損亦會於公共資本帳目中調節。

(j) Deficit

Since the Water Authority does not have a separate legal identity, its financial resources form part of the General Revenue. All deficits are deemed to be financed by the General Revenue and adjusted to the Public Capital Account of the Authority.

2. 收入

2. Revenue

		2015	2014
		（百萬元）$M	（百萬元）$M
收費供水	Chargeable supplies	**2,622.0**	2,555.8
差餉的津貼	Contribution from rates	**3,340.4**	2,236.4
政府對寬免計劃的津貼	Contribution from Government on concessions	**923.0**	1,734.2
政府為用戶提供免費用水的津貼	Contribution from Government on free allowance to consumers	**962.7**	918.7
政府樓宇用水	Supplies to Government establishments	**155.1**	159.0
收費、牌照及可收回支出的工程	Fees, licences and reimbursable works	**24.7**	22.7
存款利息	Interest from deposits	**4.2**	3.8
		8,032.1	7,630.6

政府對寬免計劃的津貼是為彌補因該年度所作出差餉寬免措施所引至的差額。

The contribution from Government on concessions is to cover the shortfall in contribution from rates resulting from the concession of rates granted during the years.

政府為用戶提供免費用水津貼的計算方法，是把2013-14及2014-15年度分別為10.8元和11元的淡水每單位淨生產成本（已包括按固定資產平均淨值計算的目標回報額，在相關年度分別為每單位2.6元和2.7元），乘以按照水錶記錄淡水耗用量內的免費用水津貼用量，即每個住宅帳戶於每121.64天首12個用水單位。

The calculation of contribution from Government on free allowance to consumers is based on the fresh water net unit production cost of $10.8 and $11.0 for the year 2013-14 and 2014-15 respectively, which has included a target rate of return on ANFA of $2.6 and $2.7 per unit for the respective years, multiplied by the quantity of metered fresh water consumption within the free allowance quantity of 12 units per account per 121.64 days.

3. 開支

3. Expenditure

		2015 （百萬元） $M	2014 （百萬元） $M
員工支出	Staff costs	**1,586.6**	1,528.7
經營及行政支出	Operating and administration expenses	**1,841.0**	1,747.9
購買東江水支出	Purchase cost of Dongjiang water	**4,031.2**	3,802.2
折舊	Depreciation	**1,588.3**	1,482.7
		9,047.1	8,561.5

4. 稅項

4. Taxation

		2015 （百萬元） $M	2014 （百萬元） $M
名義利得稅	Notional profits tax charge for the year	**0.0**	0.0
以下項目的遞延稅項資產／（遞延稅項負債）未被確認：—	Deferred tax assets/(liabilities) not recognized in respect of:–		
未使用的稅項虧損	Unused tax loss	**29,430.9**	26,969.9
由折舊免稅額所產生的重大暫時差異	Material temporary difference arising from depreciation allowances	**(19,893.0)**	(18,415.3)

5. 固定資產

5. Fixed Assets

		樓宇、過濾器、喉管等 Buildings, Filters, Mains, etc.	機器及設備 Plant and Machinery	電腦硬件、軟件及系統 Computer Hardware, Software & System	沖廁鹹水設施 Salt Water Flushing	船灣淡水湖 Plover Cove	萬宜水庫 High Island	水錶 Meters	車輛 Motor Vehicles	建造中的資產 Assets Under Construction	總額 Total
		(百萬元) $M	(百萬元) $M	(百萬元) $M	(百萬元) $M	(百萬元) $M	(百萬元) $M	(百萬元) $M	(百萬元) $M	(百萬元) $M	(百萬元) $M
成本	Cost										
二〇一四年四月一日	At 1 April 2014	47,488.9	349.5	343.5	10,058.2	702.0	1,661.2	436.5	83.6	9,521.8	**70,645.2**
添置	Additions	2.3	8.7	1.4	–	–	–	67.8	6.7	5,222.3	**5,309.2**
轉撥	Transfers	3,668.9	–	19.1	980.0	–	–	–	0.3	(4,668.0)	**0.3**
處置／註銷	Disposals/Write off	(89.5)	(1.1)	(1.0)	(41.4)	–	–	(20.2)	(1.5)	(13.3)	**(168.0)**
二〇一五年三月三十一日	**At 31 March 2015**	51,070.6	357.1	363.0	10,996.8	702.0	1,661.2	484.1	89.1	10,062.8	**75,786.7**
累積折舊	Aggregate Depreciation										
二〇一四年四月一日	At 1 April 2014	13,107.6	152.3	275.4	3,517.2	420.7	1,071.1	192.0	39.6	–	**18,775.9**
該年折舊	Charge for the year	1,033.8	33.5	23.3	412.6	9.3	29.3	37.7	8.8	–	**1,588.3**
處置／註銷後轉回	Written back on Disposals/Write off	(67.3)	(0.8)	(1.0)	(41.4)	–	–	(20.2)	(1.4)	–	**(132.1)**
二〇一五年三月三十一日	**At 31 March 2015**	14,074.1	185.0	297.7	3,888.4	430.0	1,100.4	209.5	47.0	–	**20,232.1**
帳面淨值	Net Book Value										
二〇一五年三月三十一日	**At 31 March 2015**	36,996.5	172.1	65.3	7,108.4	272.0	560.8	274.6	42.1	10,062.8	**55,554.6**
二〇一四年三月三十一日	At 31 March 2014	34,381.3	197.2	68.1	6,541.0	281.3	590.1	244.5	44.0	9,521.8	**51,869.3**

帳目不包括搬遷鑽石山食水及海水配水庫往岩洞的可行性研究及勘查研究、設計工作和建造工程所涉及的資本開支。

The capital expenditure relating to the feasibility study and investigation, design and construction for the relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs into caverns has been excluded.

6. 流動資產

6. Current Assets

		2015 （百萬元） $M	2014 （百萬元） $M
存貨	Stocks	**105.5**	106.2
應收帳項	Debtors	**464.4**	479.8
與庫務署的往來帳	Current account with Treasury	**1,997.8**	1,841.4
		2,567.7	2,427.4

7. 流動負債

7. Current Liabilities

		2015 （百萬元） $M	2014 （百萬元） $M
用戶和承建商的按金	Consumers' and contractors' deposits	**1,939.9**	1,870.6
應付帳項	Creditors	**448.5**	372.6
		2,388.4	2,243.2

8. 公共資本帳目

公共資本帳目指政府在這項公用事業的投資。

8. Public Capital Account

The Public Capital Account represents Government's investment in this utility.

		2015 （百萬元） $M	2014 （百萬元） $M
四月一日結餘	Balance as at 1 April	**52,053.5**	48,488.5
本年度的虧損	Deficit for the year	**(1,015.0)**	(930.9)
政府的額外現金投資	Additional cash investment by the Government	**4,695.4**	4,495.9
三月三十一日結餘	Balance as at 31 March	**55,733.9**	52,053.5

9. 資本承擔

於二〇一五年三月三十一日，水務監督未於經營帳目作出撥備的資本承擔如下：

9. Capital Commitments

As at 31 March 2015, the Authority had capital commitments, so far as not provided for in the Operating Accounts, as follows:

		2015 （百萬元） $M	2014 （百萬元） $M
已簽約	Contracted for	**7,501.8**	10,654.5
已批准但未簽約	Authorised but not contracted for	**6,296.6**	6,735.9
		13,798.4	17,390.4

財政年度：由每年四月一日起至翌年三月三十一日止
年份：由每年一月一日起至十二月三十一日止

匯率

除另有説明外，本年報所用「元」均指港元。自一九八三年十月十七日起，政府透過一項有關發行紙幣的措施，將港元與美元聯繫，以7.8 港元兑1 美元為固定匯率。

Financial Year: April 1 to March 31
Year (Calendar Year): January 1 to December 31

Exchange Rates

When dollars are quoted in this report, they are, unless otherwise stated, in Hong Kong dollars. Since October 17, 1983, the Hong Kong dollar has been linked to the US dollar, through an arrangement in the note-issue mechanism, at a fixed rate of HK$7.80 = US$1.

水務署
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