

可持續發展及 節約用水



Sustainability & Conservation





點滴天然資源 珍惜善用

Stewarding Mother Nature's Precious Resources

“ 只要大家同心攜手，
積極將資源保育的理念薪火相傳，
必定能一起邁向
可持續發展的未來。

**By working together
and inspiring future generations on
resource conservation,
a sustainable future
is within reach. ”**



節約用水 Water Conservation



推廣珍惜用水 提升節約意識

Engaging and Enhancing Water Conservation

水務署一直多管齊下，透過不同渠道
宣傳節約用水。

*WSD has adopted a multi-
pronged approach in
promoting water conservation,
using all-round measures.*



▲ 全新的水資源教育中心—「水知園」
The new Water Resources Education Centre - H₂OPE Centre

提倡節約用水

用水效益標籤計劃

本署自二零零九年推出屬自願參與的用水效益標籤計劃，旨在鼓勵客戶使用節水產品。截至二零一九年三月，該計劃已涵蓋沐浴花灑、水龍頭、洗衣機、小便器用具、節流器和水廁。

MAKING WATER CONSERVATION COUNT

Water Efficiency Labelling Scheme

Launched in 2009, WSD's voluntary Water Efficiency Labelling Scheme (WELS) encourages customers to use water-saving products. As of March 2019, WELS has covered showers for bathing, water taps, washing machines, urinal equipment, flow controllers and water closets.

強制用水效益標籤計劃則分階段實施，自二零一八年二月一日起，所有住宅處所的廚房和所有處所的浴室和洗手間的水管工程，均須採用符合其相關用水效益級別的節水產品，藉此推廣用水效益標籤計劃註冊產品，使其普及化。本署正研究透過修改法例，將用水效益標籤計劃由自願參與轉為全面強制參與，要求在零售市場售賣的指定類別的用水產品必須具有用水效益標籤，以便消費者選購節水產品。

最佳實務指引

本署與各政府設施的營運機構合作制訂最佳實務指引，提升用水效益。該等設施包括泳池、公園、街市、洗手間、垃圾收集站和懲教院所。同樣地，本署亦與酒店及餐飲業的協會合作，為業界編寫及推出用水最佳實務指引。這工作讓客戶共同為節約用水出一分力。

WSD is implementing its mandatory WELS in stages. Since 1 February 2018, the mandatory use of WELS products of prescribed water efficiency has been required in kitchens (domestic premises), bathrooms and toilets (all premises) for all plumbing works. The measures will promote wider use of WELS products. WSD is exploring legislative amendment to migrate WELS from voluntary participation to mandatory implementation so that prescribed types of water-using products for sale in the retail market would be affixed with WELS labels to facilitate consumer purchases of water-efficient products.

Best Practice Guidelines

WSD works with facility operators of Government swimming pools, parks, markets, toilets, refuse collection points and correctional institutions to develop Best Practice Guidelines (BPG) measures in order to enhance water use efficiency. Similarly, WSD has worked with related associations to compile and promulgate water usage BPG for hotel and catering sectors. These efforts allow customers to play their part in water conservation.



點滴話你知 Do you know?

最佳實務指引以實際運作為基礎，制訂平衡的節約用水措施，務求在無損整體服務水平的情況下，於日常運作之中實踐。

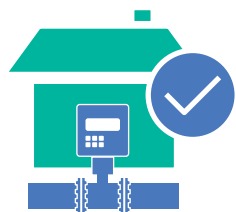
Prepared by fact-based methods, BPG formulates balanced water-saving measures for implementation in day-to-day operations without compromising the overall level of service.

在公共租住屋邨安裝節流器

本署會繼續為公共租住屋邨安裝節流器，以減少耗水量。

Public Rental Housing Estate Flow Controllers

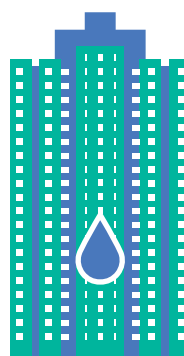
Flow controllers are continually to be installed in public rental housing estates to reduce water consumption.



153,000

戶已安裝節流器
households have flow
controllers installed

118



個公共租住屋邨已進行安裝
public rental housing estates covered

提高公眾節水意識

齊來慳水十公升運動

齊來慳水十公升運動鼓勵市民作出節約用水的承諾，並向參與住戶免費派發節流器，得到不少行業、界別和住戶支持。

RAISING WATER CONSERVATION AWARENESS

Let's Save 10 Litres Water Campaign

The Let's Save 10 Litres Water Campaign encourages the public to pledge to save water, and distributes complimentary flow controllers to participating households. Various trades, sectors and households have supported the Campaign.



>140,000

住戶參與
participating households

惜水學堂節約用水教育計劃

此計劃旨在透過結合理論與實踐，加深學生對水資源的認識，及提高他們對節約用水及水資源可持續性的意識。是項計劃在二零一五至一六年度成功在小學推出，幼稚園的先導計劃則在二零一七至一八年度推行，並在本學年度正式全面落實。為進一步迎合教學所需，本署現正優化惜水學堂的小學教材套，並將於二零一九至二零學年在全港的小學推出。

將近 **Nearly 300**

間小學參與
primary schools participated



Cherish Water Campus Integrated Education Programme

This programme broadens students' knowledge about water resources and raises their awareness of water conservation and water sustainability by integrating theory with practice. It was successfully rolled out in primary schools in 2015/16, with a pilot kindergarten programme launched in 2017/18 and officially going into full swing in this school year. The teaching kit for primary schools is now being revamped to better meet teaching needs, and is expected to be launched in all primary schools in Hong Kong in the 2019/20 school year.

140

間幼稚園參與
kindergartens participated



水資源教育中心

本署正於天水圍大樓籌辦全新的水資源教育中心—「水知園」，向公眾推廣水資源及節約用水的資訊。該中心展覽面積達720平方米，展覽內容包括水資源和節約用水等深入的資訊，適合學生與不同年齡人士參觀。

Water Resources Education Centre

WSD is establishing a new Water Resources Education Centre – H₂OPE Centre at our Tin Shui Wai Building to enhance the public's knowledge about water resources and water conservation. The centre will feature an exhibition area of 720m² that displays in-depth information on various aspects of water resources and water conservation, suitable for students and visitors of all ages.



點滴話你知 Do you know?

早在二零一二年，本署已在旺角辦事處設立臨時水資源教育中心。截至二零一八年三月辦事處關閉並遷往天水圍為止，該教育中心已接待超過66,000名主要來自小學及非牟利機構的訪客。

As early as 2012, WSD launched a temporary Water Resources Education Centre at the Mong Kok Office. It received more than 66,000 visitors, mainly from primary schools and non-profit organisations, until its closure in March 2018 when the Mong Kok Office was relocated to Tin Shui Wai.

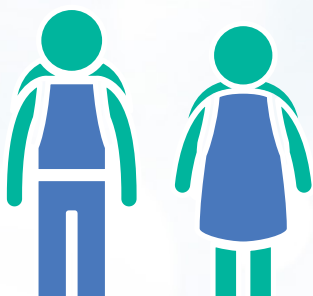


惜水大使計劃

本署與香港青年協會M21媒體空間於二零一八至一九年度合辦首屆惜水大使計劃，招募中學生及大專生成為惜水大使。這些大使參與了一連串豐富的活動，包括濾水廠導賞團、與主講嘉賓及導演交流會、短片製作工作坊及訓練營等。他們會推廣珍惜和節約用水的重要訊息，為本港建立惜水文化。

Cherish Water Ambassador Scheme

The Hong Kong Federation of Youth Groups Jockey Club Media 21 (M21) joined WSD to present the first-ever Cherish Water Ambassador Scheme in 2018/19, recruiting students from secondary schools and tertiary institutions as Cherish Water Ambassadors. The ambassadors participated in a rich array of events, including a Guided Tour to the water treatment works (WTWs), sharing sessions with guest speakers and film directors, a short film production workshop and a training camp. They will promote important messages about cherishing and saving water, and contribute in establishing a culture of water conservation in Hong Kong.



250

名中學生及大專生參與
students from secondary schools and
tertiary institutions recruited

公開講座和展覽

本署不時派員在各種公眾活動宣傳節約用水。在本財政年度，本署派員在香港綠建商舖聯盟大獎典禮上以用水效益最佳實務指引為題發表演講。是次典禮由香港綠色建築議會主辦，目的是表揚購物商場和商舖在保護環境方面的成就。參加者分享各個案例，並就行業制定最佳實務指引交流意見。

Public Lectures and Exhibitions

From time to time, WSD staff promote water conservation at public events. This financial year, we spoke about BPG for Water Usage at the ceremony of Hong Kong Green Shop Alliance Awards. Organised by the Hong Kong Green Building Council, this event commended the achievements of shopping malls and shops in the aspect of environmental protection. By sharing various cases, participants exchanged ideas on developing best practices for their industries.

防止非法取水

本署負責執行《水務設施條例》(第102章)及《水務設施規例》(第102A章)，並對違法人士採取相應法律行動。為防止非法取水，本署向政府職員及公眾宣傳有關訊息，包括透過濾水廠開放日、研討會、學校探訪、水費單上的告示，以及在政府物業、私人物業與客戶諮詢中心的宣傳板張貼海報。



127 宗
cases

宗成功檢控非法取水個案(二零一八至一九年度)
of successful prosecution of illegal taking of water
(in 2018/19)

PREVENTING ILLEGAL TAKING OF WATER

WSD is responsible for enforcing the Waterworks Ordinance (Cap. 120) and Waterworks Regulations (Cap.102A) including taking legal action against offenders. To prevent the illegal taking of water, WSD promote relevant messages to the Government officials and the public through WTW open days, seminars, school tours, and notices on water bills, as well as posters on promotion boards displayed at Government premises, private properties and customer enquiry centres.

用水流失管理措施

本署現正逐步建立「智管網」，在水管安裝感應和監測設備以設立監測區域¹。本署計劃在全港食水分配管網設立約2,400個監測區域。截至二零一九年三月，約1,300個監測區域已經設立。持續監測每個監測區域的水流和水壓，有助制訂有效的措施以處理區域內的食水流失。有關措施包括(一)主動探測及控制滲漏；(二)水壓管理；(三)高效快速地維修滲漏水管；以及(四)重置不符合維修成本效益的水管。本署將採用「智能管網管理電腦系統」，以分析從監測區域的感應和監測設備所收集到的龐大數據，以決定處理有食水流失問題的監測區域的優先次序，採取有效的用水流失管理措施。為加強水管測漏的能力，本署繼續研究各種先進技術的可行性，並為員工提供所需培訓。本署亦將部分測漏工作外判予專門承建商。

WATER LOSS MANAGEMENT INITIATIVES

WSD is progressively establishing a Water Intelligent Network (WIN) by installing sensing and monitoring equipment in the water mains for setting up District Metering Areas (DMAs)¹. WSD is planning to establish about 2,400 DMAs within the fresh water distribution networks in the territory. As of March 2019, about 1,300 DMAs have been established. Continuously monitoring the water flow and pressure conditions of these DMAs will help determine effective actions for tackling water loss in them including (i) active leakage detection and control; (ii) water pressure management; (iii) quality and speedy repair of water main leaks; and (iv) re-provisioning of water mains beyond economical repair. WSD will use Intelligent Network Management System (INMS) to analyse the vast amount of data collected through the sensing and monitoring equipment of DMAs and prioritise the DMAs with water loss problem for taking effective water loss management actions. To enhance the water main leak detection capabilities, WSD continues to explore the feasibility of applying various advanced technologies and provide necessary training to the staff. WSD has also engaged specialist contractors to carry out leak detection work.

¹ 監測區域是指分配管網內一個可藉關閉區域邊界閘掣或截斷水管而形成的獨立區域，而供應到該區域的水量和水壓會分別被量度和監測。

A DMA is defined as a discrete area of a water distribution network established by the closure of district boundary valve(s) or disconnection of water mains, with the quantity of water supplied to the area metered and the supply pressure monitored.

延伸海水供應系統

為節約食水，本署正在薄扶林及新界西北進行由淡水沖廁轉換至海水沖廁的工作。新界西北第一期轉換工作已於二零一八年第一季大致完成，涵蓋了天水圍、元朗工業邨、東頭工業區，以及約20個位於元朗及藍地的住宅屋苑。第二期工作已於二零一九年展開，範圍包括元朗市中心、洪水橋及屯門東。此外，東涌新海水供應系統的建造項目亦即將展開，預計於二零二三年完成。

EXTENDING THE SALT WATER SUPPLY SYSTEM

To save fresh water, WSD has been converting flushing supply from fresh water to salt water in Pok Fu Lam and North West New Territories (NWNT). Phase 1 of the conversion in NWNT was substantially completed in the first quarter of 2018, covering Tin Shui Wai, Yuen Long Industrial Estate, Tung Tau Industrial Estate and about 20 housing estates in Yuen Long and Lam Tei. Phase 2 of the conversion was launched in 2019, covering Yuen Long town centre, Hung Shui Kiu and Tuen Mun East. In addition, construction of a new salt water supply system in Tung Chung is about to start, expected to be completed in 2023.

可持續運作 Sustainable Operations



開拓創新方案 貫徹節水理念

A Dedicated and Innovative Approach to Conservation

水務署在提供優質供水服務同時，全力推行能源管理計劃及可再生能源措施，為守護環境作出貢獻。

WSD protects the environment through dedicated effort in implementing energy management programmes and renewable energy initiatives whilst providing high-quality water supply services.



▲ 船灣淡水湖的浮動太陽能板

Floating Photovoltaic (PV) System at Plover Cove Reservoir

為實踐可持續發展，本署承諾：

- 嚴格遵守一切環保規例
- 善用能源和燃料，開發可再生能源
- 減少並限制水務設施產生的污染和廢物，包括氣體排放、噪音污染，以及固體、液體和化學廢物
- 盡量減少在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
- 盡量減少建築工程對環境造成的影響
- 提倡安裝綠化屋頂
- 盡量減少消耗辦公室用品，並提倡使用再造紙

WSD's commitment on sustainability comprises:

- Strictly complying with all environmental regulations
- Optimising energy use and fuel consumption whilst developing renewable energy resources
- Reducing and limiting pollution and waste in our facilities, including gaseous emissions, noise pollution, and solid, liquid and chemical wastes
- Minimising the use of chemicals in the water treatment process
- Minimising water loss across the water supply system
- Minimising the environmental impacts of construction projects
- Encouraging the setting up of green roofs
- Minimising the consumption of glossary items in offices and encouraging the use of recycled paper

節約能源及開發替代能源

新版ISO 50001認證

新版本的ISO 50001能源管理系統認證已於二零一八年年底推出，本署目前正提升其ISO 50001認證至新版本，並預計於二零二零年完成有關過渡工作。此認證涵蓋整個供水鏈，包括收集、儲存、輸送和處理原水，以及供應和分配食水和海水。

ENERGY CONSERVATION AND ALTERNATIVE POWER

Updated ISO 50001 Certification

A new version for ISO 50001 Energy Management System Certification was released in late 2018. WSD is currently upgrading its ISO 50001 certification to the latest version. This transition is targeted to be completed in 2020. This certification covers the entire water supply chain, from collection, storage, transfer and treatment of raw water to the supply and distribution of fresh water and salt water.



點滴話你知 Do you know?

在二零一四年，本署成為香港特區首個獲得ISO 50001:2011能源管理系統認證的政府部門。

In 2014, WSD became the first HKSAR Government department to obtain ISO 50001:2011 Energy Management System certification.

減少碳足印

本署已完成龍翔道機電工場、長沙灣大樓、九龍灣大樓、天水圍大樓和北角大樓的碳審計工作，並會將所得數據用於為這些場所制訂減碳措施，以減少溫室氣體排放。

Carbon Footprint Reduction

WSD has completed a carbon audit in Lung Cheung Road Mechanical and Electrical Workshop, Cheung Sha Wan Building, Kowloon Bay Building, Tin Shui Wai Building, and North Point Building. The data collected will be used to determine appropriate carbon reduction measures for reducing greenhouse gas emissions in these premises.

水力發電站

繼位於屯門濾水廠的全港首個水力發電站啟用後，本署現正在沙田濾水廠興建另一所水力發電站，預計於二零一九年年底啟用。這些水力發電站將進入濾水廠的原水的位能轉化為電能，供濾水廠使用。此外，位於馬鞍山濾水廠的水力發電設施的設計工作亦即將完成，預計於二零二二年竣工。

Hydropower Generation Plants

Following the commissioning of Hong Kong's first hydropower plant at Tuen Mun WTW, WSD is constructing another hydropower plant at its Sha Tin WTW. The hydropower plant at Sha Tin WTW is scheduled for commissioning in late 2019. These plants convert the potential energy of inflowing raw water to the WTWs into electrical power for use in the WTWs. The design of the hydropower plant at Ma On Shan WTW will shortly be completed, with the plant targeted to complete in 2022.



▲ 屯門濾水廠的水力發電站
Hydropower Plant in Tuen Mun WTW



▲ 內聯閉式水力發電裝置
In-line Hydropower Harness Device

內聯閉式水力發電裝置

內聯閉式水力發電裝置將安裝於「智管網」內部分將會設立的監測區域，為感應和監測設備及數據傳輸裝置提供電力。在創新及科技局設立的科技統籌(整體撥款)資助下，本署將購入20台內聯閉式水力發電裝置。兩套適用於較大的250毫米直徑水管的內聯閉式水力發電裝置原型，早前已於東九龍區的「智管網」監測區域內通過嚴格操作測試。

In-line Hydropower Harnessing Devices

In-line hydropower harnessing devices (IHHD) will be installed in some of the DMAs to be established under the WIN to power the sensing and monitoring equipment and data transmission device. Procurement of 20 sets of IHHD will be funded under the Innovation and Technology Bureau's TechConnect Block Vote. Two prototypes of IHHD suitable for use in the larger 250mm diameter pipes have already passed vigorous running tests in DMAs in the East Kowloon Region.

變速抽水水泵

本署現正在小西灣海水抽水站安裝變速抽水泵，以改善抽水效率，相關工程預計於二零二零年年底完成。而就在東涌海水抽水站和堅尼地城海水抽水站採用同類型水泵的可行性研究亦正在進行，以評估成效。

浮動太陽能板發電系統

繼石壁水塘和船灣淡水湖的先導項目取得成功後，本署現正計劃於大欖涌水塘安裝一組100千瓦的浮動太陽能板發電系統，進一步發展再生能源。此外，本署亦正研究在船灣淡水湖安裝大型浮動太陽能發電場的可行性。

Floating Photovoltaic Systems

Following the success of pilot projects at the Shek Pik Reservoir and Plover Cove Reservoir, WSD is preparing to install a 100kW-capacity floating photovoltaic (PV) system at Tai Lam Chung Reservoir to further its efforts in developing renewable energy. In addition, WSD is studying the feasibility of implementing a large-scale floating solar farm at Plover Cove Reservoir.

Variable Speed Pumps

To improve pumping efficiency, WSD is installing variable speed pumps at Siu Sai Wan Salt Water Pumping Station, with completion expected in late 2020. Feasibility studies for the effectiveness of adopting similar pumps at Tung Chung Salt Water Pumping Station and Kennedy Town Salt Water Pumping Station are in progress.



▲ 石壁水塘的浮動太陽能板
Floating PV System at Shek Pik Reservoir

嶄新技術和設備

建築信息模擬技術

本署將採用建築信息模擬(BIM)技術以全面管理有關水務工程項目的資訊，包括從規劃、設計，以至建造、運作及維修。本署制訂了BIM應用路線圖，並為員工提供培訓以提高BIM的知識。本署正計劃將BIM的應用擴展至資產管理，以及接受以BIM提交的水管工程申請。

NEW TECHNOLOGY AND EQUIPMENT

Building Information Modelling

WSD adopts Building Information Modelling (BIM) technology to holistically manage information relating to waterworks projects, from planning and design stages to construction, operation and maintenance. A BIM Adoption Roadmap has been formulated, and trainings have been provided to enhance BIM knowledge of the staff. Plans are also underway to extend the use of BIM as an asset management tool and accepting plumbing submission in BIM format.



個水務工程項目已採用建築
信息模擬技術

Waterworks projects have
adopted BIM

自動讀錶系統

所有合適的新私人發展項目的批地條款，以及所有合適的新公營和政府發展項目，均已訂明須要採用自動讀錶系統。自動讀錶系統不單節省人力資源與提升讀錶準確度，更可為客戶提供適時的用水數據和其他有用資訊，從而加強他們節約用水的意識。

Automatic Meter Reading System

Requirements for implementation of Automatic Meter Reading (AMR) have been incorporated in the lease conditions of all appropriate new private developments and in all appropriate new public and Government developments. AMR will not only save manpower and improve accuracy in water meter readings, it will also raise customers' awareness of water conservation by timely provision of water consumption data and other useful information to the customers.

土地資源的可持續使用

提高分區辦事處運作效率

本署於二零一八年將新界西分區辦事處遷往天水圍，有助提高新界西分區水務設施的運作和維修保養工作效率。原有旺角辦事處用地已騰出作其他更適合的發展用途。

SUSTAINABLE USE OF LAND RESOURCES

Optimising Regional Office Efficiency

WSD relocated the New Territories West (NTW) Regional Office to Tin Shui Wai in 2018. The relocation helps enhance operational and maintenance efficiency of waterworks facilities in the NTW Region. The vacated office site at Mong Kok has been released for other more beneficial developments.



水務設施遷往岩洞工程

本署於二零一八年十二月展開鑽石山食水和海水配水庫遷往岩洞的勘查研究及設計階段。藍地及鄰近地區的現有及擬建配水庫遷往岩洞的可行性研究亦已於二零一九年七月展開，油塘食水及海水配水庫群以及荃灣二號食水配水庫的同類研究則已於二零一七年展開。除此以外，本署亦正與相關部門合作研究，物色其他適合遷往岩洞的水務設施。

Relocation of Waterworks into Caverns

In December 2018, WSD began the investigation and design stage for relocating Diamond Hill Fresh Water and Salt Water Service Reservoirs into caverns. A feasibility study on relocating the existing and proposed service reservoirs in Lam Tei and adjoining areas into caverns has commenced in July 2019, while similar studies on relocating Yau Tong Group Fresh Water and Salt Water Service Reservoirs and Tsuen Wan No. 2 Fresh Water Service Reservoir into caverns have commenced in 2017. In addition, WSD is working with relevant departments to identify other potential installations that may be suitable to be relocated into caverns.



政府在增加土地供應方面採取多管齊下策略，以滿足本港長遠的社會及經濟需要。發展岩洞是策略下其中一個可行選項。本署負責搬遷合適的配水庫往岩洞，以釋放土地作其他更合適的發展用途。

Cavern development is a viable option under the Government's multi-pronged strategy to increase the land supply to meet Hong Kong's long-term social and economic needs. WSD is responsible for relocating suitable service reservoirs into caverns to release their sites for other more beneficial developments.

減低環境影響

塑造安全優美的景觀

本署一直致力將其設施及斜坡與周邊自然環境融合，打造安全及綠意盎然的景觀。在二零一八年超強颱風「山竹」吹襲後，斜坡安全組的園林服務小組透過加強樹木管理及樹木風險評估，為二零一九年風雨季來臨作好準備。該組已評估及跟進大約7,000棵樹木，並已採取一系列適當的預防措施，避免樹木因狂風暴雨而倒塌。

為公眾安全起見，如無有效措施將樹木倒塌的風險降至可接受水平，相關樹木將被移除，並補種合適的植物品種，例如低保養要求、低耗水量和具生態價值的本土植物，以提升本地生物多樣性。

ENVIRONMENTAL MITIGATION

Ensuring a Safe and Green Landscape

WSD has been striving to provide a safe and green landscape within its installations and slopes that blends in with the surrounding natural environment. After Super-typhoon Mangkhut's strike in 2018, the Landscape Service Unit of the Slope Safety Section prepared for the 2019 wet season by strengthening tree management and tree risk assessments. WSD has assessed and taken follow-up actions on approximately 7,000 trees and has adopted a series of appropriate precautionary measures to help avoid tree failure from squalls and heavy rain.

For public safety, in cases where no effective mitigation measures are available to reduce the risk of tree failure to an acceptable level, relevant trees will be removed. They will be replaced with suitable plant species, such as low maintenance and low water consumption native species with high ecological value, to enhance local biodiversity.



盡量減低建造工程的影響

本署的設計及建設科負責在規劃、設計及建造階段確保水務建造工程對環境所造成的影響降至最低。設計及建設科已於二零一八年六月就供水工程項目獲頒 ISO 14001: 2015環境管理體系標準認證。此外，本署亦制訂多項環境管理計劃，並每年進行檢討，以實現本署的環保目的及目標。

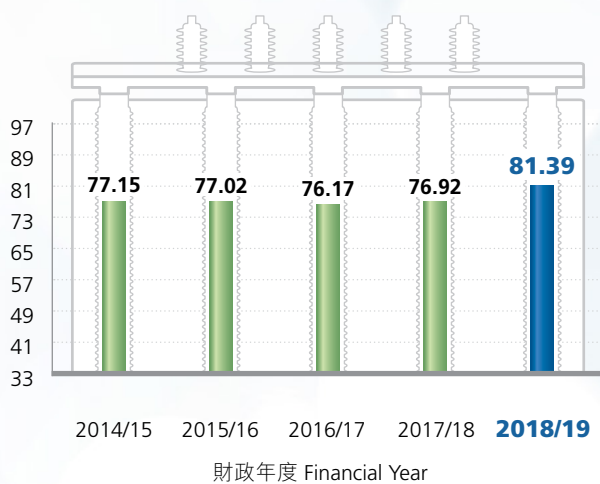
Minimising Construction Impact

The New Works Branch of WSD is responsible for ensuring that the environmental impact of waterworks construction works is minimised throughout planning, design and construction stages. In June 2018, the Branch obtained ISO 14001:2015 Environmental Management System Standards certification on the delivery of engineering projects for the provision of water supplies. A host of environmental management programmes are also developed and reviewed each year to achieve our environmental objectives and targets.



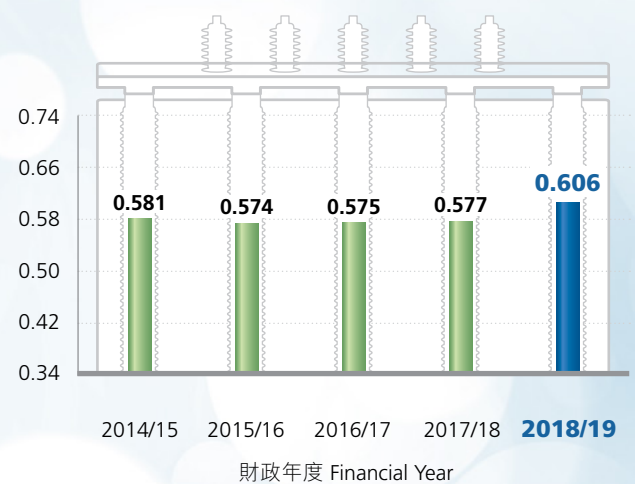
人均耗電量（食水及原水）
Per Capita Electricity Consumption
(Fresh Water and Raw Water)

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)

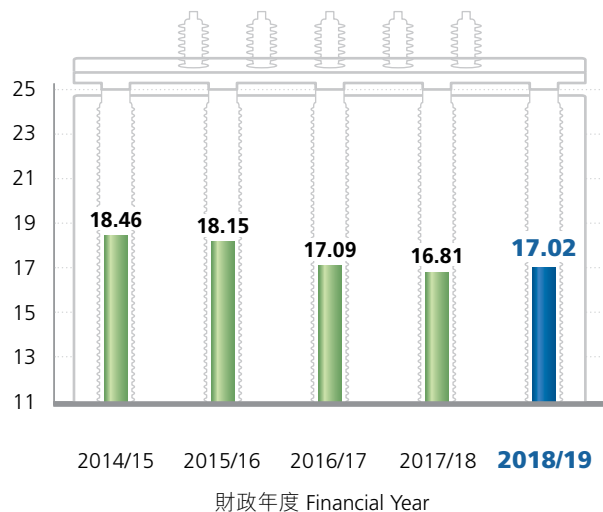
千瓦時/立方米 kWh/m³



人均耗電量（海水）

Per Capita Electricity Consumption (Salt Water)

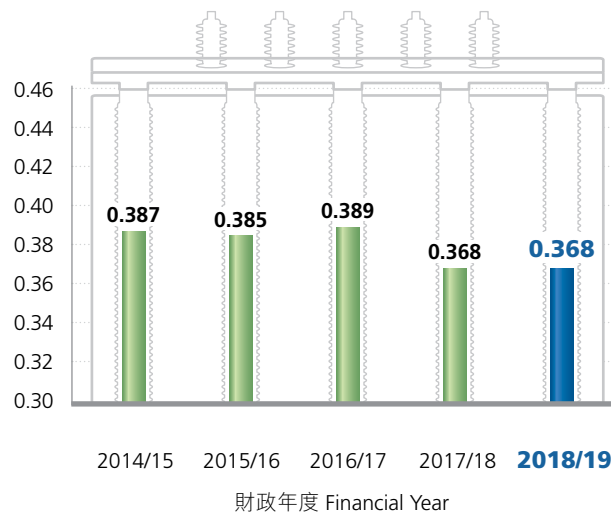
千瓦時/每人/每年 kWh/head/year



每單位耗電量（海水）

Unit Electricity Consumption (Salt Water)

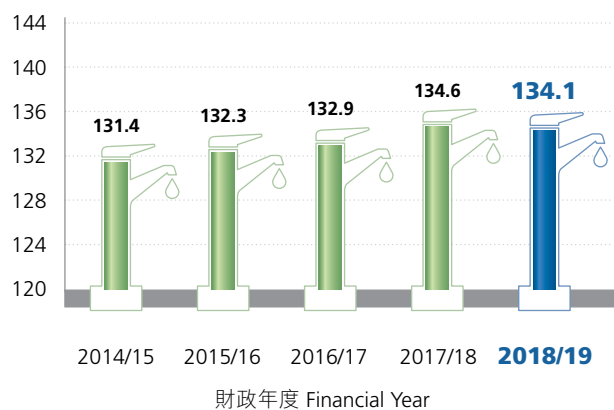
千瓦時/立方米 kWh/m³



人均住宅食水用量

Per Capita Domestic Fresh Water Consumption

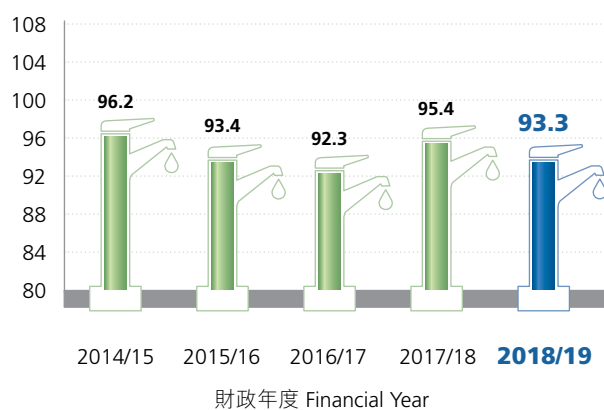
公升/日 Litres/day



人均沖廁水用量（食水及海水）

Per Capita Flushing Water Consumption (Fresh Water and Salt Water)

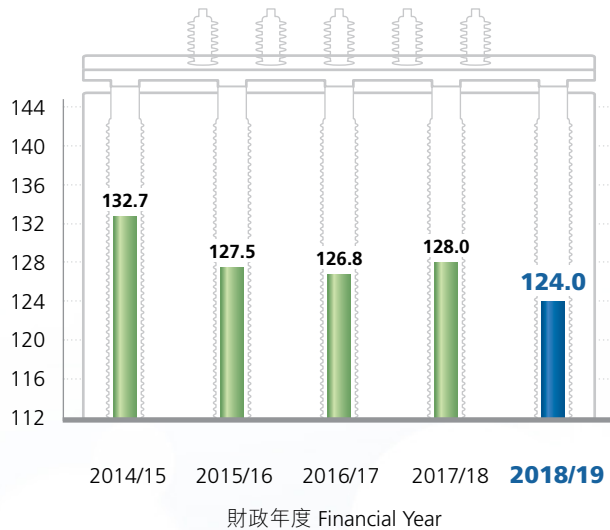
公升/日 Litres/day



註：人均沖廁水用量（食水及海水）是根據本港的沖廁水總用量計算而得。
Note: Per Capita Flushing Water Consumption (Fresh Water and Salt Water) is based on the total flushing water consumption in Hong Kong.

辦公室每單位樓面面積的耗電量

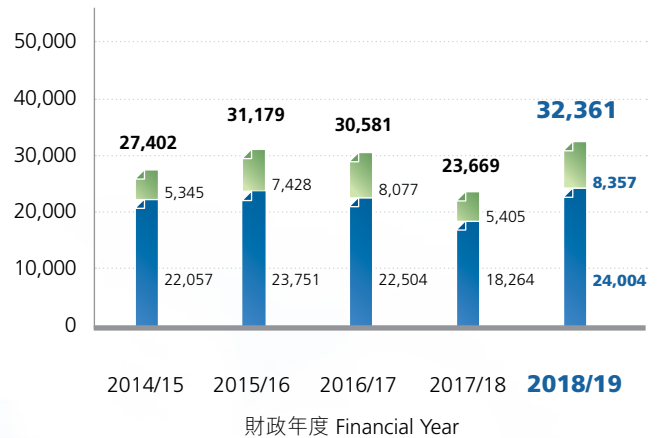
Office Electricity Consumption Per Unit Floor Space

千瓦時/平方米 kWh/m²

耗紙量

Paper Consumption

令 Reams



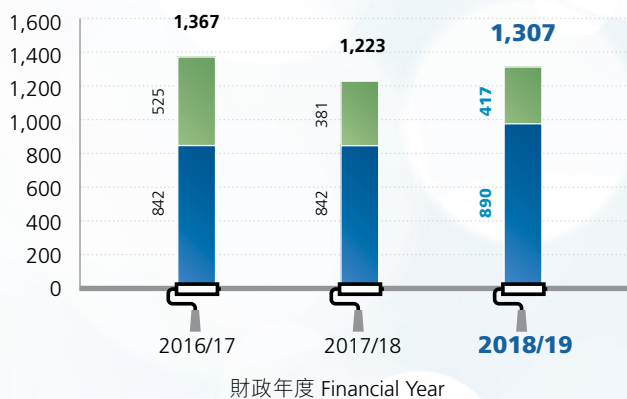
無木漿紙張 Wood-free Paper

再造紙張 Recycled Paper

內部工作所需揮發性有機化合物耗用量

VOC Consumption for In-house Work

公斤 kg

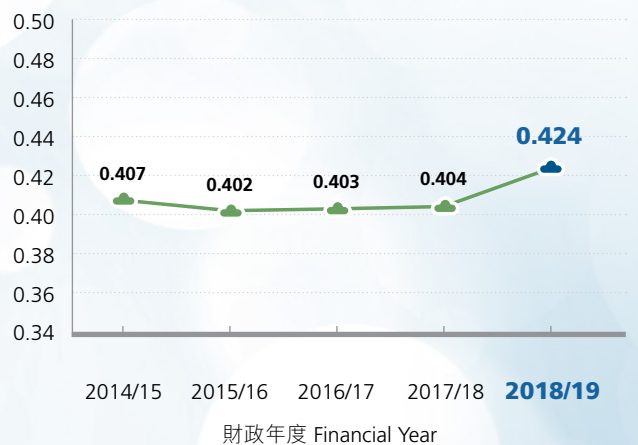


塗料、黏合劑及密封劑 Paints, Adhesives and Sealants

其他 Others

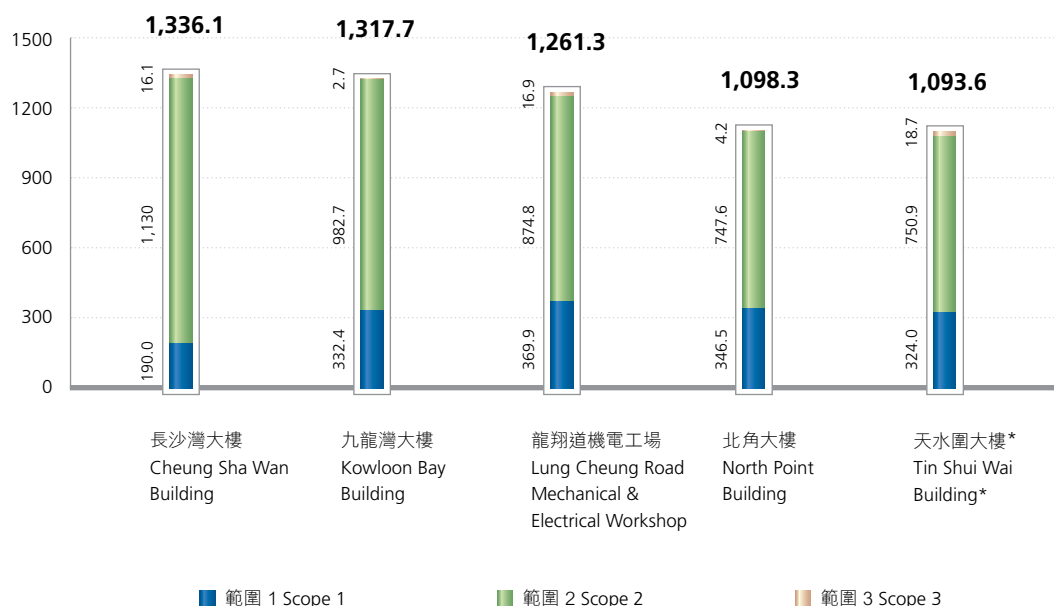
本署因使用電力處理食水而出現的溫室氣體排放

Green House Gas (GHG) Emissions Due to Electricity Used for Fresh Water Processing by WSD

千克二氧化碳/立方米 kg CO₂/m³

二零一八至一九財政年度碳審計報告
Carbon Audit Report for Financial Year 2018/19

地點 Location	公噸二氧化碳當量 Tonnes of CO ₂ - equivalent			
	範圍1 Scope 1	範圍2 Scope 2	範圍3 Scope 3	總量 Total
長沙灣大樓 Cheung Sha Wan Building	190.0	1,130.0	16.1	1,336.1
九龍灣大樓 Kowloon Bay Building	332.4	982.7	2.7	1,317.7
龍翔道機電工場 Lung Cheung Road Mechanical & Electrical Workshop	369.9	874.8	16.9	1,261.3
北角大樓 North Point Building	346.5	747.6	4.2	1,098.3
天水圍大樓* Tin Shui Wai Building*	324.0	750.9	18.7	1,093.6



註： 範圍1—直接溫室氣體排放量
範圍2—使用能源間接引致的溫室氣體排放量
範圍3—其他間接溫室氣體排放量

Note: Scope 1 – Direct GHG Emissions
Scope 2 – Energy Indirect GHG Emissions
Scope 3 – Other Indirect GHG Emissions

* 由於天水圍大樓於二零一八年八月才啟用，該大樓報告只涵蓋二零一八年八月至二零一九年三月。
As the Tin Shui Wai Building was commissioned in August 2018, the reporting period of the building only covers August 2018 to March 2019.

公用集調車輛資料

Information on Vehicle Pool Transport

財政年度 Financial Year	投入運作的政府車輛 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)		
	16/17	17/18	18/19	16/17	17/18	18/19	16/17	17/18	18/19
柴油 Diesel	28	58	85	34,554	67,818	144,386	163,522	357,842	771,660
汽油 Petroleum	163	158	123	511,092	479,787	398,065	2,424,315	2,216,830	1,997,606
混合（汽油/電力） Hybrid (Petrol/ Electric)	16	3	3	11,678	12,077	2,067	189,569	174,524	38,858
液化石油氣 LPG	11	11	11	55,940	51,379	43,503	160,744	139,457	121,690
電力 Electricity	20	16	15	—	—	—	101,237	98,845	122,293

廢氣排放

Emissions

(以公噸計) (Figures in Tonnes)	二氧化碳 CO ₂			二氧化硫 SO ₂			氮氧化物 NO _x			可吸入懸浮粒子 RSP		
財政年度 Financial Year	16/17	17/18	18/19	16/17	17/18	18/19	16/17	17/18	18/19	16/17	17/18	18/19
直接廢氣排放 Direct Emissions												
車輛（柴油） Vehicle fleet (Diesel)	82	154	347	-	-	-	1	2	4	-	-	-
車輛（汽油） Vehicle fleet (Petrol)	1,129	1,075	899	-	-	-	1	1	1	-	-	-
車輛 （液化石油氣） Vehicle fleet (LPG)	93	97	73	-	-	-	-	-	-	-	-	-
間接廢氣排放 Indirect Emissions												
耗用電 （九龍及新界） Electricity Consumed (Kowloon and New Territories)	320,938	315,317	318,021	91	86	86	293	261	261	6	8	8
耗用電（港島） Electricity Consumed (Hong Kong Island)	50,886	52,184	52,570	16	14	14	52	51	51	1	1	1
總量 Total	373,128	368,826	371,909	107	100	100	346	314	316	8	10	10

可持續發展及節水大事回顧

Sustainability & Conservation Event Highlights



凝聚大眾 共同節約用水

Uniting Everyone to Save Water

水務署積極參與各式各樣與水有關的活動，善用每個機會提高市民節約用水的意識。

WSD actively participates in all kinds of water-related activities, seizing every opportunity to raise public awareness of water conservation.



▲ 本署致力透過學校及公眾教育活動，培育年輕一代的節約用水文化。

WSD has devoted much effort in school and public education activities with the aim of nurturing a water conservation culture amongst the younger generation.



>4,000

位參加者
participants



香港水足印定向2018

活動由和富社會企業主辦、本署及香港公開大學協辦，於二零一八年四月二十二日在沙田馬場舉行。透過城市定向比賽和與水有關的任務，啟發參加者於日常生活中節約用水。本署除了組隊參賽外，亦設置遊戲攤位，宣揚節約用水的訊息。

Hong Kong Water Race 2018

Organised by Wofoo Social Enterprises and co-organised by WSD and the Open University of Hong Kong, this event was held on 22nd April 2018 at the Sha Tin Racecourse. Through the city orienteering competition and water-related tasks, participants were inspired to conserve water in their daily lives. WSD joined the race and set up game booths to promote water conservation.



活水·行2018

活動由愛德基金會主辦，於二零一八年五月五日舉行，旨在為中國內地偏遠山區籌款，用作興建用水設施。本署全力支持活動，設置遊戲攤位，並安排義工教育市民如何在日常生活中節約用水。

Walk for Living Water 2018

This event was organised by the Amity Foundation on 5th May 2018 to raise funds for building water facilities in the remote mountainous areas in Mainland China. WSD fully supported the event, setting up game booths and sending volunteers to educate the public about saving water in daily life.

2018
May
五月

點滴掙水Walk & Run 2018

本署於二零一八年五月六日參與由點滴是生命舉辦的這項活動，為中國內地、尼泊爾及柬埔寨籌款建設儲水和淨水設施。當天活動由水務署副署長周世威先生擔任主禮嘉賓，而本署義工隊亦在場協助及設置遊戲攤位推廣節約用水。

Walk & Run for Water 2018

WSD joined this event held by A Drop of Life on 6th May 2018 to help raise funds to build water storage and sanitation facilities in Mainland China, Nepal and Cambodia. The Deputy Director of Water Supplies Mr. CHAU Sai-wai officiated at the event, while WSD's Volunteer Team offered assistance and set up game booths to promote water conservation.



2018
June
六月

香港綠色日2018

本署參與這項由環保促進會舉辦的活動，鼓勵市民身體力行環保出力。本署是活動的支持機構之一，並獲邀參與二零一八年六月五日舉行的啟動禮，推廣珍惜用水的重要性和加強市民節約用水的知識，以及六月二十四日舉行的壓軸活動：閉幕禮暨著「綠」智激鬥。

Hong Kong Green Day 2018

WSD joined this Green Council event to encourage Hong Kong citizens to "Go Green, Act Green!" As one of the supporting organisations, WSD was invited to promote the importance of cherishing water and enhance the public's knowledge of water conservation at the Kick off Ceremony on 5th June 2018 and the finale activity on 24th June 2018, the Closing Ceremony cum Green Mission Challenge.

世界環境日2018 — 零廢FUN墟

活動於二零一八年六月十日由環境運動委員會舉辦，共有超過30個機構參與，攜手提高市民減少浪費及注重環保的意識。本署作為協辦機構之一，於活動中設置展覽及遊戲攤位，向公眾宣揚節約用水的訊息。

World Environment Day 2018 - Zero Waste Fun Fair

As one of the co-organisers, WSD set up an exhibition and game booths to convey water-saving message to the public in this event, which was organised by the Environmental Campaign Committee on 10th June 2018. Jointly supported by over 30 organisations, the event promoted waste reduction and environmental awareness among the public.



水資源教育中心工程項目展開

水資源教育中心展覽廳及相關區域的裝修工程(合約編號6/WSD/18)批出予俊和高雅一金明聯營。工程合約包括製作及安裝約50個展品、更改及安裝屋宇裝備，以及進行其他相關工程。合約簽署儀式於二零一八年七月二十日舉行。

2018
July
七月



Water Resources Education Centre Project Launch

The fitting out project of the exhibition halls and associated areas at the Water Resources Education Centre (Contract No. 6/WSD/18) was awarded to Chun Wo Elegant – Kingsmen Joint Venture. This contract covers the fabrication and installation of approximately 50 exhibits, as well as the modification and installation of building services and other associated works. A contract-signing ceremony was held on 20th July 2018.

2018
October
十月



香港生物多樣性節2018

為培育公眾欣賞大自然和推動生態保育的風氣，本署於二零一八年十月二十一日和十一月十日舉辦大潭水務文物徑生態及歷史導賞團。這項活動是漁農自然護理署聯同各政府部門和機構舉辦的香港生物多樣性節2018當中的活動。公眾透過導賞團了解本港水務歷史的一些重要里程碑，沿途更可欣賞自然生態和認識本地的生物多樣性。

Hong Kong Biodiversity Festival 2018

To foster the public's appreciation for nature and ecological conservation, WSD arranged guided tours to the Tai Tam Waterworks Heritage Trail (Ecology and History) on 21st October 2018 and 10th November 2018. These events were part of the Hong Kong Biodiversity Festival 2018 organised by the Agriculture, Fisheries and Conservation Department, in collaboration with other Government departments and organisations. Through the tours, the public learned about the important milestones of the local waterworks history and appreciated the natural ecology and the local biodiversity along the way.



國際環保博覽2018

為響應活動主題「減廢節能・共創低碳未來」，本署於活動中以安達臣道石礦場用地發展項目作為範例，介紹及推廣節約用水及中水重用。活動由環境局與香港貿易發展局合辦，於二零一八年十月二十五日至二十八日假亞洲國際博覽館舉行。本署亦參與研討會和公眾日專題論壇，討論和講解智能供水措施。

ECO Expo Asia 2018

Echoing the theme "Waste Less, Save More for a Low-carbon Future" of the event, WSD introduced and promoted water conservation and grey water recycling through an exhibition featuring Anderson Road Quarry Site Development as an example. This event was jointly organised by the Environment Bureau and the Hong Kong Trade Development Council at the AsiaWorld-Expo from 25th to 28th October 2018. WSD also attended the seminars and public day forum to discuss and illustrate smart water supply initiatives.

保護清潔海洋水陸歷奇挑戰賽

本署作為活動支持機構，派出義工隊協助香港青年協會於二零一八年十一月四日舉辦這項活動。活動鼓勵青年人保護珍貴的海洋生態和水資源。本署亦有派隊參加挑戰賽。活動讓參加者在船灣淡水湖堤壩及大美督鄰近海岸享受做運動的樂趣和幽美景色，同時親身體會保護海洋環境和水資源的重要性。水務署副署長周世威先生於頒獎禮擔任主禮嘉賓。

Love Our Oceans Marine Conservation Adventure Challenge

As a supporting organisation, WSD assigned Volunteer Team to assist the Hong Kong Federation of Youth Group on 4th November 2018 in staging this event, which encouraged the younger generation to protect the precious marine environment and water resources. WSD also deployed teams to join the adventure challenge. Whilst enjoying sports in the beautiful scenery of the dam of Plover Cove Reservoir and the coastal areas of Tai Mei Tuk, participants experienced the importance of protecting our marine environment and water resources. Deputy Director of Water Supplies Mr. CHAU Sai-wai was the Guest of Honour at the award presentation ceremony.



7.4 公里 km

步行由馬鞍山郊野公園作起點，
途經昂坪營地及信義會鞍山探索館
**Walk from Ma On Shan Country
Park, via Ngong Ping Viewing
Point and the Evangelical
Lutheran Church of Hong Kong
– Grace Youth Camp**



華懋行2018

本署於二零一八年十一月四日參與由華懋集團主辦的華懋行2018，設置遊戲攤位，推廣節約用水。此活動以「至愛我家」為主題，步行活動以馬鞍山郊野公園作起點，途經昂坪營地及信義會鞍山探索館，全程約7.4公里。參加者沿途認識居住在馬鞍山上村落的礦工和他們家庭的生活，領略保育、社會共融及綠色生活的重要性。

Chinachem Eco-Walk 2018

To promote water conservation, WSD set up a game booth at this event organised by the Chinachem Group on 4th November 2018. Themed under “My Sweet Home”, the approximately 7.4km walk started from Ma On Shan Country Park, via Ngong Ping Viewing Point and the Evangelical Lutheran Church of Hong Kong – Grace Youth Camp. Participants got a glimpse of the life of miners and their families living in the village in Ma On Shan to understand the importance of conservation, social harmony and green living in Hong Kong.

惜水學堂頒獎典禮暨學前計劃啟動禮

為表揚在二零一七至一八學年積極參與惜水學堂節約用水教育計劃的小學，並正式宣佈將節約用水教育計劃拓展到學前教育，本署於二零一八年十一月十六日假坑口社區會堂舉行頒獎典禮暨學前計劃啟動禮。出席典禮的嘉賓包括水務署署長黃仲良先生、水務諮詢委員會主席陳漢輝博士、教育局首席助理秘書長(幼稚園教育)陳蕭淑芬女士，以及教育局首席教育主任(課程發展)謝婉貞女士。

Cherish Water Campus Award Ceremony cum Kick-off Ceremony for the Kindergarten Integrated Education Programme

To commend the primary schools that actively participated in the 2017/18 Cherish Water Campus Integrated Education Programme (IEP), as well as to officially announce IEP's extension to the pre-primary education level, an award ceremony cum kick-off ceremony for kindergarten IEP was held by WSD on 16th November 2018 at Hang Hau Community Hall. Director of Water Supplies Mr. WONG Chung-leung was joined by the Chairman of the Advisory Committee on Water Supplies Dr. CHAN Hon-fai, Principal Assistant Secretary (Kindergarten Education) of the Education Bureau Mrs. CHAN SIU Suk-fan and Principal Education Officer (Curriculum Development) of the Education Bureau Ms. TSE Yuen-ching, Edith at the ceremony.

>100



名校長及師生獲獎
**principals, teachers and
students awarded**



惜水大使計劃委任典禮

惜水大使計劃委任典禮及工作坊於二零一八年十二月一日假香港青年協會賽馬會Media 21媒體空間進行。本署在二零一八至一九學年首次推行此計劃，以培養中學生及大專生的惜水文化意識。水務署署長黃仲良先生在典禮中與參加者分享節約用水的訊息。

Cherish Water Ambassador Appointment Ceremony

The appointment ceremony and workshop of the Cherish Water Ambassador Scheme were held on 1st December 2018 at the Hong Kong Federation of Youth Groups Jockey Club Media 21 (M21). WSD debuted this scheme in 2018/19 to nurture water conservation awareness in students of secondary schools and tertiary institutions. The Director of Water Supplies Mr. WONG Chung-leung attended the event to share insights in water conservation with the participants.



綠遊香港計劃之水務百年(大潭郊野公園) 生態文物導賞團

為推廣可持續發展及環境保育，本署聯同港燈和長春社於二零一八年十二月十六日舉行生態文物主題導賞團。導賞員向參加者介紹大潭水務文物徑沿途的生態特色和水務設施的歷史，參加者同時亦可欣賞大潭美麗的水塘風景。

A Century of Water Services (Tai Tam Country Park) under the Green Hong Kong Green Project

To promote sustainable development and environmental conservation, WSD joined hands with HK Electric and the Conservancy Association to organise a thematic ecoheritage guided tour on 16th December 2018. The tour guides introduced to the visitors the ecological features and history of various waterworks structures along the Tai Tam Waterworks Heritage Trail. Visitors also enjoyed the beautiful scenery of the reservoirs at Tai Tam.

第四屆油麻地榕樹頭節

本署吉祥物滴惜仔應油麻地街坊福利事務促進會邀請，於二零一八年十二月十六日出席第四屆油麻地榕樹頭節。活動以環保為主題，透過比賽、文化攤位及手作市集，宣傳油麻地區引人入勝的歷史與傳統文化，並推廣「揀少啲、慳多啲、識回收」的訊息。滴惜仔當天為比賽參加者打氣，以及提醒市民節約用水。

4th Yau Ma Tei Festival

Water Save Dave, the WSD's mascot, was invited to attend the 4th Yau Ma Tei Festival organised by the Yaumatei Kaifong Welfare Advancement Association on 16th December 2018. The Festival adopted "Environmentally-Friendly" as the main theme of the event. A competition, cultural booths and a handicraft fair were held to promote the fascinating history and traditional culture of the Yau Ma Tei District and the message of "Dump Less, Save More, Recycle Right". Water Save Dave cheered the contestants and reminded the public to save water during the event.





環保嘉年華2019

本署全力支持此項由環保促進會主辦的活動，向市民推廣綠色及低碳生活。活動於二零一九年一月二十日在九龍公園廣場舉行，水務署助理署長黃恩諾先生在開幕禮上擔任主禮嘉賓並致辭。作為活動的支持機構，本署擺設遊戲攤位推廣節約用水。

Green Carnival 2019

WSD fully supported this event, which was organised by the Green Council to promote a green and low-carbon lifestyle. The event was held on 20th January 2019 at the Kowloon Park Piazza. The Assistant Director of Water Supplies Mr. WONG Yan-Lok officiated at the opening ceremony and delivered a speech. As a supporting organisation, WSD set up a game booth at the event to promote water conservation.



揸水一戰2019

本署在二零一九年三月九日參加了此項由點滴是生命舉辦的活動，為中國內地的乾旱地區、尼泊爾和柬埔寨偏遠山區籌款興建供水設施。活動在山頂舉行，參加者須揸負4.5公升的水樽，親身體驗為取水而長途跋涉的苦況。水務署助理署長黃恩諾先生在活動中致辭，鼓勵參加者在日常生活中節約用水。

Race for Water 2019

WSD joined this event organised by A Drop of Life on 9th March 2019 to raise funds for building water supply facilities in arid regions of Mainland China and remote mountainous regions of Nepal and Cambodia. Participants carried 4.5 litres of bottled water at the Peak to experience the hardship of travelling long distances to fetch water. Assistant Director of Water Supplies Mr. WONG Yan-Lok delivered a speech at the event and encouraged participants to save water in their daily lives.



2019
March
三月

著綠狂奔2019

活動由環保促進會主辦，於二零一九年三月二十四日舉行。參加者穿著綠色衣物，沿香港科學園及白石角海濱長廊進行長跑比賽。水務署副署長周世威先生除了主持起步禮外，亦與其他嘉賓一同參與「一公里綠色領袖賽」。此外，本署亦於活動設置遊戲攤位推廣節約用水。

Green Run 2019

This event was organised by the Green Council on 24th March 2019. Participants dressed in green for a distance competition along Hong Kong Science Park and Pak Shek Kok Promenade. Apart from officiating at the kick-off ceremony, Deputy Director of Water Supplies Mr. CHAU Sai-wai and other guests also joined the "1 Kilometre Green Leaders Race". WSD set up a game booth at the event to promote water conservation.

>1,000

名參加者
participants

