同行 邁進
WE ADVANCE

從管理層以至前線同事，水務署上下一心，努力不懈提升服務表現，確保香港擁有可持續、安全及可靠的供水。

With the concerted efforts of everyone at WSD from management to front-line staff, we tirelessly strive to advance our performance in ensuring sustainable, safe and reliable water supplies in Hong Kong.

盡心協力
服務精益求精

Advancing together for service excellence

總濾水量
Total Water Treatment Capacity:

4.7
百萬立方米/日
million m³/day

食水質素
Fresh Water Quality

100%
符合香港食水安全標準
compliance with the Hong Kong Drinking Water Standards

客戶數目
Number of Accounts

3 077 800

署長的話
Director's Statement

RESILIENT 具應變力

安全 SAFE

RELIABLE 可靠

可持續 SUSTAINABLE

黃仲良工程師*太平紳士*
水務署署長

Ir WONG Chung-leung, *JP*
Director of Water Supplies

我們的責任是確保香港持續擁有安全可靠且具應變力的供水，並與社會大眾分享可持續發展的願景。

It is our responsibility to ensure that our city will continue to have a safe, reliable and resilient water supply, and to share the vision of a sustainable future with our community.

水是日常生活的必需品，我們必須小心守護這珍貴資源，水務署在作出每個決策時都會遵照這核心基本原則。我們的責任是確保香港持續擁有安全可靠且具應變力的供水，並與社會大眾分享可持續發展的願景。這正好反映在本年報的主題 -**「共承 惜水」**，一個不只是聚焦現在或明天，而且是放眼更長遠未來的願景 - 以及我們在二零一九至二零年度致力推行的各項主要工作。

Water is essential to our daily lives; however, we must safeguard it carefully, for it is a precious resource. This core underlying principle guides every decision we make at WSD. It is our responsibility to ensure that our city will continue to have a safe, reliable and resilient water supply, and to share the vision of a sustainable future with our community. This is reflected in our theme for this year's annual report – **"Fostering a Responsible Vision"**, that is, a vision that encompasses not just today or tomorrow, but decades ahead, and beyond – and in the key efforts to which we have dedicated ourselves in 2019/20.

規劃具應變力及可持續的未來

足夠而可持續的水資源，對香港未來長遠發展尤其重要。我們於本財政年度完成了就二零零八年起推行的「全面水資源管理策略」（「策略」）之檢討工作，確定「策略」下的主要措施已取得預期進展及成果。是次「策略」檢討更新了至二零四零年的用水需求及供應預測，包括因應氣候變化而作出的調整，並更新了「策略」，以一系列水資源管理措施，維持香港長遠供水的可持續性。更新的「策略」採

Planning a resilient, sustainable future

Ensuring sufficient, sustainable water resources is crucial for Hong Kong's continued development in the years to come. This financial year, we completed the review of our Total Water Management Strategy implemented since 2008 (the Strategy), which confirmed that we have successfully achieved the milestones of the major initiatives under the Strategy. This review updated the water demand and supply projections through 2040 with adjustments for climate change, and the Strategy with a host of water management initiatives to ensure the long-term sustainability of Hong Kong's water supplies.

更新的「全面水資源管理策略」。
Updated Total Water Management Strategy.

用雙管齊下的方式，著重**控制食水需求增長**及利用多元化的水資源**提升食水供應的應變能力**。

在控制食水需求增長方面，我們採取了三項主要措施，包括透過各種公眾教育與宣傳活動推廣節約用水；建立「智管網」及「智能管網管理電腦系統」管理用水流失；以及擴大使用次階水（包括海水及循環再用水）作非飲用用途，包括完成了安達臣道石礦場用地發展項目中水處理廠的設計，以及推展新界東北部再造水供應設施的建造。此外，我們會與公眾合作及爭取他們的支持，共同減少用水流失，並正研究就私人公用水管用水流失徵費，促使業主積極處理用水流失問題。

與此同時，我們透過發展海水化淡——一種不受氣候變化影響的策略性水資源，提升食水供應的應變能力。於二零一九年十二月，將軍澳海水化淡廠的第一階段工程正式展開，該廠採用最新的逆滲透技術生產符合《香港食水標準》的食水。我們預期在第一階段工程完成後，海水化淡廠的產量可應付本港約5%的總食水用量。

為進一步邁向可持續發展的未來，我們亦積極在水務設施開發可再生能源，包括在水塘安裝浮動太陽能板發電系統及在濾水廠興建水力發電站。除了在石壁水塘和船灣淡水湖已完成安裝的浮動太陽能板發電系統先導項目，以及在大欖涌水塘計劃中的項目外，我們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。

The updated Strategy adopts a two-pronged approach with emphasis on **containing fresh water demand growth** and **building resilience in the fresh water supply** with diversified water resources.

We have advanced three main initiatives to contain fresh water demand growth: water conservation through various educational and publicity programmes; water loss management through establishment of the Water Intelligent Network (WIN) and the Water Intelligent Network Management System (INMS); and expansion of use of lower grade water (including salt water and recycled water) for non-potable purposes, including completing the design for the Grey Water Treatment Plant at Anderson Road Quarry Site Development and proceeding with construction of the infrastructure for supply of reclaimed water for the north-eastern part of the New Territories. In addition to the above, we will work hand-in-hand with the community and enlist their support in combating water loss. We are exploring imposing water charges for the water loss in private communal water mains to incentivise property owners to take prompt rectification actions to curb the water loss.

At the same time, we are also building resilience in our fresh water supply through seawater desalination – a strategic water resource that is not susceptible to the effects of climate change. In December 2019, we commenced the construction of the first stage of our Tseung Kwan O Desalination Plant, which uses the latest reverse osmosis technology to produce fresh water that meets the Hong Kong Drinking Water Standards. Its first stage will meet approximately 5% of Hong Kong's total fresh water consumption.

Working towards the goal of a sustainable future, we are also developing renewable energy in our waterworks, including floating photovoltaic (PV) systems on reservoirs and hydropower plants at water treatment works (WTWs). In addition to the pilot floating PV systems installed at Shek Pik Reservoir and Plover Cove Reservoir and the one under planning at Tai Lam Chung Reservoir, we are studying the feasibility of implementing a large-scale floating solar farm at Plover Cove Reservoir.

石壁水塘的浮動太陽能板發電系統。
Floating PV system at Shek Pik Reservoir.

確保食水安全

在二零一九至二零年度，我們檢討了食水水質監測計劃，並就抽取水樣本的頻率、地點和規程，正推行一系列措施以進一步提升食水水質監測。我們將於二零二零年至二零二二年分階段實施上述檢討的各項建議。同時，我們亦正全面檢討《水務設施條例》，當中包括加強規管水喉物料及內部水管系統的建造。有關修例建議預計於二零二零年內展開公眾諮詢。

公眾在維護建築物的食水安全方面也有一定角色。食水在進入建築物內部水管系統後，水質有機會受到不同因素影響，例如水箱的清潔狀況或水喉物料等。因此，我們一直積極向公眾推廣「建築物水安全計劃」，並正籌劃於二零二零年七月推出「水安全計劃資助計劃」，以鼓勵私人住宅及綜合大廈的業主及物業管理人實施「建築物水安全計劃」，妥善管理其樓宇的食水安全風險。

維持供水可靠

我們以具策略性而有系統的方式管理水務設施，以維持供水的可靠性。在水管資產管理方面，我們採用了符合國際最佳實務方案的風險為本方式，識別高風險的水管進行改善工程，並按其風險安排工程的優先次序，有效令水管爆裂個案在二零一九年大幅下降至約40宗。此外，我們正逐步為各項水務設施資產推行資產管理系統，並計劃於二零二零年年底為其中九項地面資產的管理系統取得ISO 55001:2014認證。

連繫各界力量

要確保香港長遠供水的可持續性、安全和可靠，我們需要凝聚社會各界的支持，包括學術界、非政府組織及社會公眾等，創造協同效應從而邁向成功。我們與香港青年協會賽馬會Media 21媒體空間合辦的「惜水大使」計劃正是其中一項協同效應的成功例子，成功燃點節約用水的熱誠和把水資源知識薪火相傳至下一代。

Ensuring a safe water supply

In 2019/20, in response to the review of our drinking water quality monitoring programme, we are launching a number of initiatives to enhance our drinking water quality monitoring, including the water sampling frequencies, locations and protocols. We will fully implement all of the review's recommendations in stages from 2020 to 2022. We are also conducting a holistic review of the Waterworks Ordinance to inter alia enhance regulatory control of plumbing materials and plumbing system construction, and expect to launch public consultation on the legislative amendment proposals in 2020.

The public also has a role to play in safeguarding drinking water safety in buildings. Drinking water quality could be affected after entering the plumbing system of a building by factors like the cleanliness of the water tank or the plumbing materials. For this reason, we have been promoting the implementation of the Water Safety Plan for Buildings (WSPB), and are now formulating a Water Safety Plan Subsidy Scheme, scheduled to be launched in July 2020, to encourage property owners and management agents of private residential and composite buildings to implement WSPB and effectively manage water safety risks in their buildings.

Providing a reliable water supply

Ensuring the reliability of the water supply requires management of our waterworks assets in a strategic and systematic manner. We are adopting a risk-based approach that is in line with international best practices for water main asset management, for identifying and prioritising water mains with high risk for improvement works. Its effectiveness is well evidenced by the significant drop in the number of water main bursts to around 40 in 2019. We are also progressively implementing asset management system for our waterworks assets, starting with nine types of our surface assets with an aim to pursuing ISO 55001:2014 certification in late 2020.

Forging synergies and forming collaborations

Ensuring Hong Kong's long-term water sustainability, safety and reliability requires the city's united support, including academia, non-government organisations and the general public. The synergies we create with them are indispensable avenues to success. Our "Cherish Water Ambassador" Scheme, co-organised with the Hong Kong Federation of Youth Groups Jockey Club Media 21, is an example of how synergies work to ignite a passion for water conservation and pass on knowledge about water resources to our next generation.

...我們與世界各地的持份者、學術界及業界人士，一同探索新科技及分享創新構思，擴充我們的知識。

...we expand our knowledge base, explore new technologies and communicate innovative ideas with stakeholders, academics and industry peers around the world.

為增加協同效益和開拓國際視野，我們積極探索與世界各地的交流合作。透過成為國際組織成員、參與論壇及會議等寶貴交流機會，我們與世界各地的持份者、學術界及業界人士，一同探索新科技及分享創新構思，擴充我們的知識。於二零一九年年底，我們協辦了「第8屆國際水協亞太地區會議及展覽」，與來自世界各地的水務專才和業界人士一起探討提升水資源應變力的最佳實務方案。我們亦於二零一九年九月參加了「首屆粵港澳大灣區水務論壇暨第十三屆深港珠澳供水界學術交流會」。此外，我們亦透過參與多個國際知名的組織，例如國際水協會、Leading Utilities of the World (LUOW) 及國際海水化淡協會，致力建立廣闊的交流網絡。我們其中一位總工程師更獲選為國際海水化淡協會理事會成員，進一步增進我們與世界各地同業的交流合作。

當然，凡此種種成果、措施和高水平的服務都有賴我們專業的團隊克盡己任。我即將於二零二零年十一月退休，卸下水務署署長一職。在任期間，能夠有機會與一眾傑出有為、勤懇熱誠的同事合作，實在深感榮幸，他們定能為香港提供安全、可靠和穩健的供水。我深信我們的團隊加上各界的支持，必定可以在未來繼續實踐本署抱負，提供優質的供水服務。

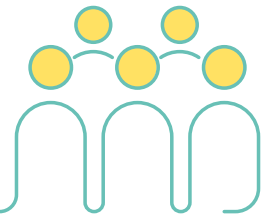
We also regularly explore collaborations outside Hong Kong to generate greater synergies and international insights. Through valuable opportunities for information exchange such as membership in international organisations, forums and conferences, we expand our knowledge base, explore new technologies and communicate innovative ideas with stakeholders, academics and industry peers around the world. In late 2019, we co-organised the 8th International Water Association Asia Pacific Regional Group (IWA-ASPIRE) Conference and Exhibition, where we discussed best practices for water resilience with international water experts and practitioners, and in September 2019, we participated in the 1st Guangdong-Hong Kong-Macao Greater Bay Area Water Forum cum 13th Shenzhen, Hong Kong, Zhuhai and Macao Seminar on Water Supply. We also strive to build a strong network with our international counterparts through active participation in world-renowned organisations such as the International Water Association (IWA), Leading Utilities of the World (LUOW) and the International Desalination Association (IDA). One of our Chief Engineers has been elected to the Board of Directors of IDA, opening up further opportunities for collaboration.

However, all of our many accomplishments, initiatives and consistent high level of services would not be possible without the hard work and diligence of our professional team. In November 2020, I will be retiring from my role as the Director of Water Supplies. I am proud to have had the opportunity to work with such a talented and dedicated team, and know that I am leaving the water safety, reliability and security of Hong Kong in good hands. I am confident that our team, with your support, will continue to excel in fulfilling our united mission for the provision of quality water services.

黃仲良工程師太平紳士
水務署署長

Ir WONG Chung-leung, *JP*
Director of Water Supplies

部門總覽
Corporate Profile



穩定而優質的供水，對本港居民的生活不可或缺，同時亦是支持本港可持續發展的關鍵要素。香港特別行政區政府水務署的職責是維持供水可靠優質。

本港17個水塘集水區收集的本地雨水約佔香港總食水用量20%至30%，餘下部分的食水由廣東省的東江輸入，兩者均經過嚴格處理及監測，務求食水水質符合根據世界衞生組織（世衞）《飲用水水質準則》制訂的香港食水標準。此外，自一九五零年代以來，我們充分利用香港近海的地理優勢，將海水用作沖廁用途。食水及海水由兩個完全獨立的供水系統供應，透過龐大的配水庫和水管網絡，配送至各家各戶及商用物業。

為確保香港供水穩健及具應變能力，我們繼續透過海水化淡及中水重用等技術開拓新水源，進一步提升香港的供水保障及應對氣候變化的能力。

作為香港最大的能源用戶之一，我們已實施相關措施，透過開發可再生能源及提升能源效益，致力減少碳足跡。我們亦是香港特區政府首個部門獲得ISO 50001:2011能源管理系統認證。

我們的抱負是滿足客戶對優質供水服務的需求。為此，我們的人員致力提供以客為本的服務，確保客戶獲得最具效率及優質的服務。

Reliable and quality water supplies are indispensable to the lives and livelihoods of the people in Hong Kong, and are critical for supporting the Territory's sustainable development. The Water Supplies Department (WSD) of the Hong Kong SAR Government is charged with the responsibility of maintaining reliable and quality water supplies.

Approximately 20% to 30% of Hong Kong's fresh water supply comes from local yield collected in catchment areas of the Territory's 17 impounding reservoirs. The remaining fresh water supply comes from Dongjiang in Guangdong. Both the collected local yield and the imported Dongjiang water are subject to stringent treatment and monitoring so as to ensure that the quality of treated water meets the Hong Kong Drinking Water Standards (HKDWS), which currently follow the Guidelines for Drinking-water Quality published by the World Health Organization (WHO Guidelines). Moreover, since the 1950s, we have taken full advantage of Hong Kong's geographic proximity to the ocean to adopt salt water for flushing purposes. Fresh water and salt water are supplied through two entirely separate supply systems. Our extensive array of service reservoirs and water mains provide these water supplies for distribution to homes and commercial developments.

To ensure the security and resilience of Hong Kong's water supplies, we continue to develop new sources of water including desalination and recycled water. These additional sources of water will give Hong Kong enhanced water security and the ability to adapt to climate change.

As one of the city's largest energy consumers, we have implemented measures to reduce our carbon footprint as much as possible by developing renewable energy and enhancing energy efficiency. We are also the first HKSAR Government department to obtain ISO 50001:2011 Energy Management System certification.

Our vision is to excel in meeting our customers' needs for quality water services. With this in mind, our committed workforce has adopted a customer-oriented approach to ensure that our customers receive the most efficient and high-quality services.

1 黃仲良工程師, 太平紳士
Ir WONG Chung-leung, JP
水務署署長
Director of Water Supplies

2 周世威工程師, 太平紳士
Ir CHAU Sai-wai, JP
水務署副署長
Deputy Director of Water Supplies

3 彭愛玲工程師[1]
Ir PANG Oi-ling, Irene[1]
助理署長／設計及建設
Assistant Director/New Works

4 陳仲勤工程師
Ir CHAN Chung-kun
助理署長／新界
Assistant Director/New Territories

5 鍾永基工程師[2]
Ir CHUNG Wing-kee, Philip[2]
助理署長／市區
Assistant Director/Urban

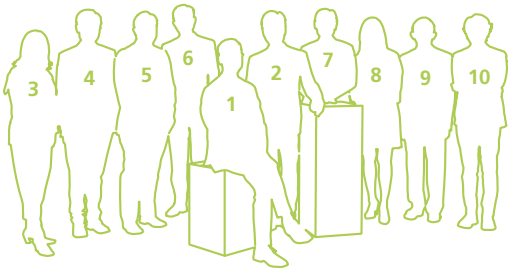
6 李大安工程師, 太平紳士
Ir LEE Tai-on, JP
助理署長／機械及電機
Assistant Director/Mechanical & Electrical

7 林聖傑先生
Mr LAM Saint-kit, Byron
助理署長／特別職務
Assistant Director/Special Duty

8 勞淑儀女士
Ms LO Shuk-yi
部門秘書
Departmental Secretary

9 黃俊光先生
Mr WONG Chun-kwong
助理署長／財務
Assistant Director/Finance

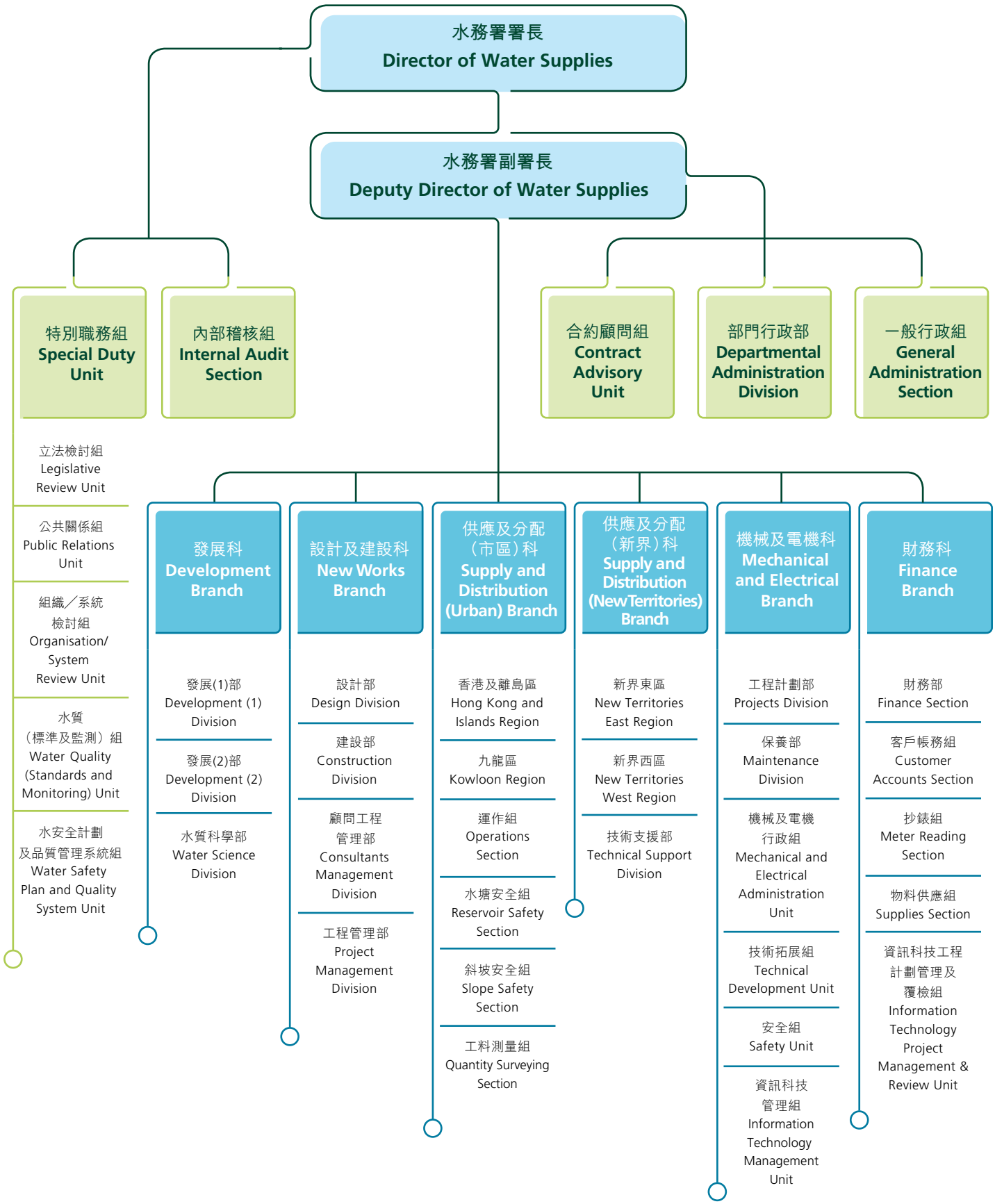
10 黃恩諾工程師
Ir WONG Yan-lok, Roger
助理署長／發展
Assistant Director/Development



[1] 彭工程師自二零二零年二月三日起出任助理署長／設計及建設。
Ir PANG was appointed Assistant Director/New Works on 3rd February 2020.

[2] 鍾工程師自二零二零年八月一日起出任助理署長／市區。
Ir CHUNG was appointed Assistant Director/Urban on 1st August 2020.

水務署組織圖
WSD Organisation Chart



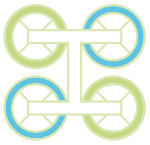
主要統計數字（截至二零二零年三月三十一日）
Principal Statistics (as of 31st March 2020)

水塘數目
No. of Impounding Reservoirs

17
個 nos

總容量
Total Storage Capacity

586
百萬立方米 million m³



濾水廠數目
No. of Water Treatment Works

20
個 nos

總濾水量
Total Water Treatment Capacity

4.7
百萬立方米/日 million m³/day

食水抽水站
(包括食水和原水抽水站及泵房)
Fresh Water Pumping Stations
(including fresh & raw water pumping stations and pump houses)

數目
No.

151
個 nos

總抽水量
Total Pumping Capacity

32.2
百萬立方米/日 million m³/day

海水抽水站
(包括泵房)
Salt Water Pumping Stations
(including pump houses)

數目
No.

35
個 nos

總抽水量
Total Pumping Capacity

2.1
百萬立方米/日 million m³/day

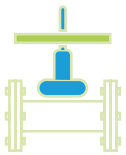
食水及海水抽水站
Combined Fresh Water & Salt Water Pumping Stations

數目
No.

7
個 nos

總抽水量
Total Pumping Capacity

0.3
百萬立方米/日 million m³/day

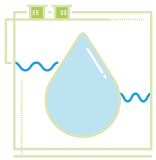


食水水管長度
(直徑20毫米至2 400毫米)
Length of Fresh Water Mains
(20 mm to 2 400 mm diameter)

6 660 公里 km

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

1 646 公里 km

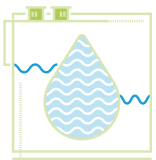


食水配水庫數目
No. of Fresh Water Service Reservoirs

178
個 nos

總容量
Total Storage Capacity

4.4
百萬立方米 million m³



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

54
個 nos

總容量
Total Storage Capacity

0.3
百萬立方米 million m³

主要工作表現指標
Key Performance Indicators

指標 Indicators	財政年度 Financial Year 2017/18	2018/19	2019/20
食水水質 100%符合香港食水標準* Fresh Water Quality 100% compliance with the Hong Kong Drinking Water Standards*	達到指標 Target achieved	達到指標 Target achieved	**達到指標 Target achieved**
海水水質 97%符合水務署所定的水質指標** Salt Water Quality 97% compliance with WSD Water Quality Objectives**	達到指標 Target achieved	達到指標 Target achieved	**達到指標 Target achieved**
食水供水水壓(15至30米)^ Fresh Water Supply Pressure (15–30 metres) ^	100%	100%	**100%**
海水供水水壓(15米)^ Salt Water Supply Pressure (15 metres) ^	100%	100%	**100%**
因預先計劃進行的工程而暫停供水的時間長度 (98%於八小時內) Water Supply Suspension Duration for Planned Work (98% within 8 hours)	達到指標 Target achieved	達到指標 Target achieved	**達到指標 Target achieved**
水錶準確程度 (偏差程度不超過±3%) Water Meter Accuracy (inaccuracy not exceeding ±3%)	97.7%	97.7%	**98.2%**

* 水務署自二零一七年九月起開始採用香港食水標準為指標，而在此之前，則一直採用世界衞生組織制定的《飲用水水質準則》為指標。
The Hong Kong Drinking Water Standards have been adopted by WSD in the target since September 2017. Before that, the World Health Organization's Guidelines for Drinking-water Quality were adopted in the target.

** 此指標於二零一九至二零年度經修訂為「海水水質 — 97%符合水務署所定的水質指標」，二零一八至一九年度則為「海水水質—96%符合水務署所定的水質指標」，而二零一七至一八年度所採用的指標為「海水水質（供水接駁位置）— 96%符合水務署所定的水質指標」。
The target for 2019/20 has been revised as "Salt water quality – 97% compliance with WSD Water Quality Objectives". The target for 2018/19 was "Salt water quality – 96% compliance with WSD Water Quality Objectives". The target in 2017/18 was "Salt water quality (at connection points) – 96% compliance with WSD Water Quality Objectives".

^ 配水系統內（不包括系統盡頭）最低的剩餘水壓。
Minimum residual pressure in the distribution systems except at their extremities.