



水質

Water Quality



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水質標準

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 GB3838-2002》第II類（適用於集中式生活飲用水地表水源地一級保護區）的標準，有關標準是適用於集中式生活飲用水地表水源地的最高標準。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場、鋪設專用輸水管道、建立東江流域水量水質監控系統，以及在深圳水庫設立生物硝化站等。此外，廣東當局已推展沙灣河流域水環境綜合整治工程，以解決在暴雨期間沙灣河洪水流入深圳水庫的問題。我們亦在接收東江水的木湖抽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監測輸港東江水的水質。此外，我們正發展一套包含現有水安全計劃的水質管理系統，以提供一個更全面的框架，保障香港的食水水質和公眾健康。我們也在二零一六年十月二十六日成立隸屬水務諮詢委員會的建築物食水安全專責小組，就建築物的水質安全問題提供意見，包括發展香港的建築物水安全計劃。我們將繼續運用創新的生物感應預警系統密切監察斑馬魚的行為，結合利用生物發光技術為基礎進行快速毒性檢測，以盡早發現輸港的東江原水的異常情況。為進一步加強水質監察，我們內部亦研發了一款嗅覺儀，並配合簡易氣味嗅味層次分析法，在馬鞍山濾水廠和小蠔灣濾水廠從味道及氣味方面監察水質。定期的食水味道及氣味監察令濾水廠操作員可及時調整濾水過程，從而確保食水水質在味道及氣味方面獲用戶接受。目前，我們正按照世界衛生組織在二

Water Quality Standards

The Guangdong Authorities have taken effective steps to ensure that the quality of Dongjiang water that reaches Hong Kong meets the national standard set out for Type II waters (applicable for the abstraction for human consumption in a first class protection area) in the “Environmental Quality Standards for Surface Water GB3838-2002”, which is the highest standard applicable for the abstraction for human consumption. 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, implementing the Dongjiang River Basin Water Quantity and Quality Monitoring and Control System, and the on-going operations of the bio-nitrification plant at the Shenzhen Reservoir. Moreover, the Guangdong Authorities have begun the Comprehensive Remediation Project for the Water Environment of Shawan River Basin in order to address the problem of flood water from Shawan River flowing into the Shenzhen Reservoir during heavy rainfalls. As regards the water quality monitoring to closely gauge the quality of imported Dongjiang water around the clock, we maintain an on-line Water Quality Monitoring System that runs via an advanced SCADA system at the Muk Wu Pumping Station, where we receive Dongjiang Water. Furthermore, we are developing an enhanced water quality management system which incorporates our existing Water Safety Plan (WSP) and provides a more comprehensive framework to safeguard the quality of the drinking water supply in Hong Kong to protect public health. We have also established a Task Group on Water Safety in Buildings under the Advisory Committee on Water Supplies on 26th October 2016, to advise on issues related to water safety in buildings including the development of the WSP for buildings in Hong Kong. We will continue to use the innovative Biosensing Alert System by closely monitoring the behaviour of zebrafish and coupled with rapid toxicity testing

零一一年制訂的第四版《飲用水水質準則》(世衛準則)來監測食水水質。世衛準則第四版(世衛2017)的首個增編最近於二零一七年二月發布。主要更新的內容包括修訂鉍的準則值(GV)、刪去4-(2-甲基-4-氯苯氧基)乙酸(MCPA)的準則值,以及加入高氯酸鹽的準則值。為了緊貼世衛準則的最新修訂,我們正就世衛準則相關修訂進行檢討及研發新的測試方法以應對世衛2017的新要求。



我們分別從集水區、進水口、木湖抽水站的東江水接收點、水塘、濾水廠、配水庫、食水分配系統以至用戶的水龍頭處抽取水樣本進行物理、化學、細菌學、生物學和輻射學方面的化驗,從而有系統地監測整個食水處理過程、供水及分配系統的水質。每年我們抽取及檢測超過16萬個樣本。

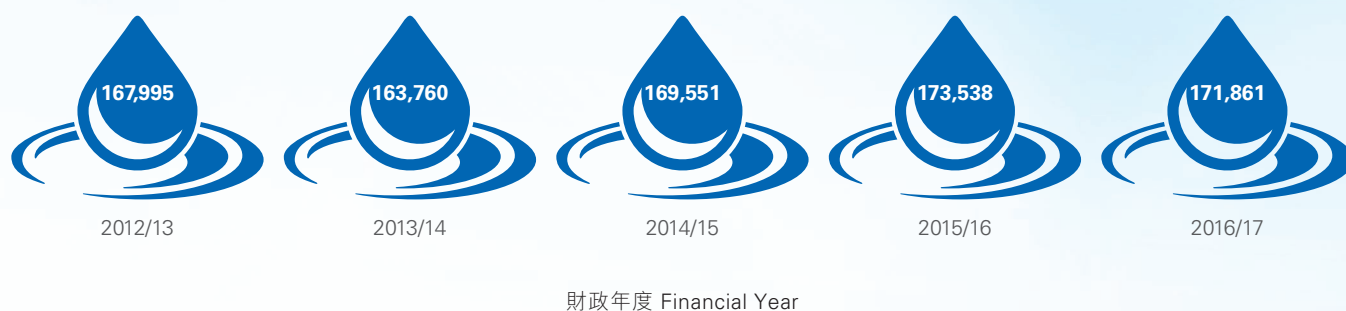
based on bio-luminescent technology, to detect abnormalities in the Dongjiang water supplied to Hong Kong. To further enhance water quality monitoring, we have also developed an in-house olfactometer and the simplified Flavour Profile Analysis at both Ma On Shan and Siu Ho Wan Water Treatment Works for use in water quality monitoring in respect of taste and odour. Regular taste and odour surveillance of the drinking water supply enables operators to make timely adjustments of water treatment processes to ensure that the drinking water quality in terms of taste and odour is acceptable to consumers. Currently, we are monitoring the drinking water quality in accordance with the fourth edition of the Guidelines for Drinking-water Quality published by the World Health Organization (WHO) in 2011. The first addendum to the fourth edition of the WHO's Guidelines (WHO 2017) was recently released in February 2017. The key updates include the revision of Guideline Value (GV) for barium, the withdrawal of GV for 4-(2-methyl-4-chlorophenoxy) acetic acid (MCPA) and the introduction of GV for perchlorate. In order to stay up to date with the latest revisions to the WHO's Guidelines, we are conducting a review on the latest update of WHO 2017 and developing testing method to cope with the new requirements in the WHO 2017.

Water quality throughout the entire treatment, supply and distribution system is systematically monitored by means of physical, chemical, bacteriological, biological and radiological examinations of water samples taken at catchment, intakes, the receiving point of Dongjiang water at Muk Wu Pumping Station, impounding reservoirs, water treatment works, service reservoirs, distribution systems and publicly accessible taps. More than 160,000 samples are taken and tested each year.

二零一五年發生食水中發現鉛含量超標事件後，公眾增加了對水龍頭食水安全的關注。就此，水務署不遺餘力地採取必要的跟進整治措施。發展局於二零一六年六月成立了食水安全國際專家小組（專家小組），就食水安全事宜提供意見。就制定香港食水標準方面，水務署已委聘英國專家顧問進行全面的檢討和研究，就訂立香港食水的標準提出建議，並就此諮詢專家小組。鑑於公眾關注食水可能受金屬污染，顧問專家在第一階段研究中檢視了世衛準則所列的十二項金屬參數。此外，在研究其他國家食水安全的經驗和做法，並考慮專家小組的建議後，發展局和水務署已全面檢討現行的食水安全制度，並正在制訂行動計劃，進一步保障本港的食水水質，包括加強水務署現行的水質監測計劃，以隨機方式從用戶水龍頭收集食水樣本，測試可能在內部供水系統出現的六種金屬（即鉛、鎳、鉻、鎘、銅和銻），以監察用戶水龍頭的食水水質。

In the wake of the incident in 2015 in which excess lead was discovered in drinking water, the public have raised concerns over the drinking water quality at consumers' taps. In response to this, WSD has spared no effort in taking the necessary follow-up remedial actions. The IEP established by the DEVB in June 2016 has been providing advice on issues regarding drinking water safety. With respect to formulating drinking water standards for Hong Kong, WSD has engaged an expert consultant from the United Kingdom to conduct a holistic review and study in view of recommending the Hong Kong Drinking Water Standards, and has consulted the IEP in this regard in view of recommending the Hong Kong Drinking Water Standards. In view of the public concern over possible metal contamination in drinking water, the expert consultant has focused on the 12 metal parameters in the WHO Guidelines in the first stage of the review study. In addition, after studying on the experience and practices of drinking water safety in other countries and taking into account the advice of the IEP, DEVB and WSD have holistically reviewed the existing drinking water safety regime in Hong Kong and are developing an action plan to further safeguard the drinking water quality in Hong Kong, including the enhancement on WSD's current water quality monitoring programme to collect random water samples from consumers' taps for testing six metals (viz. lead, nickel, chromium, cadmium, copper and antimony) which could be present in the internal plumbing system.

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

財政年度 Financial Year	2014/15	2015/16	2016/17
錳(毫克／公升) Manganese (mg/L)	0.03	0.03	0.03
氨氮(毫克／公升) Ammoniacal Nitrogen (mg/L)	0.05	0.04	0.03