

生命泉源 Our Water

水質純淨符合國際認可標準 Purity of the international standards

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確保純淨可靠

本署按照世界衛生組織頒布的國際認可標準處理本港的食水，因此，食水從濾水廠輸出時絕對衛生可靠，適宜飲用。

然而，自用戶水龍頭流出的食水，可能會出現例如水質變黃等問題，主要是由於樓宇內部水管系統保養欠妥善所致。

為協助解決這類問題，本署推行了一套計劃，對致力保持樓宇內部水管系統狀況良好的大廈業主及其代理人給予認可。

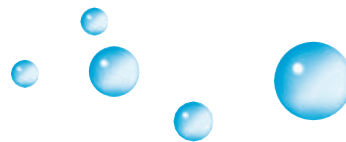
經水質事務諮詢委員會同意後，我們向所有符合「食水系統優質維修認可計劃」規定的申請人頒發為期一年的認可證書，這項計劃屬自願參加性質，於二零零二年展開。

截至二零零四年三月底為止，我們已根據這項計劃頒發了逾1 200張證書，受惠的登記用戶約達300 000個。這些數字仍持續快速攀升。

水質監察

為確保水質符合世界衛生組織的指引，本署在測試和監察整個濾水過程及供水系統的水質方面，實施了一套周密的計劃，其中包括進行物理學、化學、生物學及細菌學的化驗。

▲ 試驗水質。
Testing water quality.



Assured purity

Produced in accordance with the internationally recognized guidelines of the World Health Organisation (WHO), Hong Kong's fresh water is fully potable when it leaves WSD treatment works.

There could be problems though when it comes off consumer's taps, largely of discolouration, due mainly to improper maintenance of internal plumbing systems.

As a means to help deal with the situation, the WSD has been carrying out a scheme that gives recognition to efforts made by owners of buildings and their agents in keeping their plumbing systems in good condition.

With the endorsement of the Advisory Committee on the Quality of Water Supplies, certificates of recognition are awarded on a yearly basis to all those who comply with the requirements of a voluntary Fresh Water Plumbing Quality Maintenance Recognition Scheme that began in 2002.

Since then more than 1200 such certificates have been issued benefiting some 300 000 registered users by the end of March 2004 and rapid growth of these figures is still taking place.

Quality monitoring

In complying with WHO



guidelines, stringent tests and monitoring are carried out throughout the treatment process and supply system, covering physical, chemical, biological and bacteriological analyses.

Samples are taken regularly from selected points and at random locations throughout the distribution system for analyses with the use of advanced instruments under strict quality control protocol.

Some 172 000 samples were taken in the year for examination from catchments, intakes, pumping stations receiving Dongjiang water, impounding and service reservoirs, water treatment works, distribution systems and consumers taps.



Advisory committee

So that the public may take a direct interest in the works related to water quality, an Advisory Committee on the Quality of Water Supplies (ACQWS) was established in early 2000.

- ▲ 水塘把本地收集得來的雨水儲存。
Impounding reservoir providing storage for water collected from local rainfall.
- ▲ 員工正檢查輸送東江水的主要管道。
Staff inspecting the major mains for conveyance of Dongjiang water.

我們也定期在一些選點，以及從配水系統隨機選出的地點抽取水樣本，按照嚴格的品質控制標準，採用先進的儀器進行化驗。

年內，我們在集水區、進水口、接收東江水的抽水站、水塘、濾水廠、配水庫、分配系統及客戶水龍頭處，抽取了大約172 000個水樣本化驗。

諮詢委員會

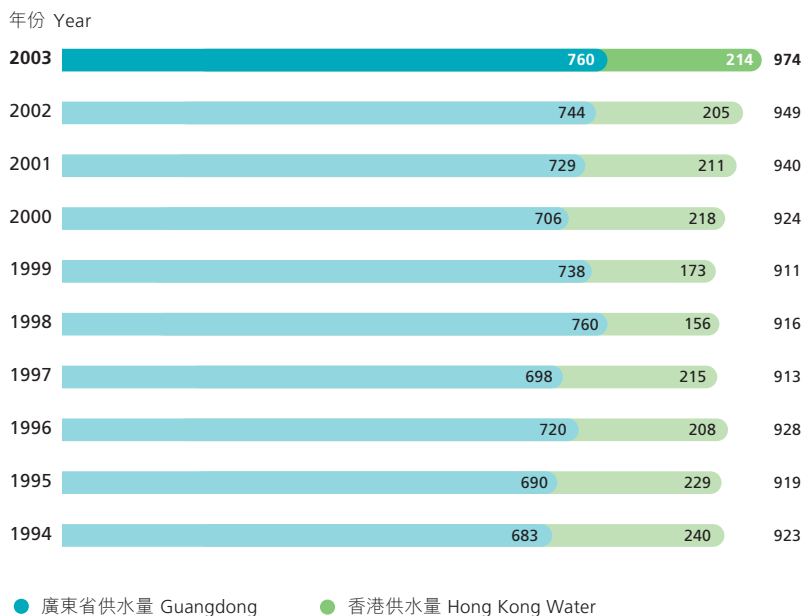
水質事務諮詢委員會在二零零零年初成立，旨在使公眾可以直接參與食水水質有關事宜。

該委員會由方鏗太平紳士和水務署署長分別出任正副主席，其餘18名委員包括政府人員、學者、專業人士及地區和環保團體代表。委員會在年內曾舉行兩次會議，討論大廈水質、公布水質數據、開拓水資源的策略等事宜。此外，委員會委員在十月應邀前往廣東省，考察東深供水改造工程及其他消滅污染措施的進展，實地了解有關情況。委員對廣東省當局在改善原水水質方面取得的進展極為滿意。

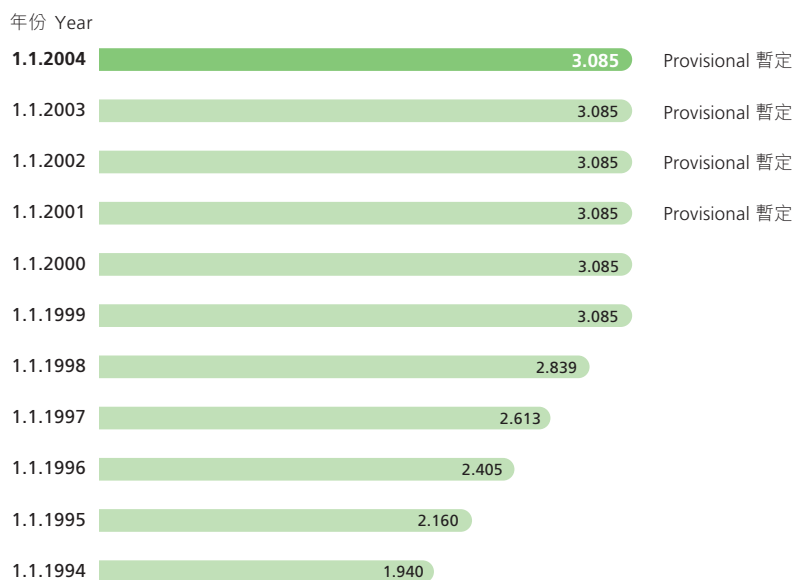
東江水

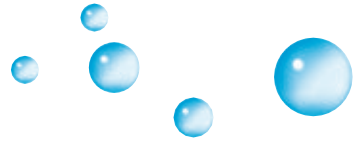
按照我們與廣東省當局的協議而輸港的東江原水，是本港的主要供水來源，相當於本港用水需求量的七至八成。年內，香港接收的原水量為7.6億立方米，水價為

廣東省對港供水量 Annual Quantity of Guangdong Water Supply



廣東省供水價格 Price of Guangdong Water





Chaired by Mr. Kenneth H Fang, GBS, JP and with the Director of Water Supplies serving as Vice Chairman, the Committee comprises 18 members including government officials, members from local districts and green groups, academics and professionals. Two meetings were held during the year to discuss such matters as water quality in buildings, release of data on water quality and planning strategy for resources. Also, members were invited to visit the Guangdong province in October for first hand observation of the progress being made in the Dongjiang water supply improvement works project and pollution abatement measures. Members expressed satisfaction with the progress being made in improving the quality of raw water.



Dongjiang water

Hong Kong's main supply of raw water, about 70-80 percent, comes from Dongjiang (the East River) by arrangement with the Guangdong authorities. Some 760 million cubic meters of water was received this year at a cost of \$3.085 per cu.m. Matters of price, quality assurance and flexibility of supply, together with progress of work on the closed aqueduct project, are

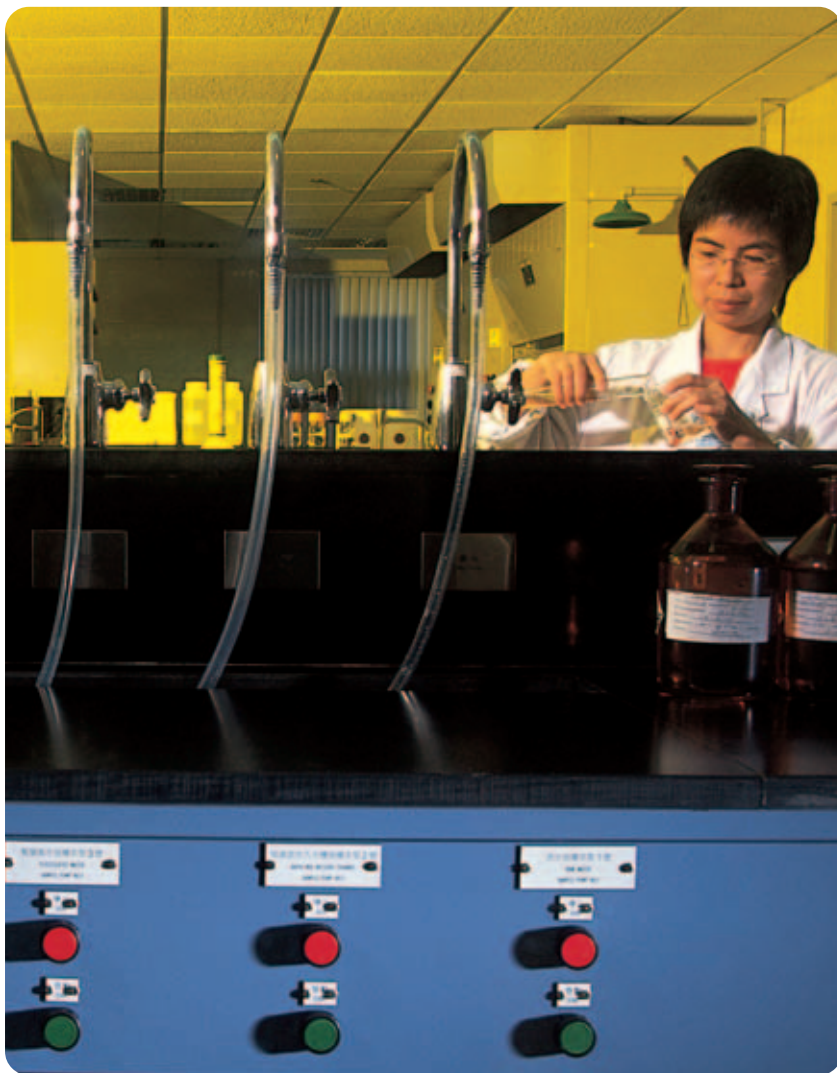
regularly discussed between the relevant authorities.

With the closed aqueduct system, which is designed to bypass all sources of pollution on the supply route between the Dongjiang intake and the Shenzhen Reservoir, there has been a marked improvement in Dongjiang water quality since the system operation in June 2003.

▲ 透過顯微系統密切監測賈第蟲及隱孢子蟲。
Close monitoring of Giardia and Cryptosporidium parasites through microscopic system.

▲ 測試水中的溶解氧氣。
Testing dissolved oxygen in water.

▲ 東江－深圳密封式輸水管道系統的其中一段。
A part of the Dongjiang – Shenzhen closed aqueduct.



每立方米3.085元。粵港雙方定期討論的議題，包括水價、水質保證、彈性供水及密封式輸水管道工程進度等。

設置密封式輸水管道系統，可避開從東江入水口至深圳水庫的輸水途

中所有污染物。自該系統於二零零三年六月啟用以來，輸港東江水水質已有顯著改善。

本地資源

除了東江水外，本港其餘的原水供應

來源，是本地龐大的集水網絡及水塘所收集的雨水，而集得的雨水量則視季節而定。去年降雨量為1 941毫米，集水區集得的雨水量為2.52億立方米，較上一年多0.1%。我們正密切監控集水區內的發展項目，以保護這種珍貴的本地資源免受污染。

生態平衡

在水塘養殖魚類是維持水中生態平衡，以及確保水塘水質良好的一項有效措施，因此，我們定期把各類魚苗放入水塘養殖。

年內，約有25萬尾魚苗，包括鯿魚、鯪魚、大頭魚等魚苗放養於船灣淡水湖、大欖涌、城門、下城門及香港仔水塘。

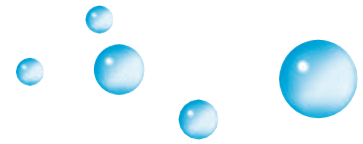
聯機監察系統

我們已在木湖抽水站設置測量氮含量的聯機分析儀，用以監察供港東江水的水質。我們亦在各濾水廠持續監察主要水質參數，包括混濁度、酸鹼度、剩餘氯及氟化物，使整套監察系統的準確度和效率有所提升。

水質數據

為公眾利益起見，本署定期於每年六月和十二月在互聯網上公布水質數據。在木湖抽水站接收的東江水

▲ 按照世界衛生組織頒布的指引試驗水質。
Testing for purity in accordance with World Health Organisation guidelines.



化驗樣本總數 No. of Samples Taken

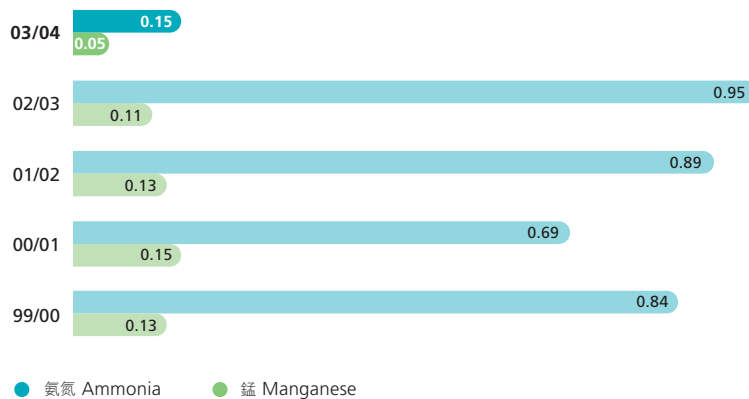
財政年度 Financial Year



東江原水內年均氨氮及錳水平 Average Ammonia and Manganese Levels in Dongjiang Water

毫克/公升 Mg/L

財政年度 Financial Year



Local resource

Apart from Dongjiang, water collected in a vast network of catchments and impounding reservoirs locally from rainfall makes up the rest of the raw water supply to Hong Kong, with the quantity of storage depending on seasonal yield. In

the past year, the yield from 1 941 mm of rainfall came to 252 million cubic metres, which was 0.1 per cent higher than the previous year. To protect this precious local resource from pollution, close control is kept of development activities within water gathering grounds.

Eco balance

For ecological balance of water bodies and as an effective means of promoting water quality – various types of fish are regularly released in impounding reservoirs.

Some quarter million fish fry, such as silver carp, mud carp and big head were released in Plover Cove, Tai Lam Chung, Jubilee, Lower Sing Mun and Aberdeen reservoirs during the year.

On-line monitoring

On-line ammonia analysers have been in use to monitor the quality of incoming Dongjiang water at the Muk Wu Pumping Stations. The continuous monitoring of key water quality parameters, including turbidity, pH, chlorine residual and fluoride at water treatment works, improves the entire system accuracy and efficiency.

Quality data

For public interest, water quality data are published on the internet regularly in June and December. Data on Dongjiang water received at the Muk Wu Pumping Stations as well as treated water include physical parameters, chemical parameters of health significance and bacteriological quality.

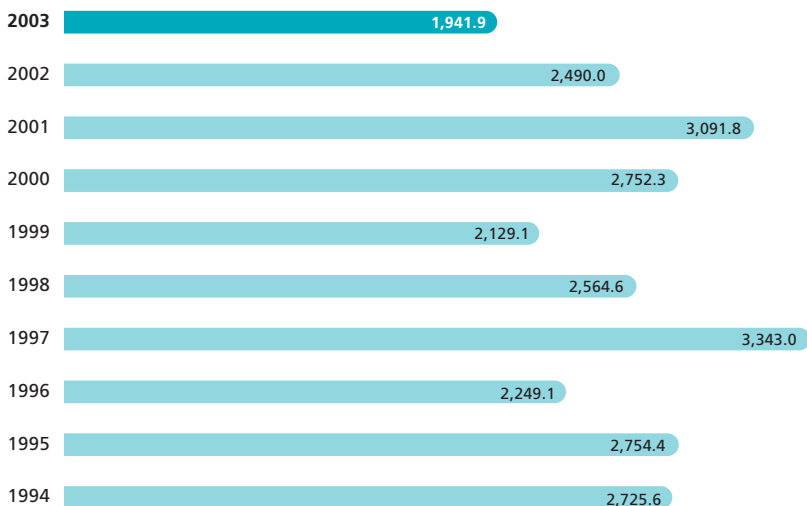
Close monitoring showed no sign of the presence of any Giardia and Cryptosporidium parasites.

降雨量及集水量 Annual Rainfall and Yield

降雨量 Annual Rainfall

毫米 Millimetres

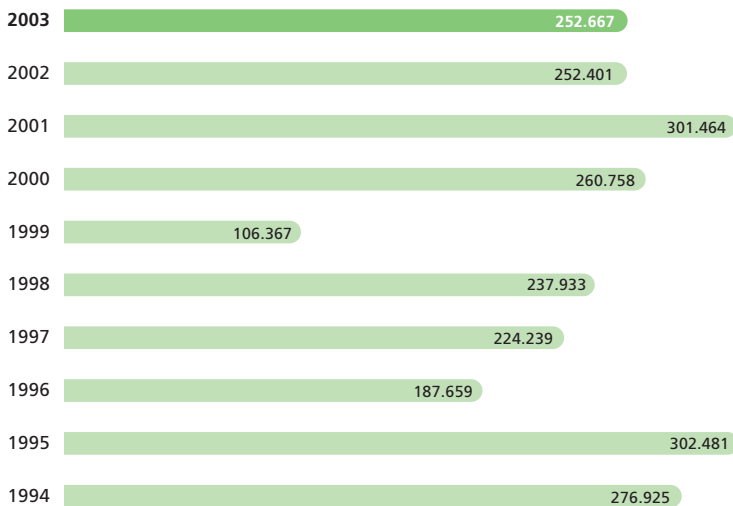
年份 Year



集水量 Annual Yield

百萬立方米 Million Cubic Metres

年份 Year



和食水的水質數據，涵蓋物理參數、對健康有影響的化學參數和細菌數量。

我們進行密切監察的結果顯示，食水中並無出現賈第蟲及隱孢子蟲。

及時發布資料

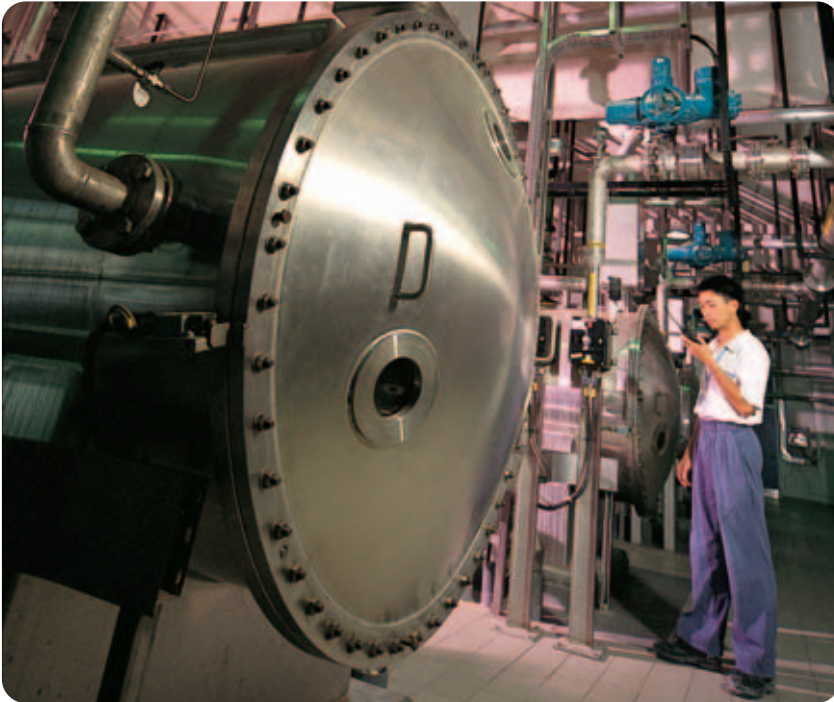
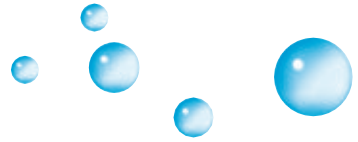
本署已批出供應新「化驗室資訊管理系統」的合約，預計該系統在二零零四年年底便會完成，取代現有的系統。新系統運作效率更高，可更迅速地進行數據管理，使水質資料得以及時發布。

為全港市民供水

目前，本港幾乎家家戶戶都獲得自來水供應。我們繼續在可行情況下進行供水建設工程，以便為其餘少數散布於偏遠地區的人口供應自來水。

全港約有八成人口獲供應海水沖廁，而我們會在可行情況下，陸續為南區部分地方、天水圍、元朗及北大嶼山等地區供應海水。現時，遠離海邊或人口稀疏的地區仍然使用食水沖廁。

我們按照本署訂定的水質指標處理沖廁用海水，並定期監察水質。另外，我們正為各海水配水庫加設上蓋，以防海藻滋生和有人擅自闖入。



Timely information

To replace its existing facility, tenders have been awarded for the supply of a new Laboratory Information Management System. The new system is due for completion by the end of 2004 and will result in more efficient operations and data management and timely dissemination of water quality information.

Water distribution for all

With fresh piped water now reaching nearly all the people, work continues, where feasible, on supplying it to the remaining few who live in scattered remote areas.



Sea water for flushing is supplied to about 80 per cent of the population, but will in time be extended, if possible, to such areas as part of the Southern District, Tin Shui Wai, Yuen Long and North Lantau. For the present, mains water is used for flushing in areas that are away from the sea front and in sparsely populated areas.

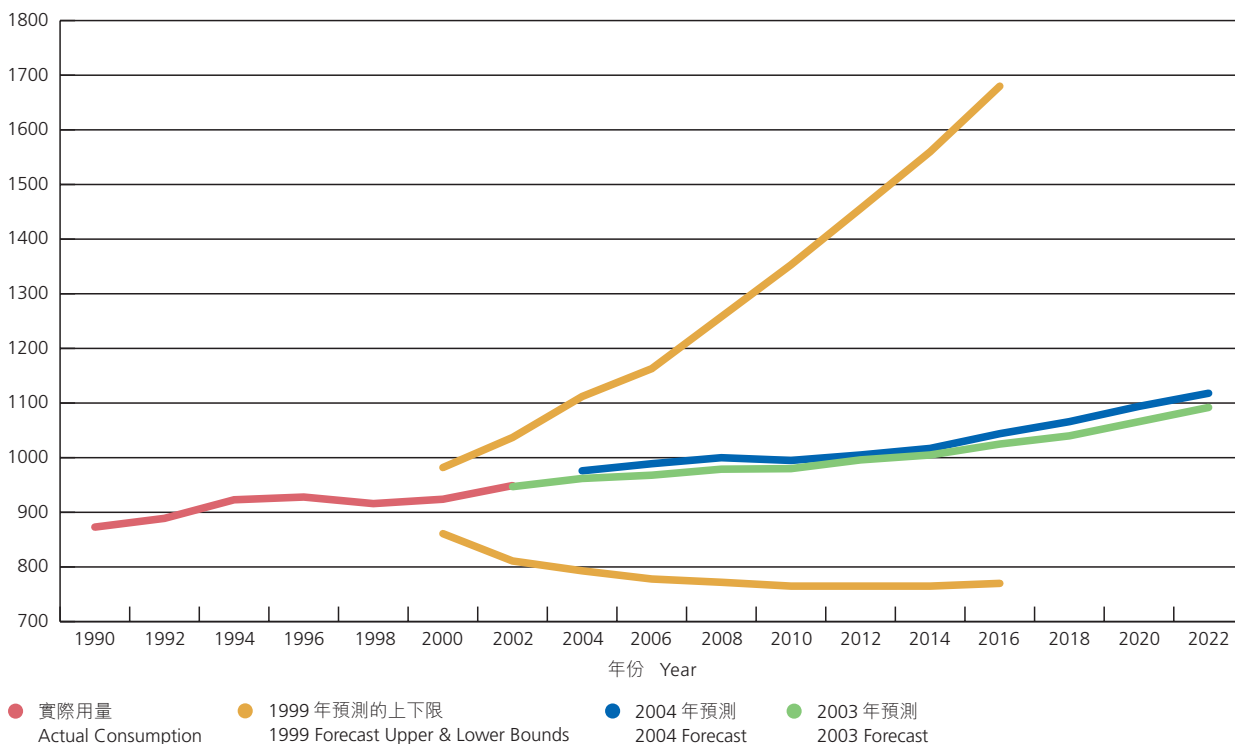
Sea water used for toilet flushing is treated according to WSD quality objectives and is regularly monitored. And, to avoid algae growth and prevent unauthorised access, covers are being placed on sea water service reservoirs.

▲ 臭氧生產器。
Ozone gas generator.

▲ 利用濾水試驗廠，有助找尋最佳的水處理工藝流程。
Using pilot plant for water treatment to help determine the optimal process.

2003-2023年食水需求預測 Fresh Water Demand Forecast Projection 2003-2023

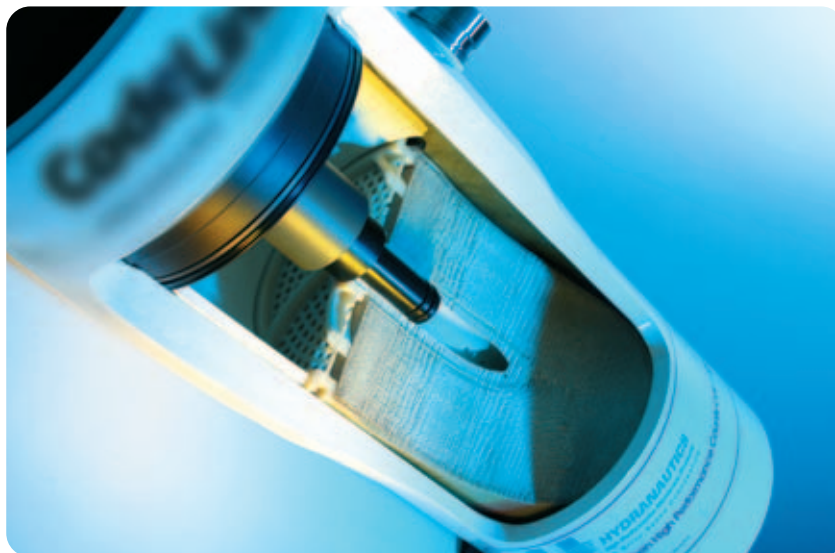
百萬立方米 Million Cubic Metres



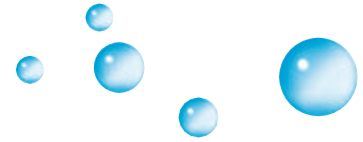
開發新水源

本署現正進行海水化淡試驗廠研究，探討在本港開發海水化淡是否合適及符合成本效益。

另一方面，我們會在昂坪推行一項試驗計劃，研究可否把經處理廢水循環再用作沖廁和灌溉花木用途。此外，我們亦繼續與其他部門攜手合作，共同推行更廣泛使用水冷式空調系統的試驗計劃。



▲ 在屯門海水化淡試驗廠內使用的薄膜管道樣本。
A sample of membrane tube used in the desalination pilot plant at Tuen Mun.



全年食水用水量 (按用水類別劃分) Annual Fresh Water Consumption (By Sectors)

百萬立方米 Million Cubic Metres

年份 Year	住宅用水 Domestic	工業用水 Industries	服務業及 商業用水 Service Trade	免費供水 Free Supply	建築及 船舶用水 Construction & Shipping	臨時 淡水沖廁 TMF	食水 總用水量 Total Fresh Water Consumption
1994	370	171	216	40	20	106	923
1995	383	145	221	44	23	103	919
1996	406	137	229	44	28	84	928
1997	419	120	228	40	28	78	913
1998	436	104	232	41	25	78	916
1999	441	95	235	43	24	73	911
2000	447	91	241	43	28	74	924
2001	468	83	242	43	27	77	940
2002	479	82	241	44	24	79	949
2003	511	77	234	52	18	82	974

註：以上所列的用水量，均包括流失的水量在內。

Notes : All consumption figures include unaccounted-for water. TMF – Temporary Mains Flushing

Development for new water source

The suitability and cost-effectiveness of desalination of sea water is being considered under a pilot plant project for possible development locally.

In other areas of activity: a pilot scheme will be launched at Ngong Ping to look into the possibility of reusing treated sewage effluent for toilet flushing and irrigation purposes, and work continues in cooperation with the other departments on a pilot scheme for the wider use of fresh water-cooled air conditioning systems.

2003年全年食水用水量 (按用水類別劃分) Annual Fresh Water Consumption (By Sectors) 2003

百分比 Percentage

