



拯救我們的生命財產。  
Saving our lives and properties.

6:00



# 供水

## WATER SUPPLY

水是生命之源  
Water's Life

- 用水量趨勢  
Consumption Trend
- 需求預測  
Demand Projection
- 供水範圍  
Service Coverage
- 雨量及集水量  
Rainfall and Yield
- 原水供應  
Raw Water Supply
- 海水化淡試驗廠  
Pilot Plant of Desalination

為堅守向客戶提供穩定和源源不絕的供水的使命，我們繼續密切監察用水量的趨勢和來自東江的原水供應，以及研究海水化淡、經處理廢水循環再用等其他水源的開發事宜。

In line with our solid commitment to the provision of a stable and continuous supply of water, we continue to closely monitor the consumption trend and supply of raw water from Dongjiang, and to explore alternative sources including sea water desalination and reuse of treated sewage effluent.



供水  
WATER SUPPLY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
1993	349	208	199	45	16	98	915
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
<b>2002</b>	<b>479</b>	<b>82</b>	<b>241</b>	<b>44</b>	<b>24</b>	<b>79</b>	<b>949</b>

註：以上所列的用水量，均包括流失的水量在內。

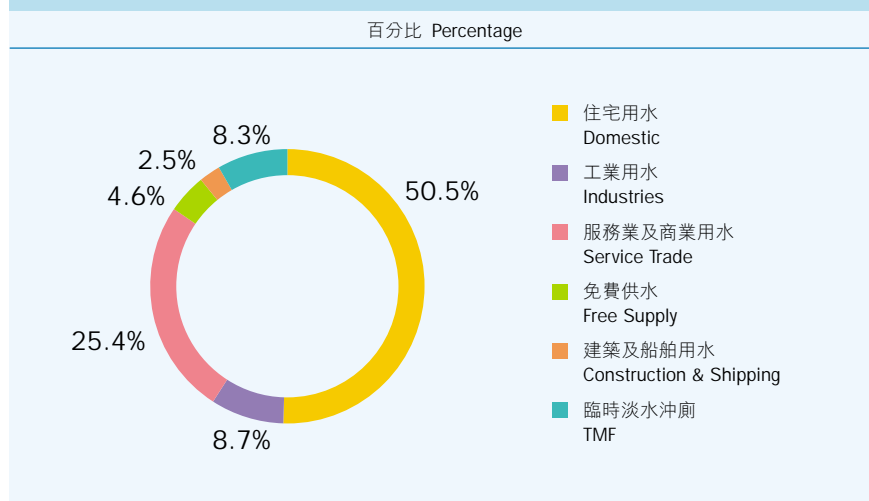
Notes: All consumption figures include unaccounted-for water.  
TMF – Temporary Mains Flushing

## 用水量趨勢

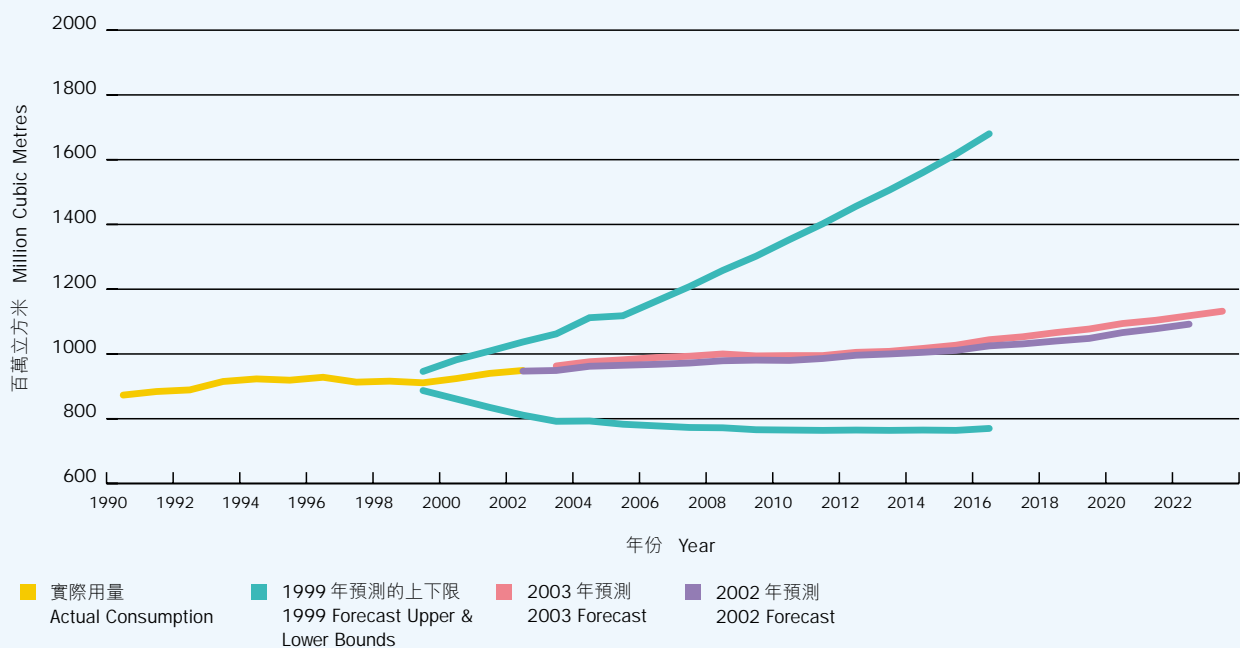
由於住宅用水量增加，而工業用水量在年內繼續下跌，食水總用量輕微上升。二零零二年，食水的每日平均用量為260萬立方米，沖廁用海水的每日平均用量則為64萬立方米。

## 需求預測

我們預測未來五年的食水用量，相對於二零零二年的9.49億立方米用量而言，平均每年會有0.9%的增幅。鑑於該段期間所預計的人口增長，住宅及服務業這兩大類別的食水用量，預料平均每年會分別增加3%和1%。此外，由於大量用水的工業日趨式微，同期間的每年平均工業用水量預期會下跌5%。

2002年全年食水用水量 (按用水類別劃分)  
Annual Fresh Water Consumption (By Sectors) 2002

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



## CONSUMPTION TREND

There was a slight rise in overall use of fresh water due to an increase in domestic consumption and a continued decline in industrial consumption in the year. In 2002, the average daily consumption of fresh water was 2.6 million cubic metres while the average daily use of sea water for flushing stood at 0.64 million cubic metres.

## DEMAND PROJECTION

The projected annual consumption of fresh water for the next five years is

expected to rise at an average rate of 0.9 per cent per year over the 2002 consumption of 949 million cubic metres. Based on projected population growth for the period, the domestic and service uses, being the key components of our fresh water consumption, are expected to increase at an average annual rate of three per cent and one per cent respectively. Industrial use, for the same period, is expected to drop on average by five per cent per year because of further decline in water-intensive industries.

## SERVICE COVERAGE

Except for a small number of villages scattered in the remotest areas, over 99.9 per cent of Hong Kong's population receives piped fresh water supply of purity that is among the best to be found anywhere else. Work continues, meanwhile, towards the aim of supplying the remaining population with fresh water.

Sea water is supplied to about 80 per cent of the population for toilet flushing, though mains fresh water is supplied to the rest areas that are not close to the seafront, or where the

## 供水 WATER SUPPLY

### 供水範圍

除少數散佈於偏遠地區的村落外，全港逾99.9%人口現時都獲得自來水供應，食水的純度可媲美世界上其他水質最佳的地區。目前，我們繼續進行供水建設工程，以達到為餘下人口供應自來水的目標。

全港約有八成人口獲供應海水沖廁，其餘遠離海邊或人口稀疏的地區，則仍然使用食水沖廁。我們會致力為更多地區，包括山頂、南區部分地方、西貢、離島、天水圍、元朗等地供應海水。

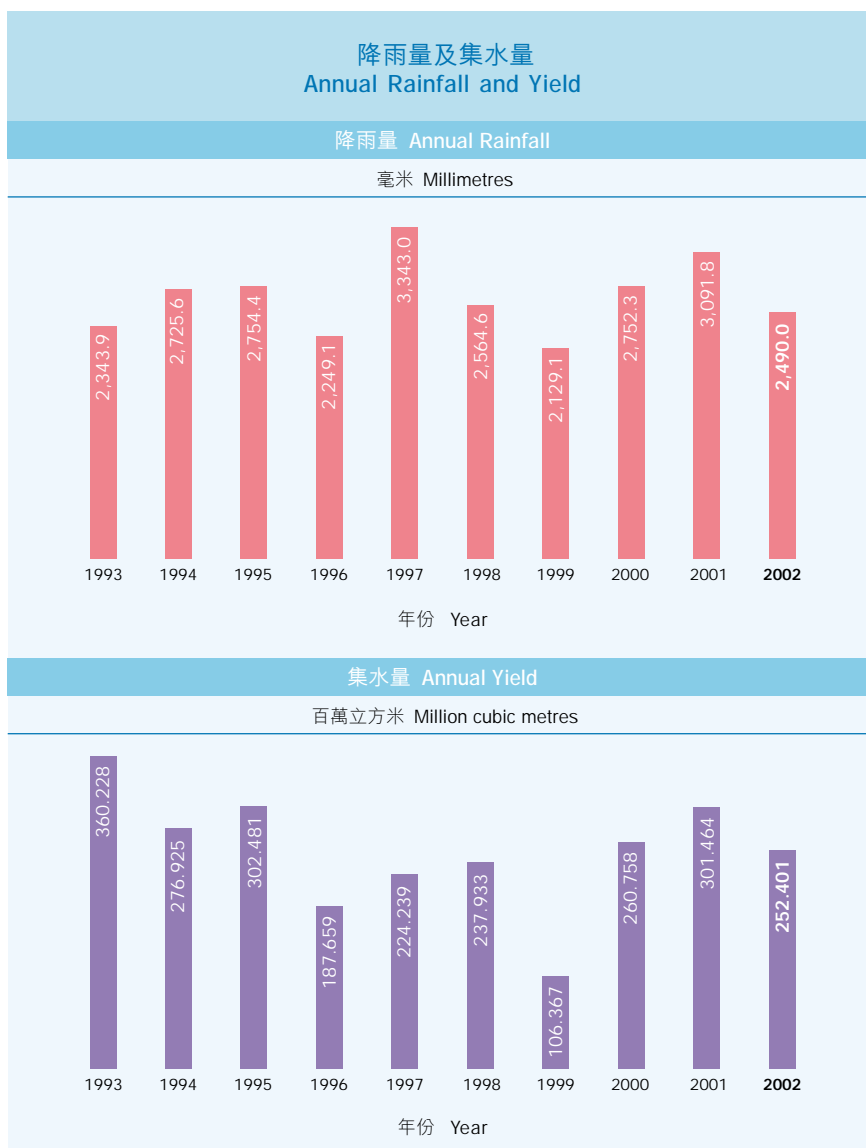
### 雨量及集水量

年內，總降雨量為2 490毫米，較去年的3 092毫米為低，但仍比長期平均降雨量2 214毫米高出12%。集水區集得的雨水量為2.52億立方米。

### 原水供應

來自東江的原水仍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左右。按照最新協議，原水的年供水量會由二零零二年的8億立方米，增加至二零零四年的8.2億立方米，按年遞增1 000萬立方米。至於二零零四年後的供水量，我們會與廣東省當局再作磋商。在二零零二年，香港從廣東方面實際接收的原水量為7.44億立方米，其餘的原水是本港集水區所集得的雨水。

粵港雙方繼續就水價、水質保證、彈性供水安排、密封式輸水管道的工程



進度等進行磋商。我們已和廣東省當局達成協議，二零零一年、二零零二年及二零零三年的單位水價，暫時仍按每立方米3.085元，實際的水價仍有待進一步磋商。

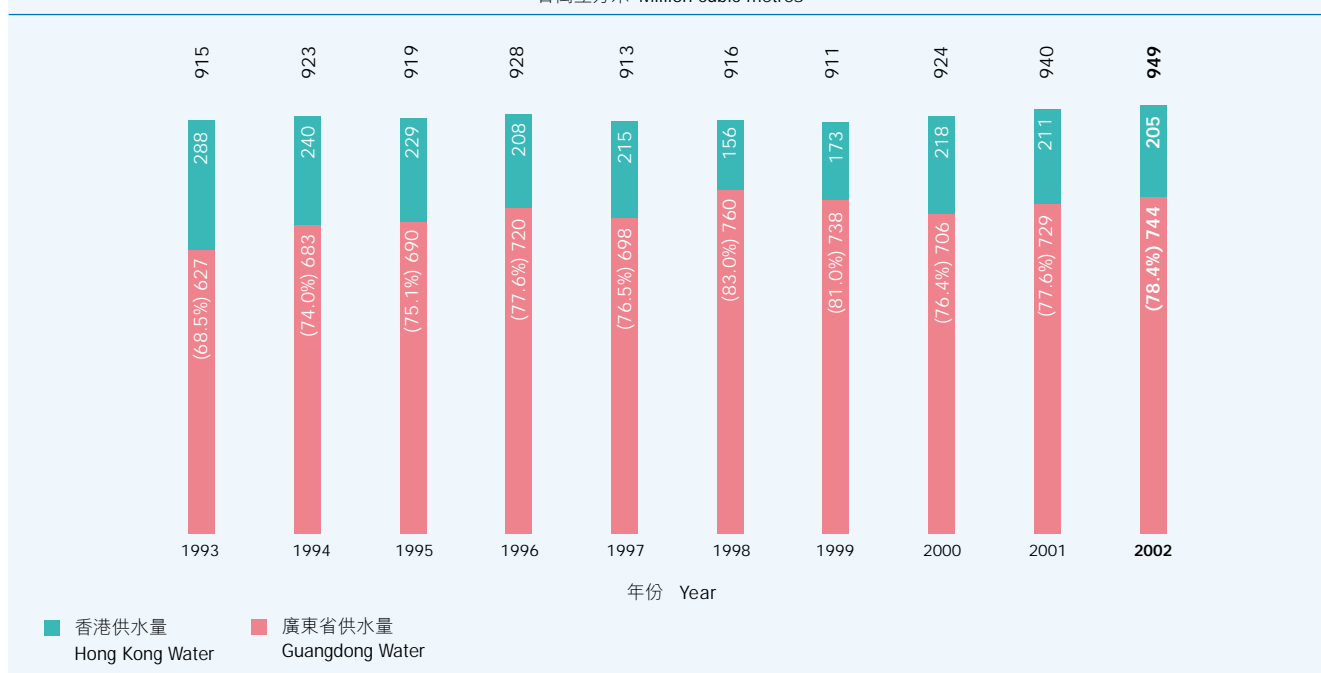
年內，雙方亦就東江供水系統的管理及運作、每年的停水維修安排、水質監察等事宜舉行了多次會議。

### 海水化淡試驗廠

本署現正進行海水化淡試驗廠研究，利用逆滲透程序把海水淡化。這項研究是「全面水質管理計劃」的其中一部分，所得數據會用來評估在本港發展海水化淡設施是否合適及符合成本效益。

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

百萬立方米 Million cubic metres



population is scattered and sparse. Effort will be made to bring sea water to more places, including the Peak, part of Southern District, Sai Kung, the outlying islands, Tin Shui Wai and Yuen Long.

### RAINFALL AND YIELD

The total rainfall of 2 490 mm during the year under review was lower than last year's 3 092 mm but was still 12 per cent above the long term mean of 2 214 mm. The yield collected was 252 million cubic metres.

### RAW WATER SUPPLY

Raw water from Dongjiang continues to be our main source of supply and makes up about 70-80 per cent of Hong Kong's needs. Under the current agreement, this will be increased by 10 million cubic metres a year from 800 million cubic metres in 2002 to 820 million cubic metres in 2004. Further negotiations will be held with the Guangdong authorities for supplies beyond 2004. The actual amount of water received from Guangdong in 2002 was 744 million cubic metres. The rest of the raw water is rainfall gathered from local catchments.

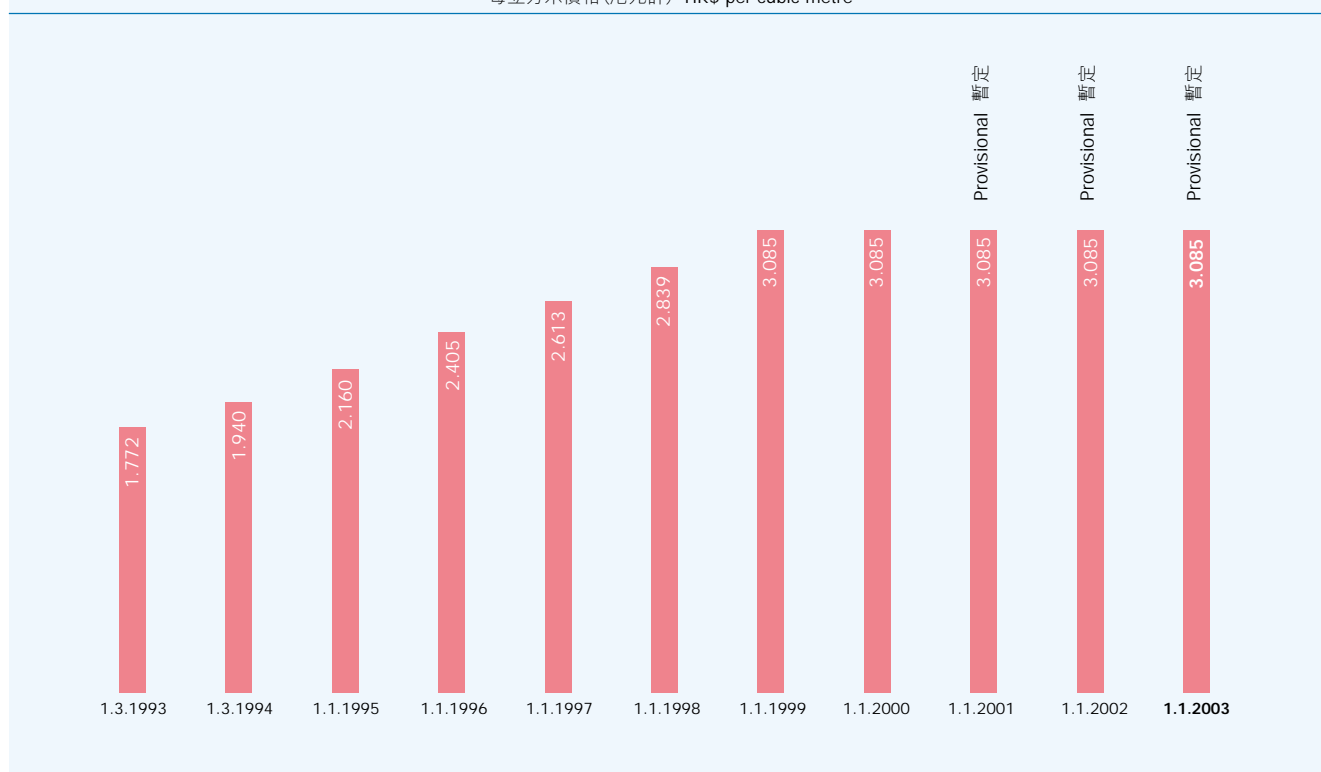
Talks continued to be held on matters of price, quality assurance, and flexibility of supply, and on the progress of work on the closed aqueduct. An agreement has been reached with the Guangdong authorities that the unit water price for 2001, 2002 and 2003 will tentatively continue at \$3.085 per cubic metre, pending further negotiations.

During the year, meetings were also held to discuss management and operations of the Dongjiang Water Supply System, and issues relating to annual shutdowns and quality monitoring.



供水  
WATER SUPPLY廣東省供水價格  
Price of Guangdong Water

每立方米價格(港元計) HK\$ per cubic metre



## 經處理廢水循環再用

為促進可持續發展及節約用水，政府將於大嶼山昂坪推行經處理廢水循環再用的試驗計劃。根據這項計劃，擬建的昂坪污水處理廠會供應經處理的廢水作非飲用用途，例如供給吊車站及公廁作沖廁或灌溉花木用途。污水處理廠及經處理廢水的供應系統工程將於二零零五年七月完竣。

## 海水供應系統

為提高沖廁海水供應系統的可靠程度及性能，本署將以變速泵取代現有的一些定速泵。此外，現有的單線管網亦會改為環形管網，以確保在其中管段進行維修或發生爆裂時，沖廁供水不會中斷。

## 空調系統試驗計劃

本署繼續參與政府進行的更廣泛使用水冷式空調系統的研究和試驗計劃，並協助制定實施這項計劃的政策。在二零零二年十二月，供應食水給非住宅空調系統使用的試驗計劃的實施範圍，已由17個選定地區增至45個地區。



助理水務署長／發展古志眾先生向傳媒介紹利用逆滲透科技將海水淡化的試驗廠。

Mr C C Ku, Assistant Director/Development, showing the press the sea water desalination pilot plant using reverse osmosis technology.



助理水務署長／發展古志眾先生展示由逆滲透海水化淡試驗廠生產的淡水。

Mr C C Ku, Assistant Director/Development, with the fresh water produced by the sea water desalination pilot plant.

## PILOT PLANT OF DESALINATION

As part of the Total Water Management Programme initiated by the government, a pilot plant study is being carried out on sea water desalination by the use of reverse osmosis technology. Data from the study will be used to assess the suitability and cost-effectiveness for possible development of desalination facilities in Hong Kong.

## REUSE OF TREATED SEWAGE EFFLUENT

In support of sustainable development and water conservation, the government will launch a pilot scheme

on the reuse of treated sewage effluent at Ngong Ping on Lantau Island. Under the scheme, treated sewage effluent will be provided by the proposed Ngong Ping Sewage Treatment Plant for non-potable uses such as toilet flushing and possibly irrigation at the cable car terminal and public toilets. Work on the treatment plant and related treated sewage effluent supply system is scheduled for completion in July 2005.

## SEA WATER SYSTEM

For the improvement of reliability and performance of the sea water flushing system, some of the fixed-speed pumps will be replaced with variable-

speed pumps. In addition, the existing single-line mains configuration is to be modified into ring mains to allow for uninterrupted supply during maintenance or mains bursts.

## PILOT SCHEME ON AIR CONDITIONING SYSTEMS

WSD continued to participate in the government study and pilot scheme on wider use of water-cooled air-conditioning systems (WACS) and to assist in policy formulation of implementation of the scheme. The pilot scheme on the use of fresh water for air-conditioning systems for non-domestic use was expanded from 17 to 45 selected areas in December 2002.