



水務署署長傅立新先生。 Mr. Hugh Phillipson, the Director of Water Supplies.

### 過渡千禧年

水務署為解決電腦公元二千年數位問題所作的充份準備，令香港的供水服務能順利過渡至千禧新紀元。

其實，儘管我們已作出周詳的準備，事前可沒有十足的保證會事事順遂。因此，為應付九月九日、元旦日(公元二零零零年)和本潤年二月二十九日這三個高危日子，我們制定了各項應變計劃。令我們深感寬慰的是，各方面皆安然無恙，這實在歸功於本署同事及其他有關人士在之前四年間未雨綢繆，竭力協助我們準備就緒。

刻下，水務署正進行多項改革及改善計劃。除日常運作事務以外，我們正全力推動多方面的工作，例如提高運作效率及服務質素、擴展供水系統以應付新發展項目的需要、執行環保工作，以及更換老化水管和修復殘舊水務設施等等，力求為本港市民提供更臻完善的供水服務。

至於日常運作方面，我們致力於處理及輸送用水往市區以至偏遠離島區的用戶。現時絕大部份的市民(99.9%)已獲得自來水供應。本署會繼續努力，讓餘下的市民可享用自來水服務。

### Into the New Millennium

As a result of thorough preparation for all possible Y2K computer problems, our water supplies flowed smoothly and faultlessly into the New Millennium.

Despite our careful preparations there had been no absolute guarantee that everything would turn out well. Contingency plans were put in place to meet all three critical dates - September 9, the New Year (Y2K), and February 29. In the event all did go well - to the credit and relief of our staff and all others involved who had put in a great deal of preparatory work over the preceding four years.

There are many changes and improvements currently underway in Water Supplies Department (WSD). In addition to regular operations, we are fully engaged in dealing with matters such as improvement in operational efficiency and service quality, expanding our supply system to meet new development needs, environmental control and replacing old water mains and rehabilitating old waterworks installations. All our activities are aimed at providing an ever better water supply to the people of Hong Kong.

On routine operations great efforts are put into the production of our treated water and distributing it to the taps of our customers in both urban and remote outlying areas. Significantly, we now provide nearly everybody - 99.9 per cent of the population - with piped potable water and we are continuing to close the small gap that remains.

### Greater Transparency

In the past year, arising from a report by the Director of Audit, there were extensive discussions in the legislature and expressions of public concern about the quality and quantity of raw water Hong Kong receives from Dongjiang - the East River.

This interest is understandable as water is important - directly affecting our daily lives. It serves to underline the need for people to be kept fully informed of all relevant facts relating to the operations of WSD.

One initiative to meet this need has been the setting up of the Advisory Committee on the Quality of Water Supplies. It began its task in April 2000 to review and advise on all matters relating to the quality of water supplies. The work of this Committee is in keeping with our current practice of promoting transparency and encouraging public participation in the monitoring of water quality.

Also, a roving exhibition, Truth about Water, put together earlier in the year, has been visiting the larger housing estates to inform people about various aspects of water processing and quality, and the importance of maintaining internal plumbing and cleaning water tanks.

### Dongjiang Water

The agreement with the Guangdong Authorities some years ago on the supply of raw water from Dongjiang relieved Hong Kong of its total reliance on seasonal rainfall and the need for more scarce land to be sterilized for the collection and storage of the water.

Without the quantity of water supply secured under this agreement, Hong Kong would not have been able to provide sufficient water of its own to meet the needs of its rapidly developing community. As events have proved, Hong Kong has gained much from the regular and predictable supply of fresh water provided through this agreement.





東江。The Dongjiang - East River.

### 更高透明度

去年，審計署署長所作關於本港所接收的東江水的質量的報告，引起了立法會對此問題的廣泛討論和市民的關注。

市民對這些直接影響日常生活的問題表示關注，固然可以理解。事實上，這亦反映了市民確有需要得悉一切與水務署運作有關的事宜。

為此，政府在二零零零年四月成立了水質事務諮詢委員會，開始檢討供水水質事宜及提供有關意見。這與本署現行鼓勵公眾參與監察水質和提高這方面透明度的做法，正是一脈相承的。

除此以外，本署本年初在各大屋邨舉行的「水的真相」巡迴展覽，亦向市民講解了有關食水處理和水質各方面的資料，並且強調保養樓宇內部供水系統及清洗水箱的重要性。

### 東江水

香港多年前與廣東省當局達成由東江供應原水的協議，讓我們無須完全依賴季節性降雨，更不必凍結更多珍貴土地的發展以收集和貯存雨水。

平情而論，如沒有這項協議所保證的供水量，香港實難獨力提供足夠的用水，以滿足社會迅速發展的需要。事實亦已證明，透過該協議定期取得穩定的食水供應，確令香港得益良多。

東江供水這項承諾，對香港特別行政區及廣東省兩地的影響，遠比想像中複雜。每項協議的背後皆有很多考慮因素，我們實應從這角度予以評價。

在上述協議中，水務署要求廣東省當局保證採取控制措施，以確保輸往香港的原水水質達致可予接受的水平，經濾水過程後能符合飲用水水質標準。本署透過與廣東省當局定期舉行的會議、實地視察工作和交換水質數據予以監察和印證。

以嚴格執行污染管制法例、在水質較佳的地點興建新取水抽水站、生物硝化處理廠建成啟用以及開展深圳清淤工程為例，廣東省當局近年採取的控制措施實在成績斐然。綜觀去年水質(特別是氨含量方面)的顯著改善，便足見廣東省所作的努力。

為免東江水至深圳的輸送路線受到污染，當局亦將興建密封式輸水管道，預期可在二零零三年啟用。與此同時，粵港雙方仍繼續共商良策，探討如何進一步採取措施改善及保障供水的質素。

The supply of water from Dongjiang is a far more complex undertaking than might be thought in its effect on both this Special Administrative Region and on Guangdong. There are many matters to be taken into account in coming to an agreement, and matters should be judged in that light.

Relating to the agreement, WSD requires assurances that control measures in Guangdong are taken to make sure that the quality of the raw water delivered to Hong Kong is acceptable for treatment to drinking water standards. Verification of this is achieved through regular meetings, visits and exchanges of water quality data with the Guangdong Authorities.

Indeed impressive results have been achieved in recent years by control measures adopted by the Guangdong Authorities, such as strict enforcement of laws on pollution control, the construction of a new intake pumping station at a location of better water quality, the commissioning of a biological nitrification plant and the start of removing sediment from the Shenzhen Reservoir. The efforts of the Guangdong Authorities have been reflected by a marked improvement of water quality in the past year, particularly in the level of ammonia.

To eliminate the risks of pollution along the supply route from Dongjiang to Shenzhen, a closed aqueduct will be built and put into service by 2003. Running in parallel, there is a continuing dialogue on ways by which further measures can be taken to improve and safeguard the quality of the water supplied.

Negotiations continue too, with regard to the quantity of water supplied in response to Hong Kong's changing demands and the variations in availability of local water. Realistically though, any concession in flexibility in our interest if agreed will have some impact on price as well.

Closest attention is paid to all aspects of the water supply from our neighbour, in terms not only of quality and quantity but cost as well.

### Caring for the Environment

We are involved in a diverse range of operations and are concerned about any impact these might have on the environment. It is an awareness and responsibility shared by all our staff.

Thus, in the complex and varied activities that go into the production of high quality water, due regard is given to their environmental impact - and measures are taken to keep adverse effects to a minimum.

A summary report on our current environmental performance appears for the first time in this annual report.

### Water-cooled Air Conditioning

When the Ngau Tam Mei and Tai Po Treatment Works are completed in 2000 and 2002 respectively, it will be possible to support the wider use of water-cooled air-conditioning systems in accordance with government policy of improving energy efficiency in the territory.

While water-cooled air-conditioning systems are more energy-efficient, there are some technical, environmental and health factors - one being Legionnaires' disease - which have still to be considered. But except for some business areas, such as Central, the existing water distribution systems should be able to cope with the expected additional demand.

WSD will take part in a two-year pilot scheme for six selected areas starting from June 2000. If this is successful it will be followed by full-scale implementation.

雙方亦繼續就香港不斷轉變的需求和集水量商討供水量。不過，如要得到粵方基於本港的利益而同意讓步作出彈性供水，水價方面難免會受到影響。

總括而言，我們經常密切注意這友鄰的一切供水事務。在質量方面如是，在成本方面亦然。

### 注重環保

供水服務所涉及的範疇繁多，本署非常關注我們的運作對環境可能造成的影響，這是本署同人深明的重任。

因此，生產優質食水的各個複雜工序，無一不充分顧及環境影響，並採取了措施把不良影響減至最少。

本年報首次登載了有關本署近年環保工作表現的簡報。

### 水冷式空調

隨著中央政府推行提高本港能源效益的政策，當牛潭尾濾水廠和大埔濾水廠在二零零零年和二零零二年分別落成啟用後，我們將可以應付更廣泛地使用水冷式空調系統。

雖然水冷式空調系統更具能源效益，目前尚有一些技術、環境及健康因素(如退伍軍人症)須予考慮。然而，除若干如中環等商業區外，現有的配水系統當足以應付預期增加的用水需求。

由二零零零年六月起，水務署會先行在六個選定地區進行為期兩年的試驗計劃。如計劃成功，日後便會全面推行。

### 尋覓新水源

為確保長久有可靠的水源應付未來數十年人口增加帶來的需求，本署委託了顧問在香港找尋新水源，並就優先考慮方案提出建議，以作進一步的可行性研究。有關顧問報告可望於本年年底前完成。

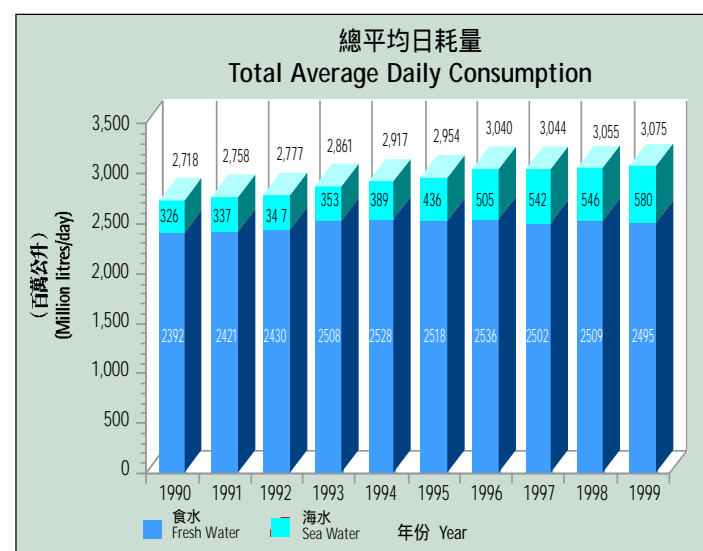
### 飲用水水質

本署轄下水質科學部現能全面就世界衛生組織所定的全部94項與健康有關的參數進行化驗工作，進一步加強了優質食水的保證。

為了讓公眾監察水質，我們首次在本報告的附件加載飲用水水質數據。這些數據在二零零零年八月亦將連同從廣東輸入的原水的數據登載於本署網頁上，藉此表明飲用水符合世界衛生組織所訂的指引標準。

### 用水趨勢

年內，工業用水量穩步下降，且續有地區改以海水沖廁，故即使住宅用水量持續上升，食水的總用量仍有所減少。食水和沖廁海水的每日平均耗用量，分別為250萬立方米和60萬立方米。



### Search for Water Resources

To ensure long-term reliability of water resources to cater for population growth in the next few decades, a consultant has been commissioned to identify possible additional water resources in Hong Kong and to recommend priority options for further feasibility study. The consultant's study is expected to be completed before the end of the year.

### Drinking Water Quality

Our Water Science Division is now fully capable of analysing all 94 parameters of health significance as stipulated by the World Health Organisation (WHO), thereby further enhancing the assurance as to the high quality of our treated water.

To allow public monitoring of our water supply, data on drinking water quality have been included for the first time as an annex to this report. These data will also be put on our home page in August 2000, together with data on raw water from Dongjiang and will show that our drinking water complies with the WHO guideline standard.

### Consumption Trend

Less fresh water was consumed during the year, even though domestic use continued to rise. This was due to the steady declining industrial use and the continued conversion to sea water flushing. The average daily fresh water consumption was 2.5 million cubic metres, while the daily consumption of sea water for flushing was 0.6 million cubic metres.

### PSP Study

The consultants report on the feasibility of private sector participation (PSP) in the provision of water supply - with all its implications on cost, quality of service, as well as impact on staff - is being very carefully considered by Government. More time is being taken on this than expected - and the decision on the way forward has not yet been taken.

### Operating Expenditure

For the year, the total operating expenditure amounted to \$5.15 billion, covering programme areas of water supply, quality control and customer services. This is an increase of 4.5 per cent over the \$4.93 billion spent the year before, and is mainly due to the increase in the cost of Dongjiang water and the additional cost of cleaning service reservoirs and treatment of effluent discharge to comply with the requirement of the Water Pollution Control Ordinance.

### Mains Leakage

To tackle the widespread problem of leakage from the distribution network, work on leak detection has been stepped up with the use of state-of-the-art equipment.

Eight pilot projects, using the flow modulation pressure reduction technique, have been put into operation on the network, with encouraging results. Savings of as much as 20 per cent of consumption in some cases have been recorded.

Some 5 600 leaks - a record number - were detected and repaired, resulting in considerable savings of water.



### 私參研究

有關私人機構參與香港供水服務的可行性研究顧問報告，政府當局正連同私參對運作成本、服務質素及員工的影響慎重考慮。這項工作要用比預期較多的時間完成，而迄今仍未就未來路向作出決定。

### 營運開支

過去一年，水務署在供水、水質控制和客戶服務等方面的營運開支總額為51.5億元，與去年的49.3億元相比，增幅為4.5%。開支增加主要是購買東江水、清洗配水庫，以及為遵行水污染管制條例而處理污水排放方面的支出上升所致。

### 水管滲漏

為解決普遍的配水網絡滲漏問題，本署採用了最先進的儀器加緊進行測漏工作。

本署在供水網絡推行八個採用流量調控式減壓技術的試行計劃，成績令人鼓舞。據記錄所示，有些計劃錄得的流失量減幅高達20%。

此外，年內經檢測須予維修的水管滲漏個案達到破紀錄的數字，約達5 600宗，使大量食水免致流失。

### 水管更換

更換水管已確定為盡量減少水管滲漏及爆喉事故的長遠之策。為此，本署制定了一項為期二十年的大型計劃，更換約3 050公里的地下水管。

在取得所需的撥款後，上述計劃的第一期，即以七年時間先行更換350公里水管的工程將會於二零零零年至二零零七年進行。

在此過渡期間，本署每年會更換約50公里無內搪層鍍鋅鐵管，以助解決滲漏引致的食水流失問題。

### 斜坡安全

在斜坡安全工作方面，年內本署為所管理的6 400個斜坡進行了大規模的視察工作，並完成其中一部份斜坡的維修工程。

### 以客為本

讓市民更便捷地享用本署的服務，是我們一貫的政策。本年較早時正式啟用的客戶電話諮詢中心，便是我們最近其中一項新猷，該中心能為市民提供「一站式」的處理投訴及查詢服務。

年內，委託私人顧問公司進行的客戶意見調查顯示，市民對本署服務的滿意程度正不斷增加，這尤其令我們欣慰。

### 公務員顧客服務獎勵計劃

在公務行列當中，本署的公共服務表現亦獲得確認。在一九九九年，本署員工在電話查詢服務及處理申請方面的傑出表現，贏得三項公務員顧客服務獎。

### 資源增值

如計劃所定，本署已展開了資源增值計劃。年內，在維持優質服務的同時，我們成功透過提高運作效率，減低開支1%，即約為3 000萬元。

憑藉管職雙方持續通力合作，我們期望在二零零零年至二零零三年的三年內，達致遠超與政府原定的5.5%節省目標。

### Pipe Replacement

Pipe replacement has been identified as the long-term solution to minimise mains leakage and bursts. An extensive programme has been drawn up for replacement of some 3 050 kilometres of underground water mains over a 20-year cycle.

Given the necessary funding, the first stage of the programme to replace initially 350 km of water mains over a seven-year period will be carried out between 2000 and 2007.

As an interim measure to deal with the loss of water through leakage, some 50 km of unlined galvanised iron (GI) pipes will be replaced annually.

### Slope Safety

In slope safety work during the year, extensive inspections were carried out, and maintenance work was undertaken where needed on 6 400 slopes under the care of the WSD.

### Customer Satisfaction

It is our policy to make our services more directly and quickly accessible to people, and one of our latest initiatives to achieve this is the Customer Telephone Enquiry Centre. This was officially opened earlier this year and it serves as a one-stop shop for all complaints and enquiries.

It is particularly pleasing to note that there has been increasing public satisfaction with our services, as shown in the response to a public opinion survey carried out by a private consultant during the year.

### Civil Service Award

There has also been recognition within the Civil Service of our public service achievements. As a result, the WSD gained three top Customer Service Awards for outstanding performance in providing telephone enquiry services and application processing in 1999.

### Enhanced Productivity

As planned, we have begun our Enhanced Productivity Programme. During the year we have reduced expenditure by one per cent amounting to some \$30 million - through greater operational efficiency, whilst at the same time maintaining the high standards expected of our service.

Over the three years from 2000 to 2003, through continuing cooperation between management and staff, we hope to substantially exceed the target savings of 5.5 per cent, originally agreed with Government.

### Quality Assurance System

We have been making good progress over the past few years in strengthening our Quality Assurance System. We will continue these efforts which serve to further improve the quality of WSD services as a whole.

This year, the Project Management Division was awarded ISO 9001. In addition, the necessary preparations are being made by the Design, Construction and Mechanical and Electrical (Maintenance) Divisions and for slope maintenance activities to obtain ISO 9000 certification next year.

Meanwhile, the Meter Testing Laboratory has obtained HOKLAS Accreditation for testing water meters up to 200 mm in diameter. Preparations are being made to obtain HOKLAS accreditation for the Pak Kong Laboratory next year.

### 品質保證制度

過去數年間，雖然我們在加強品質保證制度工作方面取得良好的進展，我們仍會竭盡所能，進一步提升本署的整體服務質素。

繼工程管理部於本年榮獲 ISO 9001 品質認證後，本署設計部、建設部和機械及電機(保養)部，以及斜坡維修工作單位現正進行所需的準備工作，以期在明年取得 ISO 9000 品質認證。

此外，水錶測試實驗室所獲香港實驗所認可計劃頒授了測試直徑達200毫米水錶的認可資格。現在北港化驗室亦正著手準備，以期在明年獲香港實驗所認可計劃頒授認可資格。

### 水費

香港的供水服務向由政府撥款補貼。就某程度而言，這解釋了何以香港的水費較世界各大城市為低。據估計，水費現時只佔一般住宅用戶每月總收入的0.2%，以任何標準衡量均可說是非常便宜。

自一九九五年二月起，水費便不曾作出調整，故從水費所得的收入只有輕微上升，而政府的補貼亦不斷增加。當局現正考慮削減補貼的不同方案。

### 員工事務

本署員工時刻不忘肩負提供公共服務的責任，對政府提出提高效率及生產力的要求，均作出了正面的回應。

年內，得到員方代表自發性的積極參與，我們成立了多個工作小組，就一系列與工作有關的事宜，例如生產力、技術、工作文化和培訓等，共商改善之道。

這些工作小組所完成的報告，其後供新成立的效率及生產力促進委員會作為研究進一步改善措施的藍本。該委員會的督導委員會和工作小組均有管理高層及職工會代表參與其中。

一如既往，本署員工再度能信守他們的服務承諾。然而，同樣重要的是，市民對本署的信心亦維持不變；從私人顧問公司為本署定期進行的客戶意見調查便可見一斑。這固然不會使我們就此變得自滿，反而激勵了員工再接再勵，各盡所能滿足客戶的期望。

對任何機構而言，特別是所肩負的工作繁重如水務署者，成功要訣莫如全體員工團結一致、竭盡忠誠。在水務署中，我很慶幸這並非仍須日夕期待、遙不可及之事。在未來的歲月，我期望員工仍秉承一貫克盡厥職的精神，全力支持本署服務市民。

### 香港供水150年

香港的供水歷史，可謂隨這個人口稀疏的小漁村發展為今天世界級金融中心的奇蹟同步發展的。

明年適逢香港供水150周年誌慶，實在值得慶祝一番，我們誠盼屆時市民亦能分享我們的喜悅和驕傲。



水務署署長傅立新  
二零零零年六月一日

### Water Charges

Hong Kong's water supply operations are subsidised by the Government. This partly explains why water charges in Hong Kong are relatively cheap compared with other major cities in the world. It is estimated that the water bill for an average household comes to only 0.2 per cent of total family income - a very low cost by any standards.

As there has been no increase in water charges since February 1995, income from chargeable supplies has increased only marginally. On the other hand, the government subsidy for water has risen steadily. Various options for reducing this subsidy are being considered.

### Staff Matters

Always aware of their responsibilities in the public service, staff have responded positively to the Government's call for improvements in efficiency and productivity.

With active and voluntary participation by staff representatives, working groups were formed during the year to come up with suggestions for improvement on a range of work-related matters, such as productivity, technology, working culture and training.

The working groups' reports have formed the basis for drawing up further improvement measures by a new Efficiency and Productivity Improvement Committee (EPIC), which involves both senior management and staff associations in the Steering Committee and its working groups.

Once again, staff have lived up to our Performance Pledge. Significant too has been the continued public confidence shown in their work as expressed in the regular customer opinion survey carried out by a private consultant for the WSD. This, of course, gives no reason for complacency, but encourages staff to devote even greater efforts to meet customers' expectations.

Essential for the success of any organisation, especially one with the extensive and responsible tasks of the WSD, is the cooperation and dedication of all staff. This has not been wanting, for which I am most grateful, and I look forward to their continued support and commitment in the coming years.

### 150 Years of Water Supply in Hong Kong

The story of Hong Kong's water supply runs parallel with the story of this territory's own development from a small, sparsely inhabited fishing village into the world-class economic miracle it is today.

Next year marks 150 years of water supply in Hong Kong. It will be a cause for celebration in which we hope the public will also share our interest and pride.

Hugh Phillipson  
Director of Water Supplies  
June 1, 2000