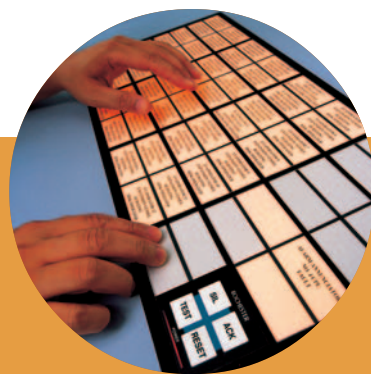


# 優質服務

## RESOURCEFUL OUTPUT



- 更換計劃  
Replacement Plans
- 地面資產  
Surface Assets
- 保管資產  
Care of Assets
- 品質保證  
Quality Assurance
- 效率助益  
Efficiency Benefits
- 滲漏控制  
Leakage Control
- 地理資訊系統技術  
GIS Technology
- 危機管理  
Crisis Management
- 資訊科技計劃  
IT Plans
- 總水錶  
Bulk Meters
- 非法用水  
Illegal Water Use
- 研究及發展  
Research and Development



致力提供卓越服務，  
預期可進一步減省開支。

Further savings are expected  
from the efforts to strive for  
excellence in all aspects of  
service.





位於大埔濾水廠的出水管道。  
Outlet water mains at Tai Po Water Treatment Works.

### 更換計劃

本署現正制訂計劃，藉以為分佈廣闊的地下資產大幅縮短更換及修復時間。

整項工程需更換約3 000公里的水管，預期需時15年便可完成，較一九九七年原定的20年為快。

完成工程後，滲漏及水管爆裂的問題將會大大減少，有助提升營運效率、節省經費，亦符合本署為市民穩定地供應最優質食水的宗旨。

### 地面資產

本署亦正制訂一項計劃，以擬定維修策略及完善的更換計劃，以便妥善分配資源，保持地面資產狀況良好。

地面資產包括水塘、配水庫、濾水廠、抽水站，以及隧道及樓宇。

### 保管資產

同時，在保管地面及地下資產方面，本署採用了多項最新技術。

「資產管理計劃」設有專用電腦系統，這系統會定期更新，確保所有機器及設備均處於良好狀態，協助食水供應。

其他工作包括：

- 更換荃灣及屯門食水及海水抽水站的水泵；
- 為大約61 000部機電及儀器設備進行了保養及維修工程，並為12個抽水站更換設備，以及為多項高壓設施更換注油式斷路器。





在處理食水過程中  
應用資訊科技。  
Application of  
IT in water  
treatment  
process.

## Replacement Plans

Plans are being drawn up to shorten considerably the time for replacement and rehabilitation work on our extensive network of underground assets.

The whole project on some 3 000 kilometres (km) of water mains will now take about 15 years for completion instead of 20 years as originally envisioned in 1997.

It will greatly reduce leakage and main bursts, thereby contributing to efficiency and savings and our commitment always to provide the public with a reliable supply of the highest quality water for their needs.

## Surface Assets

A plan is also being developed for a maintenance strategy and optimal replacement programme for the

allocation of resources to keep our surface assets in good working condition.

The surface assets include impounding and service reservoirs, water treatment works and pumping stations, as well as tunnels and buildings.

## Care of Assets

Meanwhile, some of the latest technology is applied in caring for both our surface and underground assets.

Designated computer systems developed under an Asset Management Plan are regularly updated for use in the task of ensuring that all the machinery and equipment are in good working condition for the delivery of the water supply.

Other areas of work included -

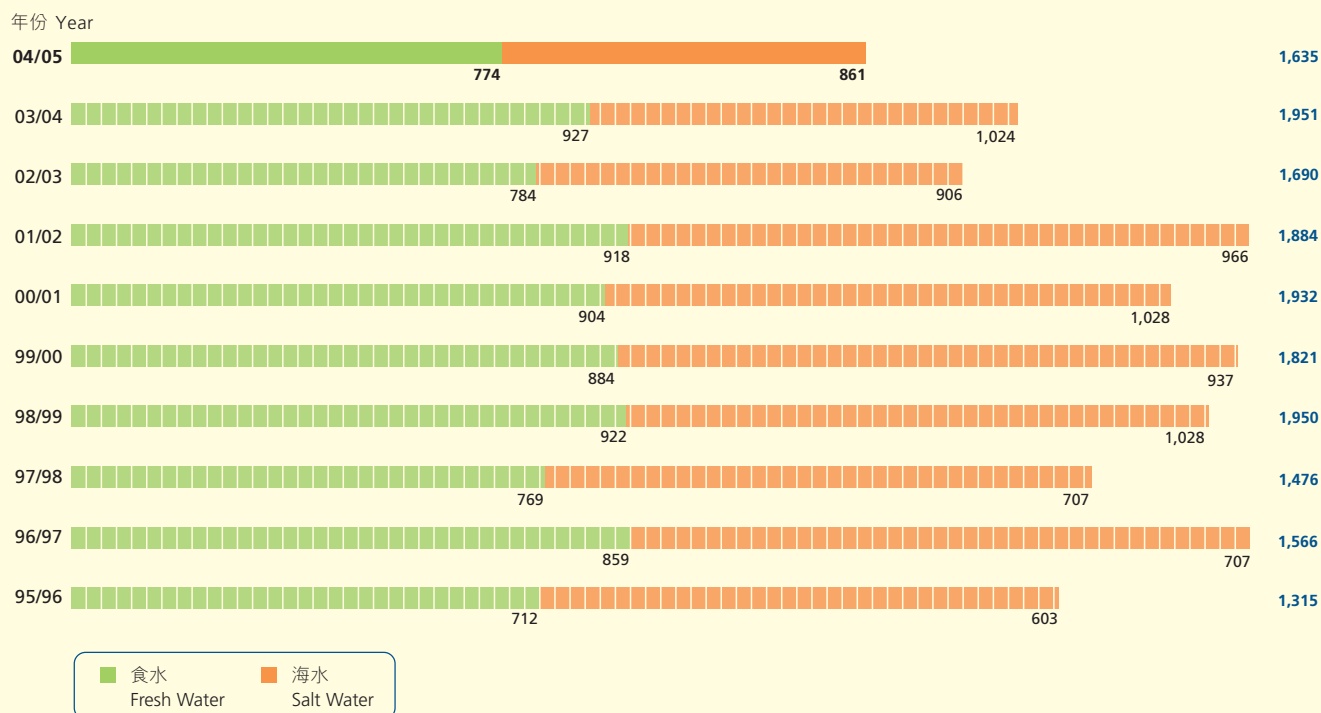
- replacement of pumping plants at Tsuen Wan and Tuen Mun fresh water and salt water pumping stations;
- repair and maintenance carried out on some 61 000 items of electrical, mechanical and instrumentation equipments, together with replacement of plants at 12 pumping stations, and oil circuit breakers for a number of high voltage installations.

## Quality Assurance

In order to acquire more knowledge about implementing an Integrated Management System (IMS) combining the ISO 9000, ISO 14000 and OHSAS 18000, we have asked some of our staff to attend a relevant training course on IMS.

### 水管爆裂修理個案統計數字 (按供水類別劃分) STATISTICS ON MAINS BURSTS REPAIRED (BY TYPES OF WATER SUPPLY)

由定期合約承辦商修理的水管爆裂個案數目  
No. of Mains Bursts Repaired by Term Contractors



#### 品質保證

為了進一步掌握如何實施「綜合管理系統」(結合ISO 9000、ISO 14000及職業安全衛生管理系統18000)的相關知識，本署保送部分員工參加綜合管理系統的相關培訓課程。

#### 效率助益

由管職雙方代表所組成的「組織架構及效率檢討工作小組」制訂的效率目標，在二零零五／零六財政年度為本署節省1.22億港元的基本資源分配開支。

於本財政年度，營運開支節省3.5%，連同原定的1%節流目標，合共節省4.5%開支。

有賴40項有關重組、重新調配人員及精簡整體工作程序的減省開支建議，

同時致力提供卓越服務，預期可進一步減省開支。

此外，自二零零零年展開「善用資源研究」至今，濾水廠及使用人手操控的抽水站的操作人員總數有所減少。

#### 滲漏控制

本署跟進顧問研究訂出管道滲漏問題的長遠策略，已在北角及筲箕灣地區的策略位置設立多個水壓管理及流量監測點。

此外，本署使用聲音記錄器等多種先進設備，成功找出地下管道的滲漏位置。

#### 地理資訊系統技術

本署應用地理資訊技術，開發了數碼

繪圖系統，這系統以數碼格式記錄整個供應及配送網絡，涵蓋超過7 000公里的食水及海水水管。

數碼繪圖的優點，在於其可與地政總署的基本地圖及其他政府部門的數據互相結合。

#### 危機管理

我們制訂了一項危機管理應變計劃。這項計劃清晰列明各類緊急情況，若發生緊急事故，即可迅速採取應變行動。這項計劃會不時進行檢討及更新。

緊急事故包括生化、幅射及核子攻擊、廣東核電站出現故障、電力中斷及嚴重急性呼吸系統綜合症爆發等情況。



### 水管爆裂修理個案統計數字 (按運作區劃分) STATISTICS ON MAINS BURSTS REPAIRED (BY REGIONS)

由定期合約承辦商修理的食水管及海水管爆裂個案數目  
No. of (F.W. & S.W.) Mains Bursts Repaired by Term Contractors

財政年度 Financial Year	運作區 Region				總數 Total (No.)
	香港及離島區 (個案數目) HK & I (No.)	新界東區 (個案數目) NTE (No.)	新界西區 (個案數目) NTW (No.)	九龍區 (個案數目) K (No.)	
2004/05	496	346	317	476	1,635
2003/04	513	507	323	608	1,951
2002/03	496	277	319	598	1,690
2001/02	545	325	397	617	1,884
2000/01	583	306	388	655	1,932
1999/00	564	297	429	531	1,821
1998/99	394	336	462	758	1,950
1997/98	323	168	402	583	1,476
1996/97	358	154	451	603	1,566
1995/96	334	170	382	429	1,315

### Efficiency Benefits

Efficiency targets set by the Working Group on the Review of the Organizational Structure and Efficiency (ROSE), with members drawn from staff and management, have brought about savings of \$122 million from the baseline allocation for the 2005/06 fiscal year.

The savings of 3.5 per cent of operating expenditure for the current fiscal year, in addition to the original target of 1 per cent, make up a total of 4.5 per cent in all.

Further savings are expected from the 40 cost-saving proposals concerning re-structuring, staff redeployment, as well as overall streamlining of work, in combination with efforts for excellence in all aspects of service.

Arising from a study, meanwhile, for the Optimal Utilization of Resources (OUR) that began in 2000, savings in total operational staff strength in water treatment works and manned pumping stations were achieved.

### Leakage Control

As a follow-up to recommendations by consultants on a long-term strategy to deal with pipe leakage, a number of pressure management and flow monitoring points have been set up on strategic locations in the North Point and Shau Kei Wan areas.

In addition to this, various types of the state-of-the-art equipment, such as noise loggers, have been used with success to help locate leaks in underground pipes.





▲ 閉路電視是監察設備運作的有用工具。  
CCTV is a useful tool for monitoring plant operation.

### 資訊科技計劃

作為策略計劃的一部分，本署已斥資建立新式強大資訊科技系統。

「客戶服務及發單系統」以及「化驗室資訊管理系統」的核心工作已於二零零四年年底完成。

「部門資訊入門網站」的主要工程及「維修工程管理系統」的第一階段工作，預計將於二零零五年年中左右完成。

### 總水錶

為了檢測大型屋邨的流失水量，我們已在多個公共及私人屋邨安裝總水錶以監察其耗水量。

結果，我們在部分屋邨發現邨內地下管道有嚴重滲漏情況，並已要求負責的屋邨管理處採取補救措施。

### 非法用水

經全面調查後，我們在元朗地區發現多宗未經授權接駁水管個案，並已對違法者採取法律行動。

### 研究及發展

我們現正就海水系統研究彈性座封閘閥及金屬座封閘閥的性能。

根據在沙田濾水廠進行的試驗，斜管技術具有經濟效益，並可提高澄清池的濾水量。我們正推廣此項技術，應用於沙田濾水廠其他澄清池及屯門濾水廠。



外勤員工可透過使用地理資訊系統技術更有效地運作水閘。

With the use of GIS technology, site staff are able to perform valve operation more efficiently.

## GIS Technology

Geographical Information System (GIS) Technology is applied in the development of the Digital Mapping System, which captures in digital format the complete supply and distribution networks with over 7 000 km of fresh and salt water mains.

The potential of digital mapping lies in its integration with the base maps of the Lands Department as well as data from other government departments.

## Crisis Management

A crisis management contingency plan has been put in place, setting out clear descriptions of emergency situations and thereby facilitating quick action in dealing with them. This plan is subject to constant review and updating.

Emergency situations include such matters as chemical, biological, radiological and nuclear agent attack, failure incidents in nuclear power plants in Guangdong, power outages, and SARS outbreaks.

## IT Plans

As part of a strategic plan, substantial investments have been made on new and powerful information technology systems.

Work was completed on the core of the Customer Care and Billing System, as well as the Laboratory Information Management System by the end of 2004.



## RESOURCEFUL OUTPUT

測漏統計數字 (零四／零五年度)  
STATISTICS ON LEAK DETECTION (04/05)

食水  
Fresh Water

各財政年度所進行的測漏工作 Tests Conducted Per Financial Year	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
最低晚間流量測試次數 No. of Minimum Night Flow Tests	396	410	443	495	487	431	334	320	300
分段流量測漏次數 No. of Step Tests (or Leakage Tests)	69	72	77	46	43	15	55	70	92
日間流量測試次數 No. of Day Flow Tests	88	100	124	200	217	223	845	1361	1,838
音聽視察次數 No. of Sounding & Visual Inspections	3,423	3,545	4,169	4,045	4,438	3,853	3,247	3,286	3,358
測試及視察次數總計 Total No. of Tests & Inspections	3,976	4,127	4,813	4,786	5,185	4,522	4,481	5,037	5,586
經發現的滲漏個案數目 No. of Leaks Detected	2,829	3,287	4,868	5,353	5,714	5,054	3,825	3,651	4,231
估計每日可節省的水量(立方米) Estimated Quantity of Fresh Water Saved (cu.m/day)	209,820	203,998	249,615	254,623	290,940	231,161	178,433	91,993	99,293

海水  
Sea Water

各財政年度所進行的測漏工作 Tests Conducted Per Financial Year	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
最低晚間流量測試次數 No. of Minimum Night Flow Tests	19	23	3	6	5	0	0	0	8
分段流量測漏次數 No. of Step Tests (or Leakage Tests)	1	1	0	0	1	4	11	8	4
日間流量測試次數 No. of Day Flow Tests	4	11	10	20	23	14	31	48	127
音聽視察次數 No. of Sounding & Visual Inspections	177	211	171	284	312	319	376	557	400
測試及視察次數總計 Total No. of Tests & Inspections	201	246	184	310	341	337	418	613	539
經發現的滲漏個案數目 No. of Leaks Detected	127	156	208	216	254	191	197	219	199
估計每日可節省的海水量(立方米) Estimated Quantity of Sea Water Saved (cu.m/day)	14,511	11,543	23,430	25,532	41,895	25,805	26,993	12,598	11,948



位於沙田濾水廠的澄清池。  
Clarifier at Sha Tin Water Treatment Works.

Due for completion around the middle of 2005 are a major part of the Departmental Information Portal and the first phase of the Maintenance Works Management System.

### Bulk Meters

In the effort to detect unaccounted-for water inside large housing estates, bulk meters have been installed to monitor water consumption in a number of public and private housing estates.

As a result, substantial underground pipe leakages were found in some of the estates and the responsible estate management offices have been asked to take remedial action.

### Illegal Water Use

Following extensive investigations, some unauthorized tapings of water were found to be taking place in the Yuen Long area and legal action was taken against the offenders.

### Research and Development

A study is being undertaken on the performance of resilient seated and metal seated gate valves for use in the salt water system.

Trials carried out at the Sha Tin Water Treatment Works showed that the inclined tube technology was cost-effective as well as viable in increasing the throughput of a clarifier. The same technology will be applied to other clarifiers at the Sha Tin Water Treatment Works and the Tuen Mun works.