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每天為行車隧道帶來煥然一新的面貌。
Giving our tunnels a sparkling look daily.



基礎設施投資

INVESTMENT IN INFRASTRUCTURE

水是生命
之源
Water's
Life

- 基本工程項目
Capital Works Projects
- 更換水管
Mains Replacement
- 規劃及設計中的工程
Projects under Planning
and Design
- 施工中的工程
Projects under Construction
- 工程管理
Project Management
- 價值管理
Value Management

持續投資在擴展及改良供水基礎設施，
是我們得以順利提供可靠的優質供水
服務的關鍵。

Continual investment in expanding and
upgrading our water supply infrastructure



is critical to our success in
providing a reliable water
service of quality.

基礎設施投資 INVESTMENT IN INFRASTRUCTURE

基本工程項目

為應付新發展區的用水需求，我們現正規劃及推行多個大型基本工程項目，並致力提高工程的推展效率。目前，所有基本工程項目都由政府的基本工程儲備基金撥款興建。

更換水管

根據地下資產管理計劃，我們要在20年內更換或修復大約3 000公里水管。這項大型工程已在二零零零年十二月展開，造價為100億元。更換或修復首350公里水管的工程(第1階段第1期)現正進行，造價約為24億元，預期在二零零八年完成。本署亦正為另外250公里水管(第1階段第2期)進行規劃及詳細設計，工程造價約為10億元，將於二零零五年開始施工，二零零九年完竣。至於在二零一零年結束前多更換700公里水管的第2階段工程，初步規劃已告完成，估計造價為28億元。

如情況許可，我們會採用無開掘方法施工，當中包括內喉緊貼法、喉管推頂或撞擊法、水平定向鑽挖法和微型隧道掘進法等，務求盡量減低工程對市民造成的不便。

規劃及設計中的工程

沙田濾水廠是全港最大型的濾水廠，投入運作近40年，過濾的食水約佔全港每日食水用量的四成。我們現正計



大型的地下食水和海水管道敷設工程。
Laying of large fresh water and salt water mains.

劃重建該濾水廠，並採用最新的濾水科技(例如薄膜過濾法)，使其回復昔日濾水量並提高效能。年內，我們已為重建工程展開勘察工作，工程預計會在二零零六年至二零二零年分階段完成並投入運作。

有關將小濠灣濾水廠的日產量由15萬立方米倍增至30萬立方米的工程，本署委聘的顧問公司現正進行勘察研究及環境影響評估，在二零零四年年底便會完成。有關的擴建工程計劃在二零一一年竣工，以配合北大嶼山的發展。

為應付「大嶼山吊車系統」旅遊發展項目的用水需求，我們將於二零零三年

六月展開一項為昂坪而設的新供水工程計劃，造價為7,000萬元，供水設施將於二零零五年投入服務。

造價1.3億元的坪輦食水配水庫建造工程的設計工作已經展開。這項工程旨在提高現有供水系統的可靠性，以及可應付上水及粉嶺區發展項目的用水需求。建造工程預期在二零零四年五月展開，在二零零七年年初完竣。

規劃中的大型工程還包括荃灣濾水廠設備現代化、新界西北部沖廁用水供應、小濠灣和銀礦灣濾水廠聯網等工程。

CAPITAL WORKS PROJECTS

Many major capital projects are being planned and constructed to cope with the new developments and a great deal of effort has been focused on improving the efficiency in project delivery. All capital investments are funded by the government under the Capital Works Reserve Fund.

MAINS REPLACEMENT

Our major programme for replacement and rehabilitation of some 3 000 kilometres of water mains in 20 years under the Underground Asset Management Plan at a cost of \$10 billion started in December 2000. The work on the first 350 kilometres of water mains (Phase 1 of Stage 1) costing about \$2.4 billion is in progress and is scheduled for completion in 2008. Planning and detailed design are being carried out on a further 250 kilometres of mains (Phase 2 of Stage 1) for work costing about \$1 billion to commence in 2005 for completion in 2009. The initial planning on replacement of another 700 kilometres of mains by 2010 at an estimated cost of \$2.8 billion under Stage 2 of the project was completed.

Where practicable, the trenchless methods including close-fit linings, pipe jacking or ramming, horizontal directional drilling and micro-tunnelling will be used so as to keep public inconvenience to the minimum.

PROJECTS UNDER PLANNING AND DESIGN

Sha Tin Water Treatment Works, which is the largest water treatment works in Hong Kong and meets some 40 per cent of our daily fresh water demand, has been in operation for nearly 40 years. Plan is underway to re-provision the water treatment works to restore its capacity and improve its efficiency by making use of latest treatment technologies such as membrane filtration. Investigation work of the project was initiated in the year and the whole project is scheduled for completion and commissioning in phases from 2006 to 2020.

An investigation study together with the associated Environmental Impact Assessment is, meanwhile, being conducted by consultants for completion by end of 2004 on doubling the daily treatment capacity of the Siu Ho Wan Water Treatment Works from 150 000 cubic metres to 300 000. The extension work is planned for completion in 2011 to tie in with the development in North Lantau.

To provide for the tourism project, the cable car system in Lantau, construction work will begin in June 2003 on a new water supply project for Ngong Ping. It will cost \$70 million and be commissioned by 2005.

Design work commenced on the \$130 million project for construction of the Ping Che Fresh Water Service



利用隧道鑽挖機敷設地下水管。
Making use of tunnel boring machine to lay water mains.



採用手挖隧道式無開掘方法於交通繁忙的道路敷設地下水管。
Using hand-dug tunnelling no dig method to lay water mains under busy road.

Reservoir. It will serve to improve the reliability of the existing water supply system and provide for the demand resulting from the developments in the Sheung Shui and Fanling areas. Construction work is expected to begin in May 2004 for completion by early 2007.

Other major projects being planned include modernization of the Tsuen Wan Water Treatment Works, flushing water supply for North West New Territories, and integration of Siu Ho Wan and Silver Mine Bay Water Treatment Works.

基礎設施投資 INVESTMENT IN INFRASTRUCTURE



興建中的油塘二號食水配水庫。
Yau Tong No.2 Fresh Water Service Reservoir under construction.



興建中的陰澳篤食水配水庫。
Yam O Tuk Fresh Water Service Reservoir under construction.

施工中的工程

造價35億元的大埔濾水廠第一期以及相關的配水庫和輸水管道已建成，將於二零零三年六月投入運作。由於濾水廠位於供水系統的中央，我們已預留空間，可在有需要時把濾水廠的日產量由現時的25萬立方米逐步提高，最終增至120萬立方米。

年內，為配合九龍東南部發展而展開的供水基礎設施建造工程繼續進行，將於二零零六年完成。這項工程造價3.3億元，其中包括在鑽石山建造一個食水配水庫、為位於紅磡的海水抽水站進行改善工程，以及在黃大仙和九龍城敷設10.5公里長的水管。

為供水予大嶼山香港迪士尼樂園而進行的陰澳篤食水配水庫建造工程，目前進展良好。

現正進行的大型工程，還包括深水埗、旺角及何文田的幹管敷設工程，造價為5億元。

工程管理

「工程管理部」正採取嚴格措施以加強監管工作，確保所有工程按預算造價依時完成，其中一項最新措施是改善本署工程的規劃、設計和建造階段的配合與協調，而另一項主要措施，是按原定開支目標及時間表加強監控進行中的內部工程計劃。

價值管理

年內，本署為兩項工程計劃進行價值管理研究，以便在工程的規劃及設計階段更有效地評估各可行方案。



興建鑽石山二號食水配水庫的工地。
Construction site of Diamond Hill No.2 Fresh Water Service Reservoir.

PROJECTS UNDER CONSTRUCTION

Costing \$3.5 billion, the Stage 1 of the Tai Po Water Treatment Works together with the related service reservoirs and aqueduct has been completed and will be put into operation in June 2003. In view of the centrality of its location, provisions have been made that its present daily capacity of 250 000 cubic metres can be expanded in stages to an ultimate 1.2 million cubic metres when necessary.

Construction of the water supply infrastructure to cope with developments in South East Kowloon continued in the year in line with its scheduled completion in 2006. The \$330 million project includes the construction of a fresh water service reservoir at Diamond Hill, upgrading the salt water pumping station at Hung Hom and laying 10.5 kilometres of water mains through built up areas in Wong Tai Sin and Kowloon City.

Work is progressing well on the Yam O Tuk Fresh Water Service Reservoir for the Hong Kong Disneyland on Lantau Island.

Other major projects in progress include laying of trunk mains in Sham Shui Po, Mong Kok and Ho Man Tin at a cost of \$500 million.



將近落成的大埔濾水廠。
Nearly completed Tai Po Water Treatment Works.

PROJECT MANAGEMENT

Strict measures are being taken by the Project Management Division to strengthen control on delivery of all projects on time and within budget. One of the latest initiatives is to improve the interface and links between the planning, design and construction stages of our projects. Another key measure is to step up the monitoring and control of programme key dates and target expenditures of all active in-house projects.

VALUE MANAGEMENT

To enhance option evaluation during the project planning and design stages, value management studies were conducted on two projects during the year.



鑽石山二號食水配水庫的出水隧道正進行挖掘工程。
Excavation of outlet tunnel of Diamond Hill No.2 Fresh Water Service Reservoir.



興建中的大環海水抽水站電解氯氣機房。
New Electrochlorination House of Tai Wan Salt Water Pumping Station under construction.