PRINCIPAL STATISTICS (as at 1.1.2009)

No. of Impounding Reservoirs
17
Total Storage Capacity
586 million cubic metres

No. of Fresh Water Pumping Stations
150
Total Daily Pumping Capacity
31.27 million cubic metres
(including both fresh & raw water pumping stations and pump houses)

No. of Salt Water Pumping Stations
28
Total Daily Pumping Capacity
1.75 million cubic metres
(including both pumping stations and pump houses)

No. of Combined Fresh Water & Salt Water Pumping Stations
7
Total Daily Pumping Capacity
0.27 million cubic metres

No. of Fresh Water Service Reservoir
165
Total Storage Capacity
4.16 million cubic metres

No. of Salt Water Service Reservoir
45
Total Storage Capacity
0.31 million cubic metres

No. of Water Treatment Works
21
Total Daily Treatment Capacity
4.87 million cubic metres

Length of Fresh Water Mains
6200 km (20mm to 2400mm diameter)

Length of Salt Water Mains
1600 km (20mm to 1200mm diameter)

STAFF ESTABLISHMENT

As at 1 January 2009, the department has an establishment of 4 477 staff members. Some 337 are professional and assistant professional officers, including Civil Engineers, Electrical Engineers, Mechanical Engineers, Waterworks Chemists, Accountants, Land Surveyors, Quantity Surveyors, Geotechnical Engineers and Statisticians. The rest are Technical Staff, General and Common Grade Staff.

CARING FOR THE COMMUNITY

The Department and its staff take their commitment to the community seriously. Staff members play an active role in serving the community, even outside working hours. Teams of volunteers participated in activities including flag days, tree planting endeavours and visits to homes for the elderly. They also organised tours of historic waterworks installations for secondary school students. In a separate recognition of this ethos of community service, the Hong Kong Council for Social Services has awarded the Department its Caring Organisation logo.

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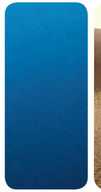
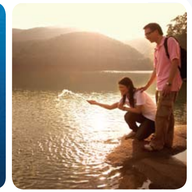
February 2009 (1st Edition)

Water Supplies Department





OUR VISION

- To excel in satisfying customers' needs for the provision of quality water services

OUR MISSION

- To provide a reliable and adequate supply of wholesome potable water and sea water to our customers in the most cost-effective way
- To adopt a customer-oriented approach in our services
- To maintain and motivate an effective, efficient and committed workforce to serve the community
- To remain conscious of our responsibilities towards the environment
- To make the best use of resources and technology in our striving for continuous improvement in services

OUR VALUES

- **C**ustomer satisfaction
- **R**eliability
- **E**nvironmental awareness
- **D**edication
- **I**mprovement
- **T**eamwork

CORPORATE PROFILE

The Water Supplies Department (WSD) is one of the works departments under the Development Bureau of the Government of the Hong Kong Special Administrative Region (HKSAR). WSD plays a pivotal role in supplying clean, healthy drinking water to people of Hong Kong. The city's water comes from two primary sources, the Dongjiang (or East River) in Guangdong and a network of domestic catchments located within Hong Kong's country parks and rural areas. It also supplies sea water for flushing to about 80% of the population.

PRINCIPAL FUNCTIONS AND SERVICES

To plan and manage water resources and water supply systems

The department plans water resources, prepares outline proposals for new water supply schemes and improvements to the existing system to meet growth of demand in existing and developing areas, monitors the adequacy of water resources and installations and collates hydrological information necessary for the management and development of the waterworks.

To design and construct waterworks

The department carries out design and supervision of construction of waterworks, which include catchwater, tunnels, reservoirs, water treatment works, access roads, pumping stations and pipeworks. Specialist works such as laying of submarine pipelines, dam construction and major water supply projects are usually undertaken by consulting engineers. The department vets and approves consultants' proposals and monitors and administers their work and the consultancy agreements.

To operate and maintain water supply and distribution systems

The department monitors water storage, operation and maintenance of catchwater, intakes, impounding reservoirs, pumping stations, water treatment works, service reservoirs, trunk and distribution mains to ensure a reliable water supply to the customers.

Fresh water and sea water are supplied through two entirely separate systems of pumping stations, service reservoirs and water mains. The water is distributed either by pumping or by gravity, after leaving the treatment works or being extracted from the sea, to service reservoirs which are located at various places and elevations throughout the territory, each serving a particular area. Water from the service reservoirs is distributed to customers by gravity via extensive networks of water mains.

To control the quality of water supply to customers

The department checks and controls the quality of water supplied. Water quality throughout the entire supply system is continuously monitored by the department with chemical, bacteriological, limnological, biological, and radiological examination of water samples taken at intakes, storage reservoirs, treatment works, service reservoirs, trunk mains and consumer taps to ensure that the quality complies with the guideline values recommended by the World Health Organization for drinking water quality.

To provide customer services and to enforce the Waterworks Ordinance

The department is responsible for the administration and enforcement of the Waterworks Ordinance and Regulations. The department also scrutinises plumbing proposals for new and revised plumbing systems of buildings and inspects the works. Provision of metered supplies, handling customer enquiries and complaints regarding new connections and disconnections of water supplies are also undertaken by the department.

ORGANISATION OF WATER SUPPLIES DEPARTMENT

Customer Service Branch

- Overseeing all customer services functions
- Administering all customer accounts

Development Branch

- Forecast and monitoring of water demand
- Planning for the provision of water supply to developing areas
- Control of the quality of water supplies to ensure compliance with approved standards
- Prosecution of consumers in breach of Waterworks Ordinance and Regulations

Financial & Information Technology Branch

- General financial control of waterworks revenue and expenditure
- Development and maintenance of Information Systems
- Management of departmental data

Mechanical & Electrical Branch

- Design, procurement and installation of mechanical and electrical plant and equipment
- Maintenance of mechanical and electrical plant and equipment
- Advising on safe working practices/measures in waterworks installations and projects
- Co-ordination of training activities

New Works Branch

- Planning of waterworks projects
- Prepare designs and tender documents for waterworks projects
- Supervising the construction and commissioning of waterworks projects
- Monitoring consultants' work on waterworks projects

Operations Branch

- Control and management of water catchments and waterworks installations
- Operation and maintenance of water supply and distribution systems

LATEST DEVELOPMENTS

WSD always plans ahead to ensure the timely and efficient delivery of water to areas of population growth in Hong Kong. At the same time, its programme of upgrading or replacing existing water mains and treatment plants continues.

Total Water Management (TWM) Strategy

To achieve an optimal balance between water demand and water supply for ensuring sustainable use of water resources, WSD implements a TWM strategy in an integrated, multi-sectoral and sustainable manner. The key initiatives under the TWM strategy are as follows:

Water Demand Management

- To enhance public education on water conservation
- To promote use of water saving devices
- To enhance water leakage control through the programme to replace and rehabilitate aged water mains, and application of new technology to improve pressure management and detection of leakage
- To extend use of sea water for toilet flushing

Water Supply Management

- To strengthen protection of water resources
- To actively consider water reclamation (including reuse of grey water and rainwater harvesting)
- To develop the option of sea water desalination

Replacing and Rehabilitating Water Mains

Hong Kong's fresh water and salt water supplies are provided through a network of over 7 800 kilometres of water mains. About 45% of the water mains were laid some 30 years ago. WSD is implementing a four-stage programme to replace and rehabilitate 3 000 kilometres of aged water mains. The entire project will cost about HK$19.2 billion and be completed by 2015.

In a crowded city like Hong Kong, water main bursts and other incidents along our ageing supply network can cause supply and traffic disruptions. By moving ahead with its replacement and rehabilitation programme, the department is ensuring water supplies remain safe, reliable and efficient.

The aim is to complete the programme with the minimum disruption to daily life. Trenchless methods such as close-fit lining, cured-in-place pipes, pipe-jacking and horizontal directional drilling are used as much as possible. We are maintaining a watch on trenchless technology to ensure that we can advance our own techniques and minimise disruptions to the public.

Enhancement of Water Treatment Works Facilities

To offer more reliable water supply with a balanced output from the treatment works, WSD will expand the Tai Po Water Treatment Works and modernise the Sha Tin Water Treatment Works. To facilitate the in-situ reprovisioning works at Sha Tin Water Treatment Works, the capacity of the Tai Po Water Treatment Works will be increased from the existing 250 000 cubic metres/day to 800 000 cubic metres/day at an estimated cost of HK$4.2 billion. Construction is expected to begin in early 2010 for completion by the end of 2014.

Sha Tin Water Treatment Works

Tai Po Water Treatment Works

Asset Management

In January 2008, we took part in the 2008 Asset Management Benchmarking Project organised by the Water Services Association of Australia and the International Water Association (IWA). Over 40 water utilities from the United States, Canada, Australia, New Zealand, Oman, and the United Arab Emirates participated. The benchmarking project aims to take stock of our capability, current practices and effectiveness in asset management, benchmarking against other utilities and identifying and adopting the best practices.

While conducting the benchmarking project on asset management, we are also planning to construct an overall asset management framework. This holistic approach will cover issues ranging from policy and objective setting to strategy formulation and the laying out of the methodology and processes involved. Meanwhile, preparatory work for assessments of asset conditions is under way.

Information Technology

We continue to advance our strategic plan for information technology. Substantial investment has been made in new and powerful technology systems for the maintenance of both underground infrastructure and our surface assets. This will result in long term cost savings and greater service efficiencies.

Replacement of Water Meters

According to the Waterworks Regulations, water meters shall register to an accuracy of ±3% of the correct amount. This is also the performance target on the overall meter accuracy pledged by the department to customers. We are implementing regular programmes for replacement of ageing water meters.