


愛護自然

水務署的主要職責，是為市民提供日常生活不可或缺的用水。

在應付這些用水需求的同時，我們亦會審慎衡量有關保護自然和環境的責任。

環保目標

因此，本署為用戶提供衛生清潔的優質食水時，會致力採取嚴謹的措施，確保繁複的供水程序符合環保及持續發展的要求，並把負面影響減至最低。

這種遠見使本署既能滿足現時的供水需求，亦能促進環境保護，以確保香港的持續發展。注重環保是政府的政策，亦即各部門的職責，水務署十分樂意分擔這項責任。

環保政策

我們為達致環保目標，整體上會致力於：

防止污染：減低濾水廠及配水庫排出的污泥及污水量，減少工場及化驗室的固體、化學及其他廢物，以及減低柴油驅動泵組等設備排放的廢氣和抽水站發出的噪音。

節約能源及資源：節省每單位產量所需的電力及燃料，適當用水，減低漏水量，避免製造辦公室廢物，減少在地盤使用木材，以及在情況許可下，降低在濾水過程中使用氯氣、石灰及明礬的用量。

透過本署嚴密監管，確保建造工程得以妥善進行，務求盡量減少對環境造成的破壞，並適當處理須棄置的物料。

嚴格遵守一切有關環保的條例及規例，並採取措施糾正違規的情況。

溝通及訓練：與客戶、供應商和市民就部門的環保政策及表現多加溝通，並透過適當訓練，提升員工的環保意識及知識。

任重道遠

關注環境，任重道遠，我們會不斷致力改進這方面的表現。

故此，我們需要在適當時候設立環境管理系統，統籌各種為服務市民所做的工作，俾能符合本署注重環保的做法、目標及相關法例。

為達致這個目的，我們現正研究設立ISO 14001環保系統及相關審核制度所帶來的影響。

In Harmony With Nature

The Water Supplies Department performs an essential function by providing the water that we consume and require for our everyday activities.

In doing so, however, it carefully weighs this need against its responsibility of working in harmony with nature and the environment.

Environmental Goal

Thus in the complex series of operations that go into the provision of wholesome water of the highest quality to our customers, WSD is committed to taking careful measures to ensure that they are carried out in a sustainable and environmentally-friendly manner, while keeping adverse effects to a minimum.

This long-term outlook will enable the WSD to meet existing demands without compromising or disrupting the ability to continue working into the future. It is a responsibility in keeping with government policy - and which the WSD is happy to share with other departments.

Environmental Policy

In pursuance of its environmental goal the WSD will, broadly, make all effort to-

Prevent pollution by reducing the discharge of effluent from treatment works and service reservoirs, cutting down on solid waste and other waste, as well as chemical waste from workshops and laboratories, reducing emissions from diesel-driven pumpsets and the like, and reducing noise from pumping stations;

Reduce the use of energy and resources through savings in electricity and fuel per unit of production, by the proper use of water and cutting down on water loss through leakage, and by reducing office waste, as well as the use of timber in construction sites, and, where possible, by using less chemicals such as chlorine, lime and alum in the treatment process;

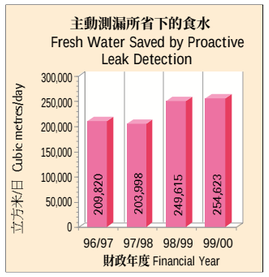
Ensure, through strict WSD supervision, that construction work is properly carried out so that there is minimum disruption of the environment and proper handling of materials for disposal;

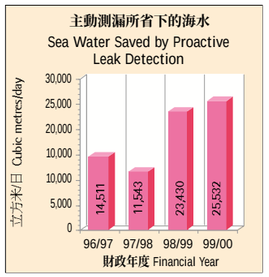
Strictly enforce compliance with all environmental legislation and regulations, and take steps to remedy situations where there is non-compliance;

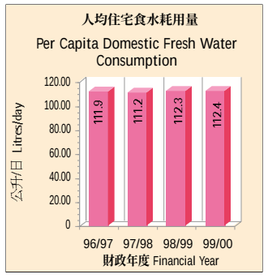
Communicate with customers, suppliers and the general public on our environmental policies and performance and **provide proper training** to staff to raise their environmental awareness and knowledge.

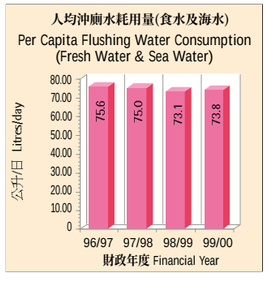
An Ongoing Responsibility

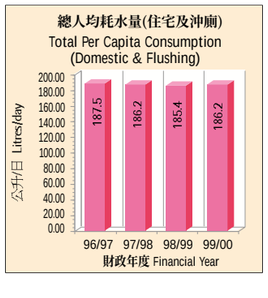
Concern for the environment is an ongoing responsibility and effort will continue to be made to improve on our performance.











未來路向

展望將來，我們會採取更多措施，務求：

- 提高所蒐集資料的準確性和可靠性，以及擴大資料的範圍。
- 為運輸服務、固體廢物產量、環保開支及內部用水量制定量度及匯報制度。
- 以電腦化記錄系統收集電力資料，取代人手制度。
- 為耗電量、固體廢物產量等制定基準目標。
- 找出更多切合環保的棄置廢物方法，以減少棄往堆填區的廢物，並與供應商及承辦商合作，找出方法盡量減少廢物產量。
- 採用更多的循環再造產品，並在供應合約中實施符合環保的採購準則。
- 加強供水網絡的水壓管理及區域檢測的工作，以減少漏水的情況。
- 加快翻新及更換抽水泵組，以提高能源效益。
- 加快更換及修復水管，以減少食水流失。
- 進行調查，以衡量客戶對本署環保方面表現的看法。
- 在網頁上公布本署環保方面的表現，並請市民發表意見。
- 加強訓練員工，以提高環保意識。

節約用水　Efficiency of Water Use

過去四年，本港住宅食水每日的人均耗用量約為112公升，如表所示，耗水量維持在頗為穩定的水平。

其他數字顯示，主動測漏計劃在節省食水及海水上發揮功效。

水壓管理及區域檢測試驗計劃可大幅減少網絡滲漏情況，成效令人鼓舞，本署現正考慮推廣使用有關方法。

不過，更換水管仍是長遠解決漏水問題的最佳方法。本署現正致力加速進行這個持續更換水管計劃。

The average daily consumption for domestic use of about 112 litres of fresh water per head of the population remained relatively steady over the past four years as shown in the chart.

Other figures show the effectiveness of the proactive leak detection programme for both fresh and sea water.

The substantially reduced network leakage resulting from pressure management and district metering trial schemes has been encouraging and consideration is being given to wider use of the methods.

Nevertheless mains replacement remains the most effective long-term solution to the leakage problem and effort is being made to speed up the on-going programme.

This will, in time, entail the establishment of an Environmental Management System (EMS) to coordinate the diverse activities of the services provided to the public in conformity with the WSD's environmentally-friendly practices and goals as well as relevant legislation.

To achieve this consideration is now being given to the implications for establishment of the ISO 14001 environmental management system, together with the relevant audit system.

The Way Forward

Looking ahead, further measures will be taken to -

- Improve the accuracy, reliability and scope of data collection.
- Develop measurement and reporting systems for transport, solid waste production, environmental expenditure and internal water use.
- Replace manual electricity data collection system by computerised record system.
- Set baseline targets for electricity consumption, solid waste production etc.
- Identify more environmentally-friendly waste disposal methods to reduce disposal of waste to landfill and to work with suppliers and contractors to identify ways to minimise amount of waste produced.
- Use more recycled products and implement environmental procurement criteria for supply contracts.
- Step up network pressure management and district metering to reduce network leakage.
- Step up refurbishment and replacement of pumpsets to improve energy efficiency.
- Expedite mains replacement and rehabilitation to curb loss of water through leakage.
- Conduct surveys to gauge customer perception of our environmental performance.
- Publicise environmental performance on home page and invite comments from the public.
- Step up staff training on environmental awareness.

盛放的荷花。 A water lily.

不受污染的水塘美景。
A scenic, pollution-free reservoir.

水塘附近經悉心保護的集水區。
A well-kept catchment area near a reservoir.

目標及成績

我們現已採取一系列符合本署環保政策的措施：

節約能源及資源

目標	採取的措施
■ 提高供水過程的能源效益。	■ 設立能源管理委員會，監察及提出節省能源的措施。 ■ 在主要水務設施進行能源審核，找出需要提高能源效益之處。 ■ 密切監察抽水泵組的效能，包括定期進行測試，把效益欠佳的泵組以新型號取代。 ■ 提升員工關注環保的意識和知識。
■ 減少因系統滲漏而流失食水以節約能源，並減少濾水過程中所產生的固體廢物。	■ 在分配網絡實施主動測漏及水壓管理計劃。 ■ 迅速回應漏水及爆水管事故。 ■ 擬備更換及修復水管的長遠計劃。
■ 在濾水廠及其他操作範疇節約用水。	■ 把清潔濾水池的反沖水循環再用。 ■ 向員工提倡節約用水。
■ 透過需求管理及提供其他水源，鼓勵珍惜食水。	■ 採用獨立水錶量水及累進式的定價策略，提倡節約用水。 ■ 使用海水沖廁。 ■ 降低沖廁水箱的容量。
■ 減少用紙及避免浪費紙張。	■ 把用過紙張空白的一面列印便箋及外來的傳真。 ■ 減少印存副本。 ■ 以電郵與署內、其他政府部門及決策局的人員溝通。 ■ 採用普通紙傳真機及雙面影印機。 ■ 雙面列印招標文件及報告。
■ 減少其他辦公室廢物。	■ 推行電子化物料及工作定單系統，減少編印報告及單據。 ■ 透過利用環保產品例如可循環再用的鐳射打印機和上色劑筒、原芯筆(而非鉛筆)，以及再次使用信封及散頁文件夾，奉行節約。 ■ 多加收集廢紙，供循環再造用。

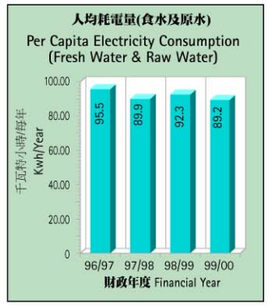
Aims and Achievements

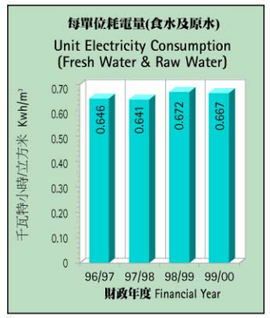
Some of the measures already being taken in compliance with our environmental policy:

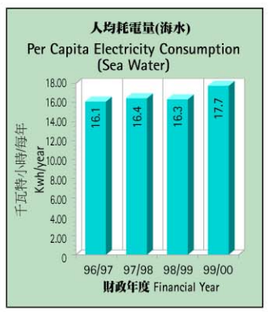
Minimisation of Energy and Resources Use

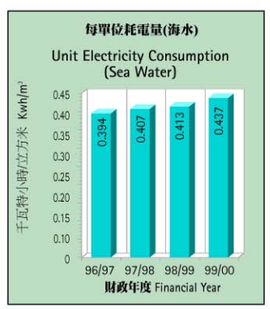
Aim	Measures Taken
■ Improvement of energy efficiency of water supply operations.	■ An Energy Management Committee has been set up to oversee and take forward energy saving measures. ■ Conducting energy audits at major waterworks installations to identify areas for improving energy efficiency. ■ Close monitoring of the efficiency of pumpsets, including conducting regular pump tests and replacement of less efficient ones by new models. ■ Raising staff awareness and knowledge of environmental concerns.
■ Reduction of water loss through system leakage to cut energy consumption and production of solid waste due to water treatment.	■ Implementing proactive leak detection and pressure management programme in the distribution network. ■ Responding rapidly to leaks and mains bursts. ■ Formulation of long-term mains replacement and rehabilitation programmes.
■ Reduction of water consumption in water treatment and other areas of our operations.	■ Recycling filter backwash water after filter cleaning. ■ Promoting water conservation among staff.
■ Promotion of efficient water use through demand management and providing alternative sources.	■ Adoption of individual metering and a progressive increasing pricing to promote water conservation. ■ Use of sea water for flushing. ■ Reduction of flushing cistern volume.
■ Reduction of paper usage and wastage.	■ Use of blank side of used papers for memos and incoming faxes. ■ Less use of photocopies. ■ Communication through e-mail internally and with other government departments and bureaux. ■ Use of plain paper fax machines and double-side photo-copiers. ■ Printing on both sides of paper for tender documents and reports.

以最先進的儀器進行地下喉管測漏工作。
Using state-of-the-art equipment to detect undergound pipe leaks.









防止污染

目標

- 減少因排放污水及固體廢物對環境所造成的影響。
- 盡量減少供水過程、建造及維修工程等對環境造成的影響。
- 保護集水區免受污染。

採取的措施

- 為全部現有及新建的濾水廠設置污泥處理及脫水設施，以便把固體廢物製成污泥餅，送往適當的堆填區棄置。
- 把化學品的投放量調校至恰到好處，盡量減低濾水時所產生的固體廢物。
- 採用流動濾水裝置先行過濾清洗配水庫的污水，才排放入排水系統。
- 在建造、拆卸及維修保養合約中加入條文，規定承建商把拆建廢物棄往認可堆填區，並嚴格遵守有關排放廢氣及發出噪音的法例。
- 以電力泵取代柴油驅動泵，並盡量減少現有柴油驅動泵的操作時間。以FM 200取代哈龍滅火系統。
- 在海水抽水站以電解產氯機代替加氯裝置。
- 執行水務設施條例，嚴禁排出的污水流入集水區。
- 管制集水區的發展項目，以防止污染。
- 聯同環境保護署、地政總署及漁農自然護理署密切監察集水區的活動及水質。

能源消耗 Energy Consumption

作為全港三大電力用戶之一，水務署年內耗用逾7億2 000萬千瓦特小時的電力，與上一年的耗電量比較，有輕微的升幅。本署的用電需求主要來自濾水廠及抽水站的操作。

供水所需的總耗電量，視乎輸水量及平均抽水壓力而定。

自一九九六/九七年起，供應食水及原水所用的人均耗電量一直下降，但海水供應的每單位耗電量卻見上升。

我們已加強測試抽水泵，進一步提高抽水效率。

As one of the three major users of power in Hong Kong, mostly for the operation of its treatment works and pumping stations, the WSD consumed over 720 million kilowatt hours (kwh) of electricity during the year. This was slightly more than the previous year's consumption.

Total electricity consumption arising from water supply operations depends on the amount of water delivered and the average pumping head.

There has been a decline in per capita electricity consumption of fresh and raw water since 1996/7, but a rise in the unit consumption of sea water supply.

We have stepped up pump testing to further improve pumping efficiency.

Aim

- Reduction of other office waste.

Measures Taken

- Implementing electronic materials and job order systems to reduce printing of reports and vouchers.
- Economising through use of environmentally-friendly products e.g. recyclable laser printer and toner cartridges, clutch pencils instead of wooden pencils, and reuse of envelopes and loose minute jackets.
- Increasing collection of waste paper for recycling.

Pollution Prevention

Aim

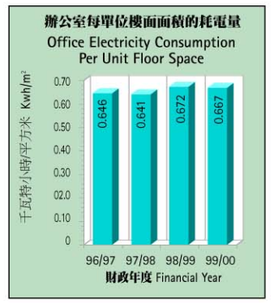
- Reduction of environmental impact arising from discharge of effluent and solid waste.
- Minimisation of environmental impacts associated with water supply operations, construction and maintenance works, etc.
- Protection of water gathering grounds from pollution.

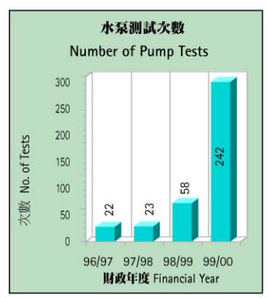
Measures Taken

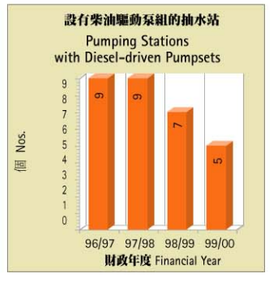
- Providing sludge treatment and dewatering facilities in all existing and new treatment works to convert treatment waste into sludge cakes for disposal to appropriate landfill sites and for strict compliance with air and noise emission legislation.
- Optimising dosages of chemicals to minimise production of solid waste from water treatment.
- Using a mobile treatment unit to treat effluent arising from cleaning of service reservoirs before discharging into drainage system.
- Incorporating into construction, demolition and maintenance contracts the requirements for disposal of construction and demolition waste to approved landfill sites .
- Replacement of diesel-driven pumpsets with electric pumpsets and minimising running time of existing diesel-driven pumpsets and of fire fighting systems of halon with FM 200.
- Replacement of gas chlorination plant by electrochlorinators at sea water pumping stations.
- Enforcement of the Waterworks Ordinance prohibiting polluting discharges in water gathering grounds.
- Controlling developments in water gathering grounds to prevent pollution.

現正於銀鑛灣濾水廠興建的污泥處理設施。

Sludge treatment plant being constructed at Silvermine Bay Treatment Works.







減少廢物 Waste Reduction

整體耗紙量維持在頗為穩定的水平。年內，用紙令數增加，而表格及信封的用量則減少。

我們繼續進行以電力操作泵組取代柴油驅動泵組的計劃，餘下的五個抽水站會在未來數年更換泵組。

年內，約收集得80噸用過的紙張，以便循環再造。

Overall paper consumption remained relatively constant, with an increase in the year in the number of reams used and a decrease in use of forms and envelopes.

Replacement of diesel-driven pumpsets with electrically-operated ones continues, with the remaining five such pumping stations due for replacement in the next few years.

During the year, some 80 tonnes of used paper was collected for recycling.

守法循規

目標	採取的措施
■ 達致全面遵守環保法例的目標。	■ 根據空氣污染管制條例的規定，更換及棄掉石棉水泥管。 ■ 嚴密監察承建商進行的建造及維修保養工程，確保符合噪音及空氣污染管制規例。 ■ 濾水廠排出的所有污水先經處理，才排放入排水系統。 ■ 妥善棄置化學廢物、變壓器油。 ■ 就所有大型基本工程項目進行環境影響評估，減低與其有關的任何負面影響。 ■ 制定全面的應急程序及應變計劃，以應付危急情況，例如洩漏氯氣及主要系統出現故障。

溝通

目標	採取的措施
■ 加強市民珍惜用水及保護環境的意識 。	■ 在網頁提倡珍惜用水。 ■ 為學校、教育機構及青年中心舉辦濾水廠開放日及參觀活動；到屋邨及其他住宅區舉行巡迴展覽。

Compliance

Aim	Measures Taken
■ Achievement of full compliance with environmental legislation.	■ Replacement and disposal of asbestos cement pipes in accordance with the requirements of the Air Pollution Control Ordinance. ■ Close monitoring of construction and maintenance works undertaken by contractors to ensure compliance with the regulations on noise and air pollution. ■ Processing of all effluent from treatment works and service reservoirs before discharge into drainage system. ■ Proper disposal of chemical wastes, transformer oil. ■ Conducting Environmental Impact Assessment (EIA) of all major capital projects and reducing any negative environmental impacts associated with projects. ■ Developing comprehensive emergency procedures and contingency plans to manage emergencies like leakage of chlorine and failure of major systems. ■ Monitoring closely the activities and water quality in water gathering grounds in conjunction with Environmental Protection Department, Lands Department and Agriculture, Fisheries and Conservation Department.

Communication

Aim	Measures Taken
■ Raising public awareness of water conservation and environmental protection.	■ Promotion of water conservation on home page. ■ Holding open days and organising tours to treatment works for schools, educational institutions and youth centres. Sending roving exhibitions to housing estates and other populated areas.

學童學習使用水務署網頁。
School children learn about the WSD home page.

巡迴展覽的展板吸引市民駐足觀看。
Display panels attract viewers at roving exhibition.