

## Head 194 — WATER SUPPLIES DEPARTMENT

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**Controlling officer:** the Director of Water Supplies will account for expenditure under this Head.

**Estimate 2017–18** ..... **\$8,282.1m**

**Establishment ceiling 2017–18** (notional annual mid-point salary value) representing an estimated 4 443 non-directorate posts as at 31 March 2017 rising by 20 posts to 4 463 posts as at 31 March 2018..... **\$1,535.5m**

In addition, there will be an estimated 23 directorate posts as at 31 March 2017 rising by two posts to 25 posts as at 31 March 2018.

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### Controlling Officer's Report

#### Programmes

**Programme (1) Water Supply: Planning and Distribution**  
**Programme (2) Water Quality Control**  
**Programme (3) Customer Services**

These programmes contribute to Policy Area 24: Water Supply, Drainage and Slope Safety (Secretary for Development).

#### Detail

##### Programme (1): Water Supply: Planning and Distribution

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	<b>2017–18 (Estimate)</b>
Financial provision (\$m)	6,999.1	7,241.1	7,265.1 (+0.3%)	<b>7,510.9</b> (+3.4%)
				(or +3.7% on 2016–17 Original)

#### Aim

**2** The aim is to plan and develop water resources and to design, construct, maintain and operate water supply systems in order to provide round-the-clock supplies throughout the year to meet the demands of the territory.

#### Brief Description

**3** The Department is responsible for providing adequate and satisfactory supplies of water to the territory. This work involves:

##### *Fresh water*

- assessing fresh water supply requirements on the basis of providing round-the-clock supply of water throughout the year to meet the demand of the territory;
- developing fresh water resources to cope with such requirements;
- planning, designing and constructing reliable and efficient fresh water supply and distribution systems to meet such requirements in good time; and
- operating and maintaining fresh water supply and distribution systems.

##### *Salt water for flushing*

- assessing salt water supply requirements;
- planning, designing and constructing reliable and efficient salt water supply and distribution systems to meet such requirements in good time; and
- operating and maintaining salt water supply and distribution systems.

**4** In 2016, the Department was able to plan, design and construct new projects for development of fresh water resources and extension of fresh and salt water supplies to new developments and to operate and maintain water supply systems to provide adequate and uninterrupted supplies of water throughout the year.

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5 The key performance measures in respect of water supply are:

### *Targets*

	Target	2015 (Actual)	2016 (Actual)	2017 (Plan)
supply pressure				
fresh water supply—maintaining normally a minimum residual head of between 15 and 30 metres in the distribution systems except at their extremities (%) .....	100	100	100	<b>100</b>
salt water supply—maintaining normally a minimum residual head of 15 metres in the distribution systems except at their extremities (%) .....	100	100	100	<b>100</b>

### *Indicators*

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
projects under planning .....	30	29	<b>29</b>
value of projects under planning (\$m) .....	7,125.6	6,800.0	<b>6,520.0</b>
projects under design .....	27	24	<b>23</b>
value of projects under design (\$m) .....	4,597.0	6,594.8	<b>6,900.2</b>
projects under construction .....	40	37	<b>38</b>
expenditure of works under construction (\$m) .....	4,134.8	3,673.7	<b>3,256.6</b>
fresh water supplied (m <sup>3</sup> ) .....	972 708 000	987 224 000	<b>970 000 000</b>
salt water supplied (m <sup>3</sup> ) .....	272 380 000	260 061 000	<b>283 000 000</b>
days on full supply .....	365	366	<b>365</b>
total treatment works capacity (m <sup>3</sup> /day) .....	5 015 600	5 015 600	<b>5 015 600</b>
total pumping plant capacity (megawatts) .....	349	349	<b>350</b>
leakage rate of water mains (%) .....	15.0	15.2	<b>15.2</b>
education programmes / promotion campaigns on water conservation§ .....	—	3	<b>3</b>
schools joining education programmes on water conservation§ .....	—	210	<b>240</b>

§ New indicator as from 2016.

### *Matters Requiring Special Attention in 2017–18*

6 During 2017–18, the Department will:

- continue to establish the Water Intelligent Network,
- continue with the implementation of the total water management strategy for sustainable use of water resources with focuses on water conservation and water loss management as well as on development of new water resources,
- complete the review of total water management strategy,
- continue with the construction of the advance works for in-situ reprovisioning of Sha Tin water treatment works (South Works),
- continue with the design for a desalination plant at Tseung Kwan O whilst commencing the laying of the trunk water mains in advance,
- complete the financial and legal framework study and commence the construction of an infrastructure in stages for supplying reclaimed water for non-potable purposes in the north-eastern part of the New Territories including Sheung Shui and Fanling,
- complete the feasibility study for the relocation of service reservoirs at Diamond Hill to cavern, and
- continue with the design and construction of the fresh and salt water supply systems in various stages to meet the increase in demand arising from housing development.

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### Programme (2): Water Quality Control

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	<b>2017–18 (Estimate)</b>
Financial provision (\$m)	189.7	210.2	258.1 (+22.8%)	<b>271.4</b> (+5.2%)
				(or +29.1% on 2016–17 Original)

#### *Aim*

7 The aim is to control the quality of water supplied to consumers in accordance with international and the Department's standards.

#### *Brief Description*

8 The Department is responsible for ensuring that the purity, wholesomeness and safety of treated fresh water conform to international standards, i.e. the World Health Organization's Guidelines for Drinking-water Quality (WHO Guidelines), in all respects and at all times. The Department is also responsible for ensuring that the quality of salt water for flushing conforms to the Department's standards. This work involves:

##### *Fresh water*

- water treatment—ensuring that treated water conforms chemically and bacteriologically to the standards stipulated in the WHO Guidelines; and
- water quality control—ensuring that test samples taken from treatment works, service reservoirs, connection points, consumers' taps, etc., conform to the standards stipulated in the WHO Guidelines.

##### *Salt water for flushing*

- water treatment—ensuring that the water supplied conforms chemically and bacteriologically to the Department's standards; and
- water quality control—ensuring that test samples taken from pumping stations, service reservoirs, connection points, etc., conform to the Department's standards.

9 In 2016, the Department achieved the set quality standards in the treatment of water and maintained effective measures in monitoring and controlling the quality of water supplied to consumers.

10 In response to the recommendations of Commission of Inquiry into Excess Lead Found in Drinking Water announced in May 2016, the Department has been working in consultation with the International Expert Panel on Drinking Water Safety on the development of a holistic plan comprising drinking water quality standards, sampling protocols, an enhanced water quality monitoring programme as well as water safety plans to safeguard the quality and safety of drinking water.

11 The Department has commenced to review the existing Waterworks Ordinance (Cap. 102) and Waterworks Regulations (Cap. 102A) to safeguard the safety and quality of drinking water in inside service.

12 The key performance measures in respect of water quality control are:

#### *Targets*

	Target	2015 (Actual)	2016 (Actual)	<b>2017 (Plan)</b>
fresh water quality—water supplied to customers at the connection points complies with the standards stipulated in the WHO Guidelines (%).....	100	100	100	<b>100</b>
salt water quality—water supplied to customers at the connection points complies with Water Quality Objectives set by Water Supplies Department (%).....	96	96	96	<b>96</b>

#### *Indicators*

	2015 (Actual)	2016 (Actual)	<b>2017 (Estimate)</b>
<i>Treated fresh water</i> sampling visits at treatment works, service reservoirs, connection points and consumers' taps^.....	26 455	26 055	<b>26 000</b>

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	2015 (Actual)	2016 (Actual)	2017 (Estimate)
chemical quality satisfying standards (%).....	100	100	<b>100</b>
bacteriological quality satisfying standards (%) .....	100	100	<b>100</b>

^ Revised description of the previous indicator “samples taken from treatment works, service reservoirs, connection points and consumers’ taps” as from 2016 to better reflect the actual work carried out by the Department . Normally, two samples are collected per visit.

### **Matters Requiring Special Attention in 2017–18**

**13** During 2017–18, the Department will carry out the following work to safeguard the quality and safety of drinking water:

- continue to develop drinking water quality standards and sampling protocols,
- implement the enhanced water monitoring programme,
- complete a review on the departmental water safety plan,
- develop templates and checklists for water safety plan for buildings for use by relevant stakeholders of building development, and
- continue to review the existing Waterworks Ordinance and Waterworks Regulations and submit legislative amendment proposals to the Legislative Council in due course.

### **Programme (3): Customer Services**

	2015–16 (Actual)	2016–17 (Original)	2016–17 (Revised)	2017–18 (Estimate)
Financial provision (\$m)	470.1	472.6	478.7 (+1.3%)	<b>499.8</b> (+4.4%)
				(or +5.8% on 2016–17 Original)

### **Aim**

**14** The aims are to provide customer services and to enforce the Waterworks Ordinance and Waterworks Regulations.

### **Brief Description**

**15** The Department is responsible for the provision of efficient and effective services to customers and for taking enforcement action on offences under the Waterworks Ordinance and Waterworks Regulations. This work involves:

- improving efficiency and effectiveness in dealing with customer enquiries and complaints,
- enforcing the Waterworks Ordinance and Waterworks Regulations,
- ensuring timeliness of billing and promptness in updating consumer accounts,
- monitoring closely the level of arrears of water charges, and
- coping with the growth in the number of consumer accounts.

**16** In 2016, the Department continued to implement enhancement measures on the control of the construction, installation, etc. of the inside service, including the control of pipes and fittings, inspection of plumbing works and the management of licensed plumbers, for the safety and quality of drinking water in the inside service.

**17** The key performance measures in respect of customer services are:

### **Targets**

	Target	2015 (Actual)	2016 (Actual)	2017 (Plan)
processing application for taking up of consumership				
by post within seven working days (%)# .....	100	100	100	<b>100</b>
in person at Customer Enquiry Centres (all-purpose counter) within 15 minutes (%).....	100	100	100	<b>100</b>

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	Target	2015 (Actual)	2016 (Actual)	2017 (Plan)
issue of final bill upon closure of account within three working days (%)#.....	100	99.8	100	<b>100</b>
refund of water deposit within nine working days (%)#.....	100	99.9	99.9	<b>99.9</b>
processing application for meter test within eight working days (%)#.....	100	100	99.5	<b>100</b>
processing application for autopay service (upon receipt of notification from banks) within three working days (%)#.....	100	100	100	<b>100</b>
accuracy of water meters (inaccuracy not exceeding +/- 3%) (%).....	100	97.0	97.3	<b>97.5</b>
response time for attendance to fault complaints				
within half a day for fresh water supply fault (%).....	100	100	100	<b>100</b>
within 24 hours for others (%).....	100	100	100	<b>100</b>
notice for planned suspension of water supply issued not less than four working days in advance (%)#.....	100	100	100	<b>100</b>
conducting publicity campaigns and seminars for promotion of combating unauthorised water consumption.....	60	71	71	<b>70</b>
initiating an investigation after receiving a complaint on suspected unauthorised water consumption within one working day (%)#.....	85	91	91	<b>90</b>

# Revised description from “day(s)” to “working day(s)” as from 2017 to avoid ambiguity. Basis for measuring performance remains unchanged.

### *Indicators*

	2015 (Actual)	2016 (Actual)	2017 (Estimate)
no. of consumer accounts.....	2 903 000	2 942 000	<b>2 983 000</b>
fees, water charges and deposits demanded (\$m).....	2,821.0	2,871.0	<b>2,844.0</b>
arrears of water charges at year end in terms of no. of days of water charges demanded.....	0.8	0.9	<b>0.9</b>
prosecutions.....	245	229	<b>245</b>
finest imposed (\$).....	606,600	636,800	<b>700,000</b>
house service inspections due to irregular consumption.....	8 182	8 400	<b>8 800</b>
public enquiries and requests for services.....	1 329 349	1 387 824	<b>1 336 800</b>
disputes and complaints handled.....	15 581	15 684	<b>15 600</b>

### *Matters Requiring Special Attention in 2017–18*

**18** During 2017–18, the Department will continue to:

- review and enhance the control of the construction, installation, etc. of the inside service including the control of pipes and fittings, inspection of plumbing works and the management of licensed plumbers;
- strengthen regulatory control on inside service leakage to minimise water loss in inside service;
- review the support and maintenance of information technology systems to ensure the continual operation and delivery of customer services in a cost-effective manner;
- enhance the billing system; and
- review the water tariff.

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### ANALYSIS OF FINANCIAL PROVISION

	2015-16 (Actual) (\$m)	2016-17 (Original) (\$m)	2016-17 (Revised) (\$m)	2017-18 (Estimate) (\$m)
<b>Programme</b>				
(1) Water Supply: Planning and Distribution .....	6,999.1	7,241.1	7,265.1	<b>7,510.9</b>
(2) Water Quality Control.....	189.7	210.2	258.1	<b>271.4</b>
(3) Customer Services.....	470.1	472.6	478.7	<b>499.8</b>
	7,658.9	7,923.9	8,001.9 (+1.0%)	<b>8,282.1</b> (+3.5%)
				<b>(or +4.5% on 2016-17 Original)</b>

#### Analysis of Financial and Staffing Provision

##### Programme (1)

Provision for 2017-18 is \$245.8 million (3.4%) higher than the revised estimate for 2016-17. This is mainly due to the increased provision for purchase of water under the water supply agreement, increase in requirement for replacing ageing plant and equipment, partly offset by reduced provision for expenses on contract maintenance. In addition, there will be a net increase of three posts in 2017-18.

##### Programme (2)

Provision for 2017-18 is \$13.3 million (5.2%) higher than the revised estimate for 2016-17. This is mainly due to the increased provision for creation of seven posts to take forward the recommendations of the Commission of Inquiry into Excess Lead Found in Drinking Water, consultancy studies for safeguarding drinking water quality and purchase of water treatment chemicals, partly offset by reduced requirement for acquisition of laboratory equipment.

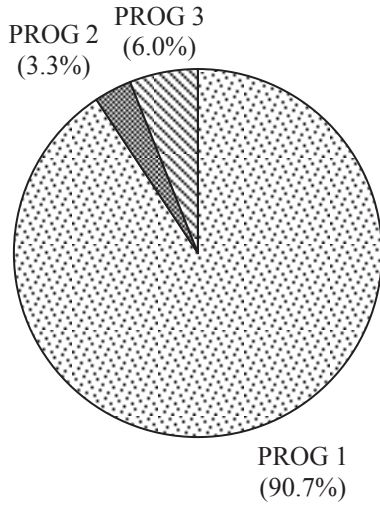
##### Programme (3)

Provision for 2017-18 is \$21.1 million (4.4%) higher than the revised estimate for 2016-17. This is mainly due to the increased provision for operating expenses. In addition, there will be creation of 11 civil service posts in 2017-18 for conversion of non-civil service contract positions and agency staff, and creation of one civil service post for handling the additional workload arising from the control of unauthorised fresh water cooling towers.

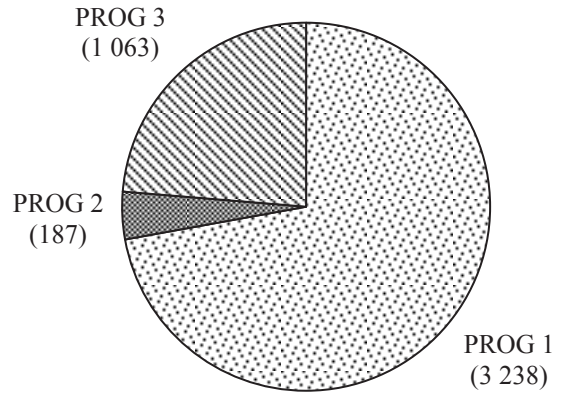
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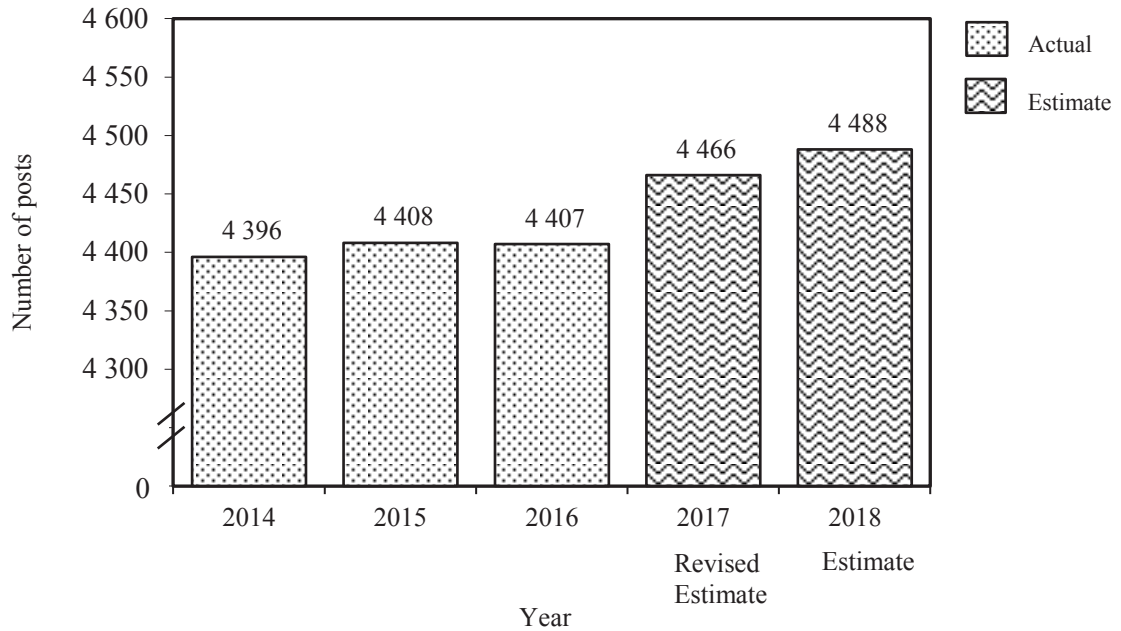
*Allocation of provision  
to programmes  
(2017-18)*



*Staff by programme  
(as at 31 March 2018)*



*Changes in the size of the establishment  
(as at 31 March)*



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Sub-head (Code)	Actual expenditure 2015-16	Approved estimate 2016-17	Revised estimate 2016-17	<b>Estimate 2017-18</b>	
	\$'000	\$'000	\$'000	<b>\$'000</b>	
<b>Operating Account</b>					
Recurrent					
000	Operational expenses .....	3,326,680	3,361,935	3,439,875	<b>3,482,132</b>
223	Purchase of water .....	4,319,550	4,543,660	4,543,660	<b>4,788,290</b>
	Total, Recurrent.....	<u>7,646,230</u>	<u>7,905,595</u>	<u>7,983,535</u>	<b><u>8,270,422</u></b>
	Total, Operating Account .....	<u>7,646,230</u>	<u>7,905,595</u>	<u>7,983,535</u>	<b><u>8,270,422</u></b>
<b>Capital Account</b>					
Plant, Equipment and Works					
661	Minor plant, vehicles and equipment (block vote).....	9,125	18,322	18,322	<b>11,672</b>
	Plant, vehicles and equipment.....	3,592	—	—	<b>—</b>
	Total, Plant, Equipment and Works.....	<u>12,717</u>	<u>18,322</u>	<u>18,322</u>	<b><u>11,672</u></b>
	Total, Capital Account.....	<u>12,717</u>	<u>18,322</u>	<u>18,322</u>	<b><u>11,672</u></b>
	Total Expenditure .....	<u><u>7,658,947</u></u>	<u><u>7,923,917</u></u>	<u><u>8,001,857</u></u>	<b><u><u>8,282,094</u></u></b>



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### Details of Expenditure by Subhead

The estimate of the amount required in 2017–18 for the salaries and expenses of the Water Supplies Department is \$8,282,094,000. This represents an increase of \$280,237,000 over the revised estimate for 2016–17 and \$623,147,000 over the actual expenditure in 2015–16.

#### Operating Account

##### Recurrent

**2** Provision of \$3,482,132,000 under *Subhead 000 Operational expenses* is for the salaries, allowances and other operating expenses of the Water Supplies Department.

**3** The establishment as at 31 March 2017 will be 4 466 permanent posts. It is expected that there will be a net increase of 22 posts including two supernumerary posts in 2017–18. Subject to certain conditions, the controlling officer may under delegated power create or delete non-directorate posts during 2017–18, but the notional annual mid-point salary value of all such posts must not exceed \$1,535,481,000.

**4** An analysis of the financial provision under *Subhead 000 Operational expenses* is as follows:

	2015–16 (Actual) (\$'000)	2016–17 (Original) (\$'000)	2016–17 (Revised) (\$'000)	2017–18 (Estimate) (\$'000)
Personal Emoluments				
- Salaries.....	1,546,556	1,594,373	1,614,255	1,653,125
- Allowances.....	120,671	120,360	127,207	127,207
- Job-related allowances.....	8,840	9,156	8,942	9,442
Personnel Related Expenses				
- Mandatory Provident Fund contribution.....	6,588	7,896	7,218	9,304
- Civil Service Provident Fund contribution.....	30,210	39,076	40,846	52,992
Departmental Expenses				
- Light and power.....	655,890	689,800	667,992	667,992
- Hire of services and professional fees .....	101,378	105,368	114,851	110,058
- Fuel and lubricating oil .....	159	170	170	170
- Specialist supplies and equipment .....	77,100	90,235	114,495	124,495
- Maintenance materials .....	54,903	57,653	59,160	59,160
- Contract maintenance .....	586,215	505,596	530,415	501,606
- General departmental expenses .....	138,170	142,252	154,324	166,581
	3,326,680	3,361,935	3,439,875	3,482,132

**5** Provision of \$4,788,290,000 under *Subhead 223 Purchase of water* is for the purchase of water from Guangdong.

#### Capital Account

##### Plant, Equipment and Works

**6** Provision of \$11,672,000 under *Subhead 661 Minor plant, vehicles and equipment (block vote)* represents a decrease of \$6,650,000 (36.3%) against the revised estimate of 2016–17. This is mainly due to reduced requirements in 2017–18 for acquisition of laboratory equipment and replacement of ageing plant and equipment.