

CONTROLLING OFFICER'S REPLY**DEVB(W)077****(Question Serial No. 0798)**

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (1) Water Supply: Planning and Distribution

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Regarding water supply in Hong Kong:

1. What was the water consumption in Hong Kong in the past five years?
2. What were the quantities of water supply from the various reservoirs of Hong Kong? What is the percentage of such quantities in the total water supply?
3. What were the quantities of water supply under the Dongjiang (DJ) water supply agreement and the actual quantities of water delivered in the past five years?

Asked by: Hon CHAN Hak-kan (Member Question No. 34)

Reply:

1. The fresh water consumption data in the past five years is as follows:-

Year	Fresh Water Consumption (million cubic metres)
2012	935
2013	933
2014	959
2015	973
2016	987

2. The water supply quantities of various impounding reservoirs, excluding Dongjiang (DJ) water, and their percentages of the total fresh water consumption in the past five years are as follows -

Year	Water Supply Quantities (million cubic metres)								Percentage of water supply from Impounding Reservoirs (%)
	Plover Cove	Tai Lam Chung	Shek Pik	High Island	Shing Mun & Reception	Lower Shing Mun	Others including Kowloon Group and Tai Tam Group	Total	
2012	67.8	33.6	34.5	24.4	21.1	33.0	11.6	226	24.2%
2013	90.4	58.5	30.1	54.6	19.1	58.3	10.0	321	34.4%
2014	51.8	37.0	39.3	29.8	19.5	44.9	12.7	235	24.5%
2015	25.3	31.1	34.2	46.1	17.1	40.6	12.6	207	21.3%
2016	77.7	53.3	46.4	78.9	9.3	76.4	16.0	358	36.3%

3. In the past five years, the annual supply ceiling in the DJ water supply agreements is 820 million cubic metres and the actual supply quantities are as follows:-

Year	Actual Supply Quantities (million cubic metres)
2012	709
2013	612
2014	724
2015	766
2016	629

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)078****(Question Serial No. 0802)**Head: (194) Water Supplies DepartmentSubhead (No. & title): (000) Operational ExpensesProgramme: (1) Water Supply: Planning and DistributionControlling Officer: Director of Water Supplies (Enoch T S LAM)Director of Bureau: Secretary for DevelopmentQuestion:

What were the numbers of reports of fresh water main bursts and salt water main bursts in various districts that Water Supplies Department received in each of the past three years? What was the quantity of fresh water wasted each year? What is the progress of the Replacement and Rehabilitation Programme for water mains?

Asked by: Hon CHAN Hak-kan (Member Question No. 38)Reply:

The number of water main burst cases in 2014, 2015 and 2016 by districts are tabulated below –

District	Fresh Water			Salt Water		
	2014	2015	2016	2014	2015	2016
Central & Western	0	4	3	5	3	0
Eastern	2	2	7	1	4	4
Islands	6	3	9	0	0	0
Southern	2	2	3	1	1	1
Wan Chai	3	0	2	1	1	1
Kowloon City	6	9	7	9	16	11
Kwun Tong	9	2	2	19	4	7
Sham Shui Po	2	2	1	4	3	3
Wong Tai Sin	3	2	0	2	4	0
Yau Tsim Mong	5	5	4	14	12	3
North	3	7	1	1	0	1
Sai Kung	2	4	2	2	2	4
Sha Tin	9	6	5	9	2	1
Tai Po	8	3	2	8	12	6

Kwai Tsing	8	8	3	9	6	7
Tuen Mun	3	3	2	1	4	0
Tsuen Wan	3	1	3	1	2	3
Yuen Long	12	6	8	0	0	0
Total	86	69	64	87	76	52

The amount of water drained away due to fresh water main burst was less than 0.01% of the total fresh water supplied.

The replacement and rehabilitation (R&R) of about 3 000 km water mains programme was implemented in stages starting from 2000. All stages were substantially completed at end December 2015. The outstanding works mainly comprise connection of the newly replaced/rehabilitated watermains to the customers and the subsequent road reinstatement works.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)079

(Question Serial No.0803)

Head: (194) Water Supplies Department
Subhead (No. & title): (000) Operational Expenses
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

What is the progress of conversion to salt water supply for flushing in rural areas of the New Territories in the past three years?

Asked by: Hon CHAN Hak-kan(Member Question No. 39)

Reply:

Currently, salt water is supplied for toilet flushing in the metropolitan areas and most of the new towns. It saves about 270 million cubic meters of fresh water on average every year, corresponding to about 22% of the total water consumption in Hong Kong.

The salt water supply system has been continuously expanded. Following the completion of the infrastructure for the supply of salt water to North West New Territories (including Tin Shui Wai, Yuen Long and Tuen Mun East) in 2015, conversion of flushing supply in the districts to salt water was being implemented in two phases starting from Tin Shui Wai, Yuen Long Industrial Estate, Tung Tau Industrial Estate and more than 20 large housing estates in the vicinity of Yuen Long Town as Phase 1. Conversion works in Tin Shui Wai as part of Phase 1 was completed in end 2016 with an additional 300,000 population served by seawater flushing. Conversion works in the remaining industrial estates and large housing estates in Phase 1 are now underway and scheduled for completion in 2018. The conversion works of Phase 2 covering Yuen Long Town and Tuen Mun East will commence in 2018 for completion by 2020.

We will continue to review the extension of salt water supply to the other areas in New Territories taking into account the cost effectiveness and technical viability of such extension.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)080

(Question Serial No.1274)

Head: (194) Water Supplies Department
Subhead (No. & title): (000) Operational Expenses
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

The Department expects that it will complete the review of total water management strategy this year. When there are results from the review, how can the public participate in the formulation of the water management strategy in future?

Asked by: Hon CHENG Chung-tai (Member Question No. 25)

Reply:

The consultants for the Review of Total Water Management (TWM) Strategy are currently studying the water management initiatives primarily to meet the long-term demand of water supply in Hong Kong. We plan to engage stakeholders, including relevant advisory bodies, green groups, professional institutions and academics to provide views on the results of the TWM Strategy review in the latter half of 2017.

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)081****(Question Serial No. 0034)**

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (3) Customer Services

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

What was the number of applications for meters in each of the past three years (i.e. from 2014 to 2016)? What was the respective number of applications in the catering industry? What was the average, longest and shortest time needed for handling applications for meters and completing installation of meters in each year of the same period? What was the respective number of applications in the catering industry? How many complaints about meters were received in each year of the same period? What was the respective number of complaints in the catering industry?

Asked by: Hon CHEUNG Yu-yan, Tommy (Member Question No. 33)

Reply:

The applications for new meters mainly comprise new building cases and applications from trades including catering industry. The whole approval process of the applications generally involves vetting of plumbing proposals submitted by applicants, checking of the pipes/fittings submissions and inspection of the completed plumbing works. Water Supplies Department (WSD) does not readily have information on the processing time needed for handling these applications, but we can capture the total processing time of the whole approval process, i.e. from first application for new meters to the final approval of the completed works. The total processing time has included not only the time taken by WSD to handle the application but also the time taken by the applicants for submission of revised proposals, supplementary information and rectification of defective works. However, for a general indication, we have presented below the numbers of applications for new meters and the total processing time for new buildings and catering industry, in the past three years from 2014 to 2016 -

	2014		2015		2016	
	New buildings	Catering	New buildings	Catering	New buildings	Catering
Total number of applications	2510	379	2224	305	1871	136

	2014		2015		2016	
	New buildings	Catering	New buildings	Catering	New buildings	Catering
received						
Average total processing time of completed cases (days)#	155 (12 – 797)*	81 (11 – 444)*	222 (15 – 647)*	129 (15 – 549)*	150 (26 – 325)*	105 (37 – 374)*

The figures are derived from cases received in that particular year and with approval obtained on completion of works as at 28 February 2017.

* The numbers in bracket represent the shortest and longest total processing time in days.

The average total processing time in 2015 is comparatively longer than that in 2014 and 2016. This is mainly due to the implementation of various enhancement measures in the wake of the excess-lead-in-water incident in July 2015 including the new requirement for imposing a validity period of pre-approved pipes/fittings, new inspection items on completed works and additional testing requirements for effecting water supply. To speed up the processing of applications, WSD has introduced the following enhancement measures since 2016 :

- Increased staff resources by redeploying existing staff as well as recruiting retired civil servant and contract staff to clear backlog.
- Launched a pilot scheme of which Licensed Plumbers could opt for carrying out interim inspection of laid underground pipes or final inspection of new building projects to shorten the time for interim or final inspections.
- Implemented enhanced procedures to streamline the plumbing proposal vetting, material submission and inspection procedures.
- Continual review of internal workflow to speed up the approval process.

In regard to the complaints about meters, the numbers of complaints about meters in 2014, 2015 and 2016 are 278, 225 and 282 respectively. The complaints mainly concerns defective metering, wrong meter arrangement and water billing. We do not maintain separate complaint record for the catering industry.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)082

(Question Serial No. 0035)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (3) Customer Services
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Under this programme, 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. Please provide details, including the specific timetable for the reviews, the content of enhancement measures, and the required expenditure and manpower, etc. What are the differences in the required expenditure and manpower as compared with the previous year?

Asked by: Hon CHEUNG Yu-yan, Tommy (Member Question No. 34)

Reply:

In order to enhance the control of the installation and construction, etc. of the inside service, the Water Supplies Department (WSD) has taken forward the following measures:

Material Control

- (a) To enhance control of pipes and fittings installed in inside service, WSD has imposed a five-year validity period of general acceptance ("GA") for water supply pipes and fittings since August 2015. WSD has also stipulated the requirements for submission of supporting document of the lead free soldering materials.
- (b) To further enhance the plumbing material control, WSD plans to introduce a surveillance programme which involves carrying out verification test on plumbing products with valid "GA" in Q3 of 2017. The WSD will deploy existing staff to carry out the surveillance programme. Besides, WSD will set up a new material laboratory for testing the plumbing products in 2017-18, which will incur approximately \$6 million per year.

- (c) WSD formed an Expert Committee on Plumbing Materials in December 2016 to advise on matters related to plumbing materials.

Inspection and Approval

- (d) To enhance the inspection and approval of the inside service, WSD has stipulated the requirements for carrying out non-destructive tests on solder pipe joints and water sampling test for testing of heavy metals including lead since August 2015.
- (e) WSD plans to carry out risk-based random inspection during construction stage on the new installation of plumbing works in Q2 of 2017. WSD will create two civil service posts, which will incur approximately \$0.8 million per year, for this purpose.

Management and Training of Licensed Plumbers

- (f) To strengthen the management of the licensed plumbers (LPs), WSD has developed a detailed checklist for inspection and approval of completed plumbing works and enhanced the point penalty system for LPs stressing the importance of using compliant plumbing materials and proper discharging of the duties of LPs since October 2015.
- (g) To increase the awareness of LPs and plumbing workers on water safety, WSD in conjunction with Vocational Training Council and Construction Industry Council (CIC) have reviewed and strengthened the syllabi of relevant training courses to cover the knowledge on the potential causes and hazards of drinking water contamination, and their precautionary measures starting from September 2016.
- (h) To update LPs on the advancement in technology and of plumbing industry and to meet the expectation of the public, WSD in collaboration with the plumbing industry stakeholders launched the Voluntary Continuing Professional Development Scheme for Licensed Plumbers in October 2016.

Collaborations with the Trade and Experts

- (i) WSD established a Technical Committee on Plumbing in March 2016 to collect and consider views, comments or feedback received from the industry on plumbing matters.
- (j) To enhance the quality and management of plumbing works, WSD and the CIC jointly formulated a good practice guide on plumbing installation in March 2017.

Legislative Review

- (k) WSD is conducting a holistic review of the Waterworks Ordinance (Cap. 102) and Waterworks Regulations (Cap. 102A). Under the first stage of the legislative review, WSD has identified the following priority amendments -

- For enhancing the management of LPs - designating suitably qualified persons for carrying out plumbing works and stipulating clearly the duties of LPs.
- For material control - updating the applicable standards and requirements of plumbing materials.

WSD plans to submit the priority legislative amendments to the Legislative Council for deliberation in the Q2 of 2017.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)083

(Question Serial No. 1601)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

The Department says it 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. In connection with this, would the Department inform this Committee of the expenditure on the review of the legislation and, taking the review into account, work on education measures such as publicity and talks for the construction industry in this financial year; please provide the relevant objectives of the work year and timetable.

Asked by: Hon HO Kai-ming (Member Question No. 21)

Reply:

Water Supplies Department (WSD) has set forth a holistic review on the Waterworks Ordinance (WWO) and its Regulations (WWR) with a view to revamping the legislation to, inter alia, safeguard the quality of drinking water in Hong Kong. Legislative amendments will be made in stages with the first stage focused on some prioritized items including the duties of licensed plumbers, the requirements for designated persons to carry out the plumbing works and the latest standards for all plumbing material and components. These amendments will be submitted to the Legislative Council for consideration in the 2nd quarter of 2017.

In regard to the expenditure on the legislative review, apart from six existing civil service posts redeployed for the work, WSD created three time-limited civil service posts and one non-civil service position in 2016-17, which will incur approximately \$4.4 million per year. In addition, the WSD will create one time-limited directorate post which will incur approximately \$1.7 million in 2017-18.

Moreover, WSD will carry out the publicity work, including publication of leaflet and guidelines for the public and plumbing industry stakeholders tentatively in Q3/Q4 2017, without additional expenditure on the first stage of the legislative amendments in 2017-18.

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)084****(Question Serial No. 1662)**

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (1) Water Supply: Planning and Distribution

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Regarding current maintenance of fresh water mains and salt water mains, would the Department inform this Committee:

- (1) Please list in chronological order cases of underground fresh and salt water main bursts that have occurred in Kowloon East since January 2016 by location of occurrence, cause of the burst and time required for repairs;
- (2) the length of the fresh and salt water mains replaced due to the above water main bursts and the expenditure involved;
- (3) since some water main bursts may have been caused by execution of works at construction sites, is there a communication and precautionary mechanism between the Department and contractors for works to reduce the damage of water mains by works; if yes, what are the details?

Asked by: Hon HO Kai-ming (Member Question No. 22)

Reply:

- (1) Bursts of fresh water mains and salt water mains in Kowloon East from 1 January 2016 to 28 February 2017 are tabulated below -

Case No.	Incident Date	Location	Type of Water Mains	Main Diameter (mm)	Cause of Main Bursts	Time Taken for Repairs (hours)
1	13-Jan-2016	Lai Yip Street near Hoi Bun Road, Kwun Tong	Salt water	600	Corrosion	29.0
2	19-Jan-2016	Hiu Kwong Street near Hiu Lai Court, Kwun Tong	Salt water	250	Corrosion	15.9

Case No.	Incident Date	Location	Type of Water Mains	Main Diameter (mm)	Cause of Main Bursts	Time Taken for Repairs (hours)
3	26-Jan-2016	Hip Wo Street near Hiu Kwong Street, Kwun Tong	Salt water	375	Corrosion	77.3
4	03-Feb-2016	Hiu Kwong Street near Hiu Lai Court, Kwun Tong	Salt water	250	Corrosion	29.4
5	11-Feb-2016	Hoi Bun Road near Lai Yip Street, Kwun Tong	Salt water	300	Corrosion	40.8
6	09-Mar-2016	Sau Mau Ping Salt Water Pumping Station, Kwun Tong	Salt water	600	Corrosion	30.6*
7	19-Apr-2016	Wang Chiu Road near Kai Lai Road, Kowloon Bay	Fresh water	150	Ground movement	6.9
8	15-May-2016	Junction of Hip Wo Street and Hiu Kwong Street, Kwun Tong	Salt water	375	Corrosion	9.5
9	20-Sep-2016	Hong Lee Road near Kung Lok Road, Kwun Tong	Fresh water	200	Ageing	116.0*

Note (*): There was no water supply interruption in the case.

The Water Supplies Department (WSD) has performance targets that maximum duration of supply interruption due to fresh water main burst for 85% of the bursts should be within 8 hours and 70% within 7 hours. For the two fresh water main bursts tabulated above, the repair for case no. 9 took longer time than 7 hours. However, for this case no. 9, there was no water supply interruption as an alternative supply source was made available, and WSD took the opportunity to replace not just the burst spot but also a longer section (which was found in poor condition) to reduce the risk of further main burst. Moreover, an old salt water main running close to the fresh water main was also replaced at the same time.

The repairs of the salt water main bursts generally took longer time due to such reasons as congested ground conditions with lots of pipes and trunks of the utility companies, breaking of large concrete blocks, fabrication of special pipe fittings to suit site conditions, and time for setting of concrete for anchor blocks.

In view of the repeated salt water main bursts in Hoi Bun Road (cases no. 1 and 5), Hiu Kwong Street (cases no. 2 and 4) and Hip Wo Street (cases no. 3 and 8), WSD has taken the opportunity to replace longer sections of the water mains in poor condition to reduce the risk of further main burst.

- (2) Total lengths of fresh and salt water mains replaced as per the above incidents and the corresponding costs of repairs are tabulated below –

	Length of Water Main Replaced (m)	Cost of Repairs
Fresh Water Main	23	\$181,000
Salt Water Main	36	\$2,307,000
Total	59	\$2,488,000

- (3) A contractor undertaking excavation works in government land is required under the conditions of the excavation permit issued by relevant government authorities to procure mains record plans from WSD before commencing the excavation works. Upon receipt of a contractor's request, WSD will, apart from providing the mains record plans, also request the contractor to comply with WSD's conditions for protection of water mains, such as checking the actual positions of water mains by hand dug trial pits. WSD will also bring to the contractor's attention the two WSD publications "Guidelines for Excavation Near Water Mains" and "How to Prevent Damage to Water Mains?", which are available on WSD's website. Moreover, WSD's trench inspection team will patrol construction sites with works in the vicinity of water mains from time to time to ensure water mains are properly protected.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)085

(Question Serial No. 2366)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (2) Water Quality Control

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Please list the number of drinking water samples from public rental housing estate flats that the Department collected for testing, estates involved, blocks, floors, number of flats and expenditure incurred in the past five years; also, list the estimated expenditure for sample testing of drinking water of public rental housing estate flats in 2017-18.

Asked by: Hon KWOK Ka-ki (Member Question No. 221)

Reply:

The Water Supplies Department (WSD) under the current water quality monitoring programme takes random water samples at publicly accessible consumers' taps to check the quality of water as supplied to consumers. These samples are not taken from taps inside individual flats including those of public rental housing (PRH) estates.

That said, arising from the excess lead in drinking water in PRH estates incident in 2015, WSD assisted the Housing Authority in conducting water sampling and testing at PRH estates. The total number of water samples taken by WSD was about 7,500 in all PRH estates. This water sampling and testing exercise was charged to the Housing Authority and the total expenditure in carrying out the water sampling tests was about \$5.6M in 2015-16.

WSD is currently working on the details of an enhanced water quality monitoring programme to strengthen monitoring of the quality of drinking water from source to taps. The enhanced water quality monitoring programme will involve taking and testing water samples from premises over the territory including PRH estates. The resource requirements and the procedures for the implementation of the enhanced programme will be determined in due course.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)086

(Question Serial No. 2501)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Regarding distribution of water supply, would the Department inform this Committee:

1. Please list the anticipated consumption, quantity of purchase, actual consumption and purchased but unconsumed quantity of Dongjiang (DJ) water each year and each month in the past 10 years;
2. What was the expenditure on purchasing DJ water in the past 10 years; also, list the estimated expenditure in 2017-18.
3. Please list the quantity of rainwater collected in Hong Kong's reservoirs each month, instances of discharge, quantity of discharge and reason for discharge in the past five years.
4. What are the anticipated daily and monthly output and unit cost per cubic metre of water desalination of the desalination plant in Tseung Kwan O?

Asked by: Hon KWOK Ka-ki (Member Question No. 222)

Reply:

- (1) The local yield is inadequate to meet the fresh water demand in Hong Kong. It also fluctuates significantly and is unreliable. In order to safeguard our water security, the "package deal lump sum" approach is adopted in the Dongjiang (DJ) water supply agreement which secures a water right in the form of an annual supply ceiling with a view to maintaining water supply round-the-clock even under the extreme drought condition with a return period of 1 in 100 years.

Under the "package deal lump sum" approach, Hong Kong is assured of an adequate DJ water supply up to the annual supply ceiling in the agreements. This annual supply ceiling is obtained on the basis of a detailed analysis taking into account the forecast fresh water demand and local yield to ensure 99% reliability of water supply during the

agreement periods.

In the past ten years, the annual supply ceiling in the DJ water supply agreements is 820 million cubic metres (mcm) and the actual supplied quantities of DJ water are tabulated below:

Year/ Month	Monthly Consumption (mcm)												Annual Consumption (mcm)	Total Purchased Not Consumed (mcm)
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
2007	59.8	55.8	61.8	59.8	61.8	59.8	61.8	61.8	68.6	83.7	81.0	0	715.7	104.3
2008	72.0	69.8	74.4	72.0	74.4	51.2	31.0	31.0	45.1	49.6	75.0	7.5	653.0	167.0
2009	54.0	61.6	68.2	66.0	62.0	69.0	71.3	62.0	60.0	65.1	79.9	5.4	724.5	95.5
2010	56.1	57.2	63.3	61.3	63.3	61.2	63.3	73.8	80.2	62.2	38.9	0	680.8	139.2
2011	70.3	67.8	74.5	67.0	69.2	75.9	75.1	62.0	81.0	83.7	81.0	10.8	818.3	1.7
2012	65.8	73.4	77.0	60.9	56.9	47.7	49.3	62.4	49.9	83.7	79.6	2.6	709.2	110.8
2013	78.3	75.2	68.8	66.6	68.3	50.7	32.6	32.6	38.8	46.9	51.4	1.3	611.5	208.5
2014	69.8	67.2	72.3	69.3	52.8	41.7	40.3	40.3	79.0	83.7	81.0	27.0	724.4	95.6
2015	54.0	75.6	83.7	80.5	68.2	68.7	63.3	70.8	61.4	82.2	55.1	2.8	766.3	53.7
2016	75.2	66.1	53.0	67.5	43.1	47.5	49.2	47.2	74.6	56.6	47.7	1.3	629.0	191.0

- (2) The expenditures on purchasing DJ water in the past ten years from 2007 to 2016 are shown in the following table:

Year	Expenditure on purchasing DJ water (\$ million)
2007	2,494.80
2008	2,494.80
2009	2,959.00
2010	3,146.00
2011	3,344.00
2012	3,538.70
2013	3,743.30
2014	3,959.34
2015	4,222.79
2016	4,491.52

In 2017, the estimated expenditure on purchasing DJ water is \$4,778.29 million. The current DJ water supply agreement is for 2015 to 2017. The price of DJ water after 2017 is subject to a new supply agreement to be agreed between Guangdong authorities and Hong Kong.

(3) The annual net yield of reservoirs in the past five years was tabled below:-

Annual net yield (mcm)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	0.4	0.5	1.4	31.4	36.0	35.7	77.6	21.5	8.2	1.1	1.2	2.0
2013	-0.7	-0.9	4.9	19.4	67.3	62.6	54.5	67.9	52.1	5.4	0.8	2.4
2014	-1.2	1.0	14.2	15.6	84.1	40.3	29.9	33.0	12.1	1.2	-0.7	-1.6
2015	1.5	1.2	1.4	1.7	63.7	24.3	44.7	28.5	15.1	38.9	3.3	1.4
2016	23.6	8.0	16.4	27.8	50.9	46.7	28.1	75.7	34.7	57.1	13.9	1.7

Note: Negative figure means the quantity of rainfall collected by reservoirs is less than losses primarily due to evaporation.

Overflow was locally collected rainwater naturally discharged from small and medium reservoirs during heavy and continuous rainstorms. As such, there was no overflow for large reservoirs including Plover Cove and High Island reservoir for the past five years. There is no overflow in the past five years for Lower Shing Mun reservoir due to its high discharge rate to Lower Shing Mun supply basin. The occurrences of overflow from reservoirs in terms of no. of days in the month and the respective total quantities in the past five years were tabulated below:

Month	Overflow Instance / Overflow Quantities from Reservoir or Reservoir Groups (days)/(mcm)				
	Tai Tam	Kowloon	Aberdeen	Tai Lam Chung	Shek Pik
Jan to Apr-12	0	0	0	0	0
May-12	22 / 1.56	0	5 / 0.16	0	0
Jun-12	22 / 1.33	0	4 / 0.01	0	0
Jul-12	31 / 3.24	8 / 1.16	10 / 0.99	6 / 1.50	5 / 0.94
Aug-12	31 / 1.93	14 / 0.42	7 / 0.07	3 / 0.09	0
Sep-12	25 / 1.86	0	4 / 0.11	0	0
Oct-12	7 / 0.12	0	0	0	0
Nov to Dec-12	0	0	0	0	0

Jan to Apr-13	0	0	0	0	0
May-13	10 / 1.48	0	10 / 0.35	2 / 0.00	0
Jun-13	30 / 3.10	16 / 1.18	19 / 0.64	6 / 0.26	7 / 1.70
Jul-13	31 / 3.02	29 / 0.69	18 / 0.96	0	8 / 8.74
Aug-13	31 / 3.04	31 / 1.77	20 / 0.71	0	10 / 0.41
Sep-13	30 / 4.61	18 / 1.53	14 / 0.63	4 / 0.35	11 / 4.82
Oct-13	8 / 0.19	0	0	0	0
Nov to Dec-13	0	0	0	0	0

Jan to Mar-14	0	0	0	0	0
Apr-14	0	1 / 0.00	2 / 0.05	0	0

May-14	16 / 3.00	19 / 1.02	17 / 1.84	17 / 3.87	0
Jun-14	24 / 2.63	9 / 0.60	12 / 0.64	0	0
Jul-14	26 / 0.72	12 / 0.25	5 / 0.04	0	0
Aug-14	26 / 4.45	13 / 0.44	15 / 1.39	0	0
Sep-14	8 / 0.25	0	2 / 0.01	0	0
Oct-14	15 / 1.84	0	0	0	0
Nov to Dec-14	0	0	0	0	0

Jan to Apr-15	0	0	0	0	0
May-15	0	4 / 0.10	3 / 0.02	0	0
Jun-15	0	8 / 0.08	4 / 0.05	0	0
Jul-15	0	12 / 0.79	8 / 0.98	0	0
Aug-15	0	28 / 0.82	2 / 0.01	0	0
Sep-15	0	7 / 0.08	0	0	0
Oct-15	0	11 / 0.34	0	0	1 / 0.03
Nov to Dec-15	0	0	0	0	0

Jan to Mar-16	0	0	0	0	0
Apr-16	0	4 / 0.06	6 / 0.03	0	0
May-16	0	5 / 0.20	0	0	0
Jun-16	0	8 / 0.18	14 / 0.56	0	0
Jul-16	0	0	10 / 0.24	0	0
Aug-16	0	21 / 1.06	21 / 0.72	16 / 1.38	19 / 3.32
Sep-16	10 / 0.92	24 / 0.96	17 / 0.59	25 / 3.49	14 / 5.21
Oct-16	12 / 2.74	12 / 1.45	17 / 1.36	13 / 4.03	0
Nov-16	0	0	1 / 0.00	0	0
Dec-16	0	0	0	0	0

Overflow from small and medium reservoirs during heavy and continuous rainfall is an operational constraint. These reservoirs will overflow when the inflow during periods of heavy and continuous rainfall exceeds the outflow and the remaining storage capacity of the reservoir.

- (4) The proposed desalination plant at Tseung Kwan O will have a water production capacity at 135 000 cubic metres (m³) per day or 50 mcm per year with provision for future expansion to the ultimate production capacity up to 270 000 m³ per day or 100 mcm per year. The estimated unit water production cost of the plant is about \$12-\$13 per m³ (at 2015 price level) including the distribution and customer services costs. We have embarked on the design of the plant since November 2015 and we will review the unit water production cost of the plant during the design process.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)087

(Question Serial No. 2503)

Head: (194) Water Supplies Department

Subhead (No. & title): (000) Operational Expenses

Programme: Not Specified

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Regarding outsourced contractors of Water Supplies Department, please provide the following information:

	2016-17	Increase over the preceding year
Number of outsourced service contracts		
Number of outsourced workers employed by outsourced service providers		
Types of services provided by outsourced service providers (including but not limited to engineering and construction, property and facility management, machinery and equipment repairs, information management and information system, environmental hygiene, security, etc.)		
Average monthly salary of outsourced workers <ul style="list-style-type: none"> • 30,001 or above • \$15,001 -\$30,000 • \$10,001 -\$15,000 • \$8,001 -\$10,000 • \$6,760 -\$8,000 • less than \$6,760 		
Average length of service of outsourced workers		
Percentage of outsourced workers against the total number of staff in the department		
Number of outsourced workers working: <ul style="list-style-type: none"> • 5 days per week • 6 days per week 		
Weekly hours of week of outsourced workers: <ul style="list-style-type: none"> • Highest weekly hours of week 		

• Average weekly hours of week		
Number of workers with severance payment, long service payment offset by or with contract gratuity calculated from the accrued benefits attributable to employer's contributions to MPF, and the amount involved		

Asked by: Hon KWOK Ka-ki (Member Question No. 323)

Reply:

The Water Supplies Department uses a wide range of outsourced services, such as cleansing and security, information technology support, etc. The information for 2016-17 (as at 31.12.2016), together with the percentage change over 2015-16 (as at 31.12.2015), are provided below.

(a) Number of outsourced service contracts

2016-17	Percentage change against the preceding year
41	-16.3%

(b) Number of outsourced workers employed by outsourced service providers ^{Note}

2016-17	Percentage change against the preceding year
281	-0.4%

Note : Only those contracts with specified number of staff to be provided are counted.

(c) Types of services provided by outsourced service providers

Nature of service contracts	Number of outsourced contracts in 2016-17	Percentage change against the preceding year
Engineering and construction	0	-
Property and facility management	0	-
Machinery and equipment repairs	0	-
Information management and information system	22	-12%
Environmental hygiene	5	-16.7%
Security	9	-10%
Drivers	3	-40%
Logistics (Store support)	2	0%
Total:	41	-16.3%

A dash denotes that the relevant figure in 2015-16 is zero.

(d) Average monthly salary of outsourced workers

After the implementation of the Statutory Minimum Wage (SMW) on 1 May 2011, for service contracts on security and cleansing, contractors have been required to pay their workers wages not lower than the prevailing SMW.

For other service contracts, we specify and require only the service to be provided. We do not have information about the average monthly salary of the workers employed by the contractors.

(e) Average length of service of outsourced workers

The mode of using outsourced workers is that government departments and the contractor enter into a service contract under which the contractor will supply manpower as and when required. As long as the requirements of the government departments (in terms of the number of outsourced workers and the qualifications and/or experience required from outsourced workers) are satisfied, the contractor may arrange any of their employees to work in the departments or arrange replacement outsourced workers during the contract period for different reasons. Therefore, we do not have information on the average length of service of outsourced workers who are employees of the contractors and are at the disposal of the latter.

(f) Percentage of outsourced workers against the total number of staff in the department

2016-17	Percentage for (and change against) the preceding year
6.1%	6.2% (-0.1%)

(g) Weekly working days

Weekly working days	Number of outsourced workers in 2016-17	Percentage change against the preceding year
5	144	-0.7%
6	137	0%
Total:	281	-0.4%

(h) Weekly working hours

Weekly working hours	Number of hours in 2016-17	Percentage change against the preceding year
Highest	66	0%
Average	46	0%

(i) Severance payments / long-service payments / contract gratuities paid to outsourced workers

The department entered into contracts with the outsourced contractors for provision of services as required by the department during the contract period. The contractual relationship of the outsourced workers is with the outsourced contractors which have to fulfil the obligations of employers under the relevant laws including the Employment Ordinance (Cap. 57) and Mandatory Provident Fund Schemes Ordinance (Cap. 485). We do not have information on the severance payments / long service payments / contract gratuities paid by the contractors to their workers.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)088

(Question Serial No. 3053)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

In 2017-18, the Government will renew the Dongjiang (DJ) water supply agreement to be effective from 2018 with the Guangdong authorities. Regarding this, would the Government inform this Committee:

- a. When will negotiation of the renewal start in 2017-18 and when will the new agreement be signed?
- b. What were the quantities of water supply under the DJ water supply agreement, actual quantities of water delivered and expenditures paid to Guangdong in the past 10 years?
- c. If actual quantities of water delivered were lower than the supply ceiling under the agreement in the past 10 years, would the Government lower the supply ceiling under the new agreement to reduce expenditures of the purchase of water through the "package deal lump sum" approach?

Asked by: Hon LAU Kwok-fan (Member Question No. 40)

Reply:

- (a) The current Dongjiang (DJ) water supply agreement covers the period up to end 2017. We started the negotiation with the Guangdong authorities on the new DJ water supply agreement in February 2017 and targeted to sign the agreement by the end of 2017.
- (b) In the past ten years, the annual supply ceilings in the DJ water supply agreements is 820 million cubic metres and the actual supplied quantities of DJ water and the associated expenditures are tabulated below:—

Year	Actual supplied quantity (million cubic metres)	Expenditure (\$ million)
2007	715	2,494.80
2008	653	2,494.80
2009	725	2,959.00
2010	681	3,146.00
2011	818	3,344.00
2012	709	3,538.70
2013	612	3,743.30
2014	724	3,959.34
2015	766	4,222.79
2016	629	4,491.52

(c) The local yield is inadequate to meet the fresh water demand in Hong Kong. It also fluctuates significantly and is unreliable. In the past ten years, the quantities of local yield range from 103 million cubic metres in 2011 to 385 million cubic metres in 2016. In order to safeguard our water security, the “package deal lump sum” approach is adopted in the DJ water supply agreement which secures a water right in the form of an annual supply ceiling, thus enabling us to maintain water supply round-the-clock even under the extreme drought condition with a return period of 1 in 100 years.

Under the “package deal lump sum” approach, Hong Kong is assured of an adequate water supply up to the annual supply ceiling in the agreements. This annual supply ceiling is obtained on the basis of a detailed analysis taking into account the fresh water demand and supply forecast to ensure 99% reliability of water supply during the agreement periods.

If the annual supply ceiling is lowered, Hong Kong will be exposed to a risk of inadequate water supply in the event of drought. In fact, we imported DJ water close to the ceiling in 2011 as the rainfall in that year fell short of the normal level by 40%. If the annual supply ceiling of 820 million cubic metres had been lowered, Hong Kong might have inadequate fresh water supply in 2011 and might need to impose water rationing, which would seriously affect people's livelihood and the economy.

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)089****(Question Serial No. 2172)**

Head: (194) Water Supplies Department
Subhead (No. & title): (000) Operational Expenses
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Regarding management of reservoirs, please inform this Committee:

- (1) What were the numbers of overflow cases and situation of discharge in reservoirs managed by the Department each year in the past three years;
- (2) What were the highest storage capacity of reservoirs managed by the Department and situation of actual average storage in the past three years;
- (3) What were the situation of water contamination due to human activity in reservoirs managed by the Department, enforcement and prosecution in the past three years; please list prosecution cases by categories;
- (4) Does the Department plan to strengthen reservoir management in this financial year to strengthen publicity and education of the public and tourists about reservoir conservation; what are the work plans and estimated expenditure?

Asked by: Hon LUK Chung-hung (Member Question No. 22)

Reply:

- (1) There was no overflow for Lower Shing Mun, Plover Cover and High Island reservoirs in the past three years. The occurrence of overflow from reservoirs in terms of no. of days in the past three years is tabulated below:

Year	Overflow Instance from Reservoir or Reservoir Groups (days)				
	Tai Tam	Kowloon	Aberdeen	Tai Lam Chung	Shek Pik
2014	115	54	53	17	0
2015	0	70	17	0	1
2016	22	74	86	54	33

The overflow quantities from reservoirs in the past three years were 23.1 million m³ (mcm), 3.3 mcm and 28.5 mcm in 2014, 2015 and 2016 respectively. The overflow was locally collected rainwater naturally discharged from small and medium reservoirs during heavy rainstorms. The total rainfall was 3 027 mm in 2016 and 1 875 mm in 2015, and thus resulting in large difference in overflow quantities between these two years. WSD has been exploring options for reduction of the overflow quantities. Since 2014, the raw water from Tai Tam Group Reservoirs has been used for augmentation of the salt water flushing system which largely reduces the overflow from the Tai Tam Group Reservoirs.

(2) The total capacity of reservoirs is 586 mcm while the maximum reservoir storage and the actual average storage in the past three years are tabulated below:

Year	2014	2015	2016
Maximum Reservoir Storage (mcm)	448	499	527
Actual Average Reservoir Storage (mcm)	413	418	444

(3) Under Section 30(2)(a) of the Waterworks Ordinance (Cap.102), any person who enters, or bathes or washes in, water forming part of the waterworks may be prosecuted; under Section 30(2)(b), any person who washes or causes or permits any animal to enter therein may be prosecuted; and under Section 30(2)(c), any person who throws or places any things therein may be prosecuted. The prosecution figures in the past three years are as follows:

Prosecution Cases under Waterworks Ordinance (Cap. 102)

Year	Section 30(2)(a)	Section 30(2)(b)	Section 30(2)(c)	Total
2014	6	0	2	8
2015	12	0	6	18
2016	2	0	0	2
Total	20	0	8	28

(4) The gathering ground and the reservoirs are precious sources of fresh water and should not be contaminated. To publicize against contaminating our fresh water sources (e.g. by swimming or diving in water gathering grounds and reservoirs), we have implemented continuous education and publicity initiatives to raise public awareness, including erection of warning signs/banners in the vicinity (3 additional signs in 2016-17 and another 3 in 2017-18), distribution of leaflets, display of posters as well as advertisements in MTR stations. Moreover, in Yi O Raw Water Intake, we have provided security guards to station during the day time, conduct regular inspections and take enforcement and prosecution actions under the Waterworks Ordinance (Cap. 102) if necessary. As there is no separate costing for the abovementioned education and publicity initiatives alone, the cost attributable to this task is not readily available.

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)090****(Question Serial No. 2174)**Head: (194) Water Supplies DepartmentSubhead (No. & title): Not SpecifiedProgramme: (3) Customer ServicesControlling Officer: Director of Water Supplies (Enoch T S LAM)Director of Bureau: Secretary for DevelopmentQuestion:

Under Programme (3), the Department states that it will create 11 civil service posts in this financial year. In connection with the conversion of non-civil service contract positions and agency staff positions, would the Department inform this Committee:

- (1) The titles and work responsibilities of the 11 civil service posts and reason for conversion into civil service posts and the expenditure involved;
- (2) Please list the budget of conversion of non-civil service posts/agency posts into civil service posts and the actual number of posts thus converted into a civil service post and reason for the conversion in the past two financial years.

Asked by: Hon LUK Chung-hung(Member Question No. 23)Reply:

(1) Given that the 11 non-civil service contract (NCSC) and agency staff positions under Programme 3 of the Water Supplies Department are required on a permanent basis, WSD plans to replace them with civil service posts in 2017-18. The conversion of NCSC positions and agency staff to civil service posts does not involve additional provision in 2017-18. The relevant information is tabulated below –

Rank	Number of posts	Duties
Assistant Clerical Officer	6	Handle various kinds of enquiries, complaints on customer services and water bills, and applications in relation to licensing, e.g. for fishing licence and plumber licence, etc.
Accounting Officer II	1	Handle opening and termination of customer accounts, enquiries, complaints and other matters relating to water charge billing.
Systems Manager	1	Manage the maintenance contractor of Customer Care and Billing System (CCBS) on the technical aspects and provide technical
Analyst/Programmer I	3	

Rank	Number of posts	Duties
		advice to management and support to users of the system in the department
Total	11	

(2) No conversion of NCSC or agency staff positions into civil service posts was made under Programme 3 of the Water Supplies Department in the estimates for 2016-17. In 2015-16, 22 civil service posts were created to replace NCSC and agency staff positions under Programme 3 of the Water Supplies Department. No additional cost was incurred on the replacement of NCSC and agency staff positions. The relevant information is tabulated below :-

Rank	Number of posts	Duties
Assistant Waterworks Inspector	4	Replace existing aged water meters
Works Supervisor II	6	
Consumer Services Inspector	6	
Assistant Clerical Officer	6	Handle various kinds of enquiries, complaints and applications in relation to customer services and water bills, and provide support concerning customer accounts matters
Total	22	

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)091

(Question Serial No. 1538)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (3) Customer Services

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Under the Programme, as Matters Requiring Special Attention in 2017-18 points out, Water Supplies Department will continue to enhance the billing system. Regarding this, please provide the following information:

1. Details of the relevant project and proposals as well as manpower and resources allocated for the project and timetables.
2. Please provide the current ways and figures (frequency of the recent year) of paying water and sewage charges and a breakdown of figures by payment in person, by post, through the Internet, PPS and bank transfer, etc.
3. Certain regions of Taiwan support mobile payment applications for payment of various charges including water charges. Hong Kong Monetary Authority issued five SVF licenses last August. Would the Department consider cooperation with service providers of mobile payment to let the public pay charges with mobile payment tools?

Asked by: Hon MA Fung-kwok (Member Question No. 7)

Reply:

1. The Water Supplies Department's billing system is currently maintained by a maintenance contractor. A unit in the department comprising ten staff is responsible for supervision and management of the maintenance contractor and providing technical and business support to users of the system in the department.

We have been enhancing the billing system continuously since its implementation in June 2006 to provide better service to our consumers. In 2017-18, the system will be enhanced to accept e-Cheque from our consumers to settle their water bills. The enhancement will be carried out by the maintenance contractor and completed in the

second half of 2017. The estimated expenditure in implementing the enhancement project in 2017-18 is \$503,000.

To improve the sustainability, the core software package of the billing system will be upgraded by the maintenance contractor. Project initiation has started in late 2016 and the upgrade project is planned to be completed by 2020-21. The upgrade project is part of the service to be delivered by the maintenance contractor and the cost of the upgrade is already included in the maintenance contract.

2. Consumers may pay their water bills (including both water and sewage charges) through the following payment modes i.e. In Person, By-post, Autopay, Payment by Phone Service (PPS), Automated Teller Machine (ATM) and Internet. The statistics on payment modes for 2015-16 are shown below:-

	<u>Number of cases</u>	<u>Percentage (%)</u>
In Person (including convenience stores)	3 695 600	50.2
By-post	87 600	1.2
Autopay	858 400	11.6
PPS	768 900	10.4
ATM	386 400	5.2
Internet	<u>1 575 800</u>	<u>21.4</u>
Total:	<u><u>7 372 700</u></u>	<u><u>100.0</u></u>

3. For providing additional payment channels to consumers, the Water Supplies Department joined the Electronic Bill Payment and Presentment (EBPP) platform in September 2015. EBPP is a one-stop platform launched by the Hong Kong Monetary Authority and the banking industry to provide a one-stop platform for users to receive, manage and schedule payments for electronic bills through internet banking accounts. At present, the payment channels for water bills have not been extended to mobile payment applications. We will, in cooperation with the Treasury, keep in view the latest technology development and market demand to identify convenient and economic payment methods with a view to providing additional payment channels for the consumers to settle their water bills.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)092

(Question Serial No. 1540)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Matters Requiring Special Attention in 2017-18 under this Programme state that Water Supplies Department will implement the enhanced water monitoring programme. In connection with this:

1. Please provide details of the programme including manpower for manning, resources and procedures of monitoring.
2. In what ways does the enhanced water monitoring programme bring about improvement, compared to the original one?
3. What is the change of expenditure in implementing the enhanced water monitoring programme?

Asked by: Hon MA Fung-kwok (Member Question No. 8)

Reply:

1. The Water Supplies Department is currently working on the details of the enhanced water quality monitoring programme which will involve taking and testing water samples from source to taps over the territory. The resource requirements and the procedures for the implementation of the enhanced programme will be determined in due course.
2. Compared with the existing one which is focused on monitoring water quality as supplied to consumers, the enhanced water quality monitoring programme will strengthen the monitoring of the quality of drinking water from the source to consumers' taps.
3. Additional expenditure, if any, to be incurred in implementing the enhanced water monitoring programme will be determined in due course.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)093

(Question Serial No. 1442)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Would Water Supplies Department provide details of work and expenditure about following up on excess lead in drinking water of residential buildings in the past two years; other than routine monitoring of lead in drinking water, would the Department carry out a review of relevant parameters of metals in drinking water in this financial year; if yes, what are the details of work plans and estimates of expenditure?

Asked by: Hon MAK Mei-kuen, Alice (Member Question No. 21)

Reply:

Following the excess lead in drinking water incident in July 2015, the Water Supplies Department (WSD) has carried out an additional water testing exercise for lead in drinking water from 2015 to 2016 by collecting water samples over the territory at publicly accessible consumers' taps. A total of 1,370 samples from the consumers' taps have been taken and tested. All sample results were found to comply with the Provisional Guideline Value of 10 µg/L for lead set out in the World Health Organisation 2011 Guidelines. As the staff involved in the additional water testing exercise were also responsible for performing the routine monitoring of other water quality parameters, a separate costing for the additional sampling and testing work is not available.

WSD is currently working on the details of an enhanced water quality monitoring programme to strengthen monitoring of the quality of drinking water from source to taps. The resource requirements and the procedures for the implementation of the enhanced programme will be determined in due course.

Furthermore, after the excess lead in drinking water incident, WSD has been taking forward measures in stepping up the regulation of plumbing materials as well as inspection and approval of the inside services. Amongst others, WSD has stipulated the commissioning requirements for installation of new plumbing works of taking water samples for testing four heavy metals (lead, chromium, cadmium and nickel) and lead in solder pipe joints.

In regard to carrying out a review on the metal parameters of drinking water, we engaged an expert consultant from the United Kingdom in June 2016 to review, amongst others, the drinking water quality standards for metals including lead. The total expenditure of the consultancy study in the financial year 2016-17 and 2017-18 is \$1.2M and \$0.3M respectively. As the study has also covered a review on other aspects of water quality issues, a separate costing for the task of review of water quality standards for metals is not available. WSD is currently working in collaboration with the Development Bureau, the International Expert Panel on Drinking Water Safety and the United Kingdom expert consultant in deliberating on the review study findings and relevant issues with a view to putting forward a proposal as soon as possible.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)094

(Question Serial No. 2276)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

- (a) It is learned that the consultant's report on desalination plant at Tseung Kwan O will be completed in 2017. Does the consultant have an interim report? If yes, what are the details? If no, what is the preliminary evaluation by the consultant? Apart from seawater desalination, are there any specific and feasible measures to reduce the reliance on Dongjiang water?
- (b) Please compare the costs of water produced by desalination (per cubic metre) between Hong Kong and overseas countries (e.g. Singapore, the UK, the USA, Australia, Canada, etc.) in 2016 and explain the differences.
- (c) Please provide the estimated expenditures on Dongjiang water (including total supply quantities, total water costs and average water costs per cubic metre) in the past three years and in 2017-18.
- (d) Please provide the quantities of the discharge of fresh water to the sea resulting from overflow from reservoirs and the total expenditures involved in the past three years.

Asked by: Hon Claudia MO (Member Question No. 15)

Reply:

- (a) We engaged consultants in November 2015 to embark on the design of the first stage of the proposed desalination plant at Tseung Kwan O (TKO). The design work is progressing well and is anticipated to be completed by the end of 2017. As far as the design work is concerned, there is no interim report required on the part of the consultants. Nevertheless, the consultants have reviewed the findings of the previous planning and investigation study and carried out further investigation works. The technical feasibility and environmental viability of the project has been confirmed and the reference design of the desalination plant is under preparation.

Apart from seawater desalination, we have been implementing a number of water management measures to cope with the anticipated increase in water demand due to

population and economic growth, and to enhance the resilience of our water sources to combat climate change impacts. The measures include extending the salt water supply networks to areas which will otherwise consume fresh water for flushing purposes, exploiting the supply of reclaimed water to the north-eastern part of the New Territories for other non-potable uses, and promoting wider use of grey water recycling / rainwater harvesting systems under suitable new government projects. With such measures, Hong Kong will transform from the current three-pronged supply into a six-pronged supply in the foreseeable future. We have also been stepping up the effort on the establishment of the “Water Intelligent Network” and water conservation with an aim to reducing water losses and water consumption respectively.

- (b) The estimated unit water production cost of the proposed desalination plant at TKO is about \$12-\$13 per cubic metre (m³) (at 2015 price level) including the distribution and customer services costs. If the distribution and customer services costs are excluded, the estimated unit water production cost will become about \$10.2 per m³ (at 2015 price level), which is comparable to those of other countries as set out below.

Based on the information from the International Desalination Association published in 2016, the unit production costs (at 2015 price level, excluding the distribution and customer services costs) of desalinated water of some countries are as follows-

Country	Unit production cost (HK\$/m ³)
Spain (Carboneras)	6.8
Singapore (Singspring)	6.9
Middle East (Israel and Saudi Arabia)	3.6 to 24.1
USA	8.2 to 14.4
Australia	12.4 to 46.2

The variations in the unit production cost of the desalinated water in different countries are attributed to a number of factors including the construction cost, the energy cost, the seawater quality and temperature, and environmental requirements.

- (c) The annual water supply ceiling quantity in the past three years and 2017 is 820 million m³. The respective expenditures on purchasing Dongjiang water are as follows –

Dongjiang water	2014	2015	2016	2017
Purchase price (HK\$ million)	3,959.34	4,222.79	4,491.52	4,778.29
Average unit cost (HK\$/m ³)	4.8	5.1	5.5	5.8

The current DJ water supply agreement is for 2015 to 2017. The price of DJ water after 2017 will be under a new water supply agreement subject to negotiation with the Guangdong authorities.

- (d) The overflow quantities from impounding reservoirs in 2014, 2015 and 2016 were 23.1 million m³, 3.3 million m³ and 28.5 million m³ respectively. The overflow was locally collected rainwater naturally discharged from small and medium impounding reservoirs during heavy rainstorms and there was no additional expenditure incurred. If we were to reduce the chance of overflow from these impounding reservoirs, we would have to raise the height of the dams of these small to medium impounding reservoirs to increase the storage capacity. However, this will involve very substantial construction costs and the extra storage capacities would be of no use most of the time. Hence, we need to strike a balance between capital investments and overflow quantities.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)095

(Question Serial No. 2564)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

The Department will complete the feasibility study for the relocation of service reservoirs at Diamond Hill to cavern in 2017-18. In connection with this, would the Department provide the following information:

- a. What is the exact date of completion and announcement of the feasibility study?
- b. What are the proposed land uses of the former land for the service reservoirs? Will the residential area be used for public or private housing development? What are the capacity of producing flats and the size of population that can be accommodated respectively?
- c. When will the former land for the service reservoirs be used for housing and other uses at the earliest?

Asked by: Hon OR Chong-shing, Wilson (Member Question No. 17)

Reply:

- a. The feasibility study is anticipated to be completed by mid-2017.
- b. The site housing the existing reservoirs when vacated is planned for residential use with retail and government, institution or community (GIC) facilities (such as medical facilities, kindergarten, public car park, etc.), as well as for the reprovisioning of the existing 7-a-side soccer pitch on top of the service reservoirs. The housing type in the proposed residential area is subject to a review at the next stage of the planning and engineering study for the existing service reservoir site.
- c. The programme for housing development and other uses will be determined at the next stage of the planning and engineering study for the service reservoir site.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)096

(Question Serial No. 2578)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (2) Water Quality Control

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Concerning testing of drinking water, the Department took 26 455 and 26055 test samples in 2015 and 2016 respectively and anticipates that it will take 26 000 test samples in 2017. In connection with this, please provide the following information:

- a. List the number of test samples from “treatment works”, “service reservoirs”, “connection points” and “consumers’ taps” each year;
- b. Do “consumers’ taps” refer to taps inside commercial consumers’ flats or residential consumers’ flats? Do they refer to taps inside flats with residents or vacant or unoccupied residential flats?
- c. When replumbing works in the 11 “public rental housing estates with lead in drinking water” are complete, will the Department test the water for each household? If yes, will the number of test samples be counted in the number of annual routine test samples? If no, how to ensure the water for these residents complies with statutory requirements for water quality?

Asked by: Hon OR Chong-shing (Member Question No. 20)

Reply:

The Water Supplies Department (WSD) carries out about 26 000 visits per year to collect samples at treatment works, service reservoirs, connection points and consumers’ taps for monitoring the quality of treated water as supplied to consumers in compliance with the World Health Organization’s “Guidelines for Drinking-water Quality” (WHO 2011). The number of water samples collected per visit is normally two but the actual number per visit may vary according to the number of parameters to be monitored. The samples collected at consumers’ taps are samples taken from publicly accessible consumers’ taps in randomly selected premises including shopping centres, community facilities, sports grounds, markets, estate management offices etc. over the territory. These samples are not taken from taps inside individual flats.

a. The total number of treated water samples taken in 2015 and 2016 by WSD from the treatment works, service reservoirs, connection points and consumers' taps is tabulated below:-

	<u>2015</u>	<u>2016</u>
Total no. of samples taken	59 157	58 108

The total number of samples taken in 2017 will be in a similar order as in 2015 and 2016.

b. As stated above, the current water quality monitoring programme does not involve the taking of water samples from taps inside commercial consumers' flats nor residential consumers' flats.

c. After the Housing Department (HD) has completed the replumbing works in the 11 "public rental housing estates with excess lead in drinking water", WSD will follow the established procedures of inspection and approval of the completed plumbing works to, inter alia, check solders in pipe joints for lead and to randomly collect water samples from the newly installed fresh water inside service for testing various chemical, physical and bacteriological parameters. The inspection and approval procedures will help ensure that the plumbing installations will comply with the statutory requirements as stipulated in the Waterworks Ordinance and Regulations. As these water samples are not collected and tested under the routine water quality monitoring programme, the water samples will not be counted as samples of the programme.

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)097****(Question Serial No. 0066)**Head: (194) Water Supplies DepartmentSubhead (No. & title): (000) Operational ExpensesProgramme: Not SpecifiedControlling Officer: Director of Water Supplies (Enoch T S LAM)Director of Bureau: Secretary for Development

Question: The Water Supplies Department stated that the number of non-directorate posts will be increased by 20 to 4463 posts as at 31 March 2018. Please inform this Council of the nature of work, ranks and salaries of these new posts.

Asked by: Hon SHEK Lai-him, Abraham (Member Question No.32)Reply:

In 2017-18, there will be creation of 23 non-directorate civil service posts and lapse of three time-limited posts, resulting in a net increase of 20 non-directorate posts in the Water Supplies Department. Out of the 23 non-directorate civil service posts, 16 posts are for conversion of 12 non-civil service contract positions and 4 agency staff positions. The nature of work, ranks, duties and provision for the salaries of the 23 new posts are set out in the table below -

Nature of Work	Ranks	Number of posts	Duties	Provision for salaries (\$M)
(1) To follow up the recommendations of the Commission of Inquiry into Excess Lead Found in Drinking Water	Senior Waterworks Chemist	1	Assist in formulation of policies and procedures for developing a set of the drinking water quality standards of Hong Kong	3.877
	Senior Mechanical Engineer	1	Strengthen the control of materials of inside service including establishment of a Material Laboratory	
	Engineer / Assistant Engineer	1	Enhance the existing Water Safety Plan for waterworks and to carry out quality audits	

Nature of Work	Ranks	Number of posts	Duties	Provision for salaries (\$M)
	Assistant Waterworks Inspector	1	Carry out random inspection of the plumbing works during the construction stage of new building projects	
	Consumer Services Inspector	1		
(2) To handle the additional workload arising from the control of unauthorized fresh water cooling towers	Assistant Waterworks Inspector	1	Handle cases pertaining to unauthorized fresh water cooling towers for prosecution	0.409
(3) Creation of 16 civil service posts for conversion of 12 non-civil service contract positions and 4 agency staff positions	Assistant Clerical Officer	6	Handle various kinds of enquiries, complaints on customer services and water bills, and applications in relation to licensing, e.g. for fishing licence and plumber licence, etc.	6.412
	Accounting Officer II	1	Handle opening and termination of customer accounts, enquiries, complaints and other matters relating to water charge billing	
	Executive Officer II	1	Handle recruitment and appointment matters	
	Motor Driver	4	Operate large vans for carrying heavy equipment	
	Systems Manager	1	Manage the maintenance contractor of Customer Care and Billing System (CCBS) and provide technical advice to management and support to users of the system in the department	
	Analyst / Programmer I	3		
(4) To handle water distribution matters arising from major developments and infrastructural works	Engineer / Assistant Engineer	1	Vet project submissions regarding interface issues with the existing waterworks installations and water supply	0.733

Nature of Work	Ranks	Number of posts	Duties	Provision for salaries (\$M)
in the New Territories East			networks; Assess and monitor the impacts of the major developments and infrastructural works on the operation of the water supply systems	
	Total	23		11.431

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)098

(Question Serial No. 1369)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

The Department is carrying out the total water management strategy with the aim of promoting “Cherish Water” culture in Hong Kong. In connection with this, would the Department inform this Committee:

- (1) Please list the top ten government departments with the highest water consumption in the past three years by annual actual water consumption and targeted amount of water conservation;
- (2) Regarding water conservation in government departments, what is the Department’s plan in this financial year and what are the details;
- (3) At present, in internal areas of government buildings, what hardware facilities and methods does the Department use for water conservation; will the Department introduce new ways (such as new hardware facilities) of promoting water conservation in Hong Kong further in the fashion of “when government adopts a policy, the private sector follows suit”?

Asked by: Hon WONG Kwok-kin (Member Question No. 23)

Reply:

- (1) The water consumption of the top 10 water consuming government departments (based on the 2016 figures) in the past three years is tabulated below.

Government Department		Consumption (million cubic metres)		
		2014	2015	2016
1.	Leisure and Cultural Services Department	14.09	13.05	12.51
2.	Correctional Services Department	4.19	4.49	4.30
3.	Food and Environmental Hygiene Department	3.56	3.42	3.63
4.	Hong Kong Police Force	1.91	2.88	2.47
5.	Drainage Services Department	2.22	1.92	2.12
6.	Fire Services Department	0.96	0.95	1.03
7.	Government Property Agency	0.72	0.76	0.87
8.	Agriculture Fisheries and Conservation Department	0.82	0.66	0.57
9.	Water Supplies Department	0.73	0.71	0.55
10.	Education Bureau	0.51	0.59	0.50
	Total :	29.71	29.43	28.55

Generally speaking, there is a multitude of factors affecting water consumption of government departments including number of users at institutional facilities, patronage of public facilities, commissioning of new facilities, implementation of greening measures, etc., which make it difficult to benchmark their water conservation performance solely on the basis of their total annual water consumption. That said, in 2015, the top ten water consuming government departments altogether used 0.9% less water than in 2014 and their overall water consumption in 2016 was reduced further by 3.0% from 2015.

(2) The Leisure and Cultural Services Department (LCSD), Correctional Services Department (CSD) and Food and Environmental Hygiene Department (FEHD) are the top three water consuming departments accounting for more than 70% of the government's total water consumption in the past three years. The Water Supplies Department (WSD) has issued Best Practice Guidelines (BPG) to the LCSD and the FEHD for efficient use of water. In this

financial year, WSD will continue providing technical advice to LCSD and FEHD for their implementation of the BPG, whilst working closely with the CSD on the finalisation of the BPG for correctional services facilities.

(3) On the hardware side, WSD has since December 2009 replaced about 51 500 plumbing appurtenances (taps, showers, urinals and flush cisterns) by water saving devices and installed about 46 000 flow controllers onto existing taps and showers in government facilities and schools. WSD is currently planning to embark on a further retrofitting works programme for replacing urinals and flushing cisterns in government buildings and schools in areas not covered by the salt water flushing supply zones with water saving devices.

Another important aspect of water conservation is to reduce water loss due to leakage of underground inside service water mains. Against this, WSD has piloted a voluntary leak detection scheme with Housing Department and Architectural Services Department for underground inside service water mains at public rental housing estates and government venues. The pilot scheme has been a success with leaks found and repaired to reduce the amount of water loss through leakage. This will serve as a good basis for promoting the scheme to the private sector to carry out leak detection and repair as a preventive maintenance measure to combat water loss in private premises.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)099

(Question Serial No. 2820)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Regarding the purchase of Dongjiang (DJ) water, would the Department inform this Committee:

- a) The total costs for Hong Kong's purchase of DJ water, water supply ceiling, actual water supply and unit cost per cubic metre in the past three years;
- b) The estimated total costs for Hong Kong's purchase of DJ water, water supply ceiling, actual water supply and unit cost per cubic metre each year in the next three years;
- c) A comparison of unit costs per cubic metre of locally collected water, reclaimed water, DJ water and water desalination;
- d) Since the "package deal lump sum" approach is adopted for the current purchase of DJ water and Hong Kong's purchase of water did not reach the water supply ceiling for many years in the past, the purchase has been externally criticised as wasting money. Would the Department negotiate with the Guangdong authorities to purchase DJ water through flexible payment based on water consumption?
- e) What are the Government's measures, plans and resources for preventing the pollution of DJ water? Does the Mainland have a notification mechanism? What are the details of operation and required resources?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 49)

Reply:

- a) The annual supply ceiling in the past three years is 820 million cubic metres. The expenditure, actual supply quantity and average unit purchase cost of Dongjiang (DJ) water in the past three years are shown in the table below:-

DJ water	2014	2015	2016
Expenditure (\$ million)	3,959.34	4,222.79	4,491.52
Actual supply quantity (million m ³)	724	766	629
Average unit cost (\$/m ³)	4.8	5.1	5.5

b) The estimated expenditure, annual supply ceiling, actual supply quantity and average unit cost of DJ water for 2017 are shown in the table below:-

DJ water	2017
Expenditure (\$ million)	4,778.29
Annual supply ceiling (million m ³)	820
Actual supply quantity (million m ³)	Not known*
Average unit cost based on supply ceiling (\$/m ³)	5.8

(Note : * Actual supply quantity of DJ water is subject to actual demand and local yield.)

The current supply agreement for DJ water is for 2015-2017. The expenditure, annual supply ceiling and average unit cost for supply of DJ water after 2017 is subject to a new supply agreement to be agreed between Guangdong authorities and Hong Kong.

c) The unit production cost for water collected locally, reclaimed water, DJ water and desalinated water are as follows:-

Unit Cost	(\$/m³)
Water collected locally	4.3 (2015-16)
Reclaimed water (for toilet flushing)	5-6 [#] (2015-16)
DJ water	9.5 (2015-16)
Desalinated water	12-13 [#] (2015-16)

(Notes:

[#] It is the estimated unit water production cost. We have engaged consultants to embark on the design of the relevant infrastructure works. The unit water production cost will be reviewed during the design stage.

d) The local yield is inadequate to meet the fresh water demand in Hong Kong. It also fluctuates significantly and is unreliable. In order to safeguard our water security, the “package deal lump sum” approach is adopted in the DJ water supply agreement which secures a water right in the form of an annual ceiling of supply quantity with a view to maintaining water supply round-the-clock even under the extreme drought condition with a return period of 1 in 100 years.

Hong Kong and Guangdong (GD) are under the same climatic setting (rainfall pattern, temperature, etc.). When our local yield reduces during drought years, the quantity of DJ water available for distribution will also dwindle. In previous negotiation, we had explored other payment approach like the “payment on actual supply quantity” approach with the GD side and they expressed difficulty to guarantee that the water supply quantity requested by Hong Kong can be met particularly in drought years given the keen demand for the limited DJ water resources. We will be exposed to a risk of inadequate water supply to Hong Kong during drought years unless we set a “reserved quantity” for possible need during drought years in the DJ water supply agreement and pay for it. However, such arrangement is effectively the same as the “package deal lump sum” approach we have adopted for the DJ water supply agreements since 2006. In any case, in the coming negotiation for the new agreement, we will further explore with the GD side the viability of flexible payment based on water consumption.

e) Under the current Dongjiang (DJ) water supply agreement, the Guangdong (GD) authorities would maintain the quality of the DJ water supplied to Hong Kong to meet the national standard set out for Type II waters (applicable to the abstraction for human consumption in first class protection area) in the "Environmental Quality Standards for Surface Water GB3838-2002". In this connection, the Government has all along been maintaining close liaison with the GD authorities on water quality of DJ through an established institutional mechanism, which includes the GD/Hong Kong Water Supply Business Meeting, GD/Hong Kong Water Supply Operation and Management Technical Cooperation Sub-group Meeting and the Special Panel on the Protection of DJ Water Quality.

Separately, the DJ water quality is closely monitored through a 24-hour on-line monitoring system installed at the reception point of the Muk Wu Pumping Stations. Regular water samples are also collected at Muk Wu Pumping Stations for detailed analysis to ensure that the DJ water supply complies with the required standard.

In case of any anomaly in the quality of DJ water, WSD will immediately step up monitoring and liaise with the GD authorities concerned including strengthening the monitoring of various water quality parameters at Muk Wu Pumping Stations and consider reducing or suspending the supply of DJ water in the light of its actual quality conditions.

As regards prevention of pollution to the DJ water, the major measures made by GD include relocation of the intake points of DJ water supplied to Hong Kong to a location of better water quality, construction of an about 60-kilometre-long dedicated aqueduct to convey DJ water from GD to Hong Kong, and implementation of various sewage interception and diversion projects. The quality of the DJ water has been substantially improved and maintained at good quality since the introduction of various pollution prevention measures. In case of any major contamination incidents affecting the quality of DJ water supplied to

Hong Kong, the GD authorities will immediately notify the WSD via an established notification mechanism manned by designated liaison officers of both Hong Kong and GD authorities.

The provision for water quality control in 2017-18 is \$271.4 million. As the resources involved are required to perform the water quality control for DJ water as well as other water quality monitoring work, the estimated cost attributable to DJ water is not readily available.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)100

(Question Serial No. 3140)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (2) Water Quality Control

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Professor John Fawell, the expert witness of the Commission of Inquiry into Excess Lead Found in Drinking Water, presented a report which suggests that the Water Supplies Department (WSD) should create the position of water quality manager who would oversee drinking water quality data and activities in a holistic manner and report directly to the Director of Water Supplies. Has the WSD earmarked provision for creating the position concerned? If yes, what is the amount of provision involved? If no, what are the reasons? The WSD indicated that it will strengthen inspections and random tests of dispensers in the market. In this connection, what are the number of inspections and tests and staff establishment involved in 2016-17 and 2017-18? Will the WSD plan to allocate resources in 2017-18 to test samples of dispensers in restaurants and see whether they contain toxic substances like heavy metals? If yes, what are the details of the plan and resources? If no, what are the reasons?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 50)

Reply:

A Special Duty Unit (SDU) headed by a D2 rank officer working under the Director of Water Supplies is planned to be established. The SDU is responsible for, inter alia, implementing the recommendations of Commission of Inquiry into Excess Lead Found in Drinking Water (CoI) and co-ordinating the efforts within WSD in taking forward a wide range of tasks including the establishment of the Hong Kong drinking water standard; reviewing the water safety plan (WSP) of WSD and developing guidelines for WSP for buildings; conducting legislative review and amendments of Waterworks Ordinance and its Regulations; and devising a licensing/ registration regime for parties responsible for plumbing installations. The duties of overseeing drinking water quality data and activities will also be covered by the SDU. Apart from redeploying existing staff consisting of a multi-disciplinary team of professional and technical grades officers, WSD has earmarked about \$10.4M for the creation of 4 time-limited civil service posts and engaging 6 non civil service contract staff for the SDU.

In regard to the inspection and random testing of water dispensers, given that some water samples taken from wall-mounted dispensers were found to contain excess lead in 2015, WSD commissioned a consultant to conduct an investigation on two used and four new dispensers of different brands purchased from the market. Based on the study results, WSD has produced a leaflet providing tips for the testing, purchase and use of dispensers to inform the users and the public on the selection of new dispensers and recommend them to conduct water sample tests on their existing dispensers.

On the other hand, to draw the attention of local suppliers/manufacturers to the product safety of wall-mounted dispensers, we have issued an advisory note to them on the use of lead-free soldering materials and components of low lead content for the manufacture of dispensers and carrying out type tests of their products in accredited laboratories. The advice has also been distributed to the major retailing shops of dispensers.

As a follow-up investigation, WSD engaged a consultant at the end of 2016 to gauge the penetration and impact of the promotion and education efforts. The study mainly consisted of a field survey on the current caterers to collect information on the dispensers used by them and their understanding of the product safety of dispensers, etc. Upon analysis of the survey results, WSD will procure samples of dispensers from the market for testing. The expenditure in surveying and testing of dispensers in the market is \$0.23M and \$0.21M in 2016-17 and 2017-18 respectively.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)101

(Question Serial No. 3228)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (2) Water Quality Control

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

What measures have the Government taken forward to enhance and safeguard drinking water safety in 2016-17 and 2017-18? What are the details and expenditures?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 51)

Reply:

To enhance and safeguard drinking water quality, the Water Supplies Department (WSD) has taken forward the following studies/measures:

- (i) studying overseas practices with a view to developing drinking water standards and putting in place an enhanced programme for monitoring the safety and quality of drinking water from source to taps;
- (ii) reviewing and enhancing the Water Safety Plan of WSD; and developing guidelines for Water Safety Plan for buildings;
- (iii) stepping up the regulation and control of pipe materials and fittings of the inside service by introducing a surveillance programme on verification test on plumbing products, and commissioning a material laboratory to conduct the verification test;
- (iv) carrying out a risk-based random inspection of plumbing works during construction stage of new plumbing installations;
- (v) strengthening the management and training of licensed plumbers including the revision of the syllabi of relevant training courses and the launch of the Voluntary Continuing Professional Development Scheme for Licensed Plumbers in collaboration with stakeholders in the plumbing industry;
- (vi) setting forth a holistic review on the Waterworks Ordinance and its Regulations in regard to, inter alia, the role and duties of parties responsible for plumbing installations including contractors, plumbing professionals, licensed plumbers and workers. Legislative amendments will be proposed in stages with the first stage

focused on some prioritized items to set out clearly the duties of licensed plumbers, the requirements for designated persons to carry out the plumbing works and the latest standards for all plumbing materials and components. These amendments will be submitted to the Legislative Council for consideration in the second quarter of 2017; and

(vii) enhancing public education and publicity on drinking water safety.

In 2016-17, WSD has created 17 civil service posts, including professional and mostly inspectorate staff, which has incurred approximately \$9.5 million per year, for amongst others, stepping up the regulatory control of pipe and fittings to be used in inside service, as well as enhancing the inspection of plumbing works and management of licensed plumbers. In addition, WSD has created three civil service posts and one post-retirement service contract position in 2016-17, which has incurred approximately \$4.4 million per year to assist in carrying out a holistic review of the Waterworks Ordinance and its Regulations.

The expenditure of the consultancy studies, in regard to water quality standards and safety including the establishment of drinking water quality standards, development of guidelines for Water Safety Plan for buildings; and legislative amendment of Waterworks Ordinance and its Regulations in 2016-17 is approximately \$3.4 million. On the other hand, the expenditure on production of API (Announcement for Public Interest) and printing of posters and leaflets on water use tips to reduce lead exposure has incurred approximately \$0.7 million.

In 2017-18, WSD will create three civil service posts and 16 post-retirement service contract/non-civil service contract positions, including professional and mostly inspectorate and clerical staff for carrying out a variety of tasks including a risk-based random inspection of plumbing works, enhancing the process of applications for water supply and setting up of the material laboratory.

In addition, WSD will create four civil service posts and six post-retirement service contract/non-civil service contract positions, including engineering and water science professionals, executive and clerical officers, for the establishment of a Special Duty Unit in WSD. This Unit will be responsible for coordinating the efforts within the Department in taking forward a wide range of tasks including the establishment of the drinking water standards; the review of Water Safety Plan (WSP) of WSD; the development of guidelines for Water Safety Plan for buildings; conducting legislative review and amendments of Waterworks Ordinance and its Regulations; and devising a licensing/ registration regime for parties responsible for plumbing installations.

The creation of the above seven civil service posts and 22 post-retirement service contract/non-civil service contract positions will incur approximately \$20.7 million in 2017-18.

The expenditure of the consultancy studies, in regard to water quality standards and safety, including the establishment of drinking water quality standards and the implementation of enhanced programme for monitoring the quality of drinking water in 2017-18 is approximately \$6.6 million. On the other hand, the operation and maintenance of the material laboratory for testing of plumbing products will incur approximately \$1 million in 2017-18.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)102

(Question Serial No. 3269)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

The independent investigation report on lead in drinking water recommends that the Government test stagnant water in public rental housing estates again as soon as possible. When will the Government plan to test water in public rental housing estates again? What are the resources, timetable and details? How does the Department regulate water supply fittings in public rental housing estates, hospitals, schools and child care centres in 2017-18? What are the resources, timetable and details? Will additional manpower and resources be allocated for inspections in the above venues to see whether relevant water supply fittings, pipes and solders do not comply with declared content, including name of product, standard and origin of product, to Water Supplies Department?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 52)

Reply:

Since the release of the report by the Commission of Inquiry into Excess Lead Found in Drinking Water, the Water Supplies Department (WSD) has been working to develop inter alia an appropriate protocol for testing water samples collected in premises including those in the public rental housing (PRH) estates. In conjunction with the development of this sampling protocol, other key water safety issues have been holistically reviewed and studied, such as the drinking water quality standard, the formulation of an enhanced compliance monitoring programme and water safety plan. The WSD had engaged an expert consultant from the United Kingdom to review, amongst others, the water sampling protocols of various organizations (e.g. the European Union) and developed countries. The Development Bureau, the WSD, the international expert panel and the United Kingdom expert consultant have studied the relevant issues, including the purposes and limitations of the various sampling protocols, and their applicability in Hong Kong's situation. The WSD, together with relevant bureaux/departments, are deliberating on relevant implementation details and necessary follow-up actions including the testing of drinking water in PRH estates. The additional resources, if any, timetable and details are to be determined in due course.

In regard to regulating water supply fittings and inspection and approval of completed plumbing installations, any regulating measures taken by the WSD are applicable to all projects alike including those of PRH estates, hospitals, schools and child care centres.

The WSD has established a general acceptance (“GA”) system which is a pre-approval system to safeguard conformity of plumbing materials with the statutory requirements. For enhancing the control on plumbing materials, the WSD plans to introduce a surveillance programme which involves carrying out verification test on plumbing products with valid “GA” in Q3 of 2017. The WSD will deploy existing staff to carry out the surveillance programme. On the other hand, the WSD will set up a material laboratory for testing of plumbing products in 2017-18, which will incur approximately \$6 million per year.

Regarding inspection of plumbing works, the WSD plans to carry out risk-based random inspection during construction stage on the new installation of plumbing works starting in Q2 of 2017. The WSD will create two civil service posts, which will incur approximately \$0.8 million per year, for this purpose. Furthermore, the WSD will incur additional resources to enhance processing of applications for water supply which also cover inspection of plumbing installation. 11 post-retirement service contract positions will be created for this purpose in 2017-18 which will incur approximately \$5.1 million per year.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)103

(Question Serial No. 1982)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Last year, during the examination of Estimates of Expenditure 2016-17, the Department replied that “we are carrying out a consultancy study on the financial and legal aspects of the supply of reclaimed water. This study is expected to be completed later this year.” Regarding “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”, please inform this Committee:

1. What is the progress of the consultancy study on the financial and legal aspects of the supply of reclaimed water? When will the study report be published?
2. What is the progress of investigations/planning for the reclaimed water supply network for flushing? When will there be the estimated expenditure?
3. Will the reclaimed water supply network for flushing cover new development areas of North District such as North East New Territories and Queen’s Hill?

Asked by: Hon YEUNG Alvin (Member Question No. 148)

Reply:

1. We have completed a review on the financial and legal framework having regard to international experience and are currently in the process of developing an appropriate framework for the supply of reclaimed water in Hong Kong. We plan to collect views on the study findings in a public engagement exercise in end 2017 for finalizing the study.
2. Design of the core infrastructure works related to the supply of reclaimed water for non-potable uses in Sheung Shui and Fanling, comprising a service reservoir and trunk water mains, has been completed and construction works is scheduled to commence in the

second quarter of 2017. The infrastructure works including a chlorination plant, a pumping station and local distribution mains for the supply of reclaimed water to Sheung Shui and Fanling are currently under design, and the estimated expenditures on the design and site investigation works in the financial year 2017-18 are \$12.5 million.

3. The current plan is to supply reclaimed water to the north-eastern part of the New Territories for non-potable uses in phases starting with Sheung Shui and Fanling from 2022 onwards. Considerations will be given to extend the reclaimed water supply to new development areas in North District such as Kwu Tung North, Fanling North and Queen's Hill. To further reduce the use of fresh water for flushing, we will continue reviewing the extension of the reclaimed water supply system to other areas, wherever it is technically and financially justified.

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)169****(Question Serial No. 3672)**

Head: (194) Water Supplies Department

Subhead (No. & title): (000) Operational Expenses

Programme: (1) Water Supply: Planning and Distribution

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

1. Please advise on the Government expenditures on and prices for purchasing Dongjiang (DJ) water in the past five years; the Government expenditure on and price for purchasing DJ water in 2017-2018; the expiry date of the current contract for purchasing DJ water; whether the Government holds regular discussions with the Mainland on the quantity and price of DJ water purchased, and if yes, the details.
2. What is the estimated expenditure on the study of the construction of desalination facilities in 2017-2018? If the study findings show that the cost of seawater desalination is lower than that of purchasing DJ water, will the Government review the sources of water supply in Hong Kong and construct the desalination facilities immediately?

Asked by: Hon CHAN Tanya (Member Question No. 501)

Reply:

1. The expenditures and prices on purchasing Dongjiang (DJ) water for the past 5 years are shown in the following table:-

Year	Expenditure on purchasing DJ water (\$ million)	Average Unit Purchase Price[#] (\$/m³)
2012	3,538.70	4.3
2013	3,743.30	4.6
2014	3,959.34	4.8
2015	4,222.79	5.1
2016	4,491.52	5.5

The average unit purchase price is determined according to the annual supply ceiling of 820 million cubic metres.

In 2017, the estimated expenditure on purchasing DJ water is \$4,778.29 million and the average unit purchase price is \$5.8/m³. The current supply agreement for DJ water is for 2015 to 2017 which is due to expire on 31 December 2017. The price of DJ water after 2017 is subject to a new supply agreement to be agreed between Guangdong (GD) and Hong Kong. We have started the negotiation in February 2017 with the GD authorities on the new DJ water supply agreement for supply after 2017. Water price and quantity are issues that will be discussed during the negotiation.

2. In November 2015, WSD commissioned consultants for the design of the proposed desalination plant at Tsueng Kwan O with an output capacity of 135 million liters per day. The estimated expenditure of the consultancy study in 2017-18 is \$32.7M. The estimated unit water production cost of the proposed desalination plant is about \$12-13 per cubic metre (m³) (at 2015-16 price level) including distribution and customer services costs, which is higher than the unit water production cost using DJ water at \$9.5 per m³ (at 2015-16 price level). We will closely monitor the cost difference between the use of desalinated water and that of DJ water.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)170

(Question Serial No. 3673)

Head: (194) Water Supplies Department
Subhead (No. & title): (000) Operational Expenses
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

1. In 2017-2018, will the Government conduct study on the control of prefabricated building units with pipes from China to ensure that no harmful substances such as heavy metals exist in the pipes of the units? If yes, what are the details and expenditures involved?
2. Will the Government review the effectiveness of the Water Safety Plan in 2017-2018? If yes, what are the details and expenditures involved?
3. Will the Government follow the example of the United Kingdom and establish a Water Regulation Authority for holistic monitoring of Hong Kong's waterworks, including reviewing operation of water suppliers, continuous improvement of waterworks laws and ensuring the compliance of water quality with World Health Organization's guidelines in 2017-2018?

Asked by: Hon CHAN Tanya (Member Question No. 502)

Reply:

1. For all pipes and fittings to be used in plumbing systems in Hong Kong, they shall comply with the requirements and/or standards as stipulated in the Waterworks Regulations (WWR) regardless of their location of fabrication and method of construction (prefabrication or otherwise). Against this, the Water Supplies Department (WSD) has established a general acceptance ("GA") system which is a pre-approval system to ensure conformity of plumbing materials with the statutory requirements. The applicants for water supply are required under WWR to submit plumbing proposals including pipes and fittings pre-approved under the "GA" system to be installed in the plumbing systems. Moreover, upon completion of the plumbing works, WSD will check for installation of pre-approved pipes and fittings and carry out tests on solder pipe joints of inside services. WSD will take water samples in newly installed fresh water inside service for testing of heavy metals so as to assure that no excess heavy metal will be leached from the pipes and

fittings to the water. We consider that the above measures will help ensure the quality of plumbing materials to be used.

2. Water Safety Plan (WSP) has been advocated by the World Health Organization to safeguard drinking water quality. As WSP for buildings is new to the building owners and management agents in Hong Kong, WSD has engaged an overseas expert to study international practices for development of WSP for buildings in Hong Kong. We will review the effectiveness of WSP after its implementation for some time. The expenditure of engaging the expert in 2017-18 is approximately \$0.3 million.

3. The Development Bureau (DEVB) has established an inter-bureau and inter-departmental working group to identify a suitable water safety regime in Hong Kong. The working group has deliberated the findings of consultancy studies commissioned by DEVB, including water safety regimes of leading jurisdictions. The working group is putting forward proposals on introducing legislation for safeguarding the drinking water safety in Hong Kong, including, inter alia, developing a water quality regulatory framework which involves establishment of a Water Quality Regulator to oversee the performance of water supplier and review water quality standards.

In regard to continuous improvement of related laws, WSD has set forth a holistic review on the existing Waterworks Ordinance (WVO) and WWR and identified some priority legislative amendments. The priority legislative amendments include setting out clearly the requirements for designated persons to carry out the plumbing works, defining the duties of licensed plumbers as well as stipulating the latest standards for all plumbing material and components. WSD will submit the priority legislative amendments to the Legislative Council for consideration in the 2nd quarter of 2017.

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)171****(Question Serial No. 3690)**

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (1) Planning and Distribution

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

What were the specific expenditures on purchasing Dongjiang (DJ) water and the specific quantities of DJ water purchased in the past five years? What were the specific expenditures on treating DJ water in the past five years? What were the quantities and values of DJ water discharged into the sea without being used in the past five years? What are the estimated expenditure on purchasing DJ water and the estimated quantity of DJ water purchased in 2017-2018? What is the estimated expenditure on treating DJ water?

Asked by: Hon CHAN Tanya (Member Question No. 519)

Reply:

The annual supply ceiling in the past 5 years is 820 million cubic metres. The expenditures on purchasing Dongjiang (DJ) water for the past 5 years are shown in the following table:-

DJ water	2012	2013	2014	2015	2016
Purchase price (\$ million)	3,538.70	3,743.30	3,959.34	4,222.79	4,491.52

Raw water entering water treatment works includes both locally collected raw water and imported DJ water and it is treated simultaneously. The expenditure on treating raw water in water treatment works for the past five years are as follows:-

	2012-13	2013-14	2014-15	2015-16	2016-17 (up to Feb 2017)
Recurrent expenditure on treating raw water in water treatment works (\$ million)	240.1	256.0	268.2	271.0	242.6

We do not have a separate costing exercise for treatment of DJ water alone and the cost attributable to this task is not readily available.

Since the adoption of “package deal lump sum” approach in 2006, there has not been any discharge of DJ water into the sea.

For 2017, the estimated expenditure on purchasing DJ water is \$4,778.29 million with an annual supply ceiling of 820 million cubic metres. Since the current supply agreement for DJ water is for 2015-2017, the price and quantity of DJ water after 2017 is subject to a new supply agreement to be agreed between Guangdong authorities and Hong Kong. It is expected that there will be no major change in the operation mode as well as the recurrent expenditure level to be incurred in treating raw water in water treatment works in 2017-18. As explained above, we do not have a separate costing exercise for treating DJ water alone.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)172

(Question Serial No. 5520)

Head: (194) Water Supplies Department
Subhead (No. & title): (000) Operational Expenses
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

Please list the number of cases of “water suspension”, time and reasons of the 18 districts in the past five years.

Asked by: Hon CHEUNG Chiu-hung, Fernando (Member Question No. 6117)

Reply:

Water supply interruptions are usually caused by water main bursts and leaks. The statistics of water supply interruptions caused by water main bursts and leaks are tabulated in Table 1 below, which indicates that there is a decreasing trend in the number of fresh water and salt water supply interruptions due to water main bursts and leaks from 2012 to 2016.

Temporary water supply will normally be provided for fresh water supply interruptions that last for more than 3 hours. A breakdown on the number of fresh water supply interruptions that last for not more than and more than 3 hours in the past 5 years is tabulated in Table 2. Among the 28,765 cases of fresh water supply interruptions in the past 5 years, there are 5353 cases (about 19%) with supply interruptions, which last for more than 3 hours. On the other hand, temporary water supply for salt water will not be provided as the affected consumers can use alternative sources, such as used water, for flushing during the suspension period.

Table 1 : No. of Water Supply Interruptions caused by Main Burst and Leak Cases by District in the Past Five Years										
District	Fresh Water					Salt Water				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Central & Western	314	326	235	242	214	164	171	156	129	106
Eastern	203	218	182	263	247	180	199	140	228	229
Islands	298	283	317	237	326	1	1	0	0	0
Southern	267	267	260	291	289	69	79	56	104	71
Wan Chai	347	312	176	38	56	187	206	137	53	53
Kowloon City	313	264	253	275	231	252	239	177	231	214
Kwun Tong	317	286	231	154	155	204	206	182	122	146
Sham Shui Po	151	151	123	130	108	132	127	121	105	97
Wong Tai Sin	63	76	73	62	61	95	74	72	69	67
Yau Tsim Mong	199	202	218	198	194	264	219	217	182	170
North	387	404	371	505	633	1	0	2	1	1
Sai Kung	476	475	390	428	446	35	33	28	45	31
Sha Tin	227	264	252	256	230	111	98	112	90	64
Tai Po	256	284	314	338	284	59	45	46	47	39
Kwai Tsing	215	216	189	187	199	137	163	159	113	165
Tuen Mun	478	325	186	248	165	111	96	53	42	45
Tsuen Wan	230	199	254	243	235	105	116	135	121	145
Yuen Long	1384	1490	1560	1525	1321	0	1	1	4	6
Total	6125	6042	5584	5620	5394	2107	2073	1794	1686	1649

Table 2: No. of Fresh Water Supply Interruptions not more than and more than 3 hours in the Past Five Years					
Duration of Water Supply Interruption	2012	2013	2014	2015	2016
<=3 hrs	4889	4944	4561	4593	4425
>3 hrs	1236	1098	1023	1027	969
Total	6125	6042	5584	5620	5394

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)173

(Question Serial No. 5521)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (2) Water Quality Control

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Please inform this Committee of the various kinds of work, current situation and work progress of “follow-up actions in relation to the recommendations of the Commission of Inquiry into Excess Lead Found in Drinking Water (CoI)”.

Asked by: Hon CHEUNG Chiu-hung, Fernando (Member Question No. 6118)

Reply:

The current progress of follow-up actions in relation to the recommendations of the Commission of Inquiry into Excess Lead Found in Drinking Water is as follows -

- (a) The Development Bureau (DEVB) established an International Expert Panel on Drinking Water Safety (IEP) on 1 June 2016, comprising members from Australia, Canada, United Kingdom and local experts.
- (b) The Water Supplies Department (WSD) has engaged an expert consultant to review, among others, the drinking water standards and sampling protocols of various organisations (e.g. the European Union) and developed countries with a view to establishment of water quality standards, drinking water sampling protocols and programme for monitoring the quality of drinking water from source to taps for Hong Kong. DEVB/WSD is currently working with IEP, the experts and other stakeholders with a view to putting forward a proposal as soon as possible.
- (c) In regard to the development of Water Safety Plans (WSP), WSD, with assistance of an expert consultant, has reviewed the WSPs for its facilities for enhancement and planned to promulgate the guidelines and templates for developing Water Safety Plan for general and specific buildings.
- (d) The DEVB has also established an inter-bureau and inter-departmental working group and engaged a consultant to study the water safety regimes of leading jurisdictions. The working group has deliberated the findings of consultancy studies and will put

forward proposals on introducing legislation on drinking water safety, including, inter alia, developing a water quality regulatory framework which involves establishment of a Water Quality Regulator to oversee the performance of water supplier and review water quality standards.

- (e) WSD has also set forth on a holistic review of the Waterworks Ordinance and its Regulations on, inter alia, the roles and responsibilities of persons engaged in the design and construction of the inside service and the systems for their registration. WSD has identified some priority amendments setting out clearly the duties of licensed plumbers and plumbing workers, and the applicable standards for plumbing materials with a view to submitting the proposal to the Legislative Council for deliberation in the second quarter of 2017.
- (f) Starting from September 2016, training courses have been provided for licensed plumbers and plumbing workers about the potential causes and hazards of drinking water contaminations, and precautionary measures, so as to enhance their awareness on drinking water safety. Furthermore, WSD launched the Voluntary Continuing Professional Development Scheme for Licensed Plumbers in October 2016 in conjunction with the plumbing industry stakeholders.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)174

(Question Serial No. 3409)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

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

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Does your department provide sign language interpretation services? If yes, what are the manpower and expenditure involved? If no, what are the reasons?

Asked by: Hon LEUNG Yiu-chung (Member Question No. 213)

Reply:

There are no sign language interpreting services provided by the Water Supplies Department. That said, we have not received any request for sign language interpretation services in the past three years. We will however consider the provision of such services if justified on demand and need basis.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)175

(Question Serial No. 6879)

Head: Water Supplies Department

Subhead (No. & title): (000) Operational Expenses

Programme: Not Specified

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Regarding outsourcing of service in your department, please inform this Committee of the following in respect of the past 3 years:

1. the total number of outsourced service staff employed by your department and the percentage of outsourced service staff against the total number of staff with the same types of duties in your department;
2. the total expenditure on staff of your department; the total amount paid to outsourced service providers; and the percentage of amount paid to outsourced service providers against the total expenditure on staff of your department; and
3. the nature of your department's outsourced services and the duration of the relevant contracts.

In addition, according to the Government's guidelines for tendering of outsourced services revised last year, if the procured service relies heavily on the deployment of non-skilled workers, and a marking scheme for assessing the tenders is adopted, the procuring department, when assessing the tenders, should include in the assessment criteria the evaluation of tenderers' proposed wage rates and working hours for non-skilled workers. In this regard, please inform this Committee of the following:

4. the current number of outsourced service contracts involving a large number of non-skilled workers awarded by your department since implementation of the guidelines;
5. the departments which have adjusted their assessment criteria in respect of wage rates and working hours for the outsourced service contracts involving a large number of non-skilled workers in the light of the new guidelines since their implementation; how

your department has made adjustment; and if no relevant information is available, the reasons for it;

6. whether there have been any rises in the average wage rates for workers in the contracts of outsourced services that rely heavily on deployment of non-skilled workers since the implementation of the guidelines; if yes, the number of contracts with rises in wage rates; if no relevant information is available, the reasons for it;
7. your department's measures to evaluate the effectiveness of the new tendering guidelines;
8. whether your department is required to adopt the existing mechanism of two-envelope assessment of the technical and price aspects when evaluating tenders for contracts of outsourced service; if no, the number of contracts awarded without adopting the existing mechanism of two-envelope assessment of the technical and price aspects in the past 3 years;
9. the annual numbers of cases of government service contractors breaching the service contracts, the Employment Ordinance or the Occupational Safety and Health Ordinance as revealed by the inspections conducted by your department, and the annual numbers of complaints lodged by the outsourced service staff;
10. the details of follow-up actions on the aforementioned non-compliance and complaint cases; and
11. the number and details of cases involving contractors being punished for non-compliance or sustained complaints.

Asked by: Hon LEUNG Yiu-chung (Member Question No. 138)

Reply:

For (1) to (3) and (9) to (11)

The information below concerns outsourced workers engaged through outsourced service providers in the past three financial years. It includes only service contracts where the number of workers is known.

(1) Number of outsourced workers engaged through outsourced service providers in the past three years

Nature of service contracts	Number of outsourced workers in 2014-15 (as at 31.12.2014)	Number of outsourced workers in 2015-16 (as at 31.12.2015)	Number of outsourced workers in 2016-17 (as at 31.12.2016)
Security	104 (-)	104 (-)	104 (-)

Nature of service contracts	Number of outsourced workers in 2014-15 (as at 31.12.2014)	Number of outsourced workers in 2015-16 (as at 31.12.2015)	Number of outsourced workers in 2016-17 (as at 31.12.2016)
Cleansing	54 (-)	56 (-)	56 (-)
Information Technology	17 (-)	17 (-)	16 (-)
Drivers	103 (64.8%)	97 (63%)	97 (61%)
Logistics (Store support)	8 (200%)	8 (200%)	8 (266.7%)
Total:	286	282	281

Figures in () denote the percentages of outsourced workers as compared to the number of staff with the same types of duties in the department. A dash denotes that there is no staff with the same types of duties in the department.

(2) **Total expenditure on staff in the department and amount paid to outsourced service providers in the past three years**

	2014-15	2015-16	2016-17 (up to 31.12.2016)
Total expenditure on staff (\$ million)	1,667.8	1,741.5	1,356.9
Total amount paid to outsourced service providers (\$ million)	49.9	53.0	41.6
Percentage of amount paid to outsourced service providers against the total expenditure on staff	3.0%	3.0%	3.1%

(3) **Nature and duration of outsourced service contracts in the past three years**

Nature of service contracts	Number of contracts in 2014-15 (as at 31.12.2014)	Number of contracts in 2015-16 (as at 31.12.2015)	Number of contracts in 2016-17 (as at 31.12.2016)
Security	9	10	9
Cleansing	6	6	5
Information Technology	11	18	16
Drivers	4	5	3
Logistics (Store support)	2	2	2
Total:	32	41	35

Duration of service contracts	Number of contracts in 2014-15 (as at 31.12.2014)	Number of contracts in 2015-16 (as at 31.12.2015)	Number of contracts in 2016-17 (as at 31.12.2016)
6 months or less	0	0	0
Over 6 months to 1 year	19	25	7
Over 1 year to 2 years	12	15	27
Over 2 years	1	1	1
Total:	32	41	35

(9) - (11) Breaches, complaints and penalty

Number of cases	2014-15	2015-16	2016-17 (up to 31.12.2016)
(a) Breaches revealed by departmental inspections	0	0	0
(b) Complaints from outsourced service staff	0	0	0
(c) Award of penalty pursuant to (a) and substantiated complaint cases in (b)	0	0	0

(4) – (7)

Please refer to the following information on outsourced service contracts awarded from 28.5.2016 to 31.12.2016 that involved (i) services relying heavily on the deployment of non-skilled workers and (ii) a contract price to which the revised tendering guidelines were relevant:

(d) Number of outsourced service contracts awarded	0
(e) Number of contracts in (d) which adopted a marking scheme to assess the proposed wage rates and working hours, pursuant to the guidelines promulgated in May 2016	Not applicable
(f) In respect of the contracts in (e), the number of contracts with an increase in the average wage rates for non-skilled workers	Not applicable
(g) Evaluation of the effectiveness of the revised tendering guidelines issued on 27.5.2016 in light of (e) and (f)	Not applicable

(8)

Please refer to the following information on outsourced service contracts awarded during the past three financial years (from 1.4.2014 to 31.12.2016) that involved (i) services relying heavily on the deployment of non-skilled workers and (ii) a contract price to which the two-envelope approach was relevant:

Number of contracts using the two-envelope approach	0
Number of contracts <u>not</u> using the two-envelope approach	7
Total	7

- End -

CONTROLLING OFFICER'S REPLY**DEVB(W)176****(Question Serial No 6291)**

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (1) Water Supply: Planning and Distribution

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

The aim of the Water Supplies Department 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. However, there is frequent occurrence of bursting of old fresh water mains aged over 20 to 30 years in many developed areas of Hong Kong due to the ageing problem, causing road subsidence and flooding, and in turn resulting in disruptions to the traffic and damages to the property of the public. In this regard, please provide the details of the bursting of fresh water mains and salt water mains for flushing in the past three years using the table below:

Date and time	Location	Duration (hours)	Type of pipe (fresh water/salt water for flushing)	Age of water mains	Are there any claims made by the public/commercial tenants due to main bursting; if yes, what is the amount of claims?	Estimated date of next comprehensive replacement of the pipe involved

Asked by: Hon MO Claudia (Member Question No. 62)

Reply:

There are 173, 145 and 116 water main burst cases in 2014, 2015 and 2016 respectively. Details of these 434 cases are tabulated in **Appendix 1**.

Among these cases, 219 cases are fresh water main bursts while the remaining 215 cases are salt water main bursts. There are 39 cases with fresh water supply interrupted for more than eight hours and 37 cases with the traffic at RED/PINK routes affected.

There are 306 cases with age of water mains over 30 years and 100 cases between 15 years and 30 years. Regarding the remaining 28 cases with age of water mains less than 15 years, the major causes are due to corrosion of salt water mains and damage by others.

We have received 16 claims for damages due to the above burst cases. There are three cases under investigation, of which two cases with claimed amount of about \$18,000 and \$28,000, and 1 case without claimed amount. The remaining 13 claims were found not justified after investigation.

We have replaced the defective part of the burst mains during emergency repair. Out of the 434 main burst cases, there are 139 cases with the relevant section of water mains subsequently replaced or rehabilitated. 89 cases require no further action as they are either damaged by others or considered as isolated cases. For the remaining 206 cases, we will continue to adopt a multi-pronged approach, including leakage detection, pressure management and re-provisioning of high risk water mains, in order to reduce the risk of main bursts and sustain the healthiness of the water supply networks.

- End -

Appendix 1

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
1	5/1/2014 9:45	Jockey Club Road Near Tong Hang, Sheung Shui	4.92	Fresh	Unknown
2	6/1/2014 3:44	Kansu Street Near Ferry Street	14.5	Salt	28
3	7/1/2014 10:18	Lok Wo Sha Near Light Pole No. Be1596, Ma On Shan	73.42	Fresh	10
4	11/1/2014 7:30	Shan Tong Road, Tai Po	6.5	Fresh	28.1
5	14/1/2014 4:14	No. 83 Princess Margaret Road	Not affected	Fresh	Unknown
6	18/1/2014 5:55	No. 2 San Kwai Street, Kwai Chung.	6.75	Fresh	Unknown
7	21/1/2014 9:10	Footpath under the Bridge at the Junction of Tai Wai Road And Mei Tin Road, Sha Tin	Not affected	Fresh	Unknown
8	24/1/2014 11:40	Tai Wing Avenue No.3	2	Salt	Unknown
9	31/1/2014 12:47	Chung Nga Road, Tai Po	16.08	Salt	26
10	2/2/2014 18:39	No. 29 Shan Tong Village, Tai Po	5.92	Fresh	28.2
11	4/2/2014 11:51	No. 83A Kam Sheung Road	Not affected	Fresh	Unknown
12	8/2/2014 11:07	No. 142 Boundary Street	Not affected	Fresh	Unknown
13	8/2/2014 12:27	Sheung Yuet Road Near Wang Tai Road	Not affected	Salt	30
14	9/2/2014 19:38	Tsing Lun Road Near Light Pole No. H4633, Tuen Mun.	Not affected	Fresh	27
15	11/2/2014 15:16	Jockey Club Road Near Twilight Villa	2.33	Fresh	28
16	15/2/2014 3:00	Waterloo Road Near Ferry Street	Not affected	Fresh	Unknown
17	16/2/2014 19:19	No. 15 Canal Road West Near Wan Chai Road	Not affected	Fresh	Unknown
18	17/2/2014 12:42	No. 8 Cheong Hang Road	6.75	Fresh	Unknown
19	18/2/2014 1:47	Wong Tai Sin Road Near Shatin Pass Road	30.5	Salt	33
20	18/2/2014	To Kwa Wan Rad Near	Not	Salt	15

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	11:44	Lok Shan Road	affected		
21	19/2/2014 11:09	Yan Wing Street Near Ka Wing Street	Not affected	Fresh	Unknown
22	20/2/2014 10:21	Junction of Tai Wo Road And Yuen Shin Road	17.72	Salt	Unknown
23	21/2/2014 8:56	Pok Fu Lam Road near Light Pole No. 492382, Pok Fu Lam	7	Fresh	30
24	22/2/2014 9:17	No. 7 Pine Tree Hill Road	8.08	Salt	Unknown
25	24/2/2014 6:13	No.38 Chong Yip Street, Kwun Tong.	9.92	Fresh	Unknown
26	25/2/2014 12:16	Carriageway of Pak Wan Street Near Pak Tin Street	7.83	Salt	Unknown
27	25/2/2014 16:45	Yuen Shin Road, Tai Po	5.58	Fresh	26
28	25/2/2014 22:31	Ting Kok Road Near Ha Hang	49.33	Salt	24
29	28/2/2014 6:51	Backlane of No. 1 Shung Ling Street	4.58	Fresh	Unknown
30	2/3/2014 8:18	Carriageway of Connught Road Central Near Pottinger Street	9.75	Salt	25
31	4/3/2014 2:23	Carriageway of Beech Street Near Ivy Street	16.08	Salt	Unknown
32	5/3/2014 7:48	Carriageway of Cheung Yee Street Near Cheung Mou Street	5.58	Fresh	Unknown
33	6/3/2014 2:04	Tai Nan West Street Near Cheung Shun Street, Cheung Sha Wan	26.83	Fresh	Unknown
34	13/3/2014 9:09	Lam Hi Road Near Light Pole No. Bd1164, Yuen Long	4.67	Fresh	20
35	18/3/2014 13:42	No. 1 To 3 Wang Lok Street, Yuen Long	7.83	Fresh	Unknown
36	20/3/2014 9:30	Nam Wan Road Near Light Pole No. N8858	6.17	Salt	30
37	21/3/2014 9:04	Cha Kwo Ling Road Near Yau Tong Road	7.08	Salt	Unknown
38	22/3/2014 12:14	Carpark of Ha Hang Government Staff Quarters	2.75	Fresh	Unknown
39	26/3/2014 20:07	Austin Road Near Temple Street	32.75	Salt	29
40	28/3/2014	Tai Ha Street Near Light	6	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	20:03	Pole No. Fa4792, Kwai Chung.			
41	30/3/2014 4:15	No. 77 Container Port Road, Kwai Chung	6	Fresh	Unknown
42	2/4/2014 14:07	Container Port Road Near Kwai Fung Crescent, Kwai Chung	8	Salt	Unknown
43	4/4/2014 8:53	Ngau Tau Kok Road Near Tak Bo Gardens	5	Fresh	Unknown
44	5/4/2014 10:13	Footpath of Chik Wan Street, Tai Wai	6.17	Salt	31.3
45	8/4/2014 15:10	Carriageway of Castle Peak Road Near Tokin Street	14	Salt	Unknown
46	10/4/2014 10:22	Sau Mau Ping Road Near Sau Fung Street	Not affected	Salt	15
47	11/4/2014 6:56	Shum Wan Road near Light Pole No. 43259, Wong Chuk Hang	Not affected	Fresh	34
48	11/4/2014 12:36	Carriageway of Third Street Near Anthony'S Catholic Church	Not affected	Salt	Unknown
49	12/4/2014 13:22	Kwai Hei Street Near Light Pole No. W0238, Kwai Chung	4.92	Fresh	Unknown
50	19/4/2014 22:10	Footpath of Fleming Road Near Harbour Road, Wan Chai.	7.67	Salt	Unknown
51	22/4/2014 4:29	Tai Man Street Near Light Pole No. 44606, Chai Wan	Not affected	Fresh	Unknown
52	22/4/2014 4:40	Tsuen Kwai Street Near Light Pole No. Ac5422	4.5	Fresh	Unknown
53	22/4/2014 10:56	No. 10 Tsing Tai Road, Tuen Mun	3.58	Fresh	1
54	24/4/2014 22:12	Tung Tau Tsuen Road Near Junction Road, Wong Tai Sin	7.92	Fresh	Unknown
55	29/4/2014 13:29	No. 100 Texaco Road, Kwai Chung	Not affected	Salt	Unknown
56	29/4/2014 17:33	Hiram'S Highway Near Light Pole No. Eb4632, Sai Kung	3.17	Fresh	42
57	30/4/2014 17:45	Fu Mei Street Near Fu Keung Street, Lok Fu, Wong Tai Sin.	7.42	Fresh	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
58	5/5/2014 22:53	Kwai Hing Road Near Wo Tong Tsui Street, Kwai Chung	6.83	Salt	Unknown
59	6/5/2014 13:43	Junction of Wai Yip Street And Lai Yip Street	5.83	Fresh	Unknown
60	8/5/2014 2:32	Fenwick Pier Street Near Light Pole No. 27308	6.92	Fresh	Unknown
61	13/5/2014 14:45	No.8 Healthy Street Central, North Point	4.92	Fresh	Unknown
62	13/5/2014 15:13	Fung Shek Street Nera Bus Terminus, Sha Tin	Not affected	Fresh	33.4
63	13/5/2014 15:28	Bus Terminus at Chung Shek Estate	19.5	Salt	33.4
64	15/5/2014 16:37	Junction of Taing Kok Road And Fung Yuen Road, Tai Po	23.15	Salt	26
65	19/5/2014 5:49	Temple Street Near Hi Lung Lane	4.75	Salt	29
66	19/5/2014 7:25	Fung Shue Wo Road Near Light Pole No. W4053, Tsing Yi	Not affected	Salt	31
67	19/5/2014 14:33	South Lantau Road Near Light Pole No. Bc1747, Lantau	4	Fresh	24
68	19/5/2014 16:26	Carriageway of Tai Wai Road Near Mei Tin Road, Sha Tin	0.58	Salt	31.4
69	21/5/2014 10:49	Po Lam Road South Near Light Pole No. Ae4978, Sai Kung	5.55	Fresh	Unknown
70	21/5/2014 13:45	Footpath of Tin Ha Road Near Light Pole No. Fb9097, Yuen Long	7.92	Fresh	Unknown
71	28/5/2014 17:23	Wang Kwong Road Near Kai Wah Street	8	Salt	Unknown
72	29/5/2014 10:13	Pak Tai Street Near Mok Cheong Street	10.25	Salt	Unknown
73	29/5/2014 22:41	Tsoi Yuen Tsuen Near Light Pole No. Fb5778, Kam Tin Road	4.37	Fresh	Unknown
74	3/6/2014 2:16	Carriageway of Sha Kok Street Near Jat Ming Chuen	Not affected	Fresh	32.5
75	3/6/2014 5:56	Sha Kok Street	8.58	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
76	5/6/2014 3:57	Kwai Chung Road Near Light Pole No. Fa6279, Kwai Chung	21	Salt	Unknown
77	12/6/2014 10:55	Yuk Wah Street Near Tsz Wan Shan Road	6.17	Salt	Unknown
78	18/6/2014 3:38	No.70 Mody Road, Tsim Sha Tsui	17.08	Fresh	Unknown
79	19/6/2014 5:08	Tai Kiu Road Near Yuen Long Hong Lok Road	Not affected	Fresh	20
80	20/6/2014 8:26	On Pong Road Near Light Pole No. N6426, Tai Po	31.23	Salt	4.5
81	20/6/2014 20:01	No.15 Cheung Fu Street, Cheung Sha, Lantau Island	11.67	Fresh	29
82	21/6/2014 15:55	No.11, Cheung Fu Street, Lantau	5.67	Fresh	39
83	25/6/2014 13:09	Yuen Chau Kok Road, Sha Tin	22.33	Salt	33.5
84	26/6/2014 3:14	No. 39 Tsing Yi Road, Tsing Yi	6	Salt	Unknown
85	27/6/2014 4:19	Nos.118-120 Argyle Street, Mong Kok.	10.33	Fresh	Unknown
86	30/6/2014 14:19	Road Under Bridge Near Jockey Club Ti-I College, Fo Tan	8.42	Salt	35.6
87	1/7/2014 17:12	No. 1 Leung Yip Street, Yuen Long	Not affected	Fresh	Unknown
88	1/7/2014 23:34	Carriageway at the Junction of Fung Lin Road And Kau Yuk Road, Yuen Long	6	Fresh	Unknown
89	3/7/2014 21:24	Saigon Street Near Ferry Street	19.93	Salt	Unknown
90	5/7/2014 11:37	Connaught Road Central Near Gilman Street, Central	15.83	Salt	Unknown
91	5/7/2014 17:07	Tin Hau Road Near Light Pole No. Bd4435	13	Fresh	Unknown
92	5/7/2014 18:25	No. 80 Robinson Road, Mid-Level, Central	5.75	Salt	Unknown
93	7/7/2014 8:18	Po Nga Road Near Light Pole N6667, Tai Po	Not affected	Fresh	Unknown
94	7/7/2014 14:52	Kwai Shing Circuit Near Hing Shing Road, Kwai Chung	8.5	Fresh	Unknown
95	8/7/2014	No. 5-7 Ka Wing Street	9.67	Fresh	33

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	8:17				
96	9/7/2014 8:15	Near Yuen Long Theatre, Yuen Long	6.58	Fresh	20
97	9/7/2014 12:27	Ting Kok Road Near Light Pole No. Eb2832A, Tai Po	4.83	Fresh	Unknown
98	10/7/2014 6:44	Sha Tin Centre Street Near Scenery Court	7.83	Salt	33.6
99	14/7/2014 4:54	No. 4 Wylie Path	8.35	Fresh	31
100	19/7/2014 0:18	Carriageway at Hin Keng Street Near Che Kung Miu Road, Sha Tin	17.75	Fresh	Unknown
101	19/7/2014 0:23	Kam Sheung Road Near Light Pole No. U8337	6.17	Fresh	Unknown
102	20/7/2014 3:58	Tai Wo Hau Road Near Light Pole No. Cc0960, Kwai Chung	7.58	Fresh	Unknown
103	20/7/2014 14:47	Carriageway at the Junction of Hin Keng Street And Che Kung Miu Road, Sha Tin	6.92	Fresh	Unknown
104	24/7/2014 10:19	Hong Ning Road Near Hip Wo Street	10.58	Salt	Unknown
105	25/7/2014 21:34	Nam Chung Tsuen Near Light Pole No. To0095, Tai O, Lantau	20.08	Fresh	Unknown
106	26/7/2014 14:44	Che Kung Miu Road Near Hin Yiu Estate, Tai Wai	Not affected	Salt	33.6
107	26/7/2014 22:46	Tsun Yip Street Near Hoi Bun Road	18.67	Salt	Unknown
108	28/7/2014 15:42	Ting Lai Road Near Light Pole No. Ea7476, Tai Po	9.33	Salt	9.6
109	31/7/2014 13:58	Wo Yi Hop Road Near Light Pole No. Fb2893, Kwai Chung	Not affected	Salt	Unknown
110	1/8/2014 22:29	Granville Road Near Chatham Road South	16.55	Salt	28
111	4/8/2014 9:04	No.13-27 & 58-68 Bonham Road, Mid-Level	8.75	Salt	Unknown
112	5/8/2014 13:54	No. 46 Tai Yip Street	Not affected	Fresh	30
113	6/8/2014 19:35	Po Hong Road Near Light Pole No. Eb0185, Tseung Kwan O	12.58	Salt	26
114	12/8/2014	Lai King Hill Road Near	6.5	Fresh	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	11:04	Light Pole No. Fa4952, Kwai Chung			
115	13/8/2014 4:30	Junction of Tai Loong Street And Wo Yi Hop Road, Kwai Chung.	6.75	Fresh	Unknown
116	13/8/2014 17:35	Tsuen Wan Road Near Light Pole No. Fc0461, Kwai Chung	Not affected	Fresh	Unknown
117	16/8/2014 8:45	Fu Ning Street Near Chi Chun House	23.33	Salt	Unknown
118	16/8/2014 15:35	No. 18-24 Shan Mei Street, Sha Tin	4.75	Fresh	Unknown
119	19/8/2014 22:19	Wang Kwon Road Near Kai Cheung Road	Not affected	Salt	Unknown
120	22/8/2014 5:25	Queen Elizabeth Hospital Road Near Gascoigne Road	20.85	Salt	Unknown
121	25/8/2014 23:03	Wai Yip Street Near Siu Yip Street	18.58	Salt	30
122	26/8/2014 20:08	Kwai Fuk Road Near Light Pole No. Fa9716, Kwai Chung	6.92	Salt	Unknown
123	28/8/2014 5:58	No. 33 Mei King Street	Not affected	Fresh	Unknown
124	30/8/2014 7:00	Tokin Street Near Cheung Sha Wan Road	17.83	Salt	Unknown
125	31/8/2014 14:28	On Wah Street Near On Tak Road	5.83	Salt	Unknown
126	4/9/2014 14:25	Lei Yue Mun Road Near Lei On Court	11.5	Salt	Unknown
127	5/9/2014 21:15	Ng Chow Road Near Light Pole No. V1101, Ping Che	11.5	Fresh	27.8
128	8/9/2014 6:14	Yuen Long Hong Lok Road Near Light Pole No. Fb 3091	Not affected	Fresh	Unknown
129	11/9/2014 10:47	Leighton Road Near Cannal Road West	Not affected	Fresh	Unknown
130	12/9/2014 11:08	Tai Wo Service Road West Near Light Pole No. Eb9410, Tai Po	Not affected	Fresh	14.8
131	18/9/2014 16:03	No. 17-21 Yuen Long Tai Cheung Street	Not affected	Fresh	Unknown
132	20/9/2014 17:25	Po Lam Road Near Po Tat Estate	Not affected	Salt	17
133	25/9/2014	Tuen Mun Heung Sze	18.25	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	3:09	Mun Road Near Light Pole No. Dd0067			
134	26/9/2014 3:14	Wang Kwong Road Near Kai Wah Street	Not affected	Salt	Unknown
135	27/9/2014 6:37	Queen Elizabeth Hospital Road Near Gascoigne Road	8.67	Salt	Unknown
136	1/10/2014 3:46	Boundary Street Near Waterloo Road	8	Salt	12
137	3/10/2014 15:21	Tai Wo Service Road West Near Light Pole No. N6083, Tai Po.	7	Fresh	Unknown
138	4/10/2014 10:39	No. 61 Carpenter Road	10.5	Salt	14
139	8/10/2014 4:08	Texaco Road North Nera Fire Hydrant No. Ph2009	20.33	Fresh	34
140	15/10/2014 19:12	Siu Yip Street Near Tai Yip Street	23.67	Salt	30
141	20/10/2014 9:45	Carpenter Road Near Hau Wong Road	13	Salt	14
142	22/10/2014 0:59	Cycle Track Near Shatin Pui Ying College	Not affected	Fresh	Unknown
143	30/10/2014 1:12	Siu Yip Street Near Wai Yip Street	Not affected	Fresh	30
144	30/10/2014 16:23	Chung Ling Road, Tai Wai	6	Fresh	32.8
145	31/10/2014 22:12	No. 23 King'S Park Rise	57.42	Salt	Unknown
146	1/11/2014 3:52	Wang Kwong Road Near Kai Wah Street	Not affected	Salt	31
147	2/11/2014 6:17	Ting Kok Road Near Light Pole No. De0234, Tai Po	9	Salt	29.9
148	2/11/2014 12:40	Cha Kwo Ling Road Near Lei Yue Mun Road	Not affected	Salt	Unknown
149	4/11/2014 23:58	Hoi Bun Road Near Kei Yip Street	13.87	Salt	Unknown
150	16/11/2014 6:25	No. 23 King'S Park Rise	87.83	Salt	Unknown
151	18/11/2014 13:32	Backlane of No. 186 Fuk Wing Street	4.67	Salt	7
152	19/11/2014 0:06	Tsun Yip Street Near Hung To Road	15.25	Salt	Unknown
153	20/11/2014 23:18	Wang Chiu Road Near Light Pole No. Ab2465	28.42	Salt	31
154	26/11/2014	Kwai Fuk Road Near	18	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	4:28	Light Pole No. Dc0093, Kwai Chung			
155	28/11/2014 8:39	Fat Kwong Street Near Chung Hau Street	7	Salt	Unknown
156	29/11/2014 4:10	No. 81 Nathan Road	6.67	Fresh	Unknown
157	1/12/2014 16:19	Near Yue Wo Raod Sports Centre	8.17	Salt	33
158	2/12/2014 7:22	Kwei Chow Street Near Yuk Tat Street	14	Salt	Unknown
159	2/12/2014 13:19	No. 6 Kwei Chow Street	7.97	Fresh	Unknown
160	3/12/2014 17:40	Baker Street Near Po Loi Street	9	Fresh	34
161	5/12/2014 7:04	Sheung Ning Road Near Light Pole No. Ea1432	7.83	Salt	26
162	6/12/2014 8:42	No. 72 Waterloo Road	3.45	Salt	16
163	9/12/2014 14:36	Chai Wan Road Near Light Pole No. 34972, Chai Wan	6.5	Salt	12
164	11/12/2014 10:49	No.12, Dai Kwai Street, Tai Po	7.83	Salt	28.5
165	13/12/2014 9:00	Near No. 44 Chung Tsai Tsuen, Peng Chau	4.33	Fresh	Unknown
166	14/12/2014 12:44	Sha Tsui Road Near Light Pole No. Ac3392	Not affected	Fresh	49
167	17/12/2014 3:35	No. 7 Tung Choi Street	Not affected	Salt	Unknown
168	17/12/2014 13:18	Siu Yip Street Near Tai Yip Street	29.75	Salt	30
169	18/12/2014 3:40	Dundas Street Near Portland Street	Not affected	Salt	16
170	18/12/2014 9:56	Slope Finger Hill, Peng Chau	3	Fresh	32
171	20/12/2014 4:09	Siu Yip Street Near Tai Yip Street	24.67	Fresh	30
172	22/12/2014 8:13	Sheung Yee Road Near Wang Chiu Road	Not affected	Salt	Unknown
173	27/12/2014 14:40	No. 122 Wai Yip Street	Not affected	Fresh	Unknown
174	3/1/2015 7:05	On Po Road Near Light Pole No. N6671, Tai Po	23.92	Salt	29.5
175	3/1/2015 13:50	No. 48 Mody Road	6.83	Salt	6

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
176	6/1/2015 5:42	No. 39 Mong Kok Road	20.17	Salt	Unknown
177	14/1/2015 3:41	Pak Hoi Street Near Canton Road	25.42	Salt	32
178	14/1/2015 6:49	Near No.11 Tsing Yi Heung Sze Wui Road, Tsing Yi	Not affected	Salt	20
179	14/1/2015 8:25	No. 26 Des Voeux Road Central	Not affected	Fresh	Unknown
180	15/1/2015 5:28	Choi Hung Road Near Rhythm Garden	16.67	Salt	Unknown
181	16/1/2015 17:20	San Wan Road Near Light Pole No. N3107, Fanling	Not affected	Fresh	Unknown
182	17/1/2015 18:36	Castle Peak Road Near Light Pole No. Ad6135, Sheung Shui	7	Fresh	31.6
183	22/1/2015 16:24	Kwun Fat Street Near Fire Hydrant No. Ph10493	6.6	Fresh	12
184	23/1/2015 6:51	Tsing Yi Road Near Light Pole No. Ac0779, Tsing Yi	11	Fresh	Unknown
185	23/1/2015 11:39	No. 36C Siu Lek Yuen Road, Sha Tin	Not affected	Fresh	25.6
186	23/1/2015 14:08	No. 31-32 Chui Yi Street, Tai Po.	15.92	Salt	28.6
187	27/1/2015 19:25	Aberdeen Main Road near Light Pole No. 26718, Aberdeen	7.33	Salt	25
188	29/1/2015 6:54	Connaught Road Central Near Gilman Street, Central	19.5	Salt	Unknown
189	31/1/2015 18:22	No. 106 King Fuk Street	Not affected	Fresh	Unknown
190	5/2/2015 6:19	Tsun Wen Road Near Light Pole No. Fb9415	11.5	Salt	Unknown
191	9/2/2015 3:52	Canton Road Near Haiphang Road	16.75	Salt	38
192	9/2/2015 7:13	Des Voeux Road West Near Eastern Street, Sai Ying Pun	Not affected	Fresh	Unknown
193	13/2/2015 3:27	Sheung Sze Wan Road Near Clear Water Bay Road, Sai Kung	7	Fresh	Unknown
194	13/2/2015 7:43	No. 1 Waterloo Road	14.17	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
195	13/2/2015 7:45	No. 1 Waterloo Road	11.92	Fresh	Unknown
196	24/2/2015 8:32	No.51 Container Port Road, Kwai Chung	20	Salt	Unknown
197	24/2/2015 8:39	Container Port Road Near Light Pole No. Fc1374, Kwai Chung	Not affected	Fresh	Unknown
198	28/2/2015 4:29	Tolo Highway, Shatin	27.03	Salt	30.7
199	28/2/2015 8:12	No. 85 Wo Tong Tsui Street, Kwai Chung	14.83	Salt	14
200	2/3/2015 13:50	Wang Yip Street West, Yuen Long	Not affected	Fresh	20
201	5/3/2015 16:12	Tuen Hi Road Near Fire Hydrant No. Ph2286	5.63	Fresh	Unknown
202	9/3/2015 13:51	Container Port Road Near Light Pole No. Fc1379, Kwai Chung	10	Salt	Unknown
203	9/3/2015 13:51	Container Port Road Near Light Pole No. Fc1379, Kwai Chung	Not affected	Fresh	Unknown
204	9/3/2015 16:31	Mau Yip Road Near Light Pole No. Eb0222, Tseung Kwan O	6.58	Salt	21.7
205	17/3/2015 5:12	Tai Yau Street Near Ng Fon Sreet	Not affected	Salt	Unknown
206	23/3/2015 13:29	No. 1-3 Ting Kok Road, Tai Po	11.67	Fresh	34.8
207	27/3/2015 2:54	Hop Choi Street Near Light Pole No. U8546, Yuen Long	6.83	Fresh	Unknown
208	28/3/2015 0:34	Hong Ning Road Near Wo Hong Path	7.33	Salt	Unknown
209	28/3/2015 5:43	No. 1-7 Man Cheong Street	Not affected	Salt	Unknown
210	31/3/2015 18:37	No. 22 Yuk Yat Street	22.17	Salt	Unknown
211	1/4/2015 11:29	Kam Wa Street Near Light Pole No. 34958	4	Salt	21
212	3/4/2015 12:22	Tin Sam Street, Sha Tin	Not affected	Fresh	32
213	6/4/2015 11:46	Bulkeley Street Near Gillies Avenue South	11.25	Salt	Unknown
214	6/4/2015 14:12	Bulkeley Street Near Marsh Street	9.88	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
215	6/4/2015 15:18	Science Museum Road	7.97	Fresh	Unknown
216	11/4/2015 5:50	Cheung Sha Wan Road Near Un Chau Estate	8.57	Salt	Unknown
217	11/4/2015 14:03	No. 23 Hang Hau Wing Lung Road, Tseung Kwan O	7	Fresh	Unknown
218	18/4/2015 0:20	Fung Cheung Road Near Hop Yick Road, Yuen Long	10	Fresh	Unknown
219	18/4/2015 14:48	No. 104 Connaught Road West, Central	Not affected	Salt	17
220	22/4/2015 2:48	Hong Ning Road Near Kung Lok Road	19.33	Salt	Unknown
221	29/4/2015 9:59	No. 75 Lok Shan Road	43.75	Salt	16
222	1/5/2015 8:53	Chung Mei Road Near Light Pole No. U7277, Tsing Yi	8.75	Fresh	Unknown
223	10/5/2015 19:10	Fat Kwong Street Near Sheung Foo Street	20.75	Salt	15
224	15/5/2015 2:43	Chung Mei Road Near Light Pole No. U7279, Tsing Yi	15.75	Fresh	Unknown
225	21/5/2015 11:19	8 Wyndham Street, Central	8.5	Salt	21
226	21/5/2015 20:06	Castle Peak Road Near Light Pole No. Fc2623, Tsuen Wan	7	Fresh	Unknown
227	26/5/2015 6:49	Choi Hung Road Near Shatin Pass Road	21.42	Salt	Unknown
228	28/5/2015 6:37	No. 48 Macdonnell Road, Central	8	Fresh	Unknown
229	29/5/2015 22:17	Mong Kok Road Near Tong Mi Road	Not affected	Fresh	Unknown
230	1/6/2015 22:16	No. 1 Tai Wing Avenue	7	Salt	Unknown
231	4/6/2015 16:20	Junction of Sha Tsui Road & Chung On Street, Tsuen Wan	Not affected	Salt	Unknown
232	5/6/2015 9:16	Near 188 Kwai Shing Circuit, Kwai Chung	3.5	Fresh	Unknown
233	7/6/2015 12:43	Wai Yip Street Neaer Siu Yip Street	Not affected	Salt	Unknown
234	7/6/2015	Wai Yip Street Near	Not	Fresh	31

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	18:02	Sheung Yee Road	affected		
235	10/6/2015 7:07	Kam Tin Road Near Kam Tin Mung Yeung Public School, Yuen Long	6.37	Fresh	Unknown
236	10/6/2015 20:55	Kai Cheung Road Near Wang Kwong Road	Not affected	Salt	32
237	11/6/2015 9:51	Ping Che Road near Light Pole No. EB4893, Fanling	12.58	Fresh	28
238	13/6/2015 7:27	Junction of Science Museum Road and Granville Road	11.42	Salt	Unknown
239	13/6/2015 8:36	Junction of Science Museum Road and Granville Road	3.58	Fresh	Unknown
240	13/6/2015 18:30	Ping Che Road near Light Pole EB4893, Fanling	22.75	Fresh	28
241	14/6/2015 19:00	Man Wo House, Wo Che Estate, Sha Tin	Not affected	Fresh	33
242	18/6/2015 18:01	No. 111A, Argyle Street	Not affected	Fresh	Unknown
243	19/6/2015 4:30	No. 31 Au Pui Wan Street, Fo Tan	5.67	Fresh	Unknown
244	23/6/2015 10:50	Luard Road near Light Pole No. 24508	12.75	Salt	28
245	25/6/2015 14:48	Ma Tau Chung Road near Mok Cheong Street	13.9	Salt	16
246	27/6/2015 15:34	Tai Po Tsai Village near Light Pole No. Eb4656, Tseung Kwan O	2.58	Fresh	43
247	30/6/2015 11:27	Tsui Lam Road near Hong Sing Gardens, Tseung Kwan O	4.78	Salt	26
248	1/7/2015 21:03	Wang Kwong Road near Sheung Yuet Road	Not affected	Fresh	Unknown
249	3/7/2015 4:08	Mody Road near Chatham Road South	20.25	Salt	Unknown
250	4/7/2015 8:40	Plover Cove Road near Light Pole No. 6022, Tai Po	9	Salt	32
251	4/7/2015 14:24	Sun Sing Street near Shau Kei Wan Road	11.92	Salt	Unknown
252	8/7/2015 19:08	No.44 Tanner Road	6.92	Fresh	Unknown
253	8/7/2015 19:37	Backlane of No. 5-9 Tsz Wah Lane	4.25	Salt	7

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
254	16/7/2015 14:07	Lung Tak Street near Light Pole No. FC3727, Tsuen Wan	13.17	Salt	Unknown
255	17/7/2015 14:56	Plover Road near Kwong Fuk Football Ground, Tai Po	Not affected	Salt	32
256	17/7/2015 16:40	Sai Wan Ho Street near Light Pole No. 44793	Not affected	Salt	22
257	18/7/2015 22:12	Bulkeley Street near Kun Yam Street	Not affected	Salt	Unknown
258	19/7/2015 5:44	No. 69C Waterloo Road	6.33	Salt	Unknown
259	25/7/2015 12:51	Ting Kok Road near Light Pole No. EB0396, Tai Po	11.33	Salt	29.1
260	26/7/2015 8:39	Shek Ku Street near Perth Street	6.92	Fresh	Unknown
261	30/7/2015 2:37	Junction Road near Carpenter Road	20.5	Salt	Unknown
262	1/8/2015 13:10	Junction of Argyle Street and Sai Yee Street	11.25	Salt	Unknown
263	6/8/2015 6:10	No. 289 Queen's Road West	Not affected	Fresh	Unknown
264	11/8/2015 4:32	Junction of Mong Kok Road and Canton Road	Not affected	Fresh	Unknown
265	11/8/2015 11:00	No.63 Sai Wan Ho Street	1.67	Fresh	Unknown
266	23/8/2015 1:19	Footpath near Garden Rivera Block E and F, Sha Tin	Not affected	Fresh	31.2
267	3/9/2015 3:02	Kwai Lok Street near Light Pole No. Fc4678, Kwai Chung	Not affected	Fresh	Unknown
268	4/9/2015 10:55	No. 20 Good Shepherd Street	7.5	Fresh	Unknown
269	6/9/2015 1:03	Tsing Wun Road near Light Pole No. Fc3773	20.25	Salt	34
270	9/9/2015 17:25	Hui Kwong Street near Bus Terminus	Not affected	Salt	Unknown
271	11/9/2015 15:44	Ting Kok Road near Light Pole No. Eb0387	6.68	Fresh	35.2
272	11/9/2015 23:59	Chi Kiang Street near Lung Tak Street	17.5	Fresh	Unknown
273	17/9/2015 4:01	Wui Cheung Road near Canton Road	44.32	Salt	17
274	21/9/2015	Junction of Canton Road	15.63	Salt	30

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	8:56	and Wui Cheung Road			
275	23/9/2015 5:09	No. 22 Chi Kiang Street	7.67	Fresh	Unknown
276	24/9/2015 16:16	Ting Kok Road near Light Pole No. EB5685, Tai Po	5.08	Salt	19
277	25/9/2015 14:04	Construction Site near King Fuk Street	11.67	Fresh	5
278	26/9/2015 12:07	16 Shouson Hill Road, Shouson Hill	4.75	Fresh	33
279	29/9/2015 19:38	Bulkeley Street near Whampoa Street	Not affected	Salt	Unknown
280	2/10/2015 3:29	Hop Yick Road near Light Pole No. FB4339, Yuen Long.	Not affected	Fresh	Unknown
281	2/10/2015 8:05	Hung Luen Road near Kin Wan Street	14.17	Salt	14
282	6/10/2015 23:08	Queen Mary Hospital, Pok Fu Lam	4.58	Fresh	8
283	7/10/2015 12:01	Serenity Park near Light Pole No. EA7243, Tai Po	42.58	Salt	28
284	12/10/2015 14:07	Lung Sum Avenue near Light Pole DD0387	2.17	Fresh	5.9
285	12/10/2015 21:23	No. 22 Good Shepherd Street	5.17	Fresh	Unknown
286	14/10/2015 4:46	No. 30 Good Shepherd Street	9.75	Fresh	Unknown
287	16/10/2015 14:56	Mui Wo Ferry Pier Road near Light Pole No. SM0131, Mui Wo	3	Fresh	19
288	17/10/2015 10:14	Mui Wo Ferry Pier Road near Light Pole No. FB2463, Mui Wo	4.83	Fresh	Unknown
289	17/10/2015 15:31	Texaco Road near Light Pole No. Fb1805, Kwai Chung	12	Salt	Unknown
290	21/10/2015 16:02	Yuen Shin Park near Light Pole No. Ea8044, Tai Po	29.95	Salt	27.3
291	29/10/2015 2:32	San Shan Road near Pak Tai Street	8.75	Salt	Unknown
292	4/11/2015 2:23	Tai Kwai Street near Light Pole No. M7479, Tai Po	12.68	Salt	29.4
293	4/11/2015 20:06	No. 33C Portland Street	Not affected	Salt	Unknown
294	8/11/2015 5:10	Castle Peak Road near Tuen Hing Road	18.4	Salt	19

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
295	9/11/2015 4:10	Fu Ning Street near Shing Tak Street	11.5	Salt	Unknown
296	9/11/2015 20:27	Fu Ning Street near Shing Tak Street	3.08	Fresh	Unknown
297	11/11/2015 14:59	Shun Hing Street near Light Pole No. EA3253, Sha Tau Kok	6	Fresh	Unknown
298	14/11/2015 10:35	Dai Fuk Street near Light Pole No. Eb5685, Tai Po	21.83	Salt	19
299	15/11/2015 10:46	Kwai Fuk Road near Light Pole No. Dc0100, Kwai Chung	Not affected	Salt	Unknown
300	24/11/2015 14:45	Ting Kok Road near Light Pole No. Eb2815, Tai Po	54	Salt	27.4
301	25/11/2015 20:23	Mui Wo Ferry Pier Road near Light Pole No. FB2464, Mui Wo	24.33	Fresh	Unknown
302	26/11/2015 9:54	Backlane of No. 256 Tung Chau Street	2.67	Fresh	Unknown
303	27/11/2015 14:57	Tsing Yi Heung Sze Wui Road, Tsing Yi	4.92	Fresh	Unknown
304	4/12/2015 22:06	Hiram's Highway near Light Pole No. Ea9639	3.67	Fresh	43.5
305	7/12/2015 15:59	Sha Tin Wai Road near Sha Kok Street, Sha Tin	7.58	Salt	33.5
306	8/12/2015 1:31	Lai Chi Kok Road near Tonkin Street.	Not affected	Salt	27
307	8/12/2015 18:01	Cha Kwo Ling Road near Fan Wa Street	Not affected	Fresh	Unknown
308	9/12/2015 14:13	Ting Kok Road near Light Pole No. Be1883, Tai Po	Not affected	Salt	22.6
309	12/12/2015 14:05	Sha Tau Kok Road near Light Pole No. Cd1856,	Not affected	Fresh	Unknown
310	14/12/2015 5:39	Hop Yick Road near Light Pole No. Fb4340, Yuen Long	7.58	Fresh	Unknown
311	14/12/2015 18:06	No. 90 Kung Lok Road	5.2	Salt	16
312	15/12/2015 3:34	Woh Chai Street near Nam Cheong Street	9	Salt	Unknown
313	16/12/2015 13:11	Chung Hau Street, Ho Man Tin	Not affected	Fresh	Unknown
314	16/12/2015 15:52	Nga Tsin Long near Nga Tsin Wai Road	34	Salt	Unknown
315	16/12/2015	Tuen Mun Heung Sze Wui	7.62	Fresh	36

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	17:49	Road near Light Pole No. H0913			
316	18/12/2015 13:23	Kwong Fuk Square, Tai Po	1.67	Fresh	Unknown
317	26/12/2015 11:25	Junction of Ngan Shing Street and Tak Wing Street, Sha Tin	Not affected	Fresh	Unknown
318	29/12/2015 7:17	Shan King Estate near King On House	11	Salt	8
319	2/1/2016 13:10	No. 70 Ma Tau Wai Road	6.42	Fresh	Unknown
320	5/1/2016 0:42	Tak On House, Tsueng Kwan O	13	Salt	25.5
321	9/1/2016 9:21	Canton Road near Saigon Street	7	Fresh	Unknown
322	13/1/2016 3:25	Lai Yip Street near Hoi Bun Road	29	Salt	Unknown
323	15/1/2016 19:43	Near Chung Hau Tsuen Public Toilet, Mui Wo	6	Fresh	20
324	16/1/2016 6:29	Near Chung Hau Tsuen Public Toilet, Mui Wo	9.72	Fresh	20
325	18/1/2016 7:10	Wang Lee Street near Light Pole No. Fa8671, Wang Chau, Yuen Long	7.17	Fresh	34
326	19/1/2016 13:06	Hiu Kwong Street near Hiu Lai Court	15.92	Salt	34
327	20/1/2016 5:19	Plover Cove Road, Tai Po	13.58	Salt	27
328	20/1/2016 13:02	No. 190 Hollywood Road	5.5	Fresh	Unknown
329	21/1/2016 2:12	Mei Tin Road, Tai Wai	Not affected	Fresh	7.1
330	21/1/2016 10:16	Mui Wo Ferry Pier Road, Mui Wo, Lantau.	12.5	Fresh	Unknown
331	24/1/2016 6:06	No. 2-28 Kwai Lok Street, Kwai Chung	Not affected	Fresh	Unknown
332	26/1/2016 4:03	Hip Wo Street near Hiu Kwong Street	77.33	Salt	Unknown
333	26/1/2016 9:12	No. 64 Nam Wan San Tsuen, Peng Chau	Not affected	Fresh	12
334	28/1/2016 7:08	Wan Hoi Street near Tai Wan Shan Swimming Pool	9.25	Fresh	Unknown
335	28/1/2016 17:26	Tai Po Road near Berwick Street Sitting Out Area	Not affected	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
336	29/1/2016 12:54	Fat Kwong Street near Yan Man House	12	Salt	Unknown
337	31/1/2016 15:20	Fu Ning Street near Shing Tak Street	40.33	Salt	17
338	1/2/2016 8:28	Yeung Uk Road near Texaco Road, Kwai Chung	16.58	Salt	Unknown
339	3/2/2016 3:12	Hiu Kwong Street near Hiu Lai Court	29.42	Salt	20
340	5/2/2016 8:21	Yau Ma Tei Public Cargo Working Area, Hoi Fai Road	7.83	Salt	23
341	11/2/2016 12:55	Hoi Bun Road near Lai Yip Street	40.83	Salt	22
342	19/2/2016 14:06	Junction of Che Kung Miu Road and Sha Tin Tau Road	6.92	Fresh	Unknown
343	20/2/2016 3:37	Lok Shan Road near Mei King Street	Not affected	Salt	17
344	20/2/2016 13:59	Ngan Shing Street near Tak Wing Street, Sha Tin	Not affected	Salt	Unknown
345	27/2/2016 16:46	No. 81 Bulkeley Street	Not affected	Salt	28
346	29/2/2016 4:44	Belcher'S Street near Sai Cheung Street	Not affected	Fresh	Unknown
347	29/2/2016 8:26	Yau Shin Street near Light Pole No. Ad6826, Au Tau, Yuen Long	Not affected	Fresh	Unknown
348	1/3/2016 22:33	Wo Yi Hop Road near Light Pole No. Fa9987, Kwai Chung	6.42	Salt	19
349	7/3/2016 14:27	No. 21 Kwai Tei New Village, Fo Tan	3.42	Fresh	18.7
350	9/3/2016 13:24	Sau Mau Ping Salt Water Pumping Station	Not affected	Salt	Unknown
351	12/3/2016 3:15	To Kwa Wan Road near San Ma Tau Street	12.83	Salt	Unknown
352	15/3/2016 10:39	Olympic Garden, Kowloon City	Not affected	Fresh	5
353	15/3/2016 23:50	No. 47-49 Ma Tau Wai Road	5.42	Fresh	Unknown
354	17/3/2016 13:56	Ngan Kwong Wan Road near Light Pole No. Dc0170, Mui Wo	13.5	Fresh	Unknown
355	18/3/2016 2:29	Wo Yi Hop Road near Light Pole No. Cc1224,	26.17	Salt	Unknown

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
		Kwai Chung			
356	23/3/2016 6:27	No.71-81 Container Port Road, Kwai Chung	7.58	Salt	Unknown
357	31/3/2016 2:31	Jaffe Road near Light Pole No. 24537	5.75	Salt	26
358	31/3/2016 10:47	Kwai Tei New Village, Fo Tan	3	Fresh	19
359	7/4/2016 15:23	Site of Kwong Lee Road near Fat Tseung Street	3.75	Salt	Unknown
360	12/4/2016 3:55	To Kwa Wan Road near Lok Shan Road	9.82	Salt	Unknown
361	15/4/2016 17:00	King's Road near Light Pole No. 43497	Not affected	Fresh	4
362	19/4/2016 8:04	Wang Chiu Road near Kai Lai Road	6.92	Fresh	32
363	19/4/2016 12:48	Wang Yip Street West near Light Pole No. Ad9143, Yuen Long	Not affected	Fresh	Unknown
364	25/4/2016 17:10	No. 148 Electric Road	Not affected	Fresh	Unknown
365	26/4/2016 7:16	Clear Water Bay Road near Tseng Lan Shue	Not affected	Fresh	33.9
366	26/4/2016 10:04	No.104 Kat Hing Back Street, Tai O	2.2	Fresh	15
367	28/4/2016 13:05	No. 1-35, Tai Wai Road, Sha Tin	Not affected	Fresh	33
368	5/5/2016 11:39	Sai Ching Street near Fire Hydrant No. Ph2962, Yuen Long	7.75	Fresh	34
369	5/5/2016 15:29	Fantasy Road near Light Pole No. Dc0907, Disleyland, Lantau	Not affected	Fresh	12
370	12/5/2016 11:38	Nam Wan Road near Light Pole No. Ce1876	Not affected	Salt	9.9
371	15/5/2016 12:39	Junction of Hip Wo Street and Hiu Kwong Street	9.5	Salt	Unknown
372	18/5/2016 7:35	Sheung Yee Road near Wai Yip Street	5.72	Fresh	Unknown
373	22/5/2016 10:16	Fung Cheung Road, Yuen Long	Not affected	Fresh	Unknown
374	22/5/2016 13:33	Kan Tau Tsuen near Light Pole No. Eb3081, Fanling	16.08	Fresh	Unknown
375	24/5/2016 10:33	Kwok Shui Road near Light Pole No. W1531, Tsuen Wan.	12.25	Salt	36

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
376	28/5/2016 13:32	Kai Cheung Road near Wang Kwong Road	Not affected	Salt	Unknown
377	5/6/2016 6:52	Ma Tau Chung Road	Not affected	Fresh	Unknown
378	9/6/2016 0:50	City Garden Road near Fire Hydrant No. 1473	11.75	Fresh	Unknown
379	10/6/2016 6:59	Container Port Road near Light Pole No. Fc1390, Kwai Chung	Not affected	Fresh	Unknown
380	11/6/2016 17:26	Shek Pai Tau Road near Light Pole No. Dd0958	13.12	Fresh	Unknown
381	12/6/2016 6:02	Lei Muk Road near Light Pole No. Fb2948, Kwai Chung	Not affected	Salt	24
382	15/6/2016 5:49	On Po Road near Light Pole No. Eb3779, Tai Po	12.92	Fresh	Unknown
383	16/6/2016 4:20	Yeung Uk Road near Light Pole No. Dc1786, Tsuen Wan.	46.67	Salt	21
384	16/6/2016 17:49	Lung Mun Road near Ho Wan Street	Not affected	Fresh	35
385	22/6/2016 0:17	Ting Kok Road near Light Pole No. De0068, Tai Po	20.92	Salt	23
386	24/6/2016 12:36	Po Heung Street, Tai Po	15.5	Salt	33
387	4/7/2016 3:23	No. 14-18 Austin Avenue	43.75	Salt	Unknown
388	18/7/2016 12:24	Princess Margaret Road near Pui Ching Road	45.33	Salt	Unknown
389	20/7/2016 7:02	Tsuen Wah Street near Light Pole No. Ac1720, Tsuen Wan.	Not affected	Fresh	Unknown
390	26/7/2016 16:50	Near Tung Chung Pipe Bridge, Tung Chung, Lantau	6	Fresh	19
391	27/7/2016 11:57	Ngan Kwong Wan Road near Fire Hydrant No. Ph68, Mui Wo	7	Fresh	33
392	1/8/2016 7:04	Hop Yick Road near Light Pole No. Fb4340, Yuen Long.	Not affected	Fresh	25
393	2/8/2016 6:35	Tsing Luk Street near Light Pole No. Fc2256, Tsing Yi	12.08	Salt	28
394	3/8/2016	No.222-224 Sai Lau Kok	Not	Fresh	36

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	11:38	Road, Tsuen Wan	affected		
395	4/8/2016 14:34	Junction of Nam Wan Road and Tat Wan Road	16.5	Salt	28
396	7/8/2016 15:08	No.2 Shing Mun Road, Tsuen Wan	5.25	Salt	8
397	8/8/2016 11:50	City Garden Road near Light Pole No. 44594	2	Fresh	32
398	8/8/2016 13:15	Electric Road near Light Pole No. 45115	2.58	Salt	Unknown
399	11/8/2016 3:48	Kung Um Road near Light Pole No. Dd1155, Yuen Long	Not affected	Fresh	Unknown
400	14/8/2016 9:20	Java Rd	Not affected	Fresh	Unknown
401	22/8/2016 6:26	Science Museum Road near Mody Road	Not affected	Fresh	Unknown
402	23/8/2016 11:06	Junction of Ma Kok Lane and Lung Tak Street, Tsuen Wan	Not affected	Fresh	Unknown
403	1/9/2016 9:35	No.2-4 Greig Road	5.67	Fresh	Unknown
404	7/9/2016 6:51	Kwai Yan Road near Kwai Fong Mtr Station, Kwai Chung	37.25	Salt	Unknown
405	7/9/2016 6:51	Kwai Yan Road near Kwai Chung Plaza, Kwai Chung	10.25	Fresh	Unknown
406	13/9/2016 16:53	No. 163 Hai Tan Street	Not affected	Fresh	12
407	13/9/2016 18:06	No. 180 Pok Fu Lam Road, Pok Fu Lam	7.08	Fresh	Unknown
408	19/9/2016 10:35	Man Yue Street near Ma Tau Wai Road	Not affected	Fresh	30
409	20/9/2016 3:09	Hong Lee Road near Kung Lok Road	Not affected	Fresh	Unknown
410	20/9/2016 6:28	No. 8 Leung Yip Street, Yuen Long	7.83	Fresh	Unknown
411	30/9/2016 10:13	Aberdeen Praya Road near Light Pole No. 41995, Aberdeen	3.92	Fresh	4
412	5/10/2016 14:11	Junction of Ma On Shan Rd and Sai Sha Road, Ma On Shan	14.42	Salt	28
413	6/10/2016 12:05	Ngai Shing Street near Light Pole No. N0304	Not affected	Fresh	Unknown
414	13/10/2016	Sai Sha Road near Light	14.35	Salt	27

No.	Date and Time	Location	Water Supply Interruption (hr)	Type of Water Main	Age of Water Main (Note 1)
	5:27	Pole No. Be3462, Mo On Shan			
415	13/10/2016 7:14	Wan Po Road near Light Pole No. Cr1407, Tseung Kwan O	12.25	Fresh	28.4
416	18/10/2016 18:04	No. 54 Waterloo Road	10.72	Salt	Unknown
417	20/10/2016 21:07	Fat Kwong Street near Sheung Fu Street	Not affected	Salt	Unknown
418	24/10/2016 6:54	Un Chau Street near Pei Ho Street	32.83	Salt	46
419	25/10/2016 5:44	Wong Nai Chung Road	7	Fresh	Unknown
420	29/10/2016 9:26	1 Yee Shing Street, Chai Wan	8.67	Salt	Unknown
421	31/10/2016 9:35	Hung Hom Road near Tak Hong Street	Not affected	Salt	17
422	2/11/2016 18:29	No.31 Tin Hau Temple Road	6.5	Salt	16
423	8/11/2016 2:37	Arsenal Street	6.92	Fresh	Unknown
424	14/11/2016 0:15	Mody Road near Kowloon Shangri-La Hotel	6.45	Fresh	Unknown
425	14/11/2016 16:55	King's Road near Light Pole No. 43493	Not affected	Salt	Unknown
426	16/11/2016 23:24	Mody Road near Shangri-La Hotel	8.25	Salt	Unknown
427	16/11/2016 23:24	Mody Road near Shangri-La Hotel	6.58	Fresh	Unknown
428	30/11/2016 16:10	Dai King Street near Light Pole No. Ea7540	11.92	Salt	Unknown
429	2/12/2016 20:06	No. 98-102 Babington Path, Sai Wan	9.08	Fresh	Unknown
430	4/12/2016 19:49	Tsat Tsz Mui Road near Fire Hydrant No. Ph166	3.67	Salt	Unknown
431	9/12/2016 4:57	No. 44 Yiu Wa Street	Not affected	Fresh	Unknown
432	20/12/2016 5:50	Heng On Estate near Hang Hong Street, Ma On Shan	Not affected	Salt	26
433	23/12/2016 10:34	Lee Nam Road near Light Pole No. 35329, Aberdeen	4.08	Fresh	22
434	28/12/2016 12:00	Ting Tai Road near Light Pole No. Ea7295	20.75	Salt	29.5

Note:

1. "Unknown" denotes no record of age of the water main. The year of completion was not incorporated in WSD's water mains record in the past until early eighties. Hence, the age of these water mains will likely be over 30 years.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)177

(Question Serial No. 6017)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (1) Water Supply: Planning and Distribution
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

The total amount of public's expenditure for purchasing Dongjiang (DJ) water keeps on rising every year but the quality of water has not improved. It is reported that there is an illegal landfill by Baipu River in Heyuan, Guangdong, which is an upstream tributary of DJ water. The landfill does not contain leakage and the effluent may have flown into DJ; moreover, pictures of rats and condoms have been taken in the vicinity, which shocked the public.

In the Estimates this year, how will Water Supplies Department and the Guangdong authorities cooperate in improving the quality of DJ water?

Asked by: Hon TSE Wai-chun, Paul (Member Question No. 73)

Reply:

The collaboration between Hong Kong (HK) and the Guangdong (GD) authorities in protecting and improving the water quality of Dongjiang (DJ) is made through the following mechanism:

The Dongjiang Water Quality Protection Special Panel (led by the Development Bureau (DEVB) of HK and the Department of Environmental Protection of GD Province (DEPGD)) convenes regular meetings to review and advise on DJ water quality and discuss the strategies, plans and their effectiveness. The Expert Group (led by the Environment Bureau (ENB) of HK and the DEPGD) under the HK GD Joint Working Group on Sustainable Development & Environmental Protection (JWGSDEP) oversees the work of the Panel on DJ water quality and protection measures for DJ water. In addition, the JWGSDEP (led by the ENB of HK and the DEPGD) convenes regular meetings to review the progress of collaboration of the GD and HK sides and agree on the work plan for the coming year.

On a separate front, the GD and HK sides maintain close liaison on various issues relating to DJ water supply to HK through an established institutional mechanism. The GD/HK Water Supply Business Meeting (led by the DEVB of HK and the Water Resources Department of GD Province) is convened to discuss various issues relating to DJ water supply including water resources protection and water quality monitoring. Furthermore, the HK/GD Water Supply Operation and Management Technical Cooperation Sub-group (led by the Water Supplies Department (WSD) of HK and the Water Resources Department of GD Province) convenes regular meetings to examine water quality monitoring work, discuss, follow up and take forward measures for reducing pollution at sources and its implementation.

These regular meetings aside, in the event of any major contamination incidents affecting the quality of DJ water supplied to HK, the GD authorities will immediately notify WSD via an established notification mechanism manned by designated liaison officers of both HK and GD authorities. HK will also liaise closely with GD authorities on any issues related to suspected contamination incidents affecting the quality of DJ water supply to HK.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)178

(Question Serial No. 5166)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

In relation to raw water from Dongjiang (DJ) and water from reservoirs, what were the Government's expenditures on filtration and treatment in the past three years? What are the anticipated details and estimated expenditures in 2017-18? Is there any plan of upgrading water filtration facilities and technology? What are the expenditures and details?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 53)

Reply:

The expenditures incurred in the water treatment works for treating raw water from Dongjiang and reservoirs in the past three years are as follows:

2014-15: \$268.2 million
2015-16: \$271.0 million
2016-17: \$242.6 million (up to February 2017)

As there is no major change in the operation mode in the water treatment works, the expenditure level to be incurred for treating raw water in 2017-18 is expected to be of similar order as previous years.

In regard to water treatment facilities and technology, the Water Supplies Department is currently taking forward the following facility upgrading projects:

(a) With advancement of membrane technology, chlorine generation facilities using the technology of membrane electrolysis have become sufficiently compact and cost effective to be installed in water treatment works. We therefore plan to seek the Finance Committee's funding approval to upgrade the existing disinfection facilities in the water treatment works by installing on-site chlorine generation plant at an estimated cost of \$875.6 million. The works are scheduled for commencement in the third quarter of 2017 for completion by the end of 2020.

(b) The latest water treatment technologies of ozonation and bio-filtration will be employed to replace pre-chlorination in Tai Po Water Treatment Works (WTW) and Sha Tin WTW in tandem with their expansion and reprovisioning programmes respectively. Whilst the Tai Po WTW is being expanded at an approved project estimate of \$6,176.7 million, the in-situ reprovisioning of the South Works of Sha Tin WTW is also being carried out in stages with the advance works in construction stage and the main works in design stage. The approved project estimate of the advance works is \$1,658 million while the estimated cost of the main works is under review.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)179

(Question Serial No. 5167)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (2) Water Quality Control

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

Previously, the Secretary for Development said that there was “a lack of awareness” of leaded solders and risk of lead in drinking water among stakeholders including the Water Supplies Department (WSD). Will the WSD allocate additional resources for further staff training to safeguard water safety in this financial year?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 54)

Reply:

The current training courses conducted by WSD for existing and newly recruited frontline staff have been covering the risk of lead leaching into drinking water and the implementation details of enhancement measures for preventing the illegal use of lead solder in jointing fresh water supply pipes. The enhanced measures include the requirement for submission of details of lead free soldering materials in the applications for water supply, carrying out non-destructive tests on solder pipe joints, testing water samples for heavy metals including lead at the final inspection of newly installed fresh water inside service, the use of a detailed checklist for inspection and approval of completed plumbing works and implementation of an enhanced point penalty system for the licensed plumbers stressing the importance of using compliant plumbing materials.

In addition to these enhancement measures, WSD will carry out a risk-based random inspection during construction stage on the new installation of plumbing works to enhance the inspection and approval of inside service and introduce a surveillance programme which involves carrying out verification test on pre-approved plumbing products to further enhance the plumbing material control.

We will conduct relevant training courses to upkeep staff's awareness of the implementation details of the new enhancement measures to safeguard drinking water safety. Existing staff resources will be deployed to implement these training programmes.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)180

(Question Serial No. 5168)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

In connection with water supply fittings, will the Department study implementation of a product labelling system to ensure import, retail and wholesale of water supply fittings comply with the relevant legislation and let the public have the right to know? If yes, what are the details and expenditures? If no, what are the reasons?

Asked by: WONG Pik-wan, Helena (Member Question No. 55)

Reply:

To enable the general public to purchase plumbing products approved by the Water Supplies Department (WSD) thereby lowering the risk in using non-compliant plumbing products, WSD has planned to launch a voluntary labeling scheme for plumbing products with WSD's "general acceptance" starting from taps and mixers. A pilot scheme will be launched in collaboration with the plumbing industry stakeholders tentatively in Q2/2017.

We do not anticipate any major expenditure in 2017/18 arising from the above pilot scheme.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)181

(Question Serial No. 5169)

Head: (194) Water Supplies Department
Subhead (No. & title): Not Specified
Programme: (2) Water Quality Control
Controlling Officer: Director of Water Supplies (Enoch T S LAM)
Director of Bureau: Secretary for Development

Question:

What are the number of water safety experts in the establishment of the Water Supplies Department (WSD) and details? What is the annual expenditure? The public places importance on water safety. Will the WSD consider increasing the number of water safety experts in response to the public's opinion?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 56)

Reply:

Currently, there are one Chief Waterworks Chemist, six Senior Waterworks Chemists, 22 Waterworks Chemists and one post-retirement service contract Specialist Water Chemist in the Water Supplies Department (WSD) responsible for the control and monitoring of drinking water quality. The estimated annual expenditure is about \$30.0 million.

In 2017-18, WSD will create one additional Senior Waterworks Chemist and one additional non-civil service contract Water Quality Chemist to undertake the establishment of drinking water quality standard and enhance the control and monitoring of drinking water quality in Hong Kong. The estimated additional annual expenditure is about \$2.1 million.

In regard to the engagement of water safety experts, Working Group on Water Quality and Task Group on Water Safety in Buildings have been commissioned under the Advisory Committee on Water Supplies with water experts and academic members. Furthermore, WSD has engaged a Water Safety Advisor from the United Kingdom to give advice on water safety related matters and established an expert committee comprising members from relevant academic and professional institutions to advise on matters related to plumbing materials.

- End -

CONTROLLING OFFICER'S REPLY

DEVB(W)182

(Question Serial No. 5170)

Head: (194) Water Supplies Department

Subhead (No. & title): Not Specified

Programme: (2) Water Quality Control

Controlling Officer: Director of Water Supplies (Enoch T S LAM)

Director of Bureau: Secretary for Development

Question:

What are the Water Supplies Department (WSD)'s measures and plans on realising a review of the Waterworks Ordinance in 2017-18? What are the details and expenditures? Will the WSD consider improving relevant issues with reference to recommendations of Commission of Inquiry into Excess Lead found in Drinking Water (CoI)? Will the Government consider legislation on drinking water safety? If yes, how many manpower and resources will be deployed for drafting laws and what are the details? Is there a timetable for legislation? If no, what are the reasons?

Asked by: Hon WONG Pik-wan, Helena (Member Question No. 57)

Reply:

Water Supplies Department (WSD) has set forth a holistic review on the existing Waterworks Ordinance (WVO) and its Regulations (WWR) and identified some priority legislative amendments.

The priority legislative amendments include setting out clearly the requirements for designated persons to carry out the plumbing works, defining the duties of licensed plumbers as well as stipulating the latest standards for all plumbing material and components. These amendments are proposed having regard to the recommendations of the Commission of Inquiry into Excess Lead found in Drinking Water (CoI). WSD will submit the priority legislative amendments to the Legislative Council for consideration in the 2nd quarter of 2017.

For the expenditure on the legislative review and amendments, apart from five existing civil service posts redeployed for the work, WSD created one non-civil service post in 2016-17, which will incur approximately \$1.2 million in 2017-18. In addition, the WSD will also create one time-limited directorate post which will incur approximately \$1.7 million in 2017-18.

As for drinking water safety, the Development Bureau (DEVB) has established an inter-bureau and inter-departmental working group to identify a suitable water safety regime in Hong Kong. The working group has deliberated the findings of consultancy studies commissioned by DEVB and will put forward proposal of a suitable water safety regime in Hong Kong, including the establishment of a set of drinking water standard, a water quality regulatory framework, as well as putting in place a comprehensive programme for monitoring the quality of drinking water from source to taps.

- End -