

CHAPTER 8

Drainage Services Department

Sewage Services Charging Scheme

**Audit Commission
Hong Kong
30 October 2013**

This audit review was carried out under a set of guidelines tabled in the Provisional Legislative Council by the Chairman of the Public Accounts Committee on 11 February 1998. The guidelines were agreed between the Public Accounts Committee and the Director of Audit and accepted by the Government of the Hong Kong Special Administrative Region.

Report No. 61 of the Director of Audit contains 10 Chapters which are available on our website at <http://www.aud.gov.hk>

Audit Commission
26th floor, Immigration Tower
7 Gloucester Road
Wan Chai
Hong Kong

Tel : (852) 2829 4210
Fax : (852) 2824 2087
E-mail : enquiry@aud.gov.hk

SEWAGE SERVICES CHARGING SCHEME

Contents

	Paragraph
EXECUTIVE SUMMARY	
PART 1: INTRODUCTION	1.1 – 1.9
Audit reviews	1.10 – 1.11
General response from the Administration	1.12 – 1.13
Acknowledgement	1.14
PART 2: RECOVERY OF SEWAGE SERVICES OPERATING COSTS	2.1
Provision of sewage services	2.2 – 2.3
Sewage services revenue and expenditure	2.4 – 2.15
Audit recommendation	2.16
Response from the Administration	2.17 – 2.19
PART 3: COLLECTION OF SEWAGE CHARGES	3.1
Actions to identify SC-omission cases	3.2 – 3.7
Areas for improvement	3.8 – 3.12
SC recovery from convicted cases of unauthorised use of water	3.13 – 3.14
Areas for improvement	3.15 – 3.16
Recent development	3.17
Audit recommendations	3.18
Response from the Administration	3.19 – 3.20

	Paragraph
PART 4: COLLECTION OF TRADE EFFLUENT SURCHARGES	4.1
Actions to identify TES-omission cases	4.2 – 4.12
Areas for improvement	4.13 – 4.28
Reassessment of TES rates	4.29 – 4.31
Areas for improvement	4.32 – 4.40
Audit recommendations	4.41
Response from the Administration	4.42 – 4.43
PART 5: COMPILATION OF MANAGEMENT INFORMATION	5.1
Management information	5.2 – 5.4
Audit recommendations	5.5
Response from the Administration	5.6 – 5.7
 Appendices	 Page
A : Trade effluent surcharges of 27 trades (August 2013)	54
B : Drainage Services Department: Organisation chart (August 2013)	55
C : 102 business classifications in water-account application form (August 2013)	56 – 57
D : Acronyms and abbreviations	58

SEWAGE SERVICES CHARGING SCHEME

Executive Summary

1. Hong Kong has established an extensive public sewerage system, which covers areas inhabited by 93% of the population. Every day, 2.7 million cubic metres (m³) of sewage produced from residential, commercial and industrial premises is disposed of through the public sewerage system. Under the policy directives of the Environment Bureau, the Drainage Services Department (DSD) is responsible for managing the public sewerage system for the collection, treatment and disposal of sewage.

2. In April 1995, the Sewage Services Charging Scheme (SSCS) was introduced, under which a water consumer whose premises are connected to a public sewer needs to pay a sewage charge (SC), and a trade effluent surcharge (TES) if he operates one of the 27 designated trades. The Sewage Services Branch (SS Branch) of the DSD is responsible for administering the SSCS. Furthermore, the Water Supplies Department (WSD) collects SC and TES on behalf of the DSD, which are included in water bills issued to water consumers. As of 31 March 2013, there were 2.79 million water accounts, of which 2.61 million were SC accounts (of which 22,000 were also TES accounts) and 180,000 were non-SC accounts. In 2012-13, the DSD collected \$776 million of SC and \$207 million of TES. In 2011-12, the Sewage Services Operating Accounts prepared by the DSD recorded an operating deficit of \$536 million. The Audit Commission (Audit) has recently conducted a review of the SSCS with a view to identifying areas for improvement.

Recovery of sewage services operating costs

3. In launching the SSCS in April 1995, the SC rate was set at \$1.2 per m³ of water supplied, and the TES rates were set ranging from \$0.11 to \$5.98 per m³ of water supplied, depending on the average sewage pollution strength of individual TES trades. In May 2007, the Legislative Council (LegCo) approved increases in the SC rate by 9.3% per annum from April 2008 to April 2017 (the ten-year SC-rate increment scheme). Furthermore, the TES rates for individual trades were revised in August 2008 and August 2009. On the expenditure side, the DSD has projected

Executive Summary

that the operating costs and operating deficits would increase in the coming years because of the completion and launch of additional sewage treatment facilities, to be offset somewhat by increased operational efficiency and certain cost savings (paras. 2.5 to 2.10).

4. ***Target cost recovery rates not achieved.*** In May 2008, the Chief Executive-in-Council endorsed that: (a) the projected operating cost recovery rate for SC would be around 70% after implementing the ten-year SC-rate increment scheme by 2017-18; and (b) the Government aimed to achieve a 100% cost recovery rate for TES by 2009-10. However, Audit notes that the DSD's SC cost recovery rate of 57% in 2011-12 is projected to improve to 60% in 2017-18, which will fall short of the Government's target of 70%, and the TES cost recovery rate of 95% in 2011-12 is projected to deteriorate to 62% in 2017-18, which will also fall short of the Government's target of 100% (paras. 2.12 and 2.14).

Collection of sewage charges

5. ***Omissions and long time taken in levying SC on premises.*** SC is chargeable on all water accounts except those of premises located in unsewered areas or developments. For the purpose of levying SC, all water accounts are classified as either SC chargeable or non-SC chargeable. Upon receipt of an application for a change of the account holder of an existing non-SC account, the DSD will check related information in the WSD's Customer Care and Billing System (CCBS) to determine whether the non-SC status of the account address has been changed. The DSD will conduct investigations and take necessary SC recovery action if the address falls within the sewered areas (paras. 3.3, 3.7 and 3.8).

6. Audit examination revealed two cases where the DSD had taken a long time before identifying the omissions in levying SC on premises which had been connected to public sewers. In one case, the SS Branch had not promptly updated the sewer connection information of 18 households in Estate A because they had different address formats. In another case, since noting a potential SC-omission case in Estate B in March 2011, the SS Branch had taken more than two years to identify 215 SC-omission cases in the Estate. This had resulted in a loss of Government revenue (para. 3.9).

Executive Summary

7. ***Inadequate checking of SC-omission cases.*** In 2012-13, of the 8,944 new non-SC accounts, 1,868 (21%) accounts were suspected SC-omission cases. However, Audit noted that, up to July 2013, of the 1,868 suspected SC-omission cases, the SS Branch had only selected and completed investigation of 55 cases (3%). Of these 55 cases, 40 (73%) were found to be SC chargeable. After conducting investigations of non-SC accounts in the nearby areas of the 40 cases, the DSD found additional 377 non-SC accounts which were SC chargeable. The DSD needs to task the SS Branch to carry out a one-off exercise to examine the SC status of all the non-SC accounts (paras. 3.10 to 3.12).

Collection of trade effluent surcharges

8. In applying for a new non-domestic water account, an applicant is required to choose 1 of 102 business classifications that corresponds most precisely to the account category at the service address, and fill in the business classification and its code in the application form. Of the 102 business classifications, 30 are chargeable to TES. Based on the classifications indicated by the applicants, TES is levied on pertinent water accounts through the CCBS (para. 4.2).

9. ***Misclassifications leading to omissions in levying TES.*** The DSD is aware of the fact that some TES traders have not properly filled in their business classifications when applying for water accounts, resulting in their accounts being incorrectly treated as non-TES accounts. With a view to identifying these TES-omission cases, the DSD has since May 2005 requested the Food and Environmental Hygiene Department (FEHD) to periodically provide it with information of the newly licensed food premises for it to review and ascertain whether TES has been levied on the water accounts of pertinent premises. Furthermore, the DSD has since 2001-02 requested the WSD to provide it with information of non-TES trade accounts with high water consumption to determine whether they are chargeable to TES (paras. 4.4, 4.6 and 4.10).

10. ***Self-classification mechanism not effective.*** In the three years from 2010-11 to 2012-13, the DSD had taken action to verify 3,155 non-TES accounts of newly licensed food premises. The results revealed that 72% of these accounts were in fact TES chargeable, and the DSD took action to recover TES of \$10.5 million from the pertinent traders. A high percentage of TES-omission cases may be the result of (a) TES traders' lack of knowledge of the TES requirements; and

Executive Summary

(b) the lack of deterrence on TES traders who knowingly provide incorrect information on their business classifications because there is no related penalty clause provided in the Sewage Services Ordinance. In view of the high percentage of TES-omission cases, the DSD needs to, in collaboration with the WSD, remind TES traders of the need to provide correct business-classification information. Amendments to the Sewage Services Ordinance may also be required to provide the appropriate penalty clauses (paras. 4.8, 4.9, 4.15 and 4.16).

11. ***Insufficient guidance on classifying TES-related businesses.*** The DSD mainly relies on the business-classification information provided by TES traders to levy TES on the pertinent water accounts. However, Audit notes that the WSD has not clearly stated in the water-account application form that the business classification information will be used for determining whether a trader will be charged TES. Furthermore, the 30 TES-related business classifications are not explicitly made known in the application form. In the circumstance, a TES trader may find more than one business classification that matches his business and may select a non-TES-related classification in the application form, resulting in an omission in levying TES (para. 4.17).

12. ***DSD's examination not covering food premises licensed before 2005.*** Based on the FEHD's records, as of June 2013, there were 7,692 licensed food premises which had been in operation before May 2005. However, most of these 7,692 food premises have not been examined by the DSD regarding the correctness of their business classifications for TES purposes. Audit examination of 70 such food premises revealed that 9 (13%) premises originally registered with non-TES trade accounts were in fact chargeable to TES (paras. 4.19 and 4.20).

13. ***TES not levied on some unlicensed food premises.*** In the three years from 2010 to 2012, there were 7,961 convicted cases of premises operating as unlicensed restaurants or food factories. However, the DSD had not requested the FEHD to provide it with the pertinent information for checking and identifying any TES-omission cases (paras. 4.22 and 4.23).

14. ***TES not levied on catering services operated by some private clubs.*** As of June 2013, there were 672 private clubs licensed by the Home Affairs Department. These clubs serving food to their members and guests are exempt from the requirement of obtaining a restaurant licence from the FEHD. However,

Executive Summary

the DSD had not conducted investigations of private clubs having non-TES accounts with a view to identifying any TES-omission cases. Audit examination of 50 licensed private clubs revealed that 17 clubs had not been levied TES, and 11 (65%) of these 17 clubs were providing catering services and should be chargeable to TES (paras. 4.24 and 4.26).

Audit recommendations

15. **Audit recommendations are provided in the respective sections of this Audit Report. This Executive Summary only highlights the key recommendations. Audit has *recommended* that the Director of Drainage Services should:**

Recovery of sewage services operating costs

- (a) **conduct a review to ascertain the reasons for not achieving the Government's cost recovery targets on SC and TES, and devise strategies and action plans to address the issue (para. 2.16);**

Collection of sewage charges

- (b) **take necessary measures with a view to preventing recurrence of SC omissions and any delay in taking SC recovery actions (para. 3.18(b) and (c));**
- (c) **take necessary measures with a view to preventing recurrence of cases of loss of Government revenue owing to any delay in taking SC recovery action, with due regard to the six-year debt-recovery limitation period (para. 3.18(d));**
- (d) **task the SS Branch to carry out a one-off exercise to examine the SC status of all non-SC accounts (para. 3.18(f));**

Executive Summary

Collection of trade effluent surcharges

- (e) **enhance publicity efforts on TES traders to remind them of the need to provide correct business-classification information to the DSD and the WSD (para. 4.41(a));**
- (f) **consider seeking legislative support to make amendments to the Sewage Services Ordinance for providing appropriate penalty clauses to deter TES traders from intentionally providing false business-classification information to the WSD and the DSD for the purpose of evading TES (para. 4.41(c));**
- (g) **make amendments to the water-account application form to the effect that applicants are required to declare in the form as to whether or not their businesses are chargeable to TES (para. 4.41(d)); and**
- (h) **with a view to identifying TES-omission cases for taking recovery actions:**
 - (i) **conduct examinations of 7,692 licensed food premises which had been in operation before May 2005 (para. 4.41(e)(i));**
 - (ii) **request the FEHD to provide the DSD with information of convicted cases of unlicensed restaurants or food factories for examination (para. 4.41(e)(ii)); and**
 - (iii) **conduct examinations of all licensed private clubs having non-TES accounts (para. 4.41(e)(iii)).**

Response from the Administration

16. The Administration agrees with the audit recommendations.

PART 1: INTRODUCTION

1.1 This PART describes the background to the audit and outlines the audit objectives and scope.

Work of the Drainage Services Department

1.2 Hong Kong has established an extensive public sewerage system, which covers areas inhabited by 93% of the population and is managed by the Drainage Services Department (DSD). For areas not yet connected to the system, residents are required to install private facilities, such as septic tanks, for handling sewage before its disposal. Every day, 2.7 million cubic metres (m³) of sewage produced from residential, commercial and industrial premises is disposed of through the public sewerage system.

1.3 Under the policy directives of the Environment Bureau (ENB — Note 1), the DSD is responsible for the collection, treatment and disposal of sewage through the public sewerage system. The system comprises 1,725 kilometres of sewers (mainly laid underground), 224 pumping stations and 68 sewage treatment works, including:

- (a) 21 preliminary treatment works for screening and removal of grit;
- (b) 6 primary and chemically enhanced primary treatment works for screening, removal of grit and sedimentation of solid waste and suspended solids;
- (c) 40 secondary treatment works for purification of sewage through a biological treatment process; and

Note 1: *In July 2007, the ENB was formed to take up the policy responsibility on environmental matters, including sewage services. Before July 2007, the policy responsibility was taken up by the then Environment, Transport and Works Bureau (July 2002 to June 2007), the then Environment and Food Bureau (January 2000 to June 2002), the then Planning, Environment and Lands Bureau (July 1997 to December 1999), and the then Planning, Environment and Lands Branch (September 1989 to June 1997). For simplicity, all these policy bureaux are referred to as the ENB in this Audit Report.*

Introduction

- (d) 1 tertiary treatment works at Ngong Ping of Lantau Island adopting physical and biological processes to remove nutrients and remaining suspended solids from sewage.

In recent years, the DSD has continued its efforts to construct and operate new sewage treatment facilities to improve the public sewerage system.

Sewage Services Charging Scheme

1.4 In March 1994, with an objective of fully recovering the operating costs (i.e. excluding capital costs and depreciation) of sewage services by levying sewage charges on water consumers, the Sewage Services Trading Fund, managed by the DSD, was set up under the Trading Funds Ordinance (Cap. 430). Subsequent to the enactment of the Sewage Services Ordinance (Cap. 463) in 1994, and the Sewage Services (Sewage Charge) Regulation (Cap. 463A) and the Sewage Services (Trade Effluent Surcharge) Regulation (Cap. 463B) in 1995, the Sewage Services Charging Scheme (SSCS) was introduced in April 1995. Under the SSCS, a water consumer whose premises are connected to a public sewer needs to pay:

- (a) a sewage charge (SC); and
- (b) a trade effluent surcharge (TES) if he operates one of the 27 designated trades (Note 2 — see Appendix A) which produces sewage with a pollution strength in terms of chemical oxygen demand (COD — Note 3) higher than that of domestic sewage. With reference to the average pollution strength of domestic sewage, the DSD has determined that a trade producing sewage with a COD value higher than 500 gram per cubic metre (g/m³) is chargeable to TES.

Note 2: *Between April 1995 and July 2008, TES had been applied to 30 trades. Since August 2008, after removing 3 trades (Bleaching and dyeing of garments, Textile stencilling and printing, and Laundries) from the 30 trades, the number of TES trades has been reduced to 27.*

Note 3: *COD measures the quantity of organic matters in a cubic metre of sewage, expressed in gram per cubic metre, which will be decomposed in sea water through the oxidation process.*

1.5 SC is chargeable on all water consumers with a water account with the Water Supplies Department (WSD) whose premises are connected to the public sewerage system. In 2013-14, the SC rate is \$2.05 per m³ of water supplied. For domestic water accounts, the first 12 m³ of water supplied in a four-monthly period is exempt from SC. This arrangement is not applicable to non-domestic water accounts (Note 4). As of 31 March 2013, of the 2.79 million water accounts:

- (a) 2.61 million were SC accounts (comprising 2.37 million domestic accounts and 0.24 million non-domestic accounts); and
- (b) 180,000 were non-SC accounts.

1.6 Based on the cost of treating sewage of different COD values, the DSD has determined the TES rates for 27 trades which are set out in the Sewage Services (Trade Effluent Surcharge) Regulation (see Appendix A). As of 31 March 2013, there were 22,000 TES accounts.

Administration of SSCS

1.7 In March 1998, on the grounds that the operating costs of the Sewage Services Trading Fund (see para. 1.4) could not be met by its revenue, the Trading Fund was dissolved. Since then, the DSD has prepared annual Sewage Services Operating Accounts. Furthermore, the Sewage Services Accounts Committee (Note 5) has been set up to examine the Sewage Services Operating Accounts, analyse financial performance and consider changes in SC and TES rates.

Note 4: *For non-domestic accounts (such as trade and government accounts), ten trades which produce less volume of sewage than that of water supplied are chargeable to 70% of water supplied. For example, the ice making industry produces less volume of sewage than that of water supplied.*

Note 5: *The Committee is chaired by the Permanent Secretary for the Financial Services and the Treasury (Treasury), with members including representatives from the Financial Services and the Treasury Bureau, the ENB, the DSD, the Treasury and the Information Services Department.*

Introduction

1.8 The Sewage Services Branch (SS Branch — see Appendix B) of the DSD, with a strength of 47 permanent staff and 7 non-civil-service contract staff in three sections (the Customer Services and Asset Management Section, the Operation Section and the Sewage Revenue Section), is responsible for the administration of the SSCS. The SS Branch's duties include:

- identifying SC and TES accounts;
- collecting SC and TES;
- processing applications for revising TES rates; and
- handling related customer enquiries.

1.9 The WSD collects SC and TES on behalf of the DSD which are included in monthly or four-monthly water bills (Note 6) issued to water consumers. In 2011-12, the Sewage Services Operating Accounts recorded an operating deficit of \$536 million, as follows:

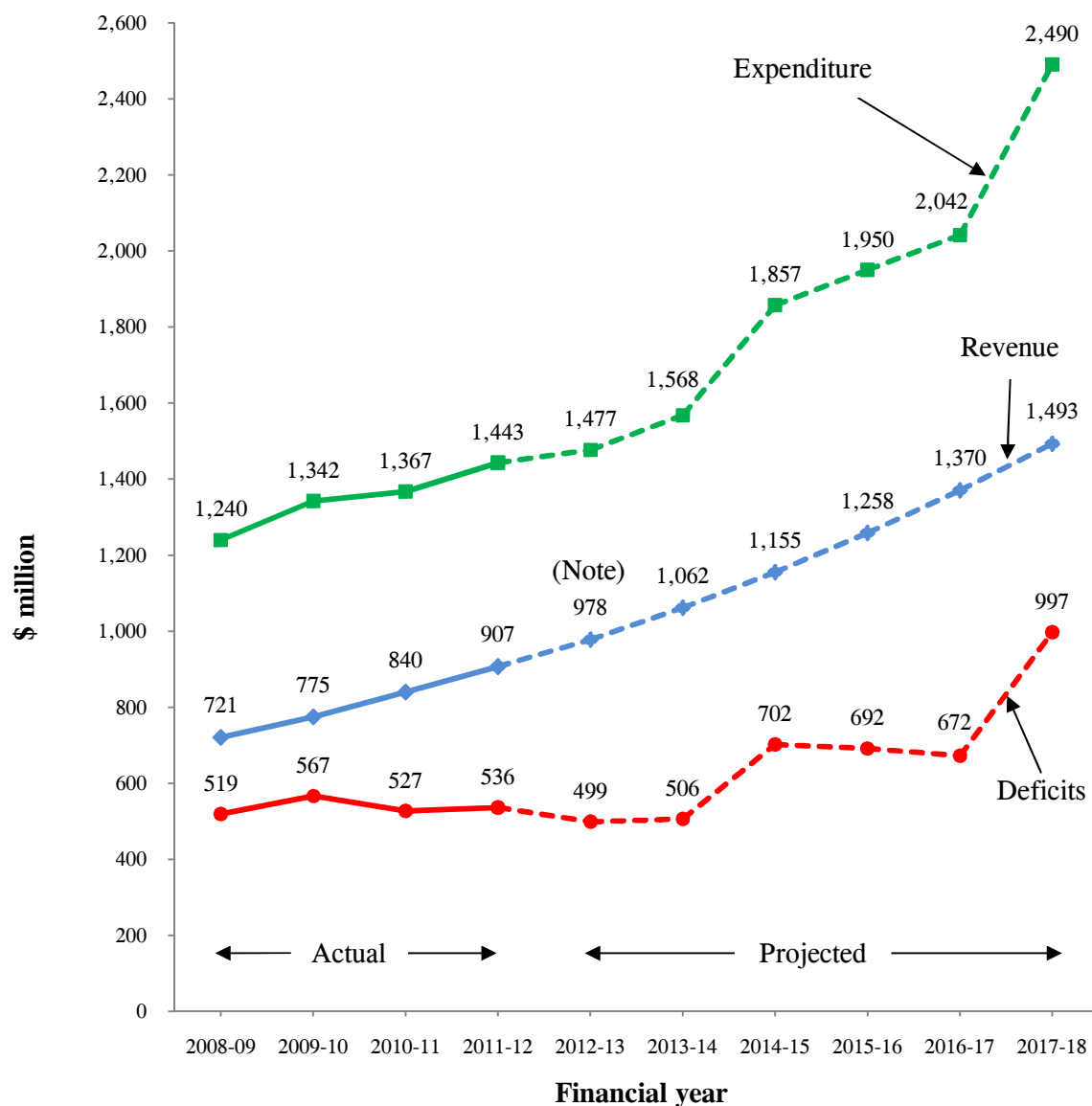
Particulars	\$ million
Revenue	907
Operating cost (excluding depreciation)	1,443
Operating deficit	(536)

Figure 1 shows the actual/projected financial performance of the sewage services for the years 2008-09 to 2017-18, with breakdown of the operating deficits of SC and TES in Figure 2.

Note 6: *The WSD issues water bills for water accounts with large water consumption (i.e. non-domestic accounts with a water meter of diameter equal to or greater than 40 millimetres or where the average daily water consumption exceeds 40 m³) on a monthly basis, whereas other water accounts are issued with water bills every four months.*

Figure 1

Financial performance of sewage services (2008-09 to 2017-18)



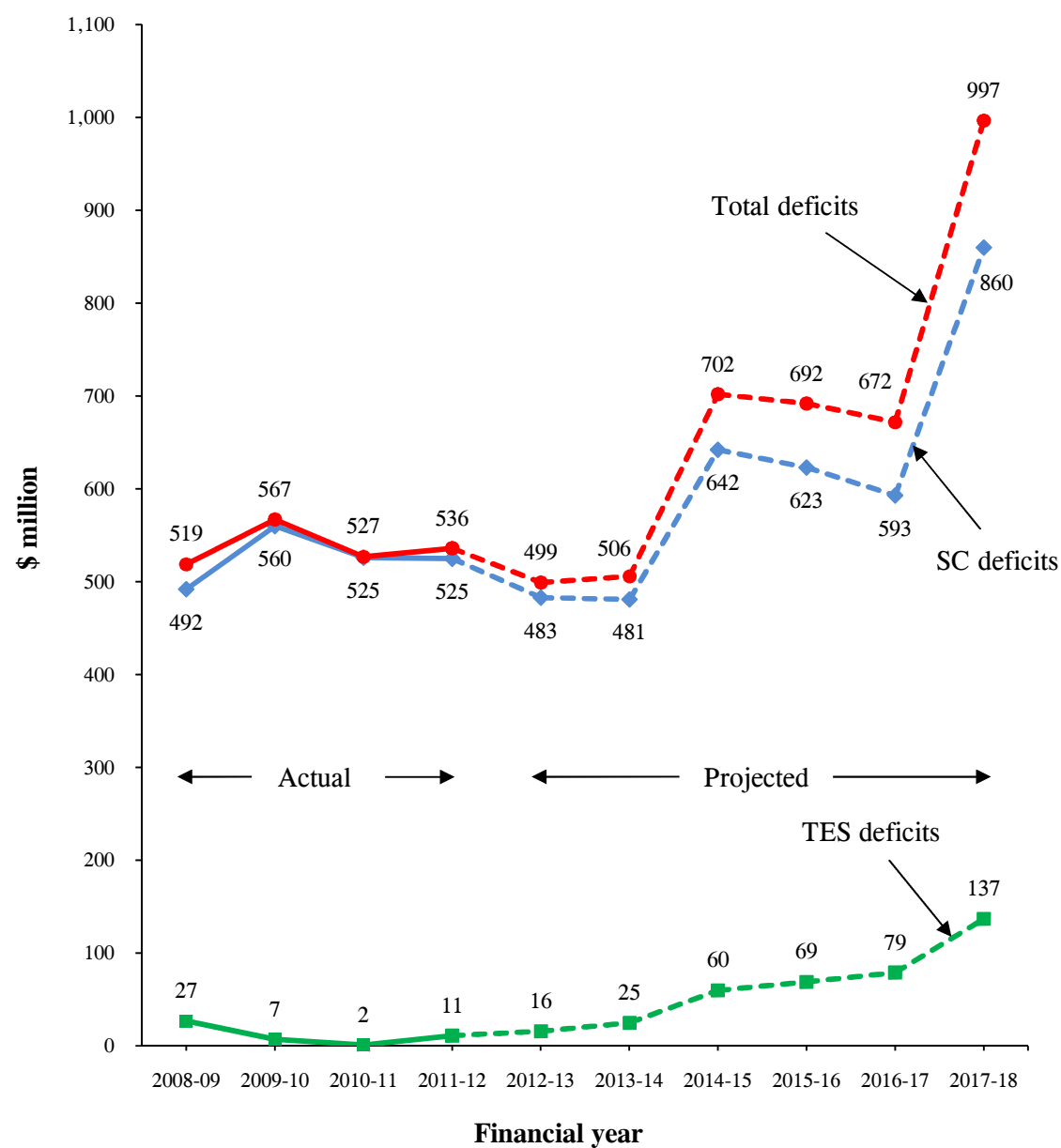
Source: Audit Commission analysis of DSD records

Note: In August 2013, the DSD informed the Audit Commission that, subject to the finalisation of the 2012-13 Sewage Services Operating Accounts, the actual SC and TES collected in 2012-13 were \$776 million and \$207 million respectively, or \$983 million in total revenue.

Remarks: Data of 2008-09 to 2011-12 are actual. Those of 2012-13 to 2017-18 are projections made by the DSD. Actual results may differ from the projections.

Figure 2

Operating deficits of SC and TES
(2008-09 to 2017-18)



Source: Audit Commission analysis of DSD records

Remarks: Data of 2008-09 to 2011-12 are actual. Those of 2012-13 to 2017-18 are projections made by the DSD. Actual results may differ from the projections.

Audit reviews

1.10 In 2012-13, the DSD collected SC of \$776 million from 2.61 million SC accounts and TES of \$207 million from 22,000 TES accounts. According to the DSD, the annual operating deficit of the SSCS is projected to double from \$499 million in 2012-13 to \$997 million in 2017-18.

1.11 In 2010, the Audit Commission (Audit) conducted a review to examine the planning and administration of the village sewerage programmes, the results of which were included in Chapter 9 of the Director of Audit's Report No. 55 of October 2010. In the review, Audit found problems relating to sewer connection of village houses in the New Territories. These sewer connection problems might have affected the levying of SC. Audit has recently conducted a review of the Government's efforts in administering the SSCS with a view to identifying areas for improvement. The review focuses on the following areas:

- (a) recovery of sewage services operating costs (PART 2);
- (b) collection of sewage charges (PART 3);
- (c) collection of trade effluent surcharges (PART 4); and
- (d) compilation of management information (PART 5).

In this Audit Report, Audit has identified areas where improvements can be made by the Government in administering the SSCS, and has made recommendations to address the issues identified.

General response from the Administration

1.12 The Director of Drainage Services fully agrees with the audit recommendations. He has said that there is room for improvement in DSD work and the DSD will strive for improvement in the provision of sewage services, which is in line with the DSD's vision.

Introduction

1.13 The Director of Water Supplies fully agrees with the audit recommendations related to the WSD. He has said that there is room for improvement in WSD work and the WSD will continue to work closely with the DSD to strive for improvement in the provision of quality water services, which is in line with the WSD's vision.

Acknowledgement

1.14 Audit would like to acknowledge with gratitude the full cooperation of the staff of the ENB, the DSD, the Environmental Protection Department (EPD), the WSD and the Food and Environmental Hygiene Department (FEHD) during the course of the audit review.

PART 2: RECOVERY OF SEWAGE SERVICES OPERATING COSTS

2.1 This PART examines the extent of achieving the Government's targets on recovering the sewage services operating costs through levying SC and TES.

Provision of sewage services

2.2 In 1994, the Government launched the Sewage Strategy for improving the water quality of Hong Kong. Under the Strategy, the DSD has implemented:

- (a) the Harbour Area Treatment Scheme (HATS) in phases, under which sewage previously discharged into the Victoria Harbour is diverted to a treatment plant on Stonecutters Island for central treatment and disposal (Note 7); and
- (b) the Sewerage Master Plans (SMPs) in phases, which involved installing sewers in a number of new development areas, replacing some aged sewers and upgrading some regional sewage treatment facilities.

2.3 As of 31 March 2012, the total capital cost of implementing HATS Stage 1 and Stage 2A, the SMPs and other sewage treatment facilities as shown in the Sewage Services Operating Accounts was \$38 billion. Table 1 shows the sewage services capital costs from 2001-02 to 2011-12.

Note 7: *HATS Stage 1 (completed in 2001) at present handles 75% of the total sewage previously discharged into the Victoria Harbour, and Stage 2A (scheduled for completion in 2014) would handle the remaining 25% of the sewage. Stage 2B under planning would involve biological treatments which would reduce pollutants in sewage before it is discharged into the sea.*

Recovery of sewage services operating costs

Table 1

**Sewage services capital costs
(2001-02 to 2011-12)**

Financial year	\$ million
2001-02	1,730
2002-03	1,431
2003-04	1,249
2004-05	1,218
2005-06	1,367
2006-07	934
2007-08	946
2008-09	1,063
2009-10	2,663
2010-11	3,857
2011-12	4,258
Total	20,716

Source: Audit analysis of DSD records

Sewage services revenue and expenditure

2.4 In September 1993, the Administration informed Legislative Council (LegCo) that it would conduct a public consultation exercise on the SSCS proposal under the following principles:

- (a) the polluter-pays principle which underlay the SSCS should require charges to reflect the full cost of sewage services; and
- (b) in the initial years, sewage charges would cover the operating costs of sewage services only and no depreciation of existing assets would be charged.

In December 1993, LegCo supported the implementation of the SSCS. Audit notes that, up to August 2013, the Government had not set a time frame for charging depreciation on assets in the Sewage Services Operating Accounts.

2.5 In launching the SSCS in April 1995, the SC rate was set at \$1.2 per m³ of water supplied, and the TES rates were set ranging from \$0.11 to \$5.98 per m³ of water supplied, depending on the average pollution strength of sewage of individual TES trades. In the first year of launching the SSCS in 1995-96, the operating costs were fully met by the sewage services charges.

2.6 Upon the dissolution of the Sewage Services Trading Fund in March 1998, the DSD commenced preparing annual Sewage Services Operating Accounts for the SSCS. For the purpose of ascertaining the cost recovery rates of SC and TES, the operating costs were apportioned between SC and TES. From 1998 to 2008, the cost apportionment rates between SC and TES ranged from 81%:19% to 78%:22%, depending on the sewage treatment cost of effluent of TES trades. Subsequent to the changes in COD values of TES trades after the conduct of a trade effluent survey in 2007-08, the cost apportionment rate between SC and TES has been maintained at a steady level of around 85%:15% since 2008.

Operating costs

2.7 On the expenditure side, with the completion of HATS Stage 1 in 2001 and the phased completion of works under the various SMPs, the operating costs of sewage services had increased from 2001 to 2012. The DSD has projected that the operating costs would further increase in the coming years upon the completion of HATS Stage 2A in 2014, and the phased completion of works under the various SMPs.

2.8 According to the DSD, over the years, it has collaborated with the EPD (which is responsible for monitoring water quality) in implementing measures to reduce the operating costs and improve operational efficiency of the sewage services. These measures include streamlining the related staff structure, outsourcing sewerage maintenance and supporting operations, and adopting energy-saving technologies for sewage services. In December 2006, the EPD informed the Panel on Environmental Affairs (EA Panel) of LegCo that, after completing a cost-saving exercise, the unit cost (excluding depreciation) per m³ of sewage treatment had been reduced by 11% between 2002-03 and 2005-06, despite

Recovery of sewage services operating costs

the increase in operating costs (excluding depreciation) upon the commissioning of the HATS Stage 1 in 2001. According to the DSD, in 2012-13, as a result of implementation of cost-saving measures, it achieved an operating cost saving of \$18.1 million.

Revenue

2.9 On the revenue side, the SC rate had remained unchanged from April 1995 to March 2008. In May 2007, LegCo approved increases in the SC rate by 9.3% per annum (the ten-year SC-rate increment scheme) from April 2008 to April 2017 (see Table 2).

Table 2
SC rates
(2007-08 to 2017-18)

Financial year	SC rate (\$ per m³ of water supplied)
2007-08	\$1.20
2008-09	\$1.31
2009-10	\$1.43
2010-11	\$1.57
2011-12	\$1.71
2012-13	\$1.87
2013-14	\$2.05
2014-15	\$2.24
2015-16	\$2.44
2016-17	\$2.67
2017-18	\$2.92

Source: DSD records

2.10 For TES rates, they had remained unchanged from April 1995 to July 2008. After examining the COD values of different TES trades, TES rates for individual trades were revised as follows:

- (a) the TES rates for 13 trades were reduced and for 1 trade increased in August 2008; and
- (b) the TES rates for the remaining 13 trades increased in two phases in August 2008 and August 2009 respectively.

Provision of information to LegCo

2.11 As a commitment to LegCo when the ten-year increment scheme for SC was approved by LegCo in May 2007, the ENB and the EPD, in collaboration with the Financial Services and the Treasury Bureau (FSTB) and the DSD, have since 2009 provided annually to the EA Panel summaries of the Sewage Services Operating Accounts (including the revenue and operating expenditure, and the cost recovery rates of SC and TES) as well as the progress of sewerage capital projects. Up to August 2013, five submissions had been made to the EA Panel.

Sewage services cost recovery targets

2.12 In May 2008, the Chief Executive-in-Council endorsed the following principles:

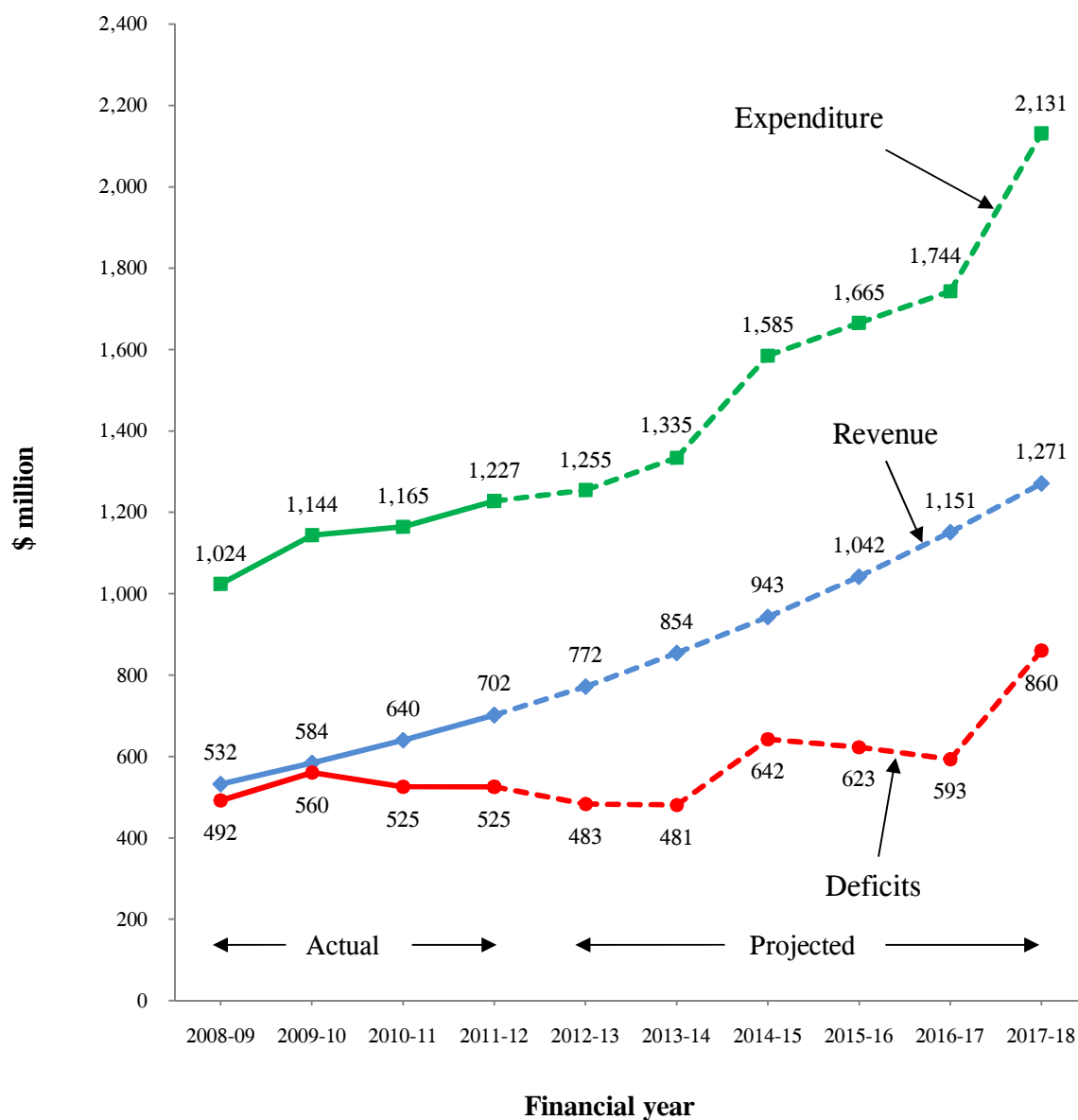
- (a) the projected operating cost recovery rate for SC would be around 70% after implementing the ten-year SC-rate increment scheme (see para. 2.9) by 2017-18; and
- (b) the Government aimed to achieve a 100% cost recovery rate for TES by 2009-10.

Target cost recovery rates not achieved

2.13 Figures 3 and 4 show the revenue and expenditure of SC, and the SC cost recovery rates (revenue ÷ expenditure × 100%) respectively from 2008-09 to 2017-18. Figures 5 and 6 show such data for TES.

Figure 3

Revenue and expenditure of SC (2008-09 to 2017-18)

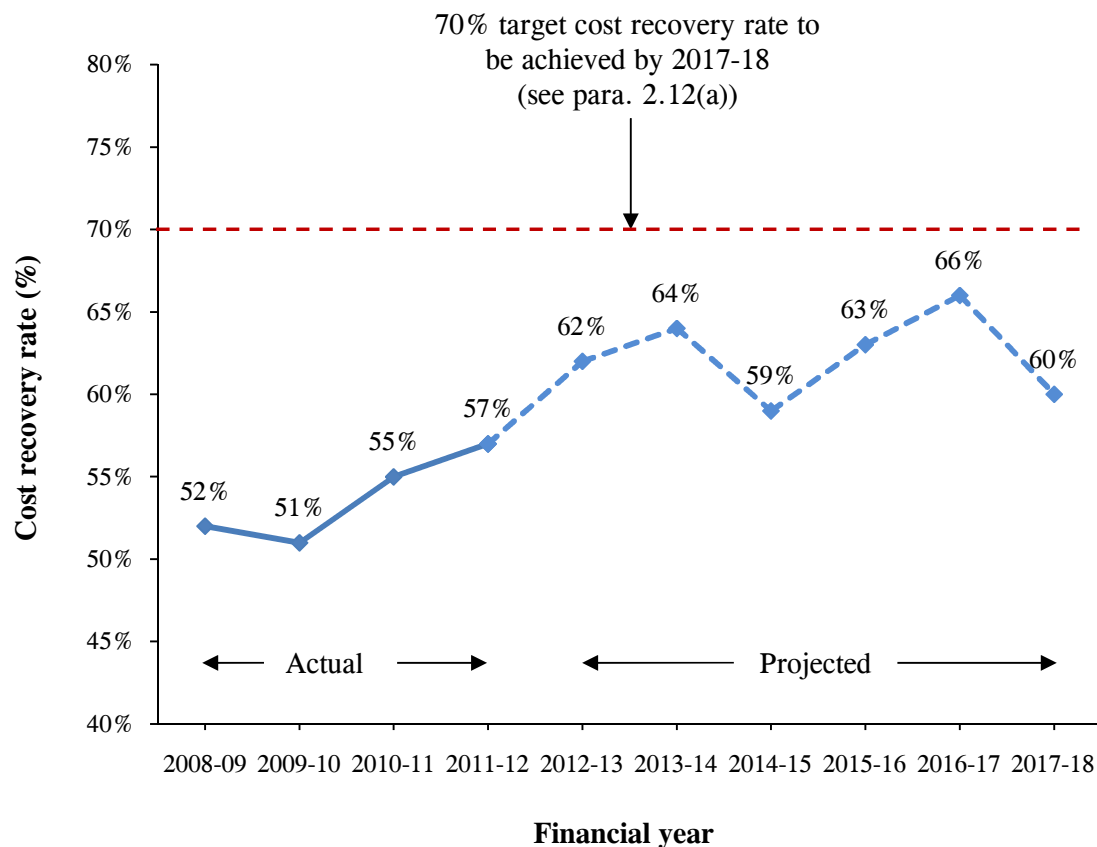


Source: Audit analysis of DSD records

Remarks: Data from 2008-09 to 2011-12 are actual. Those from 2012-13 to 2017-18 are projections made by the DSD. Actual results may differ from the projections.

Figure 4

SC cost recovery rates (2008-09 to 2017-18)

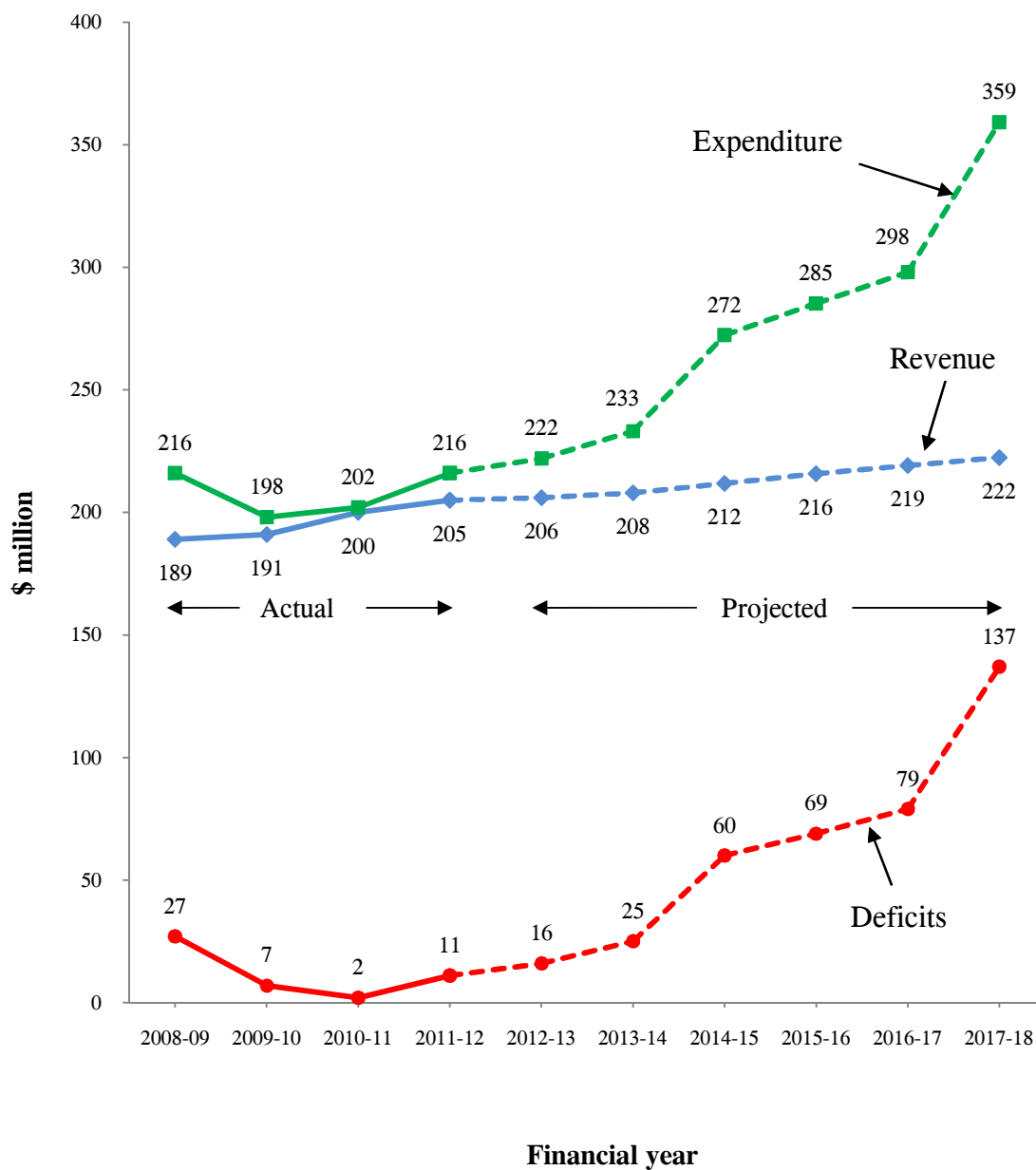


Source: Audit analysis of DSD records

Remarks: Data from 2008-09 to 2011-12 are actual. Those from 2012-13 to 2017-18 are projections made by the DSD. Actual results may differ from the projections.

Figure 5

Revenue and expenditure of TES (2008-09 to 2017-18)

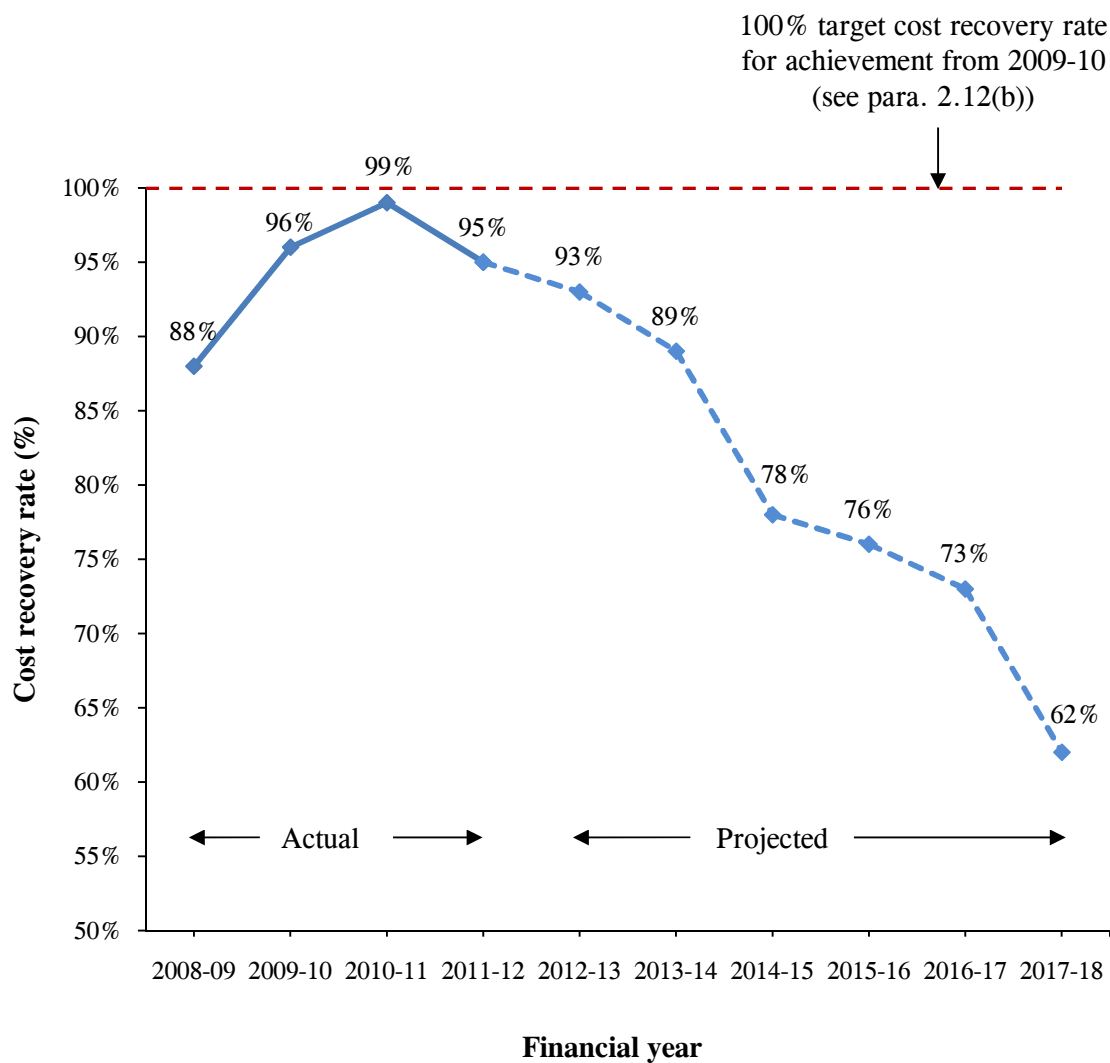


Source: Audit analysis of DSD records

Remarks: Data from 2008-09 to 2011-12 are actual. Those from 2012-13 to 2017-18 are projections made by the DSD. Actual results may differ from the projections.

Figure 6

TES cost recovery rates (2008-09 to 2017-18)



Source: Audit analysis of DSD records

Remarks: Data from 2008-09 to 2011-12 are actual. Those from 2012-13 to 2017-18 are projections made by the DSD. Actual results may differ from the projections.

Recovery of sewage services operating costs

2.14 As shown in Figures 4 and 6:

- (a) the DSD's SC cost recovery rate is 57% in 2011-12 and is projected to improve to 60% in 2017-18, which will fall short of the Government's target of 70% (see para. 2.12(a)); and
- (b) the DSD's TES cost recovery rate is 95% in 2011-12 and is projected to deteriorate to 62% in 2017-18, which will also fall short of the Government's target of 100% (see para. 2.12(b)).

2.15 In Audit's view, the DSD needs to, in collaboration with the FSTB and the ENB, conduct a review to ascertain the reasons for not achieving the cost recovery targets on both SC and TES, and devise strategies and action plans to address the issue.

Audit recommendation

2.16 **Audit has *recommended* that the Director of Drainage Services should, in collaboration with the Secretary for the Environment and the Secretary for Financial Services and the Treasury, conduct a review to ascertain the reasons for not achieving the Government's cost recovery targets on SC and TES, and devise strategies and action plans to address the issue.**

Response from the Administration

2.17 The Director of Drainage Services agrees with the audit recommendation. He has said that:

- (a) the DSD has been collaborating with the ENB, the EPD and the FSTB to review annually the SC and TES rates and their operating cost recovery rates; and
- (b) the DSD will continue to explore and implement measures to reduce the operating cost of existing sewerage facilities and conduct annual reviews to assess the need for adjusting the SC and TES rates.

Recovery of sewage services operating costs

2.18 The Secretary for the Environment agrees with the audit recommendation. He has said that:

- (a) under the Sewage Services Accounts Committee, the ENB and the EPD have been collaborating with the DSD and the FSTB to review annually the SC and TES rates, the cost saving measures and the operating cost recovery rates for both SC and TES; and
- (b) the ENB will continue to closely monitor the DSD's implementation of various measures to reduce the operating cost of existing sewerage facilities and conduct annual reviews to assess the need for adjusting the SC and TES rates.

2.19 The Secretary for Financial Services and the Treasury agrees with the audit recommendation. He has said that:

- (a) the Sewage Services Accounts Committee has been monitoring the financial performance of the sewage services operation and identified the shortfall situations as mentioned in paragraph 2.14; and
- (b) in view of the projected deteriorating financial performance, the Committee has requested the DSD, in collaboration with the ENB, to devise strategies and action plans (including implementation and exploration of cost-saving measures) to improve the efficiency of the sewage services operation.

PART 3: COLLECTION OF SEWAGE CHARGES

3.1 This PART examines the actions taken by the DSD in collecting SC, focusing on:

- (a) actions to identify SC-omission cases (paras. 3.2 to 3.12); and
- (b) SC recovery from convicted cases of unauthorised use of water (paras. 3.13 to 3.16).

Actions to identify SC-omission cases

SC collection system

3.2 According to the Sewage Services Ordinance, a water consumer whose premises are connected to the public sewerage system should pay SC at a prescribed rate (see para. 1.5) based on the volume of water supplied to the premises. The WSD collects SC and TES on behalf of the DSD by issuing bills through its Customer Care and Billing System (CCBS — Note 8).

3.3 SC is chargeable on all water accounts except those of premises located in the following unsewered areas or developments (collectively referred to as “unsewered areas”):

- (a) areas not yet connected to the public sewerage system; and
- (b) developments which have been installed with private sewage treatment facilities acceptable to the EPD, and their sewage is not discharged through the public sewerage system.

Note 8: *Through the system interface functions, information on collection of SC and TES of the DSD is uploaded onto the CCBS for billing purposes.*

3.4 Under the DSD, the SS Branch takes the lead in administering the SC collection system. Other responsible DSD Branches include the Projects and Development Branch (P&D Branch) and the Operations and Maintenance Branch (O&M Branch — see Appendix B). Details are as follows:

- (a) ***The P&D Branch and the HATS Division of the SS Branch (collectively referred to as the Project Divisions).*** The Project Divisions are responsible for constructing new public sewers under capital works projects for unsewered areas;
- (b) ***The O&M Branch.*** Three District Divisions (Hong Kong and Islands, Mainland South and Mainland North) under the O&M Branch are responsible for the operation and maintenance of all public sewers. Upon completion of checking of sewer connections from premises to public sewers, the O&M Branch will inform the SS Branch for taking SC levying actions. In addition, the O&M Branch maintains, updates and provides the SS Branch with an updated List of Unsewered Areas every six months; and
- (c) ***The SS Branch.*** The SS Branch is responsible for levying SC on all water accounts where the related premises have been connected to the public sewerage system. The SS Branch periodically uploads information in the updated List of Unsewered Areas onto the CCBS for matching of addresses of new applications for water accounts of new buildings for the purpose of levying SC. Upon receipt of a new application for a water account, the related address will be matched (through the CCBS) with areas in the List of Unsewered Areas maintained in the CCBS. For an address located within an unsewered area, SC will not be levied. Otherwise, SC will be levied on the account.

Under the village sewerage programmes, the Project Divisions are the works agent for implementing the related sewerage works projects, which are under the EPD's management. Upon completion of sewer connection works by village house owners to their houses, the owners will inform the EPD of the works completion and the latter will inform the DSD of such connections for taking SC levying actions.

Sources of information for levying SC

3.5 For premises connected to the public sewerage system, the SS Branch relies on the following sources of information for levying SC on pertinent water accounts:

- (a) under the EPD's village sewerage programmes, for village houses in the New Territories, upon the completion of sewer connection to public sewers, the EPD will provide the O&M Branch with a list of premises newly connected to public sewers with addresses (List of Newly Connected Premises). The O&M Branch will forward the List to the SS Branch for taking SC levying actions;
- (b) for other sewer connection works, upon checking of completion of the works, the O&M Branch will inform the SS Branch of the related premises for taking SC levying actions;
- (c) every three months, the O&M Branch will provide the SS Branch with a List of Newly Connected Premises with addresses to ensure that there is no omission of premises warranting the levying of SC; and
- (d) the O&M Branch updates the List of Unsewered Areas every six months and provides it to the SS Branch.

3.6 Upon noting that some premises have been newly connected to the public sewerage system, for the purpose of levying SC, the SS Branch will manually change the sewer connection status of related water accounts in the CCBS to SC chargeable.

Existing premises with non-SC accounts

3.7 For premises which are registered with non-SC accounts, the CCBS generates weekly reports of new water accounts (e.g. resulting from changes of account holders) which are not SC chargeable (Weekly New Accounts Reports). The SS Branch makes use of these Weekly New Accounts Reports for investigation of potential omissions of levying SC on pertinent water accounts caused by omissions in updating the SC status of water accounts after sewer connections in the related areas.

Areas for improvement

Omissions and long time taken in levying SC on premises

3.8 Based on the Weekly New Accounts Reports generated from the CCBS (see para. 3.7), the SS Branch conducts matching of the addresses of non-SC accounts with the addresses in the List of Unsewered Areas. For any of the addresses of non-SC accounts which are not found in the List of Unsewered Areas, the SS Branch will conduct investigations to ascertain if the account status is correct. If the DSD finds that a non-SC account should have been an SC account, it will take rectification actions to recover SC from pertinent water-account holders.

3.9 Audit examination of SC recovery cases (identified by the DSD through its investigations — see para. 3.8) revealed two cases (see Cases 1 and 2) where the DSD had taken a long time before identifying the omissions in levying SC on premises which had been connected to public sewers.

Case 1

Estate A in Sham Tseng

In March 2011, based on a Weekly New Accounts Report, the SS Branch identified a non-SC account in Estate A in Sham Tseng and requested the Mainland South Division of the O&M Branch to help ascertain whether the related premises had been connected to public sewers. In response, the Division informed the SS Branch that Estate A had not been connected to public sewers. In April 2011, the Division clarified that Estate A had already been connected to public sewers.

2. In November 2011, the SS Branch's investigations revealed that 18 of the 1,129 households in Estate A had not been levied SC since completion of the sewer connection works in March 2005. The SS Branch subsequently took actions to recover a total of \$22,310 of SC from the 18 households.

DSD comments in July 2013

3. In July 2013, the DSD informed Audit that: (a) as the 18 premises had different address formats (Note), after being informed by the Mainland South Division that Estate A had been connected to public sewers, the SS Branch did not update the sewer connection information of all pertinent water accounts in the CCBS, resulting in the omissions; and (b) there might also be an oversight in providing the incorrect information in March 2011.

Audit comments

4. In Audit's view, the DSD needs to:
- (a) take actions to resolve the address-format problem relating to addresses in the CCBS and those in the List of Newly Connected Premises; and
 - (b) conduct a review to ascertain why there were omissions in levying SC on 18 households in Estate A from March 2005 to November 2011, and take necessary measures with a view to preventing recurrence of such omissions.

Source: DSD records

Note: For example, for a building newly connected to a public sewer, its address is registered in the form of a lot number in the CCBS, while the address in the List of Newly Connected Premises is in the form of a village name.

Case 2

Estate B in Fanling

In March 2011, based on a Weekly New Accounts Report, the SS Branch identified a non-SC account in Estate B in Fanling and requested the Mainland North Division of the O&M Branch to help ascertain whether the related premises had been connected to public sewers. In response, the Division informed the SS Branch that Estate B had been connected to public sewers in November 2005, but the SS Branch had not updated the sewer connection information of all pertinent water accounts in the CCBS.

2. In March 2013, the Mainland North Division re-confirmed with the estate management office of Estate B that the sewers had been connected in November 2005.

3. In May 2013, the SS Branch's investigations revealed that 215 of the 231 households had not been levied SC since completion of the sewer connection works in November 2005. The SS Branch subsequently took actions to recover a total of \$171,973 from the 215 households. Owing to the six-year debt-recovery limitation period (Note), the SC recovery action could only be taken for outstanding SC from June 2007.

DSD comments in July 2013

4. In July 2013, the DSD informed Audit that the late billing of the SC accounts was attributable to an oversight in bringing up the sewer-connection information for action.

Audit comments

5. In Audit's view, the DSD needs to:
- (a) conduct a review to ascertain why there were omissions in levying SC on 215 households in Estate B from November 2005 to May 2013, and take necessary measures with a view to preventing recurrence of such omissions;
 - (b) conduct a review to ascertain why the SS Branch needed to take two years and two months from March 2011 to May 2013 to identify the omissions for taking recovery actions, and take necessary measures with a view to preventing recurrence of such shortcomings; and
 - (c) take actions to prevent recurrence of cases of loss of Government revenue owing to any delay in taking SC recovery action after the six-year debt-recovery limitation period.

Source: DSD records

Note: Under the Limitation Ordinance (Cap. 347), actions to recover outstanding accounts shall not be brought after the expiration of six years from the date on which the cause of action accrued.

Inadequate checking of SC-omission cases

3.10 Audit notes that in 2012-13, of the 8,944 non-SC new accounts included in the Weekly New Accounts Reports, the addresses of 1,868 (21%) accounts could not be matched with those in the List of Unsewered Areas (suspected SC-omission cases). According to the DSD, it only selected suspected SC-omission cases which would likely lead to significant SC recovery for investigation. However, Audit notes that the DSD has not issued guidelines on the selection of suspected SC-omission cases for investigation. Furthermore, up to July 2013, of the 1,868 suspected SC-omission cases, the SS Branch had only selected and completed detailed investigation of 55 cases (3%). In Audit's view, the DSD needs to strengthen actions in investigating suspected SC-omission cases.

3.11 Audit also notes that, of the 55 suspected SC-omission cases investigated by the DSD, 40 (73%) were found to be SC chargeable. The DSD also conducted investigations of non-SC accounts in nearby areas of the 40 confirmed SC-chargeable cases and found that additional 377 non-SC accounts were SC chargeable. As a result, the DSD took action to recover a total of \$360,938 of SC from the pertinent account holders.

3.12 In Audit's view, the DSD needs to issue guidelines to the SS Branch on selection of suspected SC-omission cases for review. In view of the potential significant number of non-SC accounts which are SC chargeable, the DSD needs to task the SS Branch to carry out a one-off exercise to examine the SC status of all the 180,000 non-SC accounts. After conducting the one-off exercise, the DSD needs to task the SS Branch to conduct examination in a timely manner of suspected SC-omission cases as revealed in the Weekly New Accounts Reports.

SC recovery from convicted cases of unauthorised use of water

3.13 In Chapter 12 of the Director of Audit's Report No. 57 issued in October 2011 on "Water losses from unauthorised consumption and inaccurate metering", Audit reported that there were 227 convicted cases of unauthorised use of water under section 29(2) of Waterworks Ordinance (Cap. 102 — Note 9). After obtaining legal advice in February 2012, the DSD noted that it could recover SC and, where appropriate, TES from convicted cases of unauthorised use of water.

3.14 In March 2012, at the request of the DSD, the WSD provided the DSD with a summary of 349 convicted cases of unauthorised use of water (which had taken place from 2006 to 2011). The DSD estimated that SC of \$220,000 could be recovered from the convicted persons in 224 cases. For the remaining 125 cases, the use of water was not chargeable to SC.

Areas for improvement

Recovery action on convicted cases not yet taken

3.15 Since November 2011, the DSD has discussed with the WSD to explore the possibility of levying SC and TES on persons convicted of unauthorised use of water. However, up to June 2013, the DSD had not taken recovery actions on the convicted persons in the 224 cases (see para. 3.14). In July 2013, after obtaining legal advice, the WSD informed the DSD that:

- (a) it might disclose data of the convicted persons to the DSD for collecting SC and TES, subject to the DSD's confirmation that the DSD had no other means by which SC and TES could be collected from the convicted persons, and the exemption clause provided in the Personal Data (Privacy) Ordinance (Cap. 486) was applicable for the use of the data for collecting SC and TES; and

Note 9: *Section 29(2) of the Waterworks Ordinance states that any person who contravenes unlawful taking of water shall be guilty of an offence and shall be liable to pay a charge for the water so taken or diverted as if there had been a supply of that water to him as a consumer.*

- (b) if the WSD was to collect SC and TES from the convicted persons on behalf of the DSD, the DSD needed to authorise the WSD to take such actions.

3.16 Audit notes that, under the six-year debt-recovery limitation period, the DSD can only take recovery actions on outstanding SC and TES in the previous six years, say from August 2007 to July 2013. According to the DSD, during this period of time, there were a total of 320 convicted cases of unauthorised use of water, and 199 of which might be chargeable for SC. In Audit's view, the DSD needs to, in collaboration with the WSD, take actions in a timely manner to recover SC and TES from convicted persons of cases involving unauthorised use of water. Owing to the six-year debt-recovery limitation period, any delay in taking recovery action will lead to a loss of Government revenue.

Recent development

3.17 In June 2013, the DSD set up a Task Force headed by the Deputy Director of Drainage Services to oversee the matter with a view to identifying improvement measures for levying SC.

Audit recommendations

3.18 **Audit has *recommended* that the Director of Drainage Services should:**

Actions to identify SC-omission cases

- (a) **take actions to resolve the address-format problem relating to addresses in the CCBS and those in the List of Newly Connected Premises;**
- (b) **conduct a review to ascertain why there were omissions in levying SC on 18 households in Estate A and 215 households in Estate B, and take necessary measures with a view to preventing recurrence of such omissions;**
- (c) **conduct a review to ascertain why the SS Branch needed to take two years and two months from March 2011 to May 2013 to identify the**

SC omissions in Estate B for taking recovery actions, and take necessary measures with a view to preventing recurrence of such shortcomings;

- (d) take necessary measures with a view to preventing recurrence of cases of loss of Government revenue owing to any delay in taking SC recovery action, with due regard to the six-year debt-recovery limitation period;**
- (e) issue guidelines to the SS Branch on selection of suspected SC-omission cases (as revealed in the Weekly New Accounts Reports) for review;**
- (f) task the SS Branch to carry out a one-off exercise to examine the SC status of all non-SC accounts;**
- (g) task the SS Branch to conduct examination in a timely manner of suspected SC-omission cases as revealed in the Weekly New Accounts Reports; and**

SC recovery from convicted cases of unauthorised use of water

- (h) in collaboration with the Director of Water Supplies, take actions in a timely manner to recover SC and TES from convicted persons of cases involving unauthorised use of water.**

Response from the Administration

3.19 The Director of Drainage Services agrees with the audit recommendations. He has said that:

Actions to identify SC-omission cases

- (a) the DSD will include estate and village names in different address combinations in the List of Newly Connected Premises for matching with water-account addresses in the CCBS. Meanwhile, the DSD will explore with the WSD ways to resolve the address-format problem in the CCBS;**

Collection of sewage charges

- (b) the DSD has taken preventive measures to address the issue in paragraph 3.18(b), including enhancement of measure to retrieve pertinent water-account information in the CCBS, issuing a new departmental technical circular and developing a new database for timely reporting and monitoring new sewer connections and subsequent billing of SC;
- (c) the DSD will conduct a review of the omissions in levying SC on households in Estate A and Estate B and take further preventive measures where necessary;
- (d) since September 2013, the DSD has made use of a new register to record SC-omission cases and monitor the SC recovery action. Quarterly reports will be provided to the management for monitoring purposes;
- (e) the DSD will conduct a review of the case mentioned in paragraph 3.18(c) and take further preventive measures where necessary;
- (f) in September 2013, the DSD issued a departmental technical circular containing guidelines on selection of suspected SC-omission cases for review;
- (g) the DSD will carry out a one-off exercise to examine the SC status of all non-SC accounts;
- (h) the DSD will review in a timely manner new suspected SC cases after conducting the one-off exercise in (g); and

SC recovery from convicted cases of unauthorised use of water

- (i) the DSD and the WSD have introduced procedures to handle convicted cases of unauthorised use of water in a timely manner. Since August 2013, the DSD has taken actions to recover SC and TES from the convicted persons and it has set a target to process all previously identified convicted cases by December 2013.

3.20 The Director of Water Supplies agrees with the audit recommendation related to the WSD in paragraph 3.18(h).

PART 4: COLLECTION OF TRADE EFFLUENT SURCHARGES

4.1 This PART examines the actions taken by the DSD in collecting TES, focusing on:

- (a) actions to identify TES-omission cases (paras. 4.2 to 4.28); and
- (b) reassessment of TES rate (paras. 4.29 to 4.40).

Actions to identify TES-omission cases

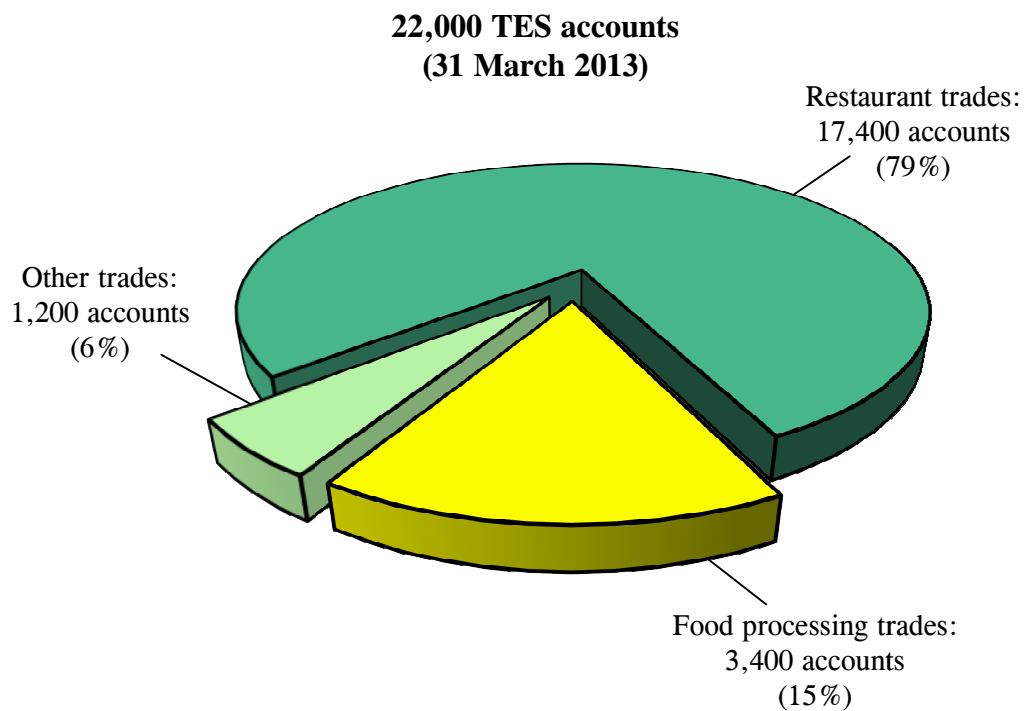
4.2 An applicant for a new water account needs to complete an application form in which he is required to indicate whether the water account applied for is for domestic or non-domestic purposes (Note 10). If he applies for a non-domestic water account, he is also required to choose 1 of 102 business classifications (provided in a booklet attached to an application form — see Appendix C) that “corresponds most precisely to the account category at the service address”, and fill in the business classification and its code in the application form. Applicants are reminded in the application form that they should notify the DSD if there are any subsequent changes to their businesses which will affect the business classification indicated in the form. Of the 102 business classifications, 30 are chargeable to TES (Note 11). However, Audit notes that these 30 TES-related business classifications are not explicitly made known in the application form. Based on the business classifications indicated by the applicants, TES is levied on pertinent water accounts through the CCBS of the WSD (see para. 3.2).

4.3 As of March 2013, of the 240,000 non-domestic water accounts, 22,000 were TES accounts. In 2012-13, the TES revenue was \$207 million and the main types of business chargeable to TES were restaurants and food processing trades (see Figures 7 and 8).

Note 10: *The water charges of domestic accounts are based on a four-tier structure of progressively increasing prices, with the first tier of 12 m³ of water supply being free of charge. For non-domestic accounts, a flat rate is charged for any volume of water supply.*

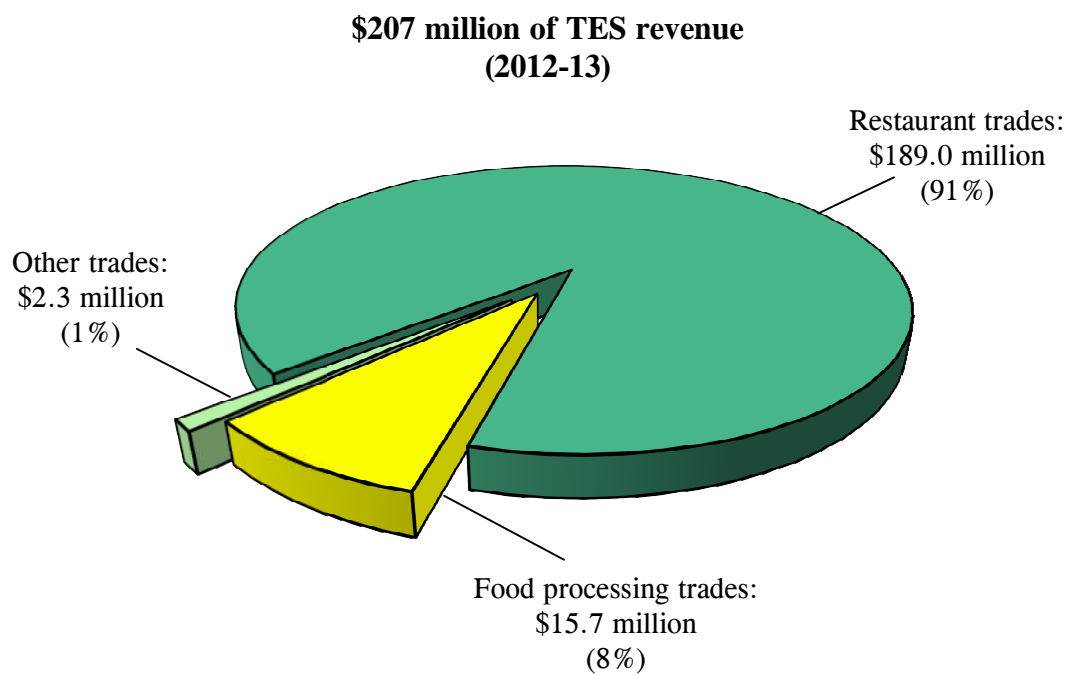
Note 11: *Of the 27 trades chargeable to TES (see Appendix A), one trade (namely Restaurants) is subdivided into 4 business classifications (namely Restaurants-Chinese, Restaurants-non-Chinese, Restaurants-fast food shops and Restaurants-other eating places, see Note to Appendix C). Therefore, there are 30 TES-related business classifications.*

Figure 7



Source: DSD records

Figure 8



Source: DSD records

DSD actions to identify TES-omission cases

4.4 The DSD mostly relies on the business classifications indicated by water-account applicants in levying TES on relevant traders. However, the DSD is aware of the fact that some TES traders have not properly filled in their business classifications when applying for water accounts, resulting in their accounts being incorrectly treated as non-TES accounts. The DSD has taken the following actions with a view to identifying TES-omission cases:

- (a) based on information provided by the FEHD, reviewing whether the water accounts of pertinent newly licensed food premises have been levied TES (see paras. 4.6 to 4.9); and
- (b) selecting non-TES trade accounts with high water consumption to examine whether some of them should be chargeable to TES (see paras. 4.10 to 4.12).

4.5 Furthermore, the DSD also takes follow-up actions on suspected TES-omission cases based on relevant information in the media, public complaints and referrals from other Government departments.

DSD examination of newly licensed food premises

4.6 As shown in Figure 8, 99% (91% +8%) of the TES revenue was collected from the restaurant and food processing trades. In order to identify TES-omission cases from these two business categories, since May 2005, the DSD has requested the FEHD to periodically provide it with information of newly licensed food premises (Note 12) for examination.

Note 12: *Under the Public Health and Municipal Services Ordinance (Cap. 132), the FEHD is responsible for issuing licences to food premises after confirming full compliance with the licensing requirements relating to food safety and fire safety. Food premises include restaurants, food factories, bakeries, factory canteens, frozen confections factories and milk factories.*

Collection of trade effluent surcharges

4.7 Based on the addresses of the newly licensed food premises provided by the FEHD, the DSD will:

- (a) ascertain whether the pertinent water accounts in the CCBS are TES chargeable;
- (b) if the accounts are non-TES accounts, conduct site inspections of the food premises to assess whether they should be chargeable to TES;
- (c) if the accounts are TES chargeable, send a letter to the pertinent water-account holders informing them that TES will be levied on their accounts, where the account holders may raise objection on the matter within three weeks from the issue date of the notification letter. In response to any objection, the DSD will conduct further reassessments and make a final decision on the objection; and
- (d) levy TES on the relevant water accounts.

4.8 In the three years from 2010-11 to 2012-13, the DSD had taken actions to verify 7,247 water accounts (involving 4,092 TES accounts and 3,155 non-TES accounts) based on information on newly licensed food premises provided by the FEHD. After completing investigations, up to August 2013, the DSD had identified that 2,268 non-TES accounts (72% of 3,155 accounts) should have been chargeable to TES.

4.9 As a result, the DSD issued demand notes to these 2,268 water account holders to recover TES amounting to \$10.5 million chargeable in the previous years.

DSD examination of high water-consumption accounts

4.10 In the seven years from 2001-02 to 2007-08, the DSD had requested the WSD to provide it with information of high water-consumption accounts of non-TES trades for it to verify whether they were chargeable to TES. Of the 927 non-TES trade accounts selected by the DSD for examination, it found that 294 (32%) were in fact chargeable to TES. The DSD took action to recover TES from the pertinent traders. According to the DSD, owing to additional work commitments (such as work relating to the reduction of the number of TES trades from 30 to 27 and changes of the TES rates), such examination work was not carried out from 2008-09 to 2010-11.

4.11 In June 2011, the DSD resumed the examination work. In view of the fact that many TES-omission cases were identified from water accounts that had been classified as “Retail shop” and “Other food products”, the DSD focused its examination on accounts with high water consumption under these two non-TES business classifications, and requested the WSD to provide it with pertinent account information for examination. In response, the WSD provided the DSD with information on:

- (a) a list of 584 non-TES trade accounts (of which the DSD selected 382 accounts (65%) for examination) as of June 2011 under the “Retail shop” business classification with an average daily water consumption exceeding 5 m³ (which was the median of the daily water consumption of businesses in the “Restaurant” business classification); and
- (b) a list of 36 non-TES trade accounts as of February 2012 under the “Other food products” business classification with an average daily water consumption exceeding 2 m³ (which was the median of the daily water consumption of businesses in the “Slaughtering, preparing and preserving meat” business classification).

4.12 The DSD’s examination of the 418 (382+36) cases revealed that 38 (9%) were in fact chargeable to TES and took action to recover TES from the pertinent traders.

Areas for improvement

Self-classification mechanism not effective

4.13 Audit notes that the DSD has made good efforts to identify TES-omission cases by examining whether TES has been correctly levied on newly licensed food premises and selected trades with high water-consumption accounts. In the three years from 2010-11 to 2012-13, as a result of the DSD's investigation efforts, it had identified 2,647 TES-omission cases and recovered TES of \$12.3 million from the pertinent traders (see Table 3).

Table 3
TES recovered resulting from DSD's investigation efforts
(2010-11 to 2012-13)

Financial year	TES chargeable accounts identified (No.)	TES recovered (\$ million)
2010-11	967	4.3
2011-12	921	6.3
2012-13	759	1.7
Total	2,647	12.3

Source: DSD records

4.14 Audit is concerned that the present self-classification mechanism may not be effective in administering the TES system, as evidenced by the fact that 72% of the water accounts of newly licensed food premises which had been classified as non-TES chargeable were in fact TES chargeable (see para. 4.8). For example, Audit examination revealed that some restaurant and food processing traders had classified their businesses conducted at the related premises as commercial offices, laundries and "office, accounting and computing machinery". Moreover, Audit notes that there was no penalty clause provided in the Sewage Services Ordinance relating to the provision of false information on business classifications, and as a

result, the DSD had not taken any prosecution actions against TES traders who had provided false information on their business classifications in the water-account application forms.

4.15 In Audit's view, the high percentage of TES-omission cases may be the result of:

- (a) TES traders' lack of knowledge of the TES requirements; and
- (b) the lack of deterrence on TES traders who knowingly provide false information on their business classifications.

4.16 In view of the high percentage of TES-omission cases, the DSD needs to, in collaboration with the WSD, enhance the publicity efforts on TES traders (particularly restaurant and food processing traders) to remind them of the need to provide correct business-classification information to the DSD and the WSD. The ENB and the DSD also need to seek legal advice on whether prosecution actions can be taken against TES traders who are proved to have provided false business-classification information to the DSD with an intention of evading TES. In the event that such prosecution action under the present laws is not practicable, the ENB and the DSD need to consider seeking legislative support to make amendments to the Sewage Services Ordinance to provide appropriate penalty clauses.

Insufficient guidance on classifying TES-related businesses

4.17 The DSD mainly relies on the business-classification information provided by TES traders (at the time of applying for new water accounts) to levy TES on the pertinent water accounts (see para. 4.2). However, Audit notes that the WSD has not made it clear in the water-account application form that the business classification information will be used for determining whether a trader will be charged TES. Instead, an applicant is only requested to choose 1 of the 102 business classifications that "corresponds most precisely to the account category at the service address". Of the 102 business classifications, 30 are chargeable to TES. However, these 30 TES-related business classifications are not explicitly made known in the application form. In the circumstance, a trader may find more than one business classification that matches his business and may select a non-TES-related classification in the application form even though he will be operating a TES-related business.

Collection of trade effluent surcharges

4.18 For example, a cafe trader may find his business at the same time belongs to the business classifications of “Restaurants — other eating places”, “Other food products”, “Retail shop” and “Miscellaneous services/vacant”, and haphazardly selects any one of the four classifications in the application form. In this case, the first business classification is TES chargeable but the remaining three are not. In Audit’s view, the DSD needs to, in collaboration with the WSD, require water-account applicants to declare in the application form whether or not their businesses are chargeable to TES according to the Sewage Services (Trade Effluent Surcharge) Regulation, and, if in the affirmative, select 1 of the 30 TES business classifications in the application form.

DSD’s examination not covering food premises licensed before 2005

4.19 Since May 2005, the DSD has requested the FEHD to periodically provide it with information of newly licensed food premises for examination. In Audit’s view, the DSD has made good efforts in tackling TES omissions by focusing detection efforts on newly licensed food premises. However, based on the FEHD’s records, as of June 2013, there were 7,692 licensed food premises which had been in operation before May 2005. Moreover, most of these 7,692 food premises have not been examined by the DSD with respect to the correctness of their business classifications for TES purposes.

4.20 Of these 7,692 food premises, Audit selected 70 for examination and found that 9 (13% — Note 13), which had originally been registered as non-TES trade accounts, were in fact chargeable to TES. The other 61 food premises had been correctly registered as TES accounts. Audit considers that the DSD’s examination of these 7,692 food premises may help identify food premises involving TES omissions.

4.21 In Audit’s view, the DSD needs to conduct examination of these 7,692 licensed food premises with a view to identifying TES-omission cases, and take action to recover TES from the pertinent traders.

Note 13: *In response to Audit examination results, the DSD conducted site visits to these 9 premises and confirmed that they were operating TES trades and should therefore be chargeable to TES.*

TES not levied on some unlicensed food premises

4.22 Under the Food Business Regulation of the Public Health and Municipal Services Ordinance (Cap. 132X), a person who operates a food business needs to apply for a licence from the FEHD (Note 14). In the three years from 2010 to 2012, there were 7,961 convicted cases relating to premises operating as unlicensed restaurants or food factories (see Table 4).

Table 4
Convicted cases of unlicensed restaurants or food factories
(2010 to 2012)

Year	Convicted cases		
	Unlicensed restaurant (No.)	Unlicensed food factory (No.)	Total (No.)
2010	1,577	1,078	2,655
2011	1,586	694	2,280
2012	2,135	891	3,026
Total	5,298	2,663	7,961

Source: FEHD records

4.23 In Audit's view, some of the unlicensed restaurants and food factories might not have been levied TES. The DSD needs to request the FEHD to provide it with information of convicted cases of unlicensed restaurants or food factories, and take necessary follow-up actions with a view to identifying TES-omission cases and recovering TES from the pertinent traders.

Note 14: *Under the Ordinance, any person who operates a food business without a licence granted by the FEHD commits an offence and is liable on summary conviction to a fine of \$50,000, imprisonment for six months and, where the offence is a continuing one, an additional fine of \$900 for each day during which the offence has continued.*

TES not levied on catering services operated by some private clubs

4.24 Some private clubs licensed by the Home Affairs Department (HAD) under the Clubs (Safety of Premises) Ordinance (Cap. 376 — Note 15) also provide catering services for their members. Under this Ordinance and the Food Business Regulation, these licensed private clubs serving food to their members and guests are exempt from the requirement of obtaining a restaurant licence from the FEHD. As of June 2013, there were 672 licensed private clubs.

4.25 According to the DSD, a business is regarded as operating catering services for TES levying purposes if:

- (a) there are food preparation and cooking activities inside the pertinent premises;
- (b) the actual business operation includes the provision of seating places for customers to consume food inside the premises; and
- (c) it is operated as a trade business (Note 16).

4.26 In June 2013, Audit selected 50 (7%) of the 672 licensed private clubs for examination. Of these 50 licensed private clubs, Audit noted that 17 (34% of 50 clubs) had not been levied TES. With reference to the DSD's criteria as stated in paragraph 4.25, Audit's site visits outside the premises of these 17 private clubs and Internet searches revealed that 11 (65% of 17 clubs) of them might be providing catering services and chargeable to TES. In August 2013, the DSD informed Audit that these 11 private clubs should be chargeable to TES.

Note 15: *Under the Ordinance, the HAD may issue a Certificate of Compliance to a private club which is formed for providing facilities to its members for social and recreation purposes. The Certificate is renewable every year.*

Note 16: *According to the DSD, a restaurant of a private club providing catering services without making any profit should not be chargeable to TES, such as a canteen for staff provided with food which is free of charge, or food which is being charged only for recovering the cost of the food provided.*

4.27 Audit notes that the DSD had not conducted examinations of licensed private clubs having non-TES accounts with a view to identifying TES-omission cases. In Audit's view, the DSD needs to conduct such examinations.

DSD's examination not covering some non-TES trade accounts with high water consumption records

4.28 In Audit's view, the DSD has made good efforts in tackling TES-omission cases by focusing detection efforts on non-TES trade accounts having high water-consumption records in the "Retail shop" and "Other food products" trades (see paras. 4.10 to 4.12). However, Audit notes that, apart from these two trades, two other business classifications (namely "Miscellaneous services/vacant" and "Cleansing and dust suppression for private use") may warrant the DSD's examination (see Table 5). Therefore, the DSD should consider extending the coverage of its examination of non-TES trade accounts having high water-consumption records to include these two trade categories.

Table 5

Business classifications with significant TES omissions identified by the DSD (2012-13)

Business classification	Account (No.)	TES recovered (\$)
(a) Retail shop	240	854,881
(b) Miscellaneous services/vacant	65	240,399
(c) Cleansing and dust suppression for private use	37	185,001
(d) Other food products	24	159,418
Total	366	1,439,699

Source: Audit analysis of DSD records

Reassessment of TES rates

4.29 Under the Sewage Services (Trade Effluent Surcharge) Regulation, a TES trader may apply for:

- (a) ***Reassessment of COD value.*** A trader may apply for a reduced TES rate levied on his business if he can demonstrate that the pollution level of his sewage discharge is lower than the prescribed generic COD value of his trade (see Appendix A). He may appoint at his expense an accredited laboratory to conduct an assessment of the pollution level of his sewage discharge in accordance with the Technical Memorandum issued under the Sewage Services Ordinance; and
- (b) ***Reassessment of discharge factor.*** A trader may apply for a reassessment of the discharge factor for his business if he can demonstrate that the volume of sewage discharge is not more than 85% of the TES chargeable volume of water supply (Note 17). In processing an application, DSD inspectors will conduct sample checks to ascertain the volume of sewage discharge of an applicant's business.

4.30 Under the Regulation, if the DSD grants approvals for a reduced TES rate (see para. 4.29(a)) and a reassessed discharge factor (see para. 4.29(b)) for a business, the approvals will be valid for three years. The Regulation does not have provisions for revoking the approvals during the three-year period.

4.31 As of March 2013, there were 451 and 35 trade water accounts which had been granted reduced TES rates and reassessed discharge factors respectively. In 2012-13, the reduction in TES revenue resulting from the grant of reduced TES rates and reassessed discharge factors were \$31.4 million and \$2.9 million respectively.

Note 17: *Under the Sewage Services (Trade Effluent Surcharge) Regulation, a discharge factor on the volume of water supply is granted to some trades for TES collection purposes on the grounds that their volume of sewage discharge is lower than that of water supply. For example, a discharge factor of 80% is granted to restaurants.*

Areas for improvement

Inadequacies in DSD's laboratory visits

4.32 According to the DSD's inspection guidelines, upon receipt of an application for a reduced TES rate, inspectors of the Operation Section of the SS Branch will pay visits to the trade premises to observe the sewage sampling work conducted by the applicant's appointed laboratory. The DSD inspectors will also pay visits to the pertinent accredited laboratory to observe the sewage sample preparation and testing procedures, and complete a checklist for the purpose. The DSD's laboratory may also conduct independent tests on some sewage samples collected. If the DSD is satisfied with the testing results of the sewage pollution levels, it will grant approval for a reduced TES rate, and the applicant needs to continue to implement the related sewage treatment measures throughout the three-year validity period.

4.33 In 2011-12 and 2012-13, the DSD granted approvals to 184 business applications for reduced TES rates. Of these 184 cases, Audit selected 50 cases (which involved significant TES-rate reductions) for examination. Audit examination revealed that of these 50 cases:

- (a) DSD inspectors had not conducted any laboratory visits in 30 cases (60%); and
- (b) of the remaining 20 cases, the DSD inspectors had not carried out in 10 cases (50%) all the necessary checks as required under the pertinent checklists in accordance with DSD guidelines (see Table 6).

Table 6

DSD actions in 20 laboratory visits

Observing laboratory staff's action to unseal samples in laboratory	Observing laboratory staff's action to mix samples collected from different time intervals	Observing laboratory staff's action to prepare samples for testing in accordance with laid-down procedures	Visits complying with one or more of the 3 observation procedures (No.)
✓	✓	✓	10
✓	×	×	1
✓	✓	×	5
×	✓	×	2
×	✓	✓	2
Total			20

Source: Audit analysis of DSD records

4.34 In August 2013, the DSD informed Audit that:

- (a) DSD inspectors were not required to carry out laboratory visits in all cases involving applications for TES-rate reductions;
- (b) since the independent laboratories responsible for carrying out the COD tests were all accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS — Note 18), they were trustworthy and were governed by established procedures for ensuring the quality of test results. Checking the work of HOKLAS accredited laboratories was not a role of the DSD. The DSD only conducted laboratory visits occasionally to monitor the COD reassessments; and

Note 18: *HOKLAS is an accreditation scheme operated by the Hong Kong Accreditation Service, which is headed by the Commissioner for Innovation and Technology.*

- (c) the DSD's investigations relating to Audit's observations in Table 6 revealed that:
 - (i) in one case, the full set of samples collected was incomplete and the laboratory did not proceed with the testing;
 - (ii) in some cases, the laboratories did not perform the required work procedures during DSD inspectors' visits; and
 - (iii) in some cases, DSD inspectors were not assigned to observe the sample unsealing procedure according to DSD rosters for inspectors.

4.35 Audit notes that the DSD has not issued any guidelines on the frequency of laboratory visits by DSD inspectors in processing applications for reduced TES rates. In Audit's view, such guidelines should be issued. The DSD also needs to issue guidelines on follow-up actions by DSD inspectors if they cannot conduct all inspection procedures during a laboratory visit. The DSD also needs to conduct a review of the effectiveness of laboratory visits conducted by DSD inspectors, having regard to DSD requirement for applicants to comply with the testing procedures laid down in the Technical Memorandum of the Sewage Services Ordinance.

TES Traders' sewage treatment measures not closely monitored

4.36 In July 2011, the DSD issued "Guidelines on application for reassessment of COD" to TES traders relating to their applications for reassessment of TES rates. According to the Guidelines, in order to monitor the sewage treatment measures implemented by TES traders who have been granted reduced TES rates throughout the three-year validity period, the DSD Operation Section will:

- (a) send inspectors to collect samples of the sewage discharge of the pertinent businesses for testing to ascertain whether the sewage discharge meets the approved conditions; and
- (b) require pertinent businesses to submit maintenance records of their sewage treatment facilities to the DSD six months after approval and every nine months thereafter.

Collection of trade effluent surcharges

4.37 As of June 2013, 192 businesses (Note 19) which had been granted reduced TES rates were subject to the control measures stated in paragraph 4.36. During the two years from July 2011 to June 2013, the DSD had carried out seven surprise visits to examine the implementation of sewage treatment measures at the pertinent traders' premises. Audit examination revealed that:

- (a) the DSD had not issued any internal guidelines on the frequency of such surprise visits;
- (b) during the seven surprise visits, DSD inspectors had not conducted any sample collection and testing, at variance with the requirements under DSD guidelines (see para. 4.36 (a)); and
- (c) from July 2011 to April 2013, the DSD issued letters to require 121 pertinent businesses to submit to the DSD maintenance records of their sewage treatment facilities. However, up to June 2013, 21 (17%) of 121 businesses had not duly submitted maintenance records to the DSD. Of the 100 businesses which had submitted maintenance records, 27 had not provided all the records as required.

In Audit's view, the DSD needs to strengthen efforts to address the above issues.

4.38 In August 2013, the DSD informed Audit that:

- (a) effluent strength was largely dependent on the sewage treatment method adopted. If an applicant maintained the same treatment method and frequency throughout the three-year validity period, the effluent strength of the sewage during the period should be similar to that at the time of the application for TES reduction; and
- (b) the DSD might conduct sample tests but it was not a requirement. The reasons for the DSD not collecting any trade-effluent samples from the pertinent premises during surprise inspections included:

Note 19: *A business may have more than one water account.*

- (i) since the sample-taking work would take a full day, any surprise element would be lost;
- (ii) the DSD did not want to disrupt the normal operation of the businesses; and
- (iii) alternative administrative measures were in place to monitor the kitchen practices of restaurants and their maintenance of sewage treatment facilities. In case of any non-compliance with DSD requirements as revealed in the maintenance records submitted to the DSD, a business needed to provide a satisfactory explanation before his application for renewal of TES reduction would be processed.

4.39 In Audit's view, the DSD needs to collect sewage samples from businesses that have been granted TES reductions for testing in accordance with DSD guidelines (see para. 4.36). This practice will help the DSD assess the magnitude of the problem of TES traders not complying with the DSD's requirements during the three-year validity period for TES reductions. Based on such information, the DSD can make assessment of the need to strengthen controls over the issue (see para. 4.40). This practice will also provide deterrence on TES traders to induce them to comply with DSD requirements during the three-year validity period.

No provisions for revoking three-year validity period for reduced TES rates

4.40 The Sewage Services Ordinance and the Sewage Services (Trade Effluent Surcharge) Regulation have no provisions for the DSD to revoke a reduced TES rate granted to a business during the three-year validity period. Audit is concerned that this arrangement is not effective in inducing pertinent traders to take measures to prevent deterioration of the pollution level of their sewage discharge after the grant of reduced TES rates. Therefore, the DSD needs to consider seeking legislative support to amend the related Regulation to provide a clause for revoking, where necessary, the reduced TES rates granted to traders during the three-year validity period.

Audit recommendations

4.41 **Audit has *recommended* that the Director of Drainage Services should:**

Actions to identify TES-omission cases

- (a) **in collaboration with the Director of Water Supplies, enhance publicity efforts on TES traders (particularly restaurant and food processing traders) to remind them of the need to provide correct business-classification information to the DSD and the WSD;**
- (b) **seek legal advice on whether prosecution actions can be taken against TES traders who are proved to have provided false business-classification information to the DSD with an intention of evading TES;**
- (c) **consider seeking legislative support to make amendments to the Sewage Services Ordinance for providing appropriate penalty clauses to deter TES traders from intentionally providing false business-classification information to the WSD and the DSD for the purpose of evading TES;**
- (d) **in collaboration with the Director of Water Supplies, make amendments to the water-account application form to the effect that applicants are required to declare in the form as to whether or not their businesses are chargeable to TES according to the Sewage Services Ordinance;**
- (e) **with a view to identifying TES-omission cases and taking action to recover TES from the pertinent traders:**
 - (i) **conduct examinations of 7,692 licensed food premises which had been in operation before May 2005;**
 - (ii) **request the FEHD to provide the DSD with information of convicted cases of unlicensed restaurants or food factories for examination; and**

- (iii) **conduct examinations of all licensed private clubs having non-TES accounts;**
- (f) **consider including the business classifications of “Miscellaneous services/vacant” and “Cleansing and dust suppression for private use” in the DSD’s examination of non-TES trade accounts with high water-consumption records;**

Reassessment of TES rates

- (g) **issue guidelines on the frequency and arrangements for conducting laboratory visits by DSD inspectors in processing applications for reduced TES rates;**
- (h) **conduct a review of the effectiveness of laboratory visits conducted by DSD inspectors;**
- (i) **for trade premises that have been granted reduced TES rates, consider issuing guidelines on:**
 - (i) **the frequency of DSD surprise visits to examine the implementation of sewage treatment measures; and**
 - (ii) **DSD sample collection frequency and testing procedures to assess the pertinent traders’ effluent strength;**
- (j) **take measures to ensure that pertinent traders will submit maintenance records of their sewage treatment facilities to the DSD in a complete and timely manner; and**
- (k) **consider seeking legislative support to amend the Sewage Services (Trade Effluent Surcharge) Regulation for providing a clause for revoking, where necessary, the reduced TES rates granted to traders during the three-year validity period.**

Response from the Administration

4.42 The Director of Drainage Services agrees with the audit recommendations. He has said that the DSD will:

Action to identify TES-omission cases

- (a) in collaboration with the WSD, enhance publicity efforts on traders to remind them of the need to provide correct business-classification information to the DSD and the WSD;
- (b) seek legal advice from the Department of Justice on the handling of cases mentioned in paragraph 4.41(b);
- (c) in collaboration with the WSD, take administrative measures, such as enhancing publicity efforts and revising the water-account application form to improve the accuracy of the business-classification information provided by traders. The DSD will evaluate the effectiveness of these administrative measures and consider the need to make relevant legislative amendments;
- (d) in collaboration with the WSD, prepare a revised water-account application form with a declaration of whether the pertinent business is chargeable to TES;
- (e) seek assistance from the FEHD in providing information of licensed food premises which had been in operation before May 2005 for identifying TES-omission cases;
- (f) seek assistance from the FEHD in providing information of convicted cases of unlicensed restaurants or food factories for identifying TES-omission cases;
- (g) seek assistance from the HAD in providing information of licensed private clubs having non-TES accounts for identifying TES-omission cases;

- (h) continue to examine non-TES trade accounts with high water-consumption records for identifying potential TES accounts and consider including additional business classifications for examination purposes after reviewing the existing examination scope;

Reassessment of TES rates

- (i) conduct a review of the effectiveness of laboratory visits currently conducted by DSD inspectors. The review findings will also be used for developing guidelines on the frequency and arrangements for conducting such visits;
- (j) step up existing administrative measures, including the issue of guidelines on the frequency of the DSD's surprise visits, to ensure that traders would implement sewage treatment measures properly;
- (k) step up existing administrative measures to ensure that traders would continue to implement appropriate measures to maintain the pollution level of their sewage discharge. The DSD will closely monitor the effectiveness of the enhanced measures and consider the need to issue guidelines on sample collection and testing procedures;
- (l) step up existing administrative measures to ensure the timely submission of maintenance records by pertinent traders;
- (m) step up existing administrative measures to ensure that traders would maintain their pollution level after the granting of reduced TES rates; and
- (n) closely monitor the effectiveness of the enhanced measures and consider the need to make relevant legislative amendments.

4.43 The Director of Water Supplies agrees with the audit recommendations related to the WSD in paragraph 4.41(a) and (d).

PART 5: COMPILATION OF MANAGEMENT INFORMATION

5.1 This PART examines the compilation of management information for the SSCS.

Management information

5.2 The DSD mainly manages the SSCS through the CCBS of the WSD. Salient information for supporting the DSD's management of the SSCS include:

- (a) Lists of Unsewered Areas (see para. 3.4(b));
- (b) Lists of Newly Connected Premises (see para. 3.5(c));
- (c) Weekly New Accounts Reports of new water accounts having non-SC status produced by the CCBS (see para. 3.7); and
- (d) business classification information of non-domestic water accounts for TES collection purposes (see para. 4.2).

Some management information not readily available

5.3 Audit notes that the following management information, which will facilitate DSD management in monitoring the SSCS, is not readily available:

- (a) reports on progress of actions taken to recover SC and TES from outstanding accounts;
- (b) ageing analysis of recovery of SC and TES; and
- (c) frequencies of DSD inspections carried out on premises relating to suspected SC and TES omissions.

5.4 In Audit's view, the DSD needs to take action to provide relevant and useful management reports.

Audit recommendations

5.5 Audit has *recommended* that the Director of Drainage Services should, for management purposes, take measures to:

- (a) in collaboration with the Director of Water Supplies, provide periodical reports on:
 - (i) progress of actions taken to recover SC and TES from outstanding accounts; and
 - (ii) ageing analysis of recovery of SC and TES; and
- (b) provide periodical reports on frequencies of DSD inspections carried out on premises relating to suspected SC and TES omissions.

Response from the Administration

5.6 The Director of Drainage Services agrees with the audit recommendations. He has said that additional quarterly reports and statistics will be provided for management purposes.

5.7 The Director of Water Supplies agrees with the audit recommendation related to the WSD in paragraph 5.5(a).

Appendix A
(paras. 1.4(b), 1.6, 4.2
and 4.29(a) refer)

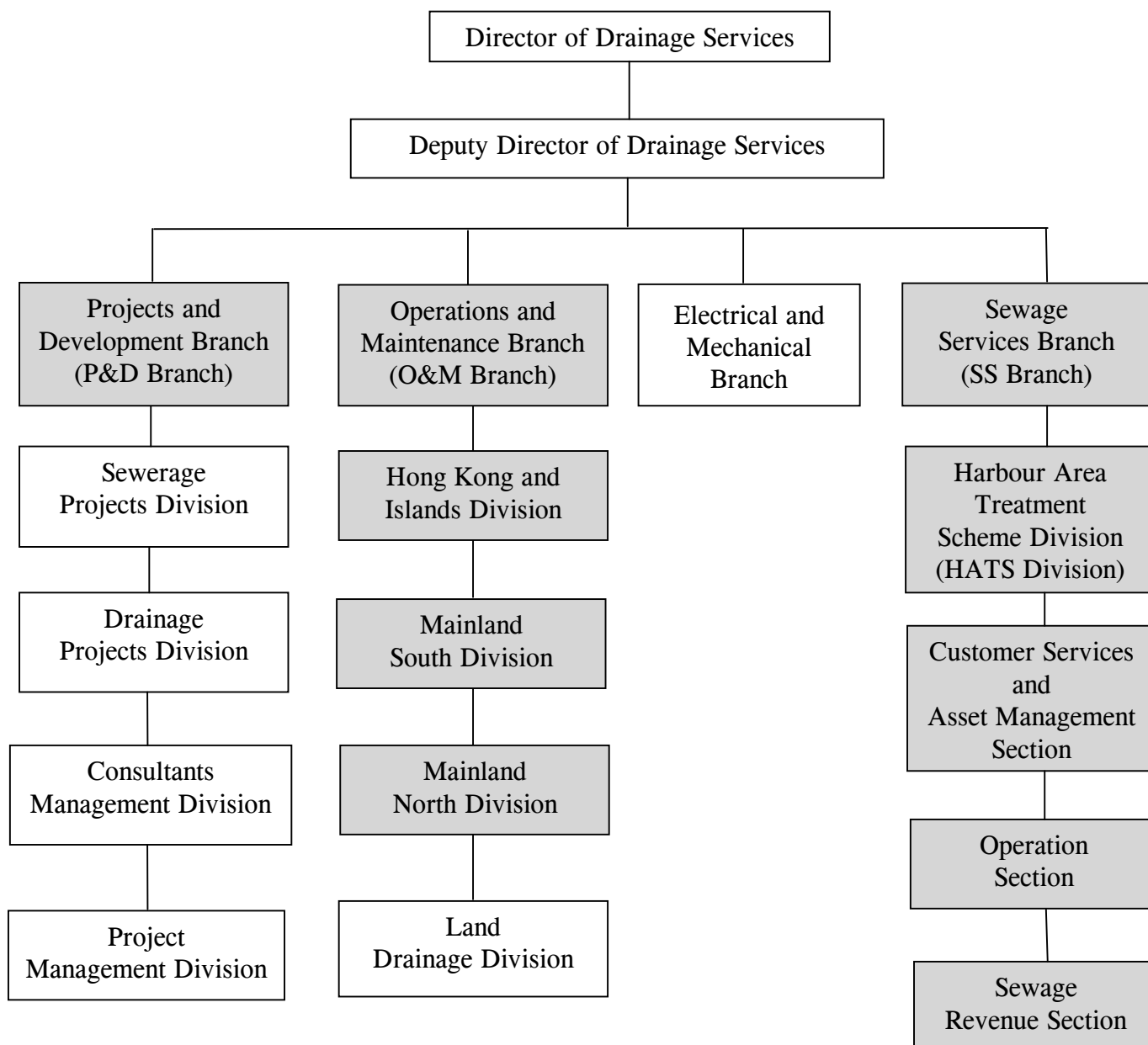
**Trade effluent surcharges of 27 trades
(August 2013)**

	Trade	Generic COD value (g/m³)	TES rate (\$/m³)
1	Yarn sizing	2,000	4.51
2	Washing new garments, excluding laundries	566	0.41
3	Bleaching and dyeing of knitted fabric (Note)	665	0.41
4	Bleaching and dyeing of woven fabric (Note)	1,053	1.20
5	Knit outerwear (Note)	566	0.41
6	Wearing apparel other than knit outerwear	566	0.41
7	Spinning cotton	570	0.41
8	Soap and cleaning preparations, perfumes, cosmetics	2,000	4.51
9	Medicines	2,000	4.51
10	Paints, varnishes and lacquers	1,000	1.38
11	Basic industrial chemicals	677	0.76
12	Tanneries and leather finishing	807	0.76
13	Pulp, paper and paperboard	1,870	4.88
14	Soft drinks and carbonated waters industries (Note)	826	0.47
15	Breweries and manufacture of malt liquor (Note)	2,000	4.51
16	Distilling, rectifying and blending spirits (Note)	2,000	4.51
17	Cocoa, chocolate and sugar confectionery	2,000	4.51
18	Vermicelli, noodles, and similar farinaceous products	2,000	4.51
19	Bakery products	2,000	3.92
20	Grain mill products	1,521	2.77
21	Vegetable oil, peanut oil, peppermint oil and aniseed oil	1,320	2.48
22	Canning, preserving and processing of fish and crustaceans	1,141	1.78
23	Canning and preserving fruit and vegetables	2,000	3.41
24	Dairy products	2,000	4.51
25	Slaughtering, preparing and preserving meat	1,129	1.74
26	Soy and other sauces	2,000	4.51
27	Restaurants (Note)	1,630	3.05

Source: Sewage Services (Trade Effluent Surcharge) Regulation

Note: For these seven trades, TES is chargeable based on 80% of the water supply because these trades produce less volume of sewage than that of water supply.

**Drainage Services Department
Organisation chart
(August 2013)**



Source: DSD records

Remarks: P&D Branch and HATS Division of SS Branch are collectively referred to as the Project Divisions.

Appendix C
(para. 4.2 refers)

**102 business classifications in water-account application form
(August 2013)**

1	Metal ore mining	18	Soft drinks and carbonated water industries	35	Textile finishing and packing, napping
2	Mining (other)	19	Tobacco manufacturing	36	Other textiles (excluding upholstery)
3	Slaughtering, preparing and preserving meat	20	Wearing apparel other than knit outerwear	37	Wood and cork products except furniture
4	Processing of animal products	21	Gloves, headgear, wearing apparel (other), napkins, embroidery, wristwatch bands (other than metal), and upholstery	38	Furniture and fixtures, except primarily of metal
5	Dairy products	22	Tanneries and leather finishing	39	Pulp, paper and paperboard
6	Canning and preserving of fruit and vegetables	23	Products of leather and leather substitutes (excluding footwear and clothing), and handbags (excluding rattan, straw and plastic bags)	40	Paper products
7	Canning, preserving and processing of fish and crustaceans	24	Footwear, except rubber, plastic and wooden footwear	41	Printing, publishing and allied industries, book binding, stationery and celluloid
8	Vegetable oil, peanut oil, peppermint oil and aniseed oil	25	Spinning cotton	42	Basic industrial chemicals
9	Grain mill products	26	Texturizing, spinning (excluding cotton), weaving, knitting (excluding outerwear), hosiery, knit underwear	43	Paints, varnishes and lacquers
10	Bakery products	27	Knit outerwear	44	Medicines
11	Vermicelli, noodles and similar farinaceous products	28	Textile stencilling and printing	45	Soap and cleaning preparations, perfumes, cosmetics
12	Cocoa, chocolate and sugar confectionery	29	Bleaching and dyeing of yarn	46	Other chemicals and chemical products
13	Ice manufacture (excluding dry ice)	30	Bleaching and dyeing of woven fabric	47	Products of petroleum and coal
14	Soy and other sauces	31	Bleaching and dyeing of knitted fabric	48	Rubber products
15	Other food products	32	Bleaching and dyeing of garments	49	Plastic products
16	Distilling, rectifying and blending spirits	33	Washing new garments (excluding laundries)	50	Pottery, china and earthenware
17	Breweries and manufacture of malt liquors	34	Yarn sizing	51	Glass and glass products (excluding spectacles and optical lenses)

Appendix C
(Cont'd)
(para. 4.2 refers)

52	Structural clay products	69	Professional and scientific, measuring and controlling equipment (other), photographic and optical goods	86	Shipping water supply
53	Cement	70	Offensive industries (other)	87	Storage
54	Concrete mixing	71	Buttons, bobbins, umbrellas, mosquito nets, sails and flags	88	Commercial offices
55	Lime	72	Wigs and hair products	89	Private academic and sports institution
56	Plaster	73	Manufacturing industries (other)	90	Private welfare activities
57	Non-metallic mineral products (other)	74	Utilities, transport, car parks, tunnels, travel, communication	91	Private clubs, institutions and religious organisations (other)
58	Basic metal industries	75	Construction, decoration, repair and maintenance	92	Hospitals and Clinics
59	Buffing, polishing and electroplating	76	Wholesale	93	Barber and beauty shops
60	Other fabricated metal products	77	Retail shop of any kind	94	Bath houses and massage parlours
61	Office, accounting and computing machinery	78	Import/export	95	Laundries
62	Radio, television, communication equipment and apparatus	79	Restaurants-Chinese	96	Private fountains
63	Electronic parts and components	80	Restaurants-non-Chinese	97	Private swimming pools and boating ponds
64	Electrical appliances and houseware, electronic toys and electrical workshops	81	Restaurants-fast food shops	98	Cleansing and dust suppression for private use
65	Machinery, equipment, apparatus, parts and components (other)	82	Restaurants-other eating places	99	Gardens, lawns and tennis courts for private use
66	Land intensive and large scale heavy industries	83	Hotels	100	Washing vehicles for private use
67	Manufacture, assembly and repair of motor vehicles, motor cycles and bicycles	84	Boarding houses	101	Air-conditioning for private use
68	Manufacture and assembly of transport equipment (other)	85	Ocean-going shipping supply	102	Miscellaneous services/vacant

Source: DSD and WSD records

Note: 30 business classifications (as shaded) belong to 27 TES trades, where 4 business classifications (see items 79 to 82) belong to the restaurant trade.

Acronyms and abbreviations

Audit	Audit Commission
CCBS	Customer Care and Billing System
COD	Chemical oxygen demand
DSD	Drainage Services Department
EA Panel	Panel on Environmental Affairs
ENB	Environment Bureau
EPD	Environmental Protection Department
FEHD	Food and Environmental Hygiene Department
FSTB	Financial Services and the Treasury Bureau
g/m ³	gram per cubic metre
HAD	Home Affairs Department
HATS	Harbour Area Treatment Scheme
HOKLAS	Hong Kong Laboratory Accreditation Scheme
LegCo	Legislative Council
m ³	cubic metre
O&M Branch	Operations and Maintenance Branch
P&D Branch	Projects and Development Branch
SC	Sewage charge
SMPs	Sewerage Master Plans
SS Branch	Sewage Services Branch
SSCS	Sewage Services Charging Scheme
TES	Trade effluent surcharge
WSD	Water Supplies Department