

For information

**Legislative Council Panel on Environmental Affairs**

**Sewage Services Operating Accounts and  
Progress of Sewerage Projects**

**Purpose**

This information note seeks to provide a summary of the Sewage Services Operating Accounts (the Accounts) for 2007-08 and a projection for 2008-09, and report the result of the Administration's review of the schedule of increases of the sewage charge (SC) in the light of the expected delays of some sewerage projects.

**Background**

2. A sewage services charging scheme (the scheme) was introduced in 1995 with a view to applying the "polluter-pays" principle to the provision of sewage services to facilitate the long-term sustainability of our environment. The scheme comprises an SC and a trade effluent surcharge (TES). The SC is levied on all users whose premises are connected to a government sewer aiming at recovering the cost of collecting and treating sewage at or below a pollution strength equivalent to domestic sewage. The TES is an additional charge on top of SC, applying to trades specified in the subsidiary legislation, for the additional cost incurred in treating effluents of strength stronger than domestic sewage. The Accounts captures the financial positions of the two charges under the scheme.

3. In order to ensure the scheme would continue to operate on the "polluter-pays" principle, the Administration put forward proposals to revise SC and TES in 2007 and 2008 respectively. For SC, the Administration proposed to increase SC by 10 increments to achieve 80% recovery of the operating cost in 10

years, with an ultimate goal of full cost recovery in the long term. For TES, the Administration proposed to revise the generic chemical oxygen demand values<sup>1</sup> and the TES rates in accordance with the results of an effluent survey with a view to achieving 100% recovery of the operating cost in 2009-10. Based on the result of the said effluent survey, the Administration also proposed to change the apportionment of sewage services operating costs between SC and TES from a ratio of 78:22 to 85:15. The adjustment enhanced the accuracy and fairness of the apportionment of the operating costs between SC and TES. The Legislative Council (LegCo) supported the Administration's proposals on both occasions.

4. The first of 10 SC increment came into force on 1 April 2008 and the revised TES took effect on 1 August 2008. During the deliberation of the SC proposal, the Administration undertook to provide annually to the LegCo Panel on Environmental Affairs (the Panel) a summary of the Accounts of the previous financial year and the projection for the following financial year for scrutiny. Separately, the Administration also undertook to review the 10-year schedule of SC increases and report the review result to the Panel if –

- (a) the Accounts show that the 80% cost recovery target for the SC has been exceeded or is projected to be exceeded in the following year; or
- (b) the programme of the planned major sewage services-related infrastructure projects (the Advance Disinfection Facilities under the HATS Stage 2A, Sludge Treatment Facilities and Stage 2A of HATS) or other projects will be delayed by more than one year.

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<sup>1</sup> Chemical oxygen demand (COD) measures the amount of oxygen required to decompose organic matter chemically and is hence a measure of polluting load. The higher the level in wastewater, the greater the cost of treating it. The generic COD values are specified in the Sewage Services (Trade Effluent Surcharge) Regulation.

### **Sewage Services Operating Accounts**

5. For 2007-08, the Accounts suffered an operating deficit (excluding depreciation and miscellaneous services) of \$517.0 million, representing a recovery rate of only 57.5%. For SC, there was an operating deficit of \$460.8 million, which means the cost recovery rate was only 51.6%. For TES, the operating deficit was \$56.2 million which corresponds to a cost recovery rate of 78.8%. The Accounts for 2007-08 have not yet reflected the first SC increment and new TES rates, which came into force on 1 April and 1 August 2008 respectively.

6. For the projection for 2008-09, the Administration expects the operating deficit for SC will increase to \$506.1 million, or a cost recovery rate of only 50.9% after taking into account the first SC increment. The increase in SC operating deficit is a combined result of the adjustment of operating costs apportionment between SC and TES (see para. 3 above) and the rise in the overall operating costs due to inflation and lower projected water consumption, offset by the SC increment on 1 April 2008. On the other hand, the TES account is projected to have a slight improvement by reducing the operating deficit to about \$35.0 million or a cost recovery rate of 84.0%. The improvement in the TES recovery rate is due to the lesser share of the operating costs borne by the TES after adjusting the operating costs apportionment (see para. 3 above) and the part year effect of the new TES rates which were implemented on 1 August 2008.

7. A summary of the operating accounts for 2007-08 and financial projections for 2008-09 is at **Annex A**.

### **Progress of sewage services-related infrastructure projects**

8. In April 2007, the Administration provided the LegCo Subcommittee

on Sewage Services (Sewage Charge) (Amendment) Regulation 2007, Sewage Services (Trade Effluent Surcharge) (Amendment) Regulation 2007 and Technical Memorandum on Procedures and Methods for Sampling and Analysis of Trade Effluents with a list of sewerage projects the operating costs of which had been factored into the 10-year SC projections. The latest position of these sewerage projects is reproduced at **Annex B**.

9. The Administration has exercised its best endeavour to ensure timely implementation of the sewerage programme. Among the 41 projects, 27 are expected to be completed according to the original programme or with minor slippage of less than one year. Nonetheless, regardless of the Administration's efforts, the completion of 14 projects might be delayed for more than one year. The delays are mainly result of longer than expected time for consulting local communities and lead time to negotiate and finalise the project alignments before commencing land acquisition. Brief accounts of the delay for each project are at **Annex C**.

### **Review of the schedule of increases**

10. In the light of the project delays, we have reviewed the 10-year schedule of SC increases to see whether the delays might have an impact on the recovery of the operation costs in relation to SC. The delayed projects involved mainly the laying of village sewerage. The latest financial projection, which has taken into account the delay of these projects, reveals that the delay of these projects in fact has little impact on the overall operating cost of the Accounts. The total operating cost of the sewage services will rise from \$1,217.0 million in 2007-08 to \$2,815.9 million in 2017-18. The increase in total operating cost of the sewage services are attributable to a number of factors, including the rise in overall operating costs due to inflation and more expenditure required due to commissioning of new capital projects. We estimate that the operating cost of the sewage services will continue to increase as we upgrade the level of sewage

treatment and the commissioning of new sewage treatment plants. The Accounts and the latest financial projections show that the 80% cost recovery target for SC has neither been nor is projected to be exceeded. We expect that the General Revenue will have to continue to subsidise substantially the Accounts even when the 10-year increment scheme has been fully implemented.

11. Against the above background, we consider that it is not necessary to revise the 10-year SC increment schedule at this stage.

**Environmental Protection Department  
Drainage Services Department  
12 May 2009**

**Sewage Services Operating Accounts**  
**Financial position for 2007-08**  
**Financial projection for 2008-09**

	2007-08 (Actual) \$ million		2008-09 (Projected) \$ million	
	Sewage Charge	Trade Effluent Surcharge	Sewage Charge	Trade Effluent Surcharge
Revenue	490.9	209.1	525.6	184.1
Expenditure (excluding depreciation)	951.7	265.3	1,031.7	219.1
Operating deficit	(460.8)	(56.2)	(506.1)	(35.0)
Cost recovery rate (%)	51.6%	78.8%	50.9%	84.0%

## Annex B

**Sewage services-related infrastructure projects  
Latest position**

<b>Project code and title (cf LegCo paper CB(1) 1435/06-07(02))</b>		<b>Target completion</b>	<b>Status</b>
1	4211DS Outlying Islands sewerage, stage 1 phase 2 - upgrading of Peng Chau sewage treatment works	2007-08	Completed in March 2008
2	4229DS North District and Tolo Harbour sewerage, sewage treatment and disposal - high priority works - expansion of Shek Wu Hui sewage treatment works and Ting Kok Road pumping station No.5	2008-09	Completed in February 2009
3	4215DS Yuen Long and Kam Tin sewerage and sewage disposal - Kam Tin trunk sewerage, Phase 1 and Au Tau trunk sewers	2009-10	On schedule
4	4222DS Tai Po sewage treatment works, Stage 5 Phase 1	2009-10	On schedule
5	4352DS Harbour Area Treatment Scheme Stage 2A – construction of advance disinfection facilities at Stonecutters Island sewage treatment works	2009-10	On schedule
6	4347DS Port Shelter sewerage stage 3 - Sai Kung Area 4 sewerage	2009-10	On schedule
7	4052DS Ting Kau sewerage, stage 2	2009-10	On schedule
8	4126DS Sham Tseng sewerage, stage 3	2009-10	On schedule
9	4230DS Outlying Islands sewerage, stage 1 phase 1 part 2 - Yung Shue Wan sewerage, sewage treatment works and outfall	2010-11	Revised to 2011-12

<b>Project code and title (cf LegCo paper CB(1) 1435/06-07(02))</b>			<b>Target completion</b>	<b>Status</b>
10	4234DS	Outlying Islands sewerage, stage 1 phase 2 - Sok Kwu Wan sewage collection, treatment and disposal facilities	2010-11	Revised to 2011-12
11	4350DS	Yuen Long and Kam Tin sewerage and sewage disposal - consultants' fees and investigations	2010-11	On schedule
12	4338DS	Improvement and upgrading of the sewerage systems in Shatin / Ma On Shan New Town	2010-11	On schedule
13	5233DS	Sludge treatment facilities	2010-11	Revised to 2012-13
14	4237DS	Tai Po Tai Wo Road sewage pumping station and rising mains	2011-12	On schedule
15	4329DS	Upgrading of Pillar Point sewage treatment works	2011-12	Revised to 2012-13
16	4342DS	Tai Po sewage treatment works, stage 5 phase 2A - disinfection	2011-12	On schedule
17	4343DS	Outlying Islands sewerage stage 2 - Peng Chau village sewerage phase 2	2011-12	Revised to 2012-13
18	4348DS	North District and Tolo Harbour sewerage, sewage treatment and disposal - regional sewerage works, part 1 - sewerage upgrade	2011-12	Revised to 2013-14
19	4235DS	Yuen Long and Kam Tin sewerage and sewage disposal	2012-13	Revised to 2014-15
20	4339DS	North District sewerage, stage 1 phase 2C and stage 2 phase 1 (The stage 1 phase 2B works under the original 4339DS was part-upgraded as 4359DS on 26.1.2007)	2012-13	Revised to 2016-17



<b>Project code and title (cf LegCo paper CB(1) 1435/06-07(02))</b>		<b>Target completion</b>	<b>Status</b>
21	4344DS Upgrading of Central and East Kowloon sewerage - packages 1 to 4 (4344DS was combined with 4337DS and 4356DS to form a new item but with the same number 4344DS covering the packages 1 to 4 of upgrading of Central and East Kowloon sewerage for which the original overall completion date is 2014-15. Upon combining the items, the works were re-packaged for construction on site in two phases. The first phase covering all the critical works items from the original 4344DS was part-upgraded as 4367DS on 15.12.2008 for completion by 2012, while design of phase 2 is in progress for works completion by the original schedule of 2014-15)	2012-13	On schedule
22	4157DS Yuen Long and Kam Tin sewerage stage 2	2013-14	Revised to 2016-17
23	4160DS Tuen Mun sewerage, stage 1	2013-14	Revised to 2017-18
24	4181DS Tuen Mun sewerage, stage 2	2013-14	Revised to 2017-18
25	4274DS Yuen Long and Kam Tin sewerage stage 3	2013-14	Revised to 2016-17
26	4236DS Tai Po sewerage treatment works, stage 5 phase 2B	2013-14	On schedule
27	4353DS (split of 4331DS) Outlying Island sewerage stage 2 – upgrading of Mui Wo Village sewerage phase 2 and Mui Wo sewage treatment works	2013-14	Revised to 2014-15
28	4358DS Sewerage to Chuen Lung Village, Kau Wa Keng Old village and Lo Wai	2013-14	On schedule

<b>Project code and title (cf LegCo paper CB(1) 1435/06-07(02))</b>			<b>Target completion</b>	<b>Status</b>
29	4332DS	Lam Tsuen Valley Sewerage	2013-14	Revised to 2016-17
30	4346DS	Upgrading of Tuen Mun sewerage, phase 1	2013-14	Revised to 2017-18
31	4226DS	Sai Kung sewage treatment works phase 2 upgrading	2013-14	Revised to 2014-15
32	4354DS (split of 4331DS)	Outlying Islands sewerage stage 2 – upgrading of Cheung Chau and Tai O sewage collection, treatment and disposal facilities	2013-14	Revised to 2015-16
33	4355DS (split of 4331DS)	Outlying Islands sewerage stage 2 - Lamma Village sewerage phase 2	2013-14	On schedule
34	4125DS	Tolo Harbour sewerage of unsewered areas	2014-15	Revised to 2017-18
35	4337DS	Upgrading of Central and East Kowloon sewerage - packages 2 and 3 (see 4344DS)	2014-15	N/A
36	4341DS	Harbour Area Treatment Scheme Stage 2A - construction of the sewage conveyance system and upgrading of Stonecutters Island sewage treatment works and preliminary treatment works	2014-15	On schedule
37	4272DS	Port Shelter sewerage stage 2	2014-15	Revised to 2016-17
38	4273DS	Port Shelter sewerage stage 3	2014-15	Revised to 2016-17
39	4345DS	North District sewerage stage 2 part 2A	2015-16	Revised to 2016-17
40	4223DS	Yuen Long and Kam Tin sewerage treatment upgrade - upgrading of San Wai sewage treatment works	2015-16	On schedule
41	4203DS	North District sewerage stage 2 part 2B	2015-16	Revised to 2016-17

**Sewage services-related infrastructure projects**  
**Description of the projects expected to delay for more than one year**

	<b>Project code and title</b>	<b>Remarks</b>
13	5233DS Sludge treatment facilities	Revised to 2012-13  More time is required for completing the EIA study and carrying out public consultation for this project.
18	4348DS North District and Tolo Harbour sewerage, sewage treatment and disposal - regional sewerage works, part 1 - sewerage upgrade	Revised to 2013-14  In view of the complex interface of the proposed works with the existing system, the need of maintaining operation of the existing system during construction, and the need to minimise traffic impact by reducing works fronts on site, the latest programme indicates that a longer construction period is required and the works could be substantially completed in end 2013.
19	4235DS Yuen Long and Kam Tin sewerage and sewage disposal	Revised to 2014-15  More time is needed to further consult the local communities and to lobby for their support.

	<b>Project code and title</b>	<b>Remarks</b>
20	4339DS North District sewerage, stage 1 phase 2C and stage 2 phase 1 (The stage 1 phase 2B works under the original 4339DS was part-upgraded as 4359DS on 26.1.2007)	Revised to 2016-17  More time is required to further consult the local communities and lobby for their support and resume private lands for the project.
22	4157DS Yuen Long and Kam Tin sewerage stage 2	Revised to 2016-17  More time is required to further consult the local communities and lobby for their support.
23	4160DS Tuen Mun sewerage, stage 1	Revised to 2017-18  More time is required to further consult the local communities and lobby for their support and resume private lands for the project.
24	4181DS Tuen Mun sewerage, stage 2	Revised to 2017-18  More time is required to further consult the local communities and lobby for their support and resume private lands for the project.
25	4274DS Yuen Long and Kam Tin sewerage stage 3	Revised to 2016-17  More time is required to further consult the local communities and lobby for their support.
29	4332DS Lam Tsuen Valley sewerage	Revised to 2016-17  More time is required to resume private lands for the project.

	<b>Project code and title</b>	<b>Remarks</b>
30	4346DS Upgrading of Tuen Mun sewerage, phase 1	Revised to 2017-18  More time is required to further consult the local communities and lobby for their support and resume private lands for the project.
32	4354DS Outlying Islands sewerage stage 2 – (split of upgrading of Cheung Chau and Tai O 4331DS) sewage collection, treatment and disposal facilities	Revised to 2015-16  More time is required to resume private lands for the project.
34	4125DS Tolo Harbour sewerage of unsewered areas	Revised to 2017-18  More time is required to resume private lands for the project.
37	4272DS Port Shelter sewerage stage 2	Revised to 2016-17  More time is required to further consult the local communities and lobby for their support.
38	4273DS Port Shelter sewerage stage 3	Revised to 2016-17  More time is required to further consult the local communities and lobby for their support.