

CONTROLLING OFFICER'S REPLY

EEB(E)034

(Question Serial No. 2186)

Head: (39) Drainage Services Department

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

Programme: (2) Sewage Services

Controlling Officer: Director of Drainage Services (MOK Wing-cheong)

Director of Bureau: Secretary for Environment and Ecology

Question:

Regarding the existing Tai Po Sewage Treatment Works (TPSTW) and Sha Tin Sewage Treatment Works (STSTW), would the Government inform this Committee, in the past 3 years:

1. of the annual expenditures and manpower of the existing TPSTW and STSTW;
2. of the numbers of malfunction incidents at the existing TPSTW and STSTW each year and the details;
3. of the design treatment capacities and actual treatment volumes of the existing TPSTW and STSTW;
4. of the expenditures on conducting the “Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme” (the Trial Scheme) at the existing TPSTW and STSTW; and the number of accidents involved; and
5. in view of the spare capacity currently available at O·PARK1 and O·PARK2, whether the Government will defer the Trial Scheme to reduce the burden on TPSTW and STSTW; if yes, of the details; if not, of the reasons?

Asked by: Hon CHAN Hak-kan (LegCo internal reference no.: 35)

Reply:

1. In the past 3 years, the operational expenses (including management, maintenance and repair fees) of Tai Po Sewage Treatment Works (TPSTW) and Sha Tin Sewage Treatment Works (STSTW), as well as the manpower involved, are tabulated as follows:

Year	STSTW		TPSTW	
	Operational expenses	No. of staff	Operational expenses	No. of staff
2023-24	Around \$170 million	82	Around \$80 million	56
2024-25	Around \$160 million		Around \$70 million	
2025-26 (Revised estimate)	Around \$190 million		Around \$70 million	

2. Since the TPSTW and STSTW have been in operation for over 40 years and are subject to ageing problems, the Drainage Services Department (DSD) has stepped up maintenance to reduce the risk of malfunctioning. In the past 3 years, there was no major incident occurred at the TPSTW. Two relatively major incidents took place at the STSTW, and the details are as follows:

(1) On 26 May 2024, a small amount of sludge mixture overflowed from a digester at the STSTW through its overload protection device, giving rise to unpleasant odour. This was a very rare incident. Investigation revealed that the cause was a blockage in the pipe connecting the digester and the central piping system, resulting in sludge mixture overflowing through the overload protection device. The DSD completed improvement works in July 2024, including the installation of additional sensors and closed-circuit television (CCTV) system to monitor the overload protection device, to prevent similar incidents from happening again.

(2) On 2 September 2025, a leakage occurred in an underground sewage pipeline at the STSTW that had been in service for about 40 years. During the incident, part of the sewage treatment facilities had to be suspended, causing the remaining facilities to be overloaded and resulting in relatively turbid water in the Kai Tak River downstream of the plant. The DSD immediately implemented contingency measures, and the suspended facilities resumed operation on 6 September. As the affected biological sewage treatment process gradually restored, the water quality of the Kai Tak River returned to the levels prior to the leakage.

3. The current design treatment capacities and actual treatment volumes of TPSTW and STSTW are tabulated as follows:

	TPSTW	STSTW
Design treatment capacity	120 000 m ³ per day	340 000 m ³ per day
Average actual treatment volumes in 2025-26 (as at February 2026)	Around 100 000 m ³ per day	Around 280 000 m ³ per day

4. Since 2019, the Environmental Protection Department (EPD) has been collaborating with the DSD to examine the use of existing sewage treatment facilities for food waste/sewage sludge anaerobic co-digestion through the “Food Waste/Sewage Sludge Anaerobic Co-digestion Trial Scheme” (the Trial Scheme). This serves as an additional component of the Organic Resources Recovery Centre network, with a view to enhancing food waste treatment capability in Hong Kong. Under the Trial Scheme, the two food waste pre-treatment facilities at TPSTW and STSTW are operated by the EPD, and their operational expenses in the past 3 years are tabulated as follows:

	Operational expenses for food waste pre-treatment facilities under the EPD (Programme under Head 44) (\$ million)		
	2023-24 (Actual)	2024-25 (Actual)	2025-26 (Revised estimate)
Trial Scheme at TPSTW	9	10	6
Trial Scheme at STSTW	3	15	17

After pre-treatment, food waste is injected into designated sludge digesters within the sewage treatment plants for anaerobic co-digestion. Currently, both sewage treatment plants utilise existing sludge digesters and treatment facilities to process both sewage sludge and food waste, with food waste accounting for only a small portion of the total sludge volume treated at the plants. As the relevant expenditure has been subsumed under the overall operational expenses of the DSD, a separate breakdown of the expenditure involved is not available.

In the past 3 years, one incident occurred at a digester at STSTW under the Trial Scheme. Details of the incident are provided in 2(1) above.

5. The Trial Scheme has demonstrated that that food waste/sewage sludge anaerobic co-digestion not only diverts food waste from landfills, but also improves the nutrient balance of sewage sludge anaerobic digestion and enhances biogas yield, thereby promoting the development of convertible renewable energy. At present, the two trials on food waste/sewage sludge anaerobic co-digestion are operating smoothly, and the relevant operation contracts are still effective. In conclusion, the Trial Scheme has confirmed the feasibility of anaerobic co-digestion of food waste and sewage sludge, and has accumulated practical operational experience and data, which will serve as a reference for advancing larger-scale projects in the future.

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