25. George Town STP

25.1 Activity and report details

Activity name	George Town STP		
Activity address	Old Bell Bay Road, George Town		
Permit number	License to Operate - 3952	**Date of issue**	3/12/1991
EPN	7933/1	**Date of issue**	17/09/2015
Treatment level	Secondary Treatment		
Authorised dry weather flows	3600 kL/day		
Key influent source	Residential/Industrial/Tankered 3 x Category 3 Customers, 2 x Category 4 Customers		
Contact person	Kate Westgate		
Report author	Luisa Romero (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2024		

Figure 25-1: George Town Sewage Treatment Plant

25.2 Monitoring and compliance summary

25.2.1 Flow data

Table 25-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Tamar River	No reuse scheme
Coordinates	E 486967 N 5446819	E 485467 N 5446223	NA
Method of measurement	In line meter	In line meter	NA
Date of last calibration/validation (if applicable).	05/08/2024	05/08/2024	NA

Table 25-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91286	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2023	2,268	74.9	70.32	--
August 2023	2,012	61.8	73.79	--
September 2023	2,125	25.9	57.67	--
October 2023	1,632	59.6	59.02	--
November 2023	1,996	19.3	58.63	--
December 2023	1,663	71.0	62.33	--
January 2024	1,946	65.2	69.51	--
February 2024	2,016	13.1	51.03	--
March 2024	1,011	10.5	46.14	--
April 2024	1,476	93.4	66.61	--
May 2024	1,683	32.9	53.18	--
June 2024	1,907	66.4	64.06	--
Annual 2023-24	1,815	594.0	732.30	--
% of total discharge	--	--	100.0%	--

2023-24 monthly flow data was submitted directly to the EPA.

25.3 Bypass events

There were no bypass events associated with the STP during the reporting period.

25.4 Discharge compliance with permit limits

Table 25-C: Discharge compliance with permit limits

Parameter	Ammonia	BOD5	Chlorine	Nitrogen	Oil and grease	pH	Phosphorous	E coli	Total suspended solids
Permit/EPN limit	mg/L	mg/L	mg/L	mg/L	mg/L	Units	mg/L	MPN/100mL	mg/L
Maximum	20.0	50	--	40.0	10.0	10.0	8.0	1500	100.0
90th percentile	5.0	30	--	25.0	--	--	6.0	750	--
50th percentile	3.0	15	--	15.0	5.0	--	4.0	200	40.0
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	--	12	12	12	12	12	12
Number analysed	12	12	--	12	12	12	12	12	12
Statistical summary									
Maximum	1.6	62	--	12.0	2.4	9.6	5.0	1966	111.0
90th percentile	1.3	53	--	10.5	1.5	9.6	4.9	763	104.7
50th percentile	0.3	19	--	5.2	1.0	9.0	4.0	178	43.0
Minimum	0.1	5	--	2.6	1.0	8.1	2.6	51	9.3
EPN limit compliance									
% compliance with maximum	100%	83%	--	100%	100%	--	100%	92%	83%
% compliance with 90th percentile	100%	67%	--	100%	--	--	100%	83%	--
% compliance with 50th percentile	100%	42%	--	100%	100%	--	58%	58%	50%
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Table 25-D: Mass loads to the environment

Parameter	EPN limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	4625.6
Phosphorous (kg)	--	Annual	2652.4
Method	Flow weighted/Composite method		

Table 25-E: Performance Analysis (Discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
BOD	15/04/2024 19/06/2024	Algae is believed to be the primary reason for elevated BOD, TSS and pH. Algae is a source of oxygen and is fundamental to lagoon treatment. Most of the non-compliant results were in warmer months when algal blooms occur.	No specific actions.
E. coli	21/03/2024	Lagoon based disinfection likely impacted by high TSS reducing UV penetration and high sludge inventory decreasing HRT. HRT further reduced by corresponding wet weather event.	No specific actions
TSS	21/03/2024 15/04/2024	Combination of algae and sludge carry-over	No specific actions.

No other parameters had exceedances in the reporting period.

25.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

25.6 Ambient monitoring program

Table 25-F: Program details

Program	NA – no requirement for ambient monitoring in the reporting period.
Status	NA
Update	NA
Comments	NA

25.7 Groundwater monitoring

Site status: Green - (2022-23 report).

George Town groundwater monitoring network consists of eight monitoring bores, ID numbers CTGW1-8 effectively covering the vicinity of Lagoons 1 and 2. Bore ID CTGW2 is considered upgradient and a background bore. Annual sampling was completed at all bores in June 2023.

The 2023-24 report, complete with hydrogeological review will be available in October 2024. Any actions required to address identified potential issues will be determined following the review. The 2022-23 groundwater motoring event report continued to record exceedances of total phosphorous concentrations above adopted guideline criterion across several bores.

Annual sampling at the extended analytical suite is scheduled to continue at all monitoring bores during the 2024-25 groundwater monitoring program.

25.8 Inflow and infiltration (I&I)

The latest revision to the TasWater Inflow and Infiltration Management Plan includes details of the actions undertaken statewide to address I&I issues. Update to the actions completed will be provided in the next revision due September 2024.

A Multi Criteria Assessment was undertaken by TasWater in 2024 to prioritise I&I investigation and works state-wide. This catchment was ranked 88 out of 108 in priority.

25.9 Sludge and biosolids

The latest revision to the Sewage Sludge Management Plan (SSMP) includes full details of the actions undertaken during the reporting period, the most recent sludge profiling results, and upcoming annual desludging program.

This STP was fully compliant with the 2023-24 SSMP.

Table 25-G: Desludging status and comments

Desludging status	Comments
Low Priority	Desludging is outside of the current prioritization planning schedule

Table 25-H: Stockpile comments

Stockpile onsite	Volume of stockpile (estimated m^3)
Yes	Residual **sludge in a storage area. Volume not yet estimated.**

25.10 Non-compliance with other permit requirements

Table 25-I: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF2 Effluent quality limits for discharge to water	Discharge compliance with permit limits	See section 25.4 Discharge compliance with permit limits and Performance Analysis

25.11 Complaints and incident reporting

No complaints or incidents reported during the FY2023-24 reporting period.

25.12 Any other relevant information

For further information on George Town STP please contact TasWater on 13 6992

www.taswater.com.au