

63. St Helens STP

63.1 Activity and report details

Activity name	St Helens STP		
Activity address	Georges Bay, Esplanade Rd, St Helens		
Permit number	Licence to Operate - 7199	Date of issue	16/03/2006
EPN	10225/1	Date of issue	22/05/2020
Treatment level	Tertiary Treatment		
Authorised dry weather flows	1500 (650 ADF) kL/day		
Key influent source	Residential/Industrial		
Contact person	Kate Westgate		
Report author	Luisa Romero (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2025		

Figure 63-1: St Helens Sewage Treatment Plant



63.2 Monitoring and compliance summary

63.2.1 Flow data

Table 63-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Georges Bay	No reuse scheme
Coordinates	E 605380 N 5424805	E 606680 N 5424195	NA
Method of measurement	In line meter	In line meter	NA
Date of last calibration/validation (if applicable).	13/12/2024	29/04/2025	NA

Table 63-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 92120	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2024	772	67.6	23.17	--
August 2024	708	63.2	20.64	--
September 2024	866	55.8	25.30	--
October 2024	595	39.2	18.67	--
November 2024	623	81.2	17.21	--
December 2024	984	111.8	30.57	--
January 2025	656	34	19.78	--
February 2025	599	30.2	15.28	--
March 2025	571	31.4	16.73	--
April 2025	532	42.4	15.94	--
May 2025	487	22	15.15	--
June 2025	668	86.8	20.97	--
Annual 2024-25	672	665.6	239.39	0.00
% of total discharge	--	--	100.0%	0.0%

2024-25 monthly flow data was submitted directly to the EPA.

63.3 Bypass events

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

63.4 Discharge compliance with permit limits

Table 63–C: Compliance summary

	Ammonia as N	BOD5	Chlorine	Nitrogen	Oil and grease	pH	Phosphorus	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	1.0	10	--	--	5	8.5	--	10	10
90th Percentile	0.8	5	--	8	--	--	1.0	--	5
50th Percentile	0.7	--	--	5	--	--	0.5	--	4
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	0.5	5.0	0.0	2.1	1.0	8.4	0.5	1.0	4.0
90th percentile	0.4	5.0	0.0	1.9	1.0	7.8	0.3	1.0	4.0
50th percentile	0.2	5.0	0.0	1.4	1.0	7.2	0.1	1.0	4.0
Minimum	0.1	5.0	0.0	1.0	1.0	5.7	0.1	1.0	4.0
EPN Limit Compliance									
% compliance with Maximum	100%	100%	--	--	100%	100%	--	100%	100%
% compliance with 90th percentile	100%	100%	--	100%	--	--	100%	--	100%
% compliance with 50th percentile	100%	--	--	100%	--	--	100%	--	100%
% compliance with pH range	--	--	--	--	--	83%	--	--	--

Minimum detection limit for BOD is 5 mg O₂/L.

Table 63-D: Mass loads to the environment

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	1186	Annual	361.5
Phosphorous (kg)	118	Annual	45.2
Method	Time weighted/grab sample method		

Table 63-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
pH	18/02/2025 18/03/2025	Excess alum (acidic) dosing causing a suppression of pH Malfunction of soda ash dosing, creating insufficient alkalinity and a loss of pH	Both issues were corrected when found (decreasing the alum dose/ reinstating the soda ash).

No other parameters have had exceedances in the FY period.

63.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

63.6 Ambient monitoring program

Table 63-F: Program details

Program	St Helens AMP
Status	Routine triennial water quality and biological monitoring conducted twice per year as required by the EPN.
Update	Monitoring completed for Spring 2024 and Autumn 2025.
Comments	<p>An ambient monitoring report for the St Helens 2024-2025 surveys has been submitted separately to this AER. Notable findings of the study include:</p> <ul style="list-style-type: none"> Overall, ambient water quality and biological monitoring has determined that the St Helens STP effluent discharge shows minimal impact to Protected Environmental Values (PEVs) which is consistent with the findings of prior ambient monitoring (Marine Solutions 2022).

63.7 Groundwater monitoring

Site status: Red

St Helens STP groundwater monitoring network consists of eight bores, ID numbers SHGW1-8 providing coverage to the west, south-west, east and south-east of the STP Lagoons and are considered slightly downgradient between STP and surrounding coastal and estuarine receiving water bodies.

Bi-annual sampling at the extended analytical suite of the was completed across the network in November 2024 and May 2025 as scheduled.

The 2024-25 groundwater monitoring event continued to provide evidence that the STP is highly likely impacting groundwater quality with concentrations of key analytes showing increasing trends and exceeding adopted assessment criteria at one or more bores across the monitoring network.

Bi-annual sampling at the extended analytical suite is scheduled to continue across the network in the 2025-26 groundwater monitoring program.

63.8 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.

A Multi Criteria Assessment was undertaken by TasWater in 2024 to prioritise I&I investigation and works state-wide. This catchment was ranked 24 out of 108 in priority.

Works this FY:

- CCTV of 4,900m sewer mains

- Jason Street and Esplanade SPS upgrades
- Rising main replacements

63.9 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 deemed compliant with the 2024–25 SSMP.

Biosolids are removed regularly from site, no stockpiling occurs.

Elevated PFOS results have been observed since PFAS testing commenced on the biosolids from this STP in August 2024. As a result, TasWater will be diverting biosolids from this site to Dulverton Landfill from August 2025. An investigation into the source of this PFOS contamination is currently underway. A mitigation plan will be developed and implemented following this investigation.

Stabilisation is not a requirement for biosolids disposed to landfill, however TasWater will continue to progress additional testing to verify the treatment process meets the requirements of Grade B.

Table 63–G: Biosolids sludge classification

Parameter	Number of samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant classification
Arsenic	12	7.4	4.5	3.1	6.9	A
Cadmium	12	0.8	0.6	0.4	0.9	A
Chromium	12	41.9	18.2	9.8	35.4	A
Copper	12	255.0	200.8	152.0	260.6	B
Lead	12	16.9	11.4	7.6	16.7	A
Mercury	12	0.6	0.4	0.1	0.6	A
Nickel	12	20.2	15.3	11.0	20.8	A
Zinc	12	559.0	441.7	283.0	586.5	B

Table 63–H: Volume and disposal destination

Quantity (DST)	Average solids content (%)	Stabilisation method	Stabilisation grade	Contamination grade	Biosolids classification	End use destination
37.3	12.8	Aerobic digestion	B	*B	2	Lynd Farm

*Elevated PFOS results above NEMP 3.0 restricted biosolids use limits have detected. TasWater will be diverting biosolids from this site to Dulverton Landfill from August 2025.

Table 63-I: Desludging comments

Desludging status	Comments
Low Priority	St Helens STP 'flow equalisation' lagoons 1&2 are not part of the BAU plant process. The lagoons are utilised to buffer stormwater inflows during heavy rainfall events.

63.10 Non-compliance with other permit requirements

Table 63-J: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF3 Effluent quality limits for discharge	Effluent discharged to Georges Bay must comply with the effluent quality limits	See table 63E

63.11 Complaints and incident reporting

No complaints reported during the FY2024-25 reporting period.

63.12 Any other relevant information

Table 63-K: Projects or significant operational events that occurred in FY 2024-25:

Project or significant operational event	Progress
East Coast Sewerage Regional Master Plan	The East Coast Sewerage Regional Master Plan has been completed and includes the short term and long-term considerations for the St Helens STP.

For further information on the St Helens STP please contact TasWater on 13 6992

www.taswater.com.au