

61.Somerset STP

61.1 Activity and report details

Activity name	Somerset		
Activity address	Bass Highway, Somerset		
Permit number	Licence to Operate - 3301	Date of issue	8/08/1988
EPN	9186/1	Date of issue	21/07/2015
Treatment level	Secondary Treatment		
Authorised dry weather flows	1200 kL/day		
Key influent source	Residential/Industrial		
Contact person	Kate Westgate (Manager Environmental Performance)		
Report author	Jake Crisp (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2024		

Figure 61-1: Somerset Sewage Treatment Plant



61.2 Monitoring and compliance summary

61.2.1 Flow data

Table 61-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Plant Influent	Bass Strait	No reuse scheme
Coordinates	E 399599 N 5457534	E 399709 N 5457768	NA
Method of measurement	In line meter	Estimation based on influent	NA
Date of last calibration/validation (if applicable).	1/08/2023	NA – to be installed	NA

Table 61-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 91355	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2023	146*	108.4	24.07*	--
August 2023	131*	76.6	24.07*	--
September 2023	107*	40.2	24.07*	--
October 2023	90*	35.4	24.07*	--
November 2023	83*	38.4	24.07*	--
December 2023	92*	89.6	24.07*	--
January 2024	91*	80.8	24.07*	--
February 2024	76*	6.2	24.07*	--
March 2024	461*	16.2	14.29*	--
April 2024	779	53.6	23.38	--
May 2024	742	40.0	22.99	--
June 2024	861	75.8	25.83	--
Annual 2023–24	305	661.2	279.00	--
% of total discharge	--	--	100.0%	--

* Influent flow meter transmitter replaced in March 2024, numbers prior to this date are underestimated. Effluent volumes for July 2023 to February 2024 are estimated based on the average flow between April 2024 and June 2024.

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

61.3 Bypass events

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

61.4 Discharge compliance with permit limits

Table 61-C: Compliance summary

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	11.0	80	--	19.0	3.0	8.5	6.0	1000	60.0
90th percentile	--	--	--	--	--	--	--	--	--
50th percentile	--	--	--	--	--	--	--	--	--
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	20.7	64	--	25.4	5.1	7.3	10.8	24196	22.2
90th percentile	7.4	38	--	17.9	4.3	7.1	10.2	24196	14.2
50th percentile	3.1	6	--	9.6	1.0	6.9	7.0	24196	4.0
Minimum	0.1	5	--	3.6	1.0	6.7	1.0	3076	4.0
EPN limit compliance									
% compliance with maximum	92%	100%	--	92%	83%	--	25%	0%	100%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Table 61-D: Mass loads to the environment

Parameter	EPN limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	3070.8
Phosphorous (kg)	--	Annual	1956.8
Method	Time weighted/grab sample method		

Table 61-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
E. coli	5/07/2023	30/01/2024	Somerset STP does not have disinfection nor phosphorus removal processes, which results in regular non-compliance with the E. coli and Phosphorus limits.
	15/08/2023	6/02/2024	
	21/09/2023	7/03/2024	
	12/10/2023	17/04/2024	
	2/11/2023	23/05/2024	
	6/12/2023	20/06/2024	
Phosphorus	12/10/2023	7/03/2024	
	2/11/2023	17/04/2024	
	6/12/2023	23/05/2024	
	30/01/2024	20/06/2024	
	6/02/2024		
Ammonia	15/08/2023	There were no known process issues attributable to this isolated non-compliance.	
Nitrogen	15/08/2023		
Oil and Grease	15/08/2023 20/06/2024	The reason for this isolated exceedance is not fully understood. May be attributed to tradewaste customers in the catchment.	

No other parameters had exceedances in the reporting period.

61.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

61.6 Ambient monitoring program

Table 61-F: Program details

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

61.7 Groundwater monitoring

No groundwater monitoring program associated with the STP.

61.8 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 66 out of 108 in priority.

61.9 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.

There are no sludge/biosolids dewatering facilities at this site, with sludge transferred via liquid sludge transport to the Wynyard STP for additional treatment. Sludge volume produced for this site is captured as part of the production from the Wynyard STP. The total volume of sludge transferred for the reporting period was 1232kL.

No stockpiling occurs at this site.

61.10 Non-compliance with other permit requirements

Table 61-G: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
Effluent quality limits for discharge to water	Discharge compliance with permit limits	See section 61.4 Discharge compliance with permit limits and Performance Analysis
Discharge Management Plan	Discharge Management Plan overdue.	TasWater acknowledges the non-compliance associated with the DMP condition. We are working towards the intent of the EPN condition to prioritise discharge risk reduction projects in line with our EPA endorsed Wastewater Risk Management Plan and Price and Service Plan process.

61.11 Complaints and incident reporting

There were no complaints received during the FY2023-24 reporting period.

Table 61-H: Incident Reporting

Date	Category	Details	Mitigation actions
28/09/2023	STP	Sludge pumps were left running, resulting in black sludge mixing in with the RAS tracks/supernatant return.	Corrective actions included: <ul style="list-style-type: none"> • Ceased decanting to outfall • Setting plant to "settle" mode to minimise aeration.

61.12 Any other relevant information

Table 61-I: Projects or significant operational events that occurred in FY 2023-24

Project or significant operational event	Progress
Wynyard and Somerset Rationalisation Strategy	The development of a Strategic Options Report investigating the current sewerage system configurations for Wynyard and Somerset is currently in progress.

For further information on Somerset STP please contact TasWater on 13 6992

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