

59 Sisters Beach STP

59.1 Activity and report details

Activity name	Sisters Beach STP		
Activity address	Honeysuckle Avenue, Sisters Beach		
Permit number	7065	Date of issue	Unknown
EPN	7072/1	Date of issue	23 December 2004
Treatment level	Tertiary Treatment		
Authorised Dry Weather Flows	585 kL/day		
Key Influent Source	Residential		
Contact person	Kate Westgate		
Report author	George Fitzgibbon		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2023		

Figure 59-1: Sisters Beach Sewage Treatment Plant



59.2 Monitoring and compliance summary

59.2.1 Flow data

Table 59-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location Name	Plant Inlet	Bass Strait	No reuse scheme
Coordinates	E 379296 N 5469355	E 379142 N 5469887	NA
Method of Measurement	In line meter	In line meter	NA
Date of last Calibration/Validation (if applicable).	4/07/2022	4/07/2022	NA

Table 59-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 91364	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2022	82	53.1	3.36	--
August 2022	82	177.9	4.69	--
September 2022	89	91.5	3.86	--
October 2022	123	158.0	4.78	--
November 2022	102	94.8	4.44	--
December 2022	84	22.6	3.52	--
January 2023	82	27.4	3.65	--
February 2023	65	37.0	3.29	--
March 2023	62	70.6	2.90	--
April 2023	71	47.6	3.24	--
May 2023	64	85.6	2.84	--
June 2023	115	194.1	4.07	--
Annual 2022-23	85	1060.2	44.63	--
% of Total Discharge	--	--	100.0%	--

2022-23 monthly flow data was submitted directly to the EPA.

59.2.2 Bypass events

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

59.3 Discharge compliance with permit limits

Table 59-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	5	20	--	15	5	8.5	5	750	30
90th percentile	2	15	--	10	2	--	3	500	20
50th Percentile	1	10	--	5	1	--	1	200	10
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	0	12	12	12	12	12	12
Number analysed	12	12	12	12	12	13	12	12	12
Statistical summary									
Max	32.4	31	5.10	45.6	2.5	7.5	7.1	575	40.0
90th percentile	26.8	8	3.49	31.5	1.0	7.3	6.5	90	32.4
50th percentile	0.5	5	2.55	4.4	1.0	6.9	4.3	10	4.8
Min	0.1	5	0.76	2.2	1.0	6.5	2.2	10	4.0
EPN Limit Compliance									
% compliance with Maximum	75%	92%	--	83%	100%	--	67%	100%	83%
% compliance with 90th percentile	67%	92%	--	75%	92%	--	25%	92%	83%
% compliance with 50th percentile	58%	92%	--	58%	92%	--	0%	92%	75%
% compliance with pH range	--	--	--	--	--	92%	--	--	--

Table 59-D: Mass loads to the environment

Parameter	EPN Limit	Frequency	2022-23 result
Nitrogen (kg)	1708	Annual	455.5
Phosphorous (kg)	470	Annual	192.3
Method	Time weighted/Grab sample method		

Table 59-E: Performance Analysis (Discharge to environment)

Effluent Compliance Parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
Phosphorus	8/12/2022 19/01/2023	The sodium aluminate dosing system has a history of failures due its poor condition and design limitations.	<p>No improvement actions this FY</p> <p>A project is currently in development to upgrade the chemical dosing units which will result in improved dosing reliability and monitoring.</p> <p>The project will also upgrade the site monitoring and control. This will improve alarming and allow quicker operations response for process malfunctions.</p>
	18/04/2023 30/05/2023		
	12-month 90 th percentile limit exceeded		
	12-month 50 th percentile limit exceeded		
Ammonia	19/01/2023 2/02/2023 16/03/2023	Non-compliances is due to a lack of DO control and increased load	No specific action
	12 months 90 th percentile limit exceeded		
	12-month 50 th percentile limit exceeded		
Nitrogen	19/01/2023 2/02/2023		

Effluent Compliance Parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
	12-month 90 th percentile limit exceeded		
BOD	19/01/2023	High BOD in this instance can be attributed to a rain event.	No specific actions
TSS	30/05/2023 8/06/2023	High suspended solids in this period likely due to solids carry over from the SBRs.	No specific actions
	12-month 90 th percentile limit exceeded		

No other parameters had exceedances in the reporting period.

59.4 Reuse Annual Reporting

No Recycled Water Scheme associated with this STP.

59.5 Ambient monitoring program

Table 59-F: Program details

Program	Sisters Beach AMP
Status	Ambient water quality and biological monitoring completed during the reporting period.
Update	Ambient water quality and biological monitoring was undertaken through the reporting period in accordance with the Ambient Monitoring Plan (AMP). This work included a plume dilution study.
Comments	An Ambient Monitoring Report covering the ambient water quality and biological monitoring undertaken in the Bass Strait receiving environment during the reporting period is currently in preparation and will be provided later in 2023.

59.6 Groundwater monitoring

No groundwater monitoring program associated with the STP.

59.7 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 2022 to prioritise I&I investigation and works state-wide. This catchment was ranked 65 out of 79 in priority.

59.8 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 2022-23 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.

No stockpiling occurs at this site.

59.9 Non-compliance with other permit requirements

Table 59-G: EPN non-compliances

EPN Condition	Description of non-conformance	Future Actions to be taken
14 Operational Procedures and Maintenance Manual	No contemporary Operational Procedures Manual	New SharePoint based solution for OPMs currently being developed. First version to be implemented in FY24.
40 Effluent quality limits for discharge to water	Discharge compliance with permit limits	See section 59.3 Discharge compliance with permit limits and Performance Analysis

59.10 Complaints and incident reporting

There were complaints reported for the reporting period.

Table 59-H: Incident Reporting

Date	Category	Details	Mitigation Actions
25/05/2023	Decant basin repair and bypass spill	Repairs to decant basin due to significant cracking. Decant basin was bypassed to facilitate repairs, coinciding with the first stage of the initial stage of a PDG project – which was to repair the decant basin cracking. During the bypassing of the decant basin, a spill of clean effluent without solids occurred (about 1000 – 2000 litres).	Operators attended site, no visible impact to the environment. No cleanup required as a result.

59.11 Any other relevant information

For further information on Sisters Beach STP please contact TasWater on 13 6992

www.taswater.com.au