

## 42. Port Sorell STP

### 42.1 Activity and report details

Activity name	Port Sorell STP		
Activity address	Larooma Rd, Hawley Beach		
Permit number	Licence to Operate - 3661	Date of issue	30/11/1988
EPN	10200/1	Date of issue	26/11/2020
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	961 kL/day		
Key Influent Source	Residential/Industrial No major trade waste or tankered waste sources		
Contact person	Kate Westgate (Manager Environmental Performance)		
Report author	Jake Crisp (Environmental Scientist)		
Contact details	Environment@taswater.com.au		
Date of submission	30 September 2025		

**Figure O-1: Port Sorell STP**



## 42.2 Monitoring and compliance summary

### 42.2.1 Flow data

**Table O-A: Flow monitoring summary**

	Influent	Effluent	Reuse
Location name	Inlet	Bass Strait	No reuse scheme
Coordinates	E 461330 N 5446691	E 461467 N 5447274	NA
Method of measurement	In line meter	Estimate based on influent	NA
Date of last calibration/validation (if applicable).	23/10/2024	NA	NA

**Table O-B: Annual flow and rainfall data**

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 91126	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2024	1,243	104.7	38.54	--
August 2024	1,393	139.7	43.20	--
September 2024	1,652	86.8	49.55	--
October 2024	1,229	86	38.10	--
November 2024	1,221	89.1	36.63	--
December 2024	1,531	73.9	47.45	--
January 2025	1,168	15.6	36.22	--
February 2025	1,007	6.2	28.19	--
March 2025	970	17.1	30.06	--
April 2025	954	30	28.63	--
May 2025	915	40.8	28.36	--
June 2025	1,010	58.5	30.29	--
Annual 2024-25	1,192	748.4	435.21	0.00
% of Total Discharge	--	--	100.0%	0.0%

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

### 42.3 Bypass events

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

## 42.4 Discharge compliance with permit limits

**Table O-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	25	40	--	40	10	8.5	8	1000	60
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	34.4	94.0	0.0	47.8	2.2	8.7	8.0	24196.0	147.0
90th percentile	29.4	80.3	0.0	44.0	1.9	8.7	7.2	23509.3	98.4
50th percentile	20.5	33.0	0.0	27.5	1.2	8.3	4.9	2111.5	39.5
Minimum	8.5	6.0	0.0	15.7	1.0	7.5	2.8	10.0	4.0
EPN Limit Compliance									
% compliance with Maximum	83%	67%	--	83%	100%	75%	100%	33%	75%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	75%	--	--	--

\* Note that chlorine is not used at this STP.

**Table O-D: Mass loads to the environment**

Mass Loads	EPN Limit	Frequency	2024-25 result
Nitrogen (kg)	--	Annual	13040.3
Phosphorous (kg)	--	Annual	2186.3
Method	Time weighted/Grab sample method		

**Table O-E: Performance analysis (discharge to environment)**

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
E. coli	17/07/2024 18/09/2024 20/11/2024 22/01/2025	19/02/2025 16/04/2025 21/05/2025	<p>The plant relies on natural light and the polishing lagoon for disinfection, as it does not have UV or chlorine systems. The overloaded polishing lagoon may also contribute to elevated E. coli levels.</p> <p>Polishing lagoon is currently being desludged (refer to Section 42.9 for further detail).</p> <p>TasWater is developing a strategic business case for Pardoe Sewerage Improvement Strategy (PARSIP) which involves options assessment for Port Sorell STP. Rationalisation of the plant to Pardoe STP and a major plant upgrade with discharge to reuse or environment are the options considered.</p>
BOD	17/07/2024 18/09/2024 21/05/2025	BOD, TSS, Ammonia and Nitrogen exceedances are likely also attributed to the currently overloaded polishing lagoon.	<p>The capital works enhanced the plant's control performance and improved the monitoring of key control parameters.</p> <p>Polishing lagoon is currently being desludged (refer to Section 42.9 for further detail).</p>
Ammonia	22/01/2025 16/04/2025		
Nitrogen	22/01/2025 16/04/2025		
pH	17/07/2024 21/08/2024 21/05/2025	There is no pH correction within the catchment for the Port Sorell STP. Non-compliance is likely due to algae blooms within the polishing lagoon.	No specific actions.

No other parameters had exceedances in the reporting period.

## 42.5 Reuse Annual Reporting

No Recycled Water Scheme associated with this STP.

## 42.6 Ambient monitoring program

**Table O-F: Program details**

Program	Port Sorell STP Ambient Monitoring Plan (AMP).
Status	Annual ambient water quality during the recreational period and biennial seasonal biological monitoring within the Bass Strait/Rubicon River Estuary receiving environment
Update	Ambient water quality monitoring undertaken from November 2024 through to April 2025 during the reporting period.  Biennial seasonal (spring and autumn) biological monitoring (intertidal and benthic habitat surveys, sediment and benthic infauna assessments) not required during the reporting period.
Comments	<p>A six-month ambient monitoring program was undertaken from November 2024 to April 2025 to understand the risks associated with the STP effluent discharges into the Bass Strait/Rubicon Estuary receiving environment. An Ambient Monitoring Report (AMR) detailing the results of ambient water quality monitoring has been provided to the EPA. The summarised findings of the AMR were:</p> <ul style="list-style-type: none"> <li>• Effluent discharges from the Port Sorell STP outfall had minimal impact on in situ field measured parameters (salinity, dissolved oxygen, temperature, pH and turbidity).</li> <li>• The toxicant ammonia was occasionally elevated at the outfall site above the ANZG (2018) toxicant default guideline values (tDGV) but rapidly decreased below the tDGV within 50m of the site on all other occasions.</li> <li>• Concentrations of nutrients ammonia, nitrogen and phosphorus species were often elevated at the outfall. However, there were also occasions where total phosphorus concentrations at reference sites exceeded concentrations at the outfall, suggesting that both broader environmental conditions and effluent discharge may contribute to the observed nutrient patterns.</li> <li>• Pathogen indicator organisms were elevated at the STP outfall site and exceeded the EPA low risk low risk guideline values (GVs) for waters with current or potential recreational use for <i>E. coli</i> on four out of six sampling occasions and for enterococci on five out of six sampling occasions in the receiving environment. Concentrations of <i>E. coli</i> occasionally exceeded low risk recreational GV's up to 200 m from the outfall. Enterococci concentrations were elevated above low risk recreational GV at the outfall on two sampling occasions.</li> <li>• Compared to the 2023–24 ambient monitoring, pathogen concentrations in the receiving environment have slightly decreased, particularly at the outfall and 50 m northwest. However, elevated levels persist at the outfall, suggesting a continued risk to recreational water quality.</li> </ul> <p>In summary, the Port Sorell STP effluent discharge is likely impacting the recreational and aesthetic PEVs of the area. In particular, the consistently elevated <i>E. coli</i> and enterococci concentrations pose a potential public health risk to users of the nearby beach, located approximately 100 m from the outfall. These impacts primarily relate to recreational and aesthetic water quality and potentially affect activities such as swimming, boating, kayaking and fishing.</p>

## 42.7 Groundwater monitoring

Site status: Amber

Port Sorell groundwater monitoring network consists of four groundwater monitoring bores, (ID numbers PSGW1–4) with bores situated around the southeast, eastern and northeastern perimeter of the STP lagoon.

Bi-annual sampling at the extended analytical suite was completed across the network during the 2024–25 groundwater monitoring program as scheduled. The annual sampling of the STP was not completed.

The 2024–25 groundwater monitoring event analytical results show no exceedance of adopted water quality guideline criteria (except chloride at one bore) and either stable or no trend for all key nutrients across the network. Biological indicators were detected above the laboratory LOR at one bore.

Bi-annual sampling at the extended analytical suite is scheduled to continue at the four monitoring bores during the 2025–26 groundwater monitoring program.

#### 42.8 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 27 out of 108 in priority.

#### 42.9 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 assessed as compliant with the 2024–25 SSMP.

Sludge at this STP is primarily captured within the two SBRs, with sludge frequently transferred via liquid sludge transport to Pardoe and Ulverstone STPs. The total volume of sludge removed in reporting period was 7366kL.

Some of the sludge from this STP is also captured in the polishing lagoon, which will be periodically desludged as required. No stockpiling occurs at this site.

**Table 42-G: Liquid sludge transfers from Port Sorell STP**

Receiving STP	Volume (kL)
Pardoe STP	7316
Ulverstone STP	50
<b>TOTAL</b>	<b>7366</b>

**Table O-H: Desludging status and comments**

Desludging status	Comments
High Priority	Desludging of the polishing lagoon will be completed in FY2025–26 as per the current prioritisation planning schedule.

## 42.10 Non-compliance with other permit requirements

**Table O-I: EPN non-compliances**

EPN condition	Description of non-conformance	Future actions to be taken
EF2 – Effluent quality limits for discharge to Bass Strait	Discharge compliance with permit limits	See Section 42.4 for more details on effluent non-compliances. TasWater submitted an effluent improvement plan to the EPA detailing interim and long-term commitments to work towards addressing these non-compliances.
EF3 – Bacteriological and chlorine effluent quality limits		
EM1 – Effluent Management EM3 – 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.  Discharge management options to be confirmed following PARSIP assessment and decision on potential rationalisation.
M6 Installation of Automated Treated Effluent Composite Sampling Equipment	Automated treated effluent composite sampling equipment has not been installed.	Electrician attended site to establish the feasibility of electrical cabling at the determined location (outfall compliance sample point). Given PARSIP, TasWater will investigate and work with the EPA to determine feasibility of establishing electrical cabling for composite sampling equipment.
G6 Annual Environmental Review	Found to be non-compliant due to complaints received not reported.	All complaints detail to be included in AER 2024–2025 (see Section 42.11).

## 42.11 Complaints and incident reporting

**Table O-J: Complaint reporting**

Date	Category	Details	Mitigation actions
15/01/2025 07/02/2025	Odour	Reports of strong odour from STP.	Project to mitigate odour from the STP was completed in November 2023. Since then, the number of odour complaints have decreased significantly.  Desludging of the polishing lagoon has begun in June 2025 to further mitigate odour.

There were no incidents during the reporting period.

## 42.12 Any other relevant information

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

Project or significant operational event	Progress
Desludging of polishing lagoon	Desludging of the polishing lagoon commenced Q4 FY2024-25. Scheduled to be completed end of September 2025.
Aerdisc aerator project	Planning complete for the addition of two Aerdisc aerators into the polishing lagoon. The work is currently scheduled for January 2026.
Mersey Central Coast Sewerage Regional Master Plan	The Mersey Central Coast Sewerage Regional Master Plan has been completed and includes the short term and long term considerations for the Port Sorell STP. The long-term consideration for the STP is for decommissioning and transfer of flows to the Pardoe STP as part of the Pardoe Sewerage Improvement Plan (ParSIP).

For further information on the Port Sorell STP please contact TasWater on 13 6992

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