

38. Orford STP

38.1 Activity and report details

Activity name	Orford STP		
Activity address	Rheban Rd, Orford		
Permit number	Licence to Operate – 2840	Date of issue	11/07/1983
EPN	8949/1	Date of issue	17/03/2014
Treatment level	Secondary Treatment		
Authorised dry weather flows	473 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 2025		

Figure 38-1: Orford Sewage Treatment Plant



38.2 Monitoring and compliance summary

38.2.1 Flow data

Table 38-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Mercury Passage off Quarry Point	No reuse scheme
Coordinates	E 572846 N 5285940	E 5747357 N 5286646	NA
Method of measurement	In line meter	Estimate based on influent	NA
Date of last calibration/validation (if applicable)	05/09/2022	NA – to be installed	NA

Table 38-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 92028	Discharge to waters total effluent Volume (ML)	Discharge to reuse total effluent Volume (ML)
July 2024	270	67	8.37	--
August 2024	231	74.6	7.17	--
September 2024	207	25.9	6.20	--
October 2024	177	38.2	5.47	--
November 2024	194	54.8	5.82	--
December 2024	322	85.5	9.98	--
January 2025	248	25.2	7.68	--
February 2025	210	45.8	5.89	--
March 2025	140	16.8	4.35	--
April 2025	76	33.2	2.29	--
May 2025	51	18.6	1.58	--
June 2025	88	86.4	2.63	--
Annual 2024-25	185	572	67.43	0.00
% of total discharge	--	--	100.0%	0.0%

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

38.3 Bypass events

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

38.4 Discharge compliance with permit limits

Table 38-C: Compliance summary

Parameter	Ammonia	BOD ₅	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	25	30	--	40	10	8.5	10	1,000	40
90th percentile	--	--	--	--	--	--	--	--	--
50th percentile	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	--	12	12	12	12	12	12
Number analysed	13	13	--	13	13	13	13	13	13
Statistical summary									
Maximum	26.4	75.0	0.0	32.7	1.4	8.8	7.8	738.0	90.0
90th percentile	24.1	53.2	0.0	29.8	1.2	8.5	7.6	632.6	89.0
50th percentile	4.1	31.0	0.0	11.4	1.0	8.1	6.4	63.0	12.8
Minimum	0.1	5.0	0.0	8.8	1.0	7.6	4.9	10.0	4.0
EPN limit compliance									
% compliance with maximum	92%	46%	--	100%	100%	85%	100%	100%	69%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	85%	--	--	--

Table 38-D: Mass loads to the environment

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	--	Annual	1,245.6
Phosphorous (kg)	--	Annual	433.0
Method	Time weighted/grab sample method		

Table 38-E: Performance analysis (discharge to environment)

Effluent compliance parameter		Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
Ammonia		18/11/2024	Not designed for ammonia removal.	No specific actions undertaken.
BOD	12/12/2024 23/01/2025 17/02/2025	20/03/2025 7/04/2025	Algae is believed to be the primary reason for elevated pH, BOD, and suspended solids. 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.	
pH	12/12/2024 23/01/2025		Increased loading in the summer months from tourist populations compounds this issue.	
TSS	17/02/2025 20/03/2025 7/04/2025			

No other parameters have had exceedances in reporting period.

38.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

38.6 Ambient monitoring program

Table 38-F: Program details

Program	Orford STP Ambient Monitoring Program 2024-25
Status	Ambient water quality, sediment and biological monitoring completed. Water quality monitoring was undertaken for completeness, but it is not an EPA requirement.
Update	Monitoring events were undertaken in winter and summer. Monitoring is completed triennially.
Comments	<p>An ambient monitoring report for the Orford STP 2024-2025 surveys has been submitted separately to this AER. Notable findings of the study include:</p> <ul style="list-style-type: none"> Ammonia concentrations in the receiving environment remained well below the toxicant Default Guideline Value (tDGV) during both sampling events. During both sampling events, enterococci levels in the receiving environment were mostly low and within EPA recreational water guidelines. It is likely that the effluent is intermittently influencing concentrations of dissolved copper, iron and zinc in the receiving environment. However, the impacts were very localised and within background levels, suggesting ambient concentrations are also influenced by other sources. Results suggest benthic infauna community composition appears to be more strongly influenced by broadscale drivers (i.e., seasonal) rather than proximity to the outfall. Sediment contaminant concentrations remained consistent with previous assessments, with no exceedances of upper guideline values. <p>Overall, results indicate minimal environmental impact from the Orford STP discharge across the two sampling events. It is recommended that ambient monitoring continue triennially, with the next survey scheduled for FY 2027-28.</p>

38.7 Groundwater monitoring

No active groundwater monitoring program associated with the STP. TasWater investigated the installation of boreholes in 2015 following the approved Orford WWTP Groundwater Monitoring Plan (2014). The investigation drilling did not encounter groundwater at the maximum depth of 27 m, therefore, no groundwater monitoring bores were installed.

38.8 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. Works this period included defect rectification within the sewer network.

38.9 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 captured within the four treatment lagoons, which will be periodically desludged as required. No stockpiling occurs at this site.

Table 38-G: Desludging status and comments

Desludging status	Comments
Medium priority	Desludging of lagoon 1 will be required within the next 5-10 years.

38.10 Non-compliance with other permit requirements

Table 38-H: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF3 Effluent quality limits for discharge to water	Discharge compliance with permit limits.	See section 38.4 Discharge compliance with permit limits and Performance Analysis.
M2 Flow meters	No recent flow meter validations.	Scheduled for rectification and installation in program.

38.11 Complaints and incident reporting

No complaints or incidents were reported during the reporting period.

38.12 Any other relevant information

Table 38-J: Projects or significant operational events that occurred in FY 2024-25:

Project or significant operational event	Progress
<p>Sewage Pump Station (SPS) upgrades and reconfiguring the sewerage network into two discrete networks.</p> <p>SPS upgrades involve new emergency storage tanks, pumps, wet wells, and electrical switchboards to reduce the frequency and volume of sewage overflows and allow for a greater holding capacity of wet weather flows within the network.</p>	Project completed.

For further information on the Orford STP please contact TasWater on 13 6992

www.taswater.com.au