

45. Queenstown STP

45.1 Activity and report details

Activity name	Queenstown STP		
Activity address	Lynchford Railway Line, Queenstown		
Permit number	Licence to Operate - 2965	Date of issue	30/07/1984
EPN	9135/1	Date of issue	19/05/2015
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	1100 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 2025		

Figure 45-1 Queenstown STP



45.2 Monitoring and compliance summary

45.2.1 Flow data

Table 45-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Queen River	No reuse scheme
Coordinates	E 378876 N 5338113	E 378885 N 5337946	NA
Method of measurement	In line meter	Estimate based on inlet	NA
Date of last calibration/validation (if applicable).	18/02/2025	NA – to be installed	NA

Table 45-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 97091	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2024	1,934	151.2	59.96	--
August 2024	3,370	382.2	104.46	--
September 2024	4,370	469.6	131.09	--
October 2024	1,858	170.2	57.58	--
November 2024	1,470	134.8	44.10	--
December 2024	2,365	280.6	73.30	--
January 2025	955	40.2	29.62	--
February 2025	899	78.4	25.16	--
March 2025	1,022	96.6	31.70	--
April 2025	1,113	96.6	33.40	--
May 2025	1,852	215.2	57.40	--
June 2025	1,691	155	50.73	--
Annual 2024-25	1,914	2270.6	698.51	0.00
% of Total Discharge	--	--	100.0%	0.0%

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

45.3 Bypass events

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

45.4 Discharge compliance with permit limits

Table 45-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	15	20	--	20	10	8.5	3	--	45
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	13.8	89.0	0.0	22.7	31.1	7.3	4.8	24196.0	165.0
90th percentile	11.3	76.3	0.0	22.2	18.3	7.2	2.5	24196.0	109.8
50th percentile	6.2	30.0	0.0	10.5	2.8	7.0	1.5	24196.0	55.5
Minimum	0.8	5.0	0.0	4.4	1.7	6.3	0.6	1585.0	30.0
EPN Limit Compliance									
% compliance with Maximum	100%	25%	--	83%	83%	100%	92%	--	17%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	92%	--	--	--

Table 45-D: Mass loads to the environment

Mass Loads	EPN limit	Frequency	2024-25 result
Nitrogen (kg)	--	Annual	7085.1
Phosphorous (kg)	--	Annual	1038.6
Method	Time weighted/Grab sample method		

Table 45-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance			Reasons for non-compliance	Actions to improve performance
BOD	1/07/2024 5/11/2024 2/12/2024 6/01/2025	3/02/2025 3/03/2025 2/04/2025 5/05/2025 6/06/2025		The overloaded lagoon results in solids carryover, contributing to exceedances in both BOD and TSS. Ammonia released from sludge breakdown leads to elevated nitrogen concentrations and associated exceedances. Elevated organic loading and surface scum likely explain the two oil and grease non-compliances.	Desludging of lagoon scheduled for FY25-26 (refer to Table 45-G).
TSS	1/07/2024 2/10/2024 5/11/2024 2/12/2024	6/01/2025 3/02/2025 3/03/2025 2/04/2025	5/05/2025 2/06/2025		
Nitrogen (Total)	3/03/2025 5/05/2025				
Oil and Grease	2/04/2025 2/06/2025				

No other parameters had exceedances in the reporting period.

45.5 Reuse Annual Reporting

No Recycled Water Scheme associated with this STP.

45.6 Ambient monitoring program

Table 45-F: Program details

Program	No ambient monitoring program required.
Status	No ambient monitoring conducted during the reporting period
Update	No ambient monitoring conducted during the reporting period.
Comments	Not Applicable

45.7 Groundwater monitoring

Site Status: Red (2023–24)

The Queenstown STP groundwater monitoring network consists of two shallow bores, ID's QUGW1 and QUGW2, located along the eastern boundary of the STP.

Bi-annual sampling was completed in October 2024 and May 2025 at bore ID QUGW1 as scheduled. Bore ID QUGW2 was unable to be sampled due to repair and maintenance requirements access the bore. The surface waters of STP Lagoons 1 and 2 and the Queen River upstream of the STP was also sampled as scheduled. No sample was obtained from the Queen River downstream of the STP due to no safe access to the waterway.

The 2024–25 groundwater monitoring event report is due September 2025, with a review of the results to be provided by 31 December as planned.

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

45.8 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 46 out of 108 in priority.

45.9 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 polishing lagoon, which will be periodically desludged as required. No stockpiling occurred at this site.

Table 45-G: Desludging status and comments

Desludging status	Commentary
High Priority	Desludging of the polishing lagoon was scheduled to occur in 2024-25 but was not completed due to being unable to find a suitable disposal option. TasWater have now identified a potential temporary drying area for the sludge and are on track to complete the desludging works in FY2025-26.

45.10 Non-compliance with other permit requirements

Table 45-H: EPN non-compliance

EPN condition	Description of non-conformance	Future actions to be taken
EF2 Effluent quality limits for discharge to water	See section 45.4 Discharge compliance with permit limits and Performance Analysis.	See section 45.4 Discharge compliance with permit limits and Performance Analysis.
EM1, EM2 & EM3 Effluent Management, Reuse Feasibility Study and Discharge Management Plan	Reuse Feasibility Study and 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.

45.11 Complaints and incident reporting

No incidents occurred in the reporting period.

Table 45-I: Complaints reporting

Date	Category	Details	Mitigation actions
27/03/2025	Odour	Odour from the STP	There were no known process issues at the plant. No mitigation actions implemented.

45.12 Any other relevant information

Table 45-J Projects or significant operational events that occurred in FY24-25.

Project or significant operational event	Progress
West Coast Sewerage Master Plan	The West Coast Sewerage Regional Master Plan has been completed. and outlines both short- and long-term considerations for the Queenstown STP with the STP retained long-term to service the catchment.

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

www.taswater.com.au