49. Ridgley STP

49.1 Activity and report details

Activity name	Ridgley STP		
Activity address	Circular Road, East Ridgley		
Permit number	Licence to Operate - 3658	**Date of issue**	8/12/1980
EPN	9187/1	**Date of issue**	8/07/2015
Treatment level	Secondary Treatment		
Authorised dry weather flows	110 kL/day		
Key influent source	Residential		
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 49-1: Ridgley STP

49.2 Monitoring and compliance summary

49.2.1 Flow data

Table 49-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Pet River	No reuse scheme
Coordinates	E 402910 N 5444235	E 403082 N 5444237	NA
Method of measurement	Level sensor	Estimate based on influent	NA
Date of last calibration/validation (if applicable).	28/09/2023	NA – to be installed	NA

Table 49-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 91304	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2023	295	122.8	9.13	--
August 2023	298	102.6	9.23	--
September 2023	194	56.0	5.83	--
October 2023	148	47.0	4.59	--
November 2023	136	77.8	4.08	--
December 2023	163	93.4	5.05	--
January 2024	159	112.6	4.94	--
February 2024	120	9.2	3.48	--
March 2024	100	33.0	3.10	--
April 2024	105	63.6	3.15	--
May 2024	124	50.2	3.85	--
June 2024	155	95.0	4.66	--
Annual 2023-24	167	863.2	61.09	--
% of Total Discharge	--	--	100.0%	--

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

49.3 Bypass events

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

49.4 Discharge compliance with permit limits

Table 49-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	5.0	18	--	10.0	2.0	8.5	4.0	200	24.0
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									
Max	1.6	15	--	8.7	1.9	8.6	0.2	1211	49.0
90th percentile	1.5	10	--	6.8	1.2	7.6	0.2	879	20.7
50th percentile	0.2	5	--	4.0	1.0	6.8	0.1	31	9.1
Min	0.1	5	--	1.7	1.0	6.6	0.1	10	4.0
EPN Limit Compliance									
% compliance with Maximum	100%	100%	--	100%	100%	--	100%	83%	92%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	92%	--	--	--

Table 49-D: Mass loads to the environment

Parameter	EPN Limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	260.4
Phosphorous (kg)	--	Annual	7.9
Method	Time weighted/Grab sample method		

Table 49-E: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
E. coli	12/10/2023 7/03/2024	The reason for the 12/10/24 non-compliance is not fully understood. Other monitoring parameters were in acceptable ranges at the time of this event. The 7/03/24 non-compliance is likely attributed to high algae counts leading to a reduction in UV transmissivity or UV intensity.	No specific actions taken
pH	7/03/2024	Elevated levels of algae are considered the main contributor to increased pH. Through photosynthesis, algae absorb carbon dioxide and produce oxygen, which can influence pH levels in the effluent.	No specific actions taken
TSS	20/06/2024	There were no process upsets or wet weather at the time of this non-compliance. Therefore, the reason for this isolated non-compliance is not fully understood.	No specific actions taken

No other parameters had exceedances in the reporting period.

49.5 Reuse annual reporting

No Recycled Water Scheme associated with this STP.

49.6 Ambient monitoring program

Table 49-F: Program details

Program	Ridgley AMP
Status	Ambient water quality and biological monitoring not completed during the reporting period.
Update	Ambient water quality and biological monitoring to be conducted in FY2024/25.
Comments	Ambient water quality monitoring to be conducted in FY2024/25 on an ongoing annual (spring, summer x2 and autumn) basis. Biological monitoring (AUSRIVAS macroinvertebrates and algae) to be undertaken in FY2024/25 on an ongoing biennial, seasonal (spring and autumn) basis.

49.7 Groundwater monitoring

Site Status: Green

Ridgley groundwater monitoring network consist of two bores. Bore ID RGGW1 is located to the north-east whilst RCGGW2 located to the east of the STP ponds. One round (biannual) sampling was completed across the monitoring network in March 2024. The second (annual) sampling round was not completed. TasWater has put measures in place for the 2024-25 sampling program to address the scheduling and resourcing delays that impacted sampling program

The 2023-24 groundwater monitoring report recorded moistly stable trends and relatively low concentrations at this site. Total phosphorous levels increased across the network though levels continue to fluctuate within historical range. Data analysis indicates either no or decreasing trends across most analytes in the monitoring network with exception of total nitrogen at RGGW2. The Report recommends annual sampling at the standard analytical suite across the network.

Biannual sampling at the standard analytical suite is scheduled to continue at both bores during the 2024-25 groundwater monitoring program. Reducing the sampling frequency to annually will be addressed prior to 2025-26 groundwater monitoring program scheduling.

49.8 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 57 out of 108 in priority.

49.9 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.

Table 49-G: Stockpile comments

Stockpile onsite	Volume of stockpile (estimated m^3)
Yes (Geobags)	Geobags are utilised onsite to dewater sludge, then removed regularly when required.

49.10 Non-compliance with other permit requirements

Table 49-H: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
Q1 Regulatory limits	AWDF limit exceeded during reporting period.	No specific actions planned, Ridgley will be considered under the North West Master Plan.
EM1, EM2 and EM3 Effluent Management: Discharge Management Plan and Reuse Feasibility Study	Discharge Management Plan (DMP) and Reuse Feasibility Study (RFS) overdue.	TasWater acknowledges the non-compliance associated with the DMP & RFS 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.
EF2 Effluent quality limits for discharge to water	Discharge compliance with permit limits	See section 49.4 Discharge compliance with permit limits and Performance Analysis

49.11 Complaints and incident reporting

No complaints or incidents reported during the FY2023-24 reporting period.

49.12 Any other relevant information

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

www.taswater.com.au