

16 Cressy STP

16.1 Activity and report details

Activity name	Cressy STP		
Activity address	Old Stock Route, off Murfett Street, Cressy		
Permit number	Licence to Operate - 3577	Date of issue	22/11/1988
EPN	7264/1	Date of issue	27/07/2006
Treatment level	Secondary Treatment		
Authorised Dry Weather Flows	240 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 16--1: Cressy Sewage Treatment Plant



16.2 Monitoring and compliance summary

16.2.1 Flow data

Table 16-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location Name	Inlet	Back Creek	Cressy Reuse Scheme
Coordinates	E505959 N5385487	E506055 N5385672	E504790 N5386503
Method of Measurement	In line meter	Estimate based on influent	Estimate based on influent
Date of last Calibration/Validation (if applicable).	13/07/2022	NA	NA

Table 16-B: Annual flow and rainfall data

Month	Average Daily Influent Volume (kL/day)	Rainfall (mm/month) BOM Station ID 91021/91375*	Discharge to Waters Total Effluent Volume (ML)	Discharge to Reuse Total Effluent Volume (ML)
July 2022	471	27.5	0.00	14.96
August 2022	406	156.8	0.00	12.58
September 2022	232	55.6	0.00	6.96
October 2022	344	127.3	0.00	10.65
November 2022	296	61.2	0.00	8.87
December 2022	217	39.8	0.00	6.74
January 2023	157	17.6	0.00	4.88
February 2023	167	24.8	0.00	5.81
March 2023	192	63.2	0.00	5.94
April 2023	186	38.2	0.00	5.57
May 2023	149	16.8	0.00	4.62
June 2023	257	89.4	0.00	7.72
Annual 2022-23	257	718.2	0.00	95.30
% of Total Discharge	--	--	0.0%	100.0%

* Station 91021 used Jul-Dec; 91375 Jan-Jun.

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

16.2.2 Bypass events

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

16.3 Discharge compliance with permit limits

No parameters have had exceedances in the FY period as there was no discharge to environment.

16.4 Reuse Annual Reporting

The Cressy STP supplies treated effluent to the Cressy recycled water scheme (RWS) for irrigation purposes at the Fairbank property.

Table 16-C: Reuse Compliance Summary

Parameter	BOD5	pH	E coli
Permit/EPN limit	mg/L	Units	MPN/100ml
Maximum	50	9.0	10000
90th percentile	--	--	--
50th Percentile	--	--	1000
Minimum	--	5.5	--
Samples analysed			
Number required	12	12	12
Number analysed	12	12	12
Statistical summary			
Max	50	10.1	2613
90th percentile	29	9.0	1210
50th percentile	15	8.0	79
Min	5	7.3	10
Summary of results			
% compliance with Maximum	100%	--	100%
% compliance with 90th percentile	--	--	--
% compliance with 50th percentile	--	--	83%
% compliance with pH range	--	83%	--

Table 16-D: Performance analysis (Discharge to reuse)

Reuse Compliance Parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
pH	09/01/2023	Algae is believed to be the primary reason for elevated pH due to CO ₂ uptake during photosynthesis. The non-compliance result occurred in summer during a likely algal bloom. Algae is a source of oxygen and is fundamental to lagoon treatment.	No specific action planned

Note: Non-compliances only identified for the times STP has discharged to reuse

Annual soil sampling was completed at six sites (1A, 1B, 1C, 1D, 2AB and 2D) at the Fairbanks property in April 2023. Changes to the soil monitoring program included the resumption of sampling

at sites 1A and 1B. The annual compliance audit was completed in conjunction with the soil sampling. A summary of the findings of the two programs are provided in Table 16-E.

Table 16-E Annual recycled water scheme compliance audit and soil monitoring summary

Program	Compliance audit	Soil monitoring
Compliance status	Compliant	Sites 1A, 1B and 1C: salinity and sodicity indicators within recommended levels. Soil salinity decreased at site 2AB with sodicity increasing, site remains sodic and slightly saline. Site 2D remains slightly saline but soil sodicity decreased and now within recommended range. Site 1D soil salinity and sodicity increased and now considered excessive. Soil Phosphorous levels are elevated across the sites and considered high at site 1D and slightly elevated at site 1C and 2D. Elevated potassium levels recorded at site 1A, 1C, 2AB and 2D also recorded elevated potassium levels resulting in an elevated grass tetany risk (significant at site 1A) at these sites.
Comments	Landowner indicated that the recycled water storage dam can overflow in winter.	Elevated phosphorous and potassium levels are attributed to fertiliser application and not recycled water irrigation. Due to low irrigation rates in comparison to fertiliser application. Reduce potassium levels within the soil by halting potassium based fertiliser and corrective measures to address grass tetany implemented (e.g. application of lime appropriately managed stock) is recommended. All soils data including grass tetany risk is provided to the recycled water customers following the annual soil sampling and compliance audit

Groundwater Status: Green

Cressy RWS groundwater monitoring network consists of three groundwater monitoring bores (CRGW2, CRGW4 and CRGW5). Bore ID: CRGW5 is associated with the recycled water storage dam. Due to resource and timing constraints no sampling was completed during 2022-23 report period.

Biannual sampling is planned for the 2023-24 groundwater monitoring program.

16.5 Ambient monitoring program

Table 16-F: Program details

Program	Seasonal Discharge Program - Routine monitoring during discharge to water.
Status	No ambient monitoring conducted as no discharges occurred during the reporting period.
Update	No discharge occurred during reporting period.
Comments	No ambient monitoring conducted during the monitoring reporting period.

16.6 Groundwater monitoring

Site Status: Green – No sign of STP impact (2022 report)

Cressy groundwater monitoring network consists of one bore (ID: CRGW1) located to the north of the STP. Due to resource and timing constraints no sampling was completed during 2022-23 report period. Biannual sampling is planned for the 2023-24 groundwater monitoring program.

16.7 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 74 out of 79 in priority.

16.8 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.

Desludging was unable commence due to unfavourable wet ground conditions restricting access at the land spreading site. Desludging will be completed during FY2023-24 when conditions have improved. This STP was fully compliant with all other aspects of the 2022-23 SSMP.

No stockpiling occurs at this site.

Table 16-G: Desludging status and comments

Desludging Status	Comments
Low Priority	Desludging is outside of the current prioritization planning schedule.

16.9 Non-compliance with other permit requirements

Table 16-H: EPN non-compliances

EPN Condition	Description of non-conformance	Future Actions to be taken
38 Wastewater Re-use	Discharge compliance with reuse permit limit	See section 16.4 Reuse Annual Reporting and Performance Analysis
7 Operations Manual	No contemporary Operational Procedures Manual	New SharePoint based solution for OPMMs currently being developed. First version to be implemented in FY24.
12 Lagoon Operations	Lagoon 1 requires desludging and vegetation removal at southern end	Desludging scheduled for FY2022-23

16.10 Complaints and incident reporting

No complaints or incidents reported during the FY2022-23 reporting period.

16.11 Any other relevant information

Table 16I:

Project or significant operational event	Progress
Meander Valley Sewerage Strategy (MVSS)	Cressy is currently being investigated for potential future rationalisation within MVSS. A MVSS Strategic Business Case and Strategic Options Report will be completed in FY 2023-24.
Recycled water irrigator replacement	Completed

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

www.taswater.com.au