

24. Geeveston STP

24.1 Activity and report details

Activity name	Geeveston STP		
Activity address	Huon Highway, Geeveston		
Permit number	Licence to Operate – 3625	Date of issue	8/12/1992
EPN	8536/1	Date of issue	31/01/2013
Treatment level	Secondary Treatment		
Authorised dry weather flows	300 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 2024		

Figure 24-1: Geeveston Sewage Treatment Plant



24.2 Monitoring and compliance summary

24.2.1 Flow data

Table 24-A: Flow monitoring summary

	Influent	Effluent	Reuse
Location name	Inlet	Kermandie River	No reuse scheme
Coordinates	E 494803 N 5220964	E 494804 N 5221009	NA
Method of measurement	Level Sensor	Level Sensor	NA
Date of last calibration/validation (if applicable).	6/08/2023	6/08/2023	NA

Table 24-B: Annual flow and rainfall data

Month	Average daily influent volume (kL/day)	Rainfall (mm/month) BOM Station ID 94268	Discharge to waters total effluent volume (ML)	Discharge to reuse total effluent volume (ML)
July 2023	330	119.6	10.23	--
August 2023	530	56.0	12.68	--
September 2023	595	132.8	16.90	--
October 2023	527	126.8	12.86	--
November 2023	344	33.4	8.65	--
December 2023	393	35.8	6.95	--
January 2024	536	47.6	7.36	--
February 2024	406	22.2	6.55	--
March 2024	211	20.6	5.83	--
April 2024	194	27.8	5.28	--
May 2024	205	39.8	0.00	--
June 2024	257	77.6	7.55	--
Annual 2023-24	378	740.0	100.83	--
% of total discharge	--	--	100.0%	--

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

24.3 Bypass events

Table 24-C: Bypass events summary

Bypass ID:		GEEST01-ON			
Bypass description:		Inlet pump station overflow to outfall			
Treatment bypassed:		Secondary Treatment, Disinfection (Chlorine)			
Treatment level of impacted effluent:		Screened			
Flows exceeding:		19 L/s (Approximate)			
Discharge location:		Kermandie River: 494804.63E, 5221009.4N (GDA94)			
Start date / time	End date / time	Duration	Volume estimate	Cause	Response actions
14/08/23 04:28	16/08/22 01:32	45.1 h	2146 kL	Rainfall Event	No specific actions undertaken
22/08/23 06:21	22/08/22 09:21	3.0 h	112 kL	Rainfall Event	No specific actions undertaken
27/10/23 22:49	28/10/22 14:52	16.1 h	1081 kL	Rainfall Event	No specific actions undertaken
13/12/23 17:28	13/12/22 18:38	1.2 h	46 kL	Rainfall Event	No specific actions undertaken
26/02/24 03:37	26/02/23 03:47	0.2 h	1 kL	Rainfall Event	No specific actions undertaken

24.4 Discharge compliance with permit limits

Table 24–D: Discharge compliance with permit limits

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	18.5	15	1.0	24.0	10.0	8.5	5.5	200	25.0
90th percentile	--	--	--	--	--	--	--	--	--
50th percentile	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	6.5	--	--	--
Samples analysed									
Number required	12	12	12	12	12	12	12	12	12
Number analysed	12	12	12	12	12	12	12	12	12
Statistical summary									
Maximum	18.2	62	1.31	25.5	1.1	7.7	11.8	959	29.0
90th percentile	10.1	37	1.02	19.4	1.1	7.3	6.8	698	23.0
50th percentile	4.5	13	0.67	11.5	1.0	6.9	1.9	13	9.8
Minimum	0.5	5	0.43	9.3	1.0	6.7	0.5	10	4.0
EPN limit compliance									
% compliance with maximum	100%	58%	83%	92%	100%	--	75%	83%	92%
% compliance with 90th percentile	--	--	--	--	--	--	--	--	--
% compliance with 50th percentile	--	--	--	--	--	--	--	--	--
% compliance with pH range	--	--	--	--	--	100%	--	--	--

Table 24-E: Mass loads to the environment

Parameter	EPN limit	Frequency	2023-24 result
Nitrogen (kg)	--	Annual	1514.5
Phosphorous (kg)	--	Annual	261.4
Method	Flow weighted/Composite method		

Table 24-F: Performance analysis (discharge to environment)

Effluent compliance parameter	Date(s) of non-compliance	Reasons for non-compliance	Actions to improve performance
BOD	19/10/2023 23/11/2023 18/01/2024 22/02/2024 21/03/2024	Instances of elevated chlorine typically are a result of the limited automated chlorine control. The variability in effluent quality from the secondary treatment process is also believed to impact the consistency disinfection performance.	No specific actions this period. Outfall relocation will improve discharge impacts and post-commissioning monitoring will confirm upgrade requirements for the STP.
Chlorine	14/09/2023 24/06/2024	The process is not specifically designed to remove phosphorus.	
E. coli	19/10/2023 21/03/2024	The majority of Instances of elevated TSS and BOD occurred during wet weather events. High flows cause solids carry over from the solids separation leading to TSS and BOD exceedances	
Nitrogen	14/09/2023		
Phosphorus	14/09/2023 22/02/2024		
TSS	22/02/2024		

No other parameters had exceedances in the reporting period.

24.5 Reuse annual reporting

No recycled water scheme associated with this STP.

24.6 Ambient monitoring program

Table 24-G: Program details

Program	Not applicable
Status	No ambient monitoring undertaken during reporting period.
Update	Not applicable
Comments	Geeveston Outfall Relocation Project currently on hold while alternative outfall locations are assessed. A post new outfall commissioning ambient monitoring plan will be implemented upon project completion.

24.7 Groundwater monitoring

No groundwater monitoring bores associated with this STP.

24.8 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 32 out of 108 in priority (high). Actions in the period included:

- Smoke Testing and Manhole audit of the entire catchment
- CCTV of 2,200m sewer mains
- Rectification works

24.9 Sludge and biosolids

There are no sludge/biosolids dewatering facilities at this site, with sludge transferred via liquid sludge transport to Macquarie Point, Selfs Point and Prince of Wales Bay STPs. 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 deemed non-compliant with the 2023-24 SSMP due to missing details of production rate and clarity of end fate. These details will be included in the 2024-25 SSMP.

No stockpiling occurs at this site.

24.10 Non-compliance with other permit requirements

Table 24-H: EPN non-compliances

EPN condition	Description of non-conformance	Future actions to be taken
EF3 Effluent discharge limits to Kermadie River	Discharge compliance with permit limits	See section 24.4 Discharge compliance with permit limits and Performance Analysis.
EM4 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.
WM2 Sewage Sludge Management Plan	Missing Biosolids Management Plan detail	Ensure BMP details are included in 2024-25 SSMP

24.11 Complaints and incident reporting

No complaints or incidents in the period.

24.12 Any other relevant information

Table 24-I: Projects or significant operational events that occurred in FY 2023-24:

Project or significant operational event	Progress
Geeveston Outfall Relocation Project	Project delayed. Following community concern, the proposed outfall location has been moved into deeper water at Shipwrights Point and further away from the recreational area. A Development Application amendment has been submitted to Huon Valley Council due to the revised outfall location. TasWater awaiting Council's assessment.

For further information on Geeveston STP please contact TasWater on 13 6992

www.taswater.com.au