

Annual Report Sarina Recycled Water Recycling Facility EPBC 2011-6005.

Introduction

Construction of the Sarina Water Recycling Facility commenced on 04 February 2013 and the first inflow into the plant commenced on 01 August 2014 with the first releases to Plane Creek on 09 August 2014. Council took over operation of the plant on 14 November 2014. Prior to Mackay Regional Council being formally handed over operation of the plant, all effluent quality results were the property of the project managers.

This is the annual report as per the EPBC Authorisation for the period 04 February 2014 to 3 February 2015

Condition 1 – Notifying the department of commencements of work

The department was not notified within 20 days of the commencement of the activity. Mackay Regional Council misinterpreted the definition. Council believed the actual date of commencement of the action was when Mackay Regional Council took over the operation of the Sarina Water Recycling Facility on 14 November 2014 after formal process proving had been completed. A letter was to be completed by the project manager contracted to manage the project and submitted to the EPBC stating this.

In a conversation with an officer from the department on Tuesday 06 October 2015 council became aware of the correct definition of the commencement of the action, and realised that council had misinterpreted the definition and as such failed to meet Condition 1. The correct date of commencement of the activity was 04 February 2013 when earth clearing for the project commenced. The EPBC should have been notified by 25 February 2013; however council misinterpreted the definition of “date of commencement of the activity”.

Condition 2

The annual report for the second twelve months from date of commencement of the activity was not completed within 3 months of the anniversary of commencement of the activity due to council’s misinterpretation of the definition of “commencement of the action”. The report should have been added to council’s website and evidence submitted to the EPBC by 04 May 2015.

A report was added to the council’s website for the period 01 July 2014 – 30 June 2015, but this was not in compliance with this Condition.

Council did not meet this condition due to a misinterpretation of the meaning of the commencement of the activity.

Average Dry Weather Flow and Maximum Peak Weather Flow

The maximum average dry weather flow was 0.65 ML/day which is below the maximum of 2.16ML/d whereas the maximum peak weather flow was 4.23 ML/day which is less than the maximum of 9.2ML/day.

Total Nitrogen and Total Phosphorus

The maximum concentrations of Total Nitrogen and Total Phosphorous released into Plane Creek are represented in Table 1 and graphically in Figures 1 and 2. These figures include both formal processing and post commissioning stages.

During the first few days of formal processing total phosphorous exceeded the EPBC limits on four occasions. The state EA recognises a formal process proving period to fine tune the treatment process to meet release conditions. From 09/09/2014 TN and TP met the required release limits.

Table 1: Total Nitrogen and Total Phosphorous SWRF 04 February 2014 to 03 February 2015

Date	TN (mg/L)			TP (mg/L)		
	Results	EPBC Limits	EHP Limits	Results	EPBC Limits	EHP Limits
10/08/2014	3.2	15		5.25	3	
14/08/2014	2.6	15		4.57	3	
19/08/2014	3.4	15		2.51	3	
26/08/2014	2.4	15		4.66	3	
2/09/2014	3	15		4.26	3	
9/09/2014	4.4	15		2.8	3	
16/09/2014	4.2	15		2.96	3	
22/09/2014	4.9	15		2.3	3	
23/09/2014	5.3	15		1.35	3	
25/09/2014	3.6	15		0.51	3	
28/09/2014	3.8	15		0.62	3	
29/09/2014	3.6	15		0.76	3	
30/09/2014	3.8	15		0.93	3	
1/10/2014	4	15		0.88	3	
2/10/2014	3.6	15		0.75	3	
2/10/2014	3.8	15		0.23	3	
3/10/2014	4.2	15		0.43	3	
4/10/2014	3.9	15		0.33	3	
5/10/2014	4.3	15		0.27	3	
6/10/2014	3.8	15		0.3	3	
7/10/2014	3.8	15		0.22	3	
9/10/2014	4	15		0.32	3	

Date	TN (mg/L)			TP (mg/L)		
	Results	EPBC Limits	EHP Limits	Results	EPBC Limits	EHP Limits
10/10/2014	4.6	15		0.14	3	
11/10/2014	4.9	15		0.13	3	
12/10/2014	4.4	15		0.15	3	
13/10/2014	4.9	15		0.17	3	
14/10/2014	4.1	15		0.14	3	
15/10/2014	4.5	15		0.033	3	
16/10/2014	4.6	15		0.17	3	
17/10/2014	4.2	15		0.22	3	
18/10/2014	4	15		0.22	3	
19/10/2014	4	15		0.15	3	
20/10/2014	3.8	15		0.17	3	
21/10/2014	4.2	15		0.23	3	
22/10/2014	4.4	15		0.22	3	
23/10/2014	4.3	15		0.23	3	
24/10/2014	4.3	15		0.97	3	
25/10/2014	3.6	15		0.57	3	
26/10/2014	4.7	15		0.28	3	
27/10/2014	3.3	15		0.13	3	
28/10/2014	3.5	15		0.033	3	
29/10/2014	3.5	15		0.033	3	
30/10/2014	3	15		0.13	3	
31/10/2014	3.6	15		0.15	3	
1/11/2014	3.5	15		0.13	3	
3/11/2014	4.6	15		0.39	3	
4/11/2014	4	15		0.21	3	
5/11/2014	4.1	15		0.14	3	
6/11/2014	3.9	15		0.31	3	
7/11/2014	4.4	15		0.39	3	
8/11/2014	4.3	15		0.59	3	
10/11/2014	4.1	15		1.37	3	
11/11/2014	4.1	15	15	1.59	3	3
12/11/2014	1.5	15	15	2.55	3	3
13/11/2014	4.7	15	15	2.81	3	3
14/11/2014	5.1	15	15	2.41	3	3
15/11/2014	8.4	15	15	2.25	3	3
20/11/2014	5.4	15	15	2.52	3	3
28/11/2014	3.5	15	15	1.74	3	3
6/12/2014	4.7	15	15	1.84	3	3
14/12/2014	4.1	15	15	0.73	3	3
21/12/2014	4.5	15	15	0.78	3	3
30/12/2014	4.2	15	15	1.45	3	3
7/01/2015	2.9	15	15	0.98	3	3
15/01/2015	4.5	15	15	1.27	3	3
23/01/2015	3.9	15	15	0.93	3	3
31/01/2015	4.7	15	15	0.54	3	3

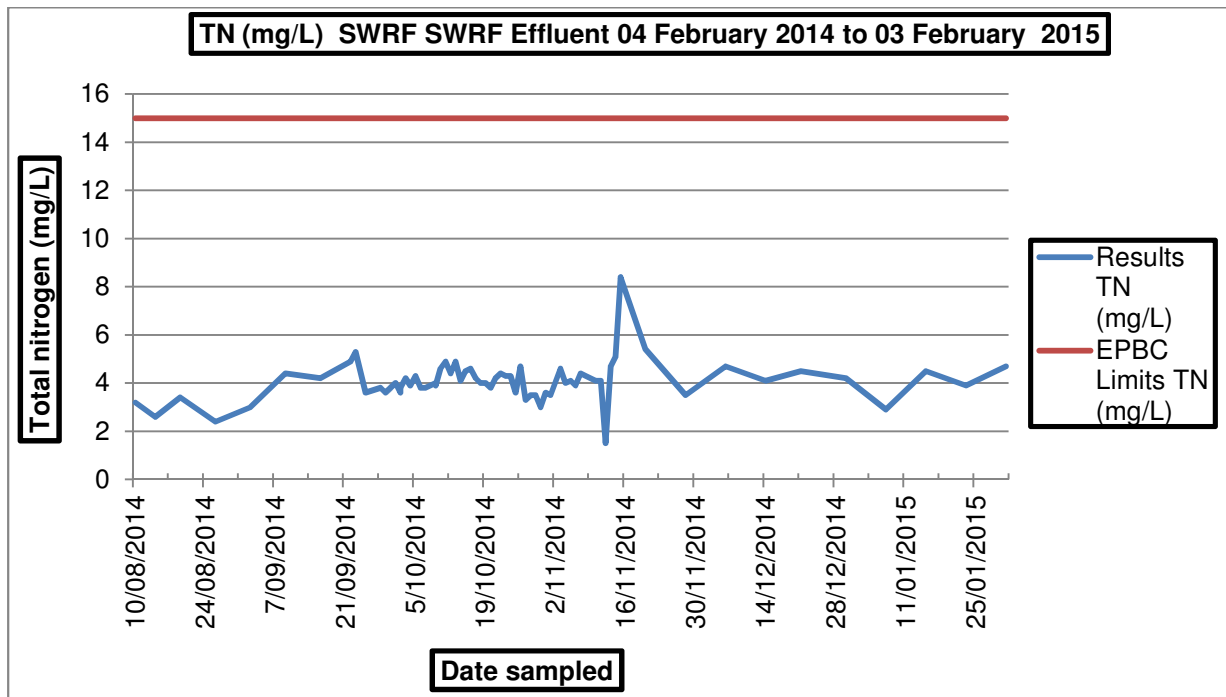


Figure 1: Total nitrogen SWRF 04 February 2014 to 03 February 2015

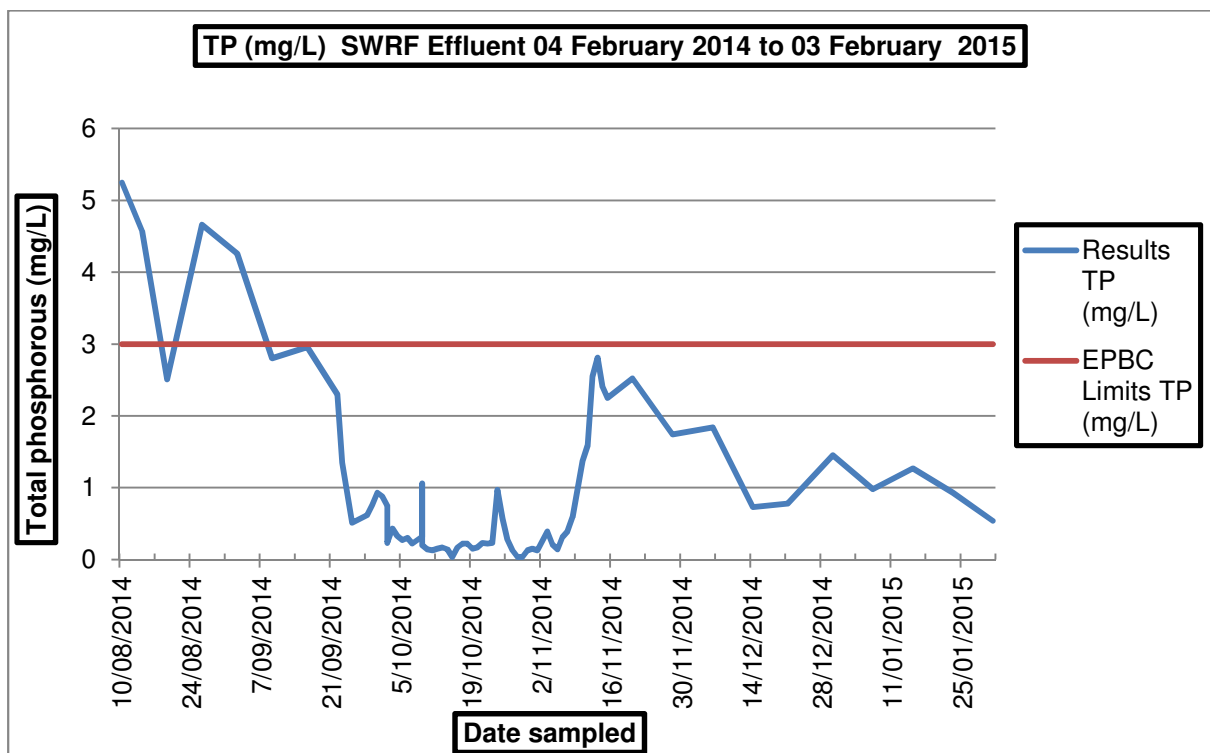


Figure 2: Total phosphorous SWRF 04 February 2014 to 03 February 2015

Annual Mass Load Contaminates

Table 2 below shows the annual mass loads for both Total Nitrogen and Total Phosphorous. Both were below the limits. These figures are for a period of 7 months. Annual mass loads of contaminants were calculated as per Condition WT5 of the Queensland State Government Environmental Authority EPPR0054143 which states “Annual Mass Load = yearly median concentration (mg/L) x average dry weather flow (ML/day)”.

Table 2: Mass Loads total nitrogen and total phosphorous SWRF 04 February 2014 to 03 February 2015

	Mass Loads (kg)	Limits (kg)
Total Nitrogen	2.65	4338
Total Phosphorous	0.33	868

There have been no reports of any slick or visible evidence of oil or grease, litter or other objectionable matter at the release point M1.

Non-compliance with EPBC approval 2011/6005

During the reporting period Mackay Regional Council failed to comply with conditions 1 and 2 of the EPBC approval. This did not come to light until October 2015 when council was informed by an officer of the EPBC that it had misinterpreted the definition of “commencement of action”.

It had been misinterpreted as the date that council took over operation of the Sarina Water Recycling Facility on 14 November 2014 rather than the date that construction of the plant commenced.

The EPBC was notified of the commencement of action date on 08 October 2015.

This misinterpretation of the definition resulted also in the annual report not being submitted within three months of the anniversary date of the commencement of works.

During the first few days of formal processing total phosphorous exceeded the EPBC limits on four occasions. During this period the plant was being operated by an external project team and water quality results were not available to council environmental officers until council commenced full operation of the plant.

It is unknown if the project team reported the total phosphorous exceedences.

The state Environmental Authority recognises a formal process proving period to fine tune the treatment process to meet release conditions. During this formal processing period the Queensland State requirements were met. From 09/09/2014 onward TP met the required release limits.