

Figure 1 Guyra Waste Water Treatment Plant, monitoring points

Image source: <https://maps.six.nsw.gov.au>

Downloaded 22nd July 2020

Guyra Waste Water Treatment Plant, 7776 Guyra Road, GUYRA NSW 2365, Licence No. 1671																		
Monitoring Point 1 - discharge to Laura Ck		Licence Period 01May 2020 to 30 April 2021																
Parameter/month	90th %ile	Units	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Minimum	Average	Maximum	90th %ile
Sample date	Limits		29-May	30-Jun	30-Jul	31-Aug												
pH	6.5-8.5		7.40	7.65	8.26	8.83									7.4	8.0	8.83	8.66
EC	no limit	uS/cm	528	456	339	430									339	438	528	506
TSS	<20	mg/L	5	8	22.5	5									5	10.1	23	18.2
BOD5	<15	mg/L	2.9	2.1	3	8.8									2	4.2	9	7.06
Ammonia-N	<5	mg/L	2.86	0.38	0.22	0.29									0.22	0.0	2.86	2.1
TKN	no limit	mg/L	4.10	2.70	3.30	2.20									2.20	3.1	4.10	3.86
NOx-N	no limit	mg/L	0.80	0.80	0.80	0.80									0.80	0.0	0.80	0.8
Total N	<15	mg/L	4.90	3.50	4.10	3.00									3.00	3.9	4.90	4.66
SRP	no limit	mg/L	1.78	0.38	0.08	0.15									0	0.0	2	1.4
TP	<1	mg/L	2.08	0.79	0.43	0.24									0.24	0.0	2.08	1.7
TOG	<10	mg/L	<5	<5	<5	<2									<5	<5	<5	<5
Weir FC	no limit	cfu/100 ml	680	64	8	<1									8	251	680	557
Inflow FC	no limit	cfu/100 ml	880	2800	1700	300									300	1420	2800	2470
Cumulative monthly discharge	ML		12.88	28.74	49.53	72.81									Allowable annual total = 218 ML			
Report Date			03-Jun	06-Jul	12-Aug	07-Sep												

Abbreviations: EC (electrical conductivity); TSS (total suspended solids); BOD5 (5-day biochemical oxygen demand); TKN (total Kjeldahl nitrogen); NOx-N (nitrate + nitrite as nitrogen); Total N (total nitrogen); SRP (orthophosphate); TP (total phosphorus); TOG (total oil & grease); FC (faecal coliforms)

The top value on the Y-axis for TSS, BOD5 and TOG are the limits of the licence.

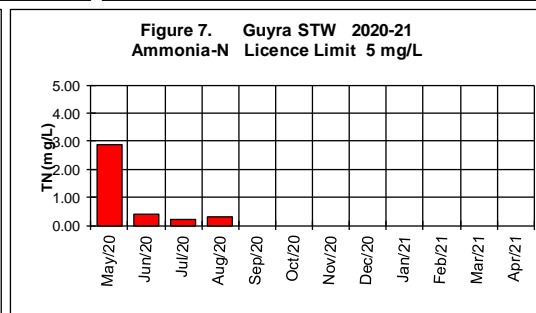
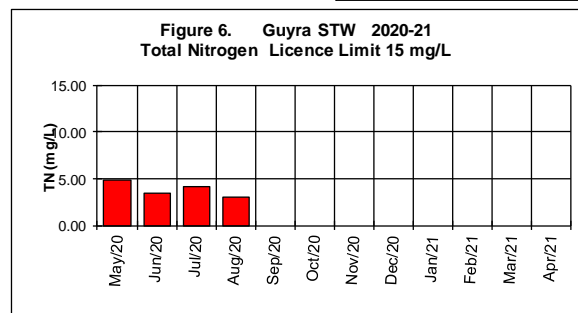
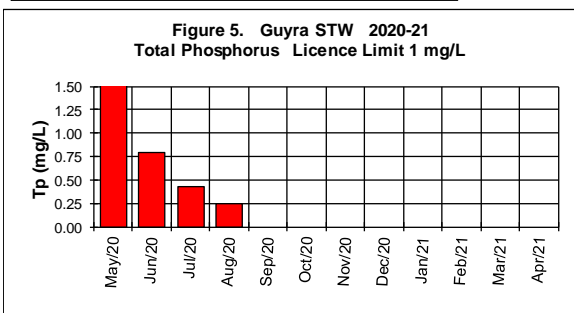
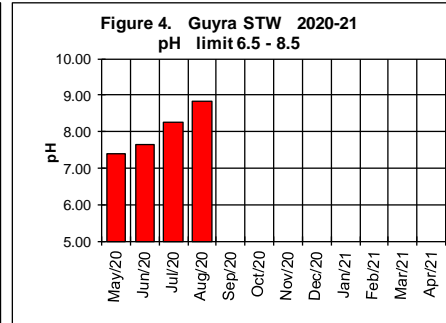
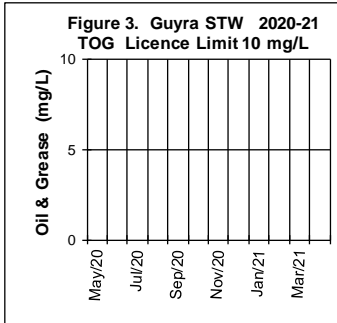
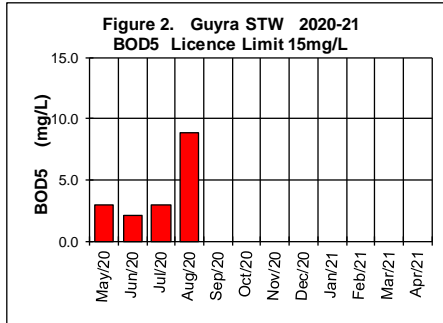
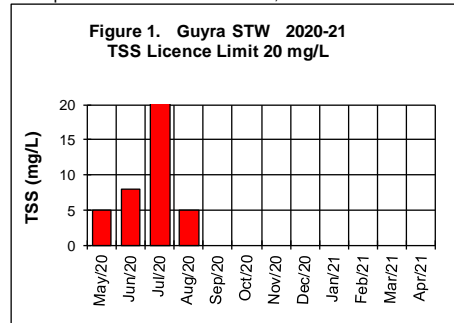


Table 2. Water Quality Monitoring data for licence period

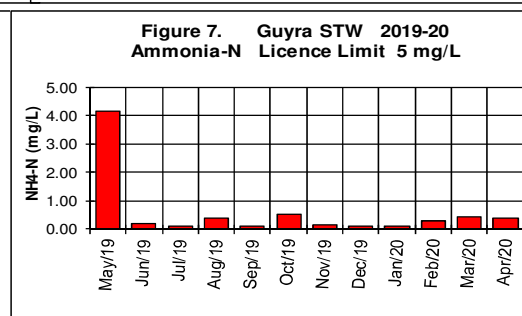
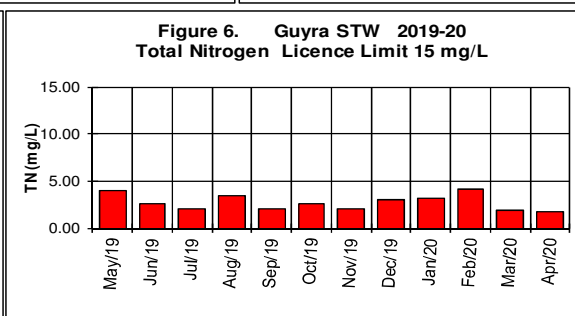
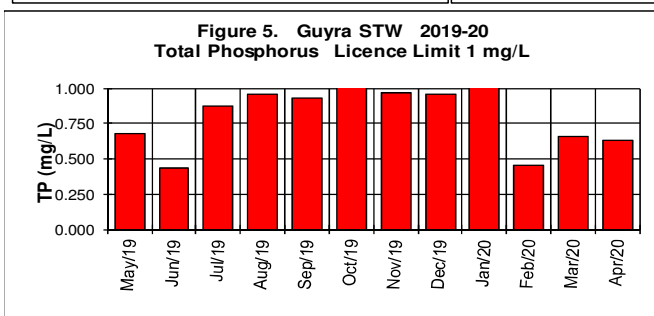
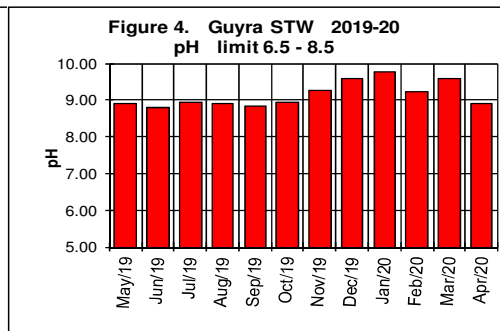
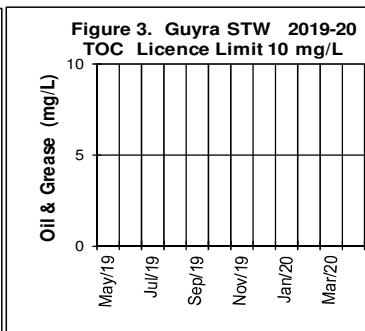
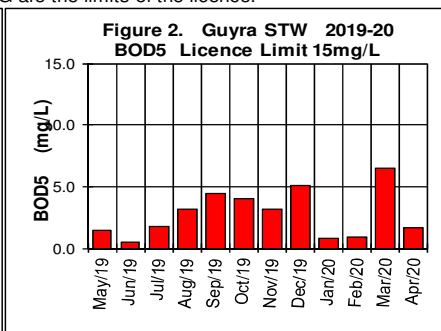
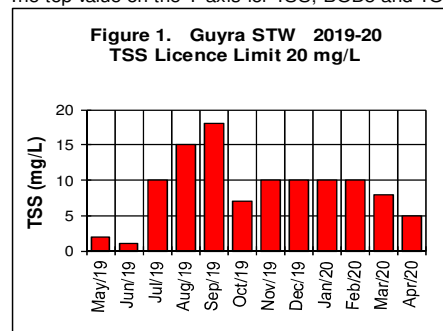
Note: May 2020: Elevated total phosphorus result of equipment malfunction for dosing alum

Guyra Waste Water Treatment Plant, 7776 Guyra Road, GUYRA NSW 2365, Licence No. 1671																		
Monitoring Point 1 - discharge to Laura		Licence Period 01May 2019 to 30 April 2020																
Parameter/month	90th %ile	Units	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	Minimum	Average	Maximum	90th %ile
Sample date	Limits		31-May	26-Jun	31-Jul	29-Aug	27-Sep	31-Oct	29-Nov	30-Dec	30-Jan	27-Feb	31-Mar	30-Apr				
pH	6.5-8.5		8.90	8.81	8.95	8.9	8.83	8.94	9.26	9.58	9.76	9.24	9.58	8.92	8.81	9.14	9.76	9.58
EC	no limit	uS/cm	696	661	694	747	761	774	719	741	541	475	488	612	475	659	774	760
TSS	<20	mg/L	2	1	10	15	18	7	10	10	10	10	8	5	1	8.8	18	14.5
BOD5	<15	mg/L	1.5	0.5	1.8	3.2	4.5	4	3.2	5.1	0.8	0.9	6.5	1.7	1	2.8	7	5.04
Ammonia-N	<5	mg/L	4.14	0.20	0.12	0.40	0.12	0.51	0.15	0.09	0.08	0.27	0.42	0.40	0.08	0.58	4.14	0.5
TKN	no limit	mg/L	2.90	2.40	1.90	2.80	1.10	1.80	1.20	2.20	2.30	3.30	1.10	4.00	1.10	2.25	4.00	3.26
NOx-N	no limit	mg/L	1.06	0.17	0.16	0.68	0.94	0.80	1.80	0.80	0.80	0.80	0.80	0.80	0.16	0.80	1.80	1.05
Total N	<15	mg/L	4.00	2.60	2.10	3.50	2.00	2.60	2.00	3.00	3.10	4.10	1.90	1.80	1.80	2.73	4.10	3.95
SRP	no limit	mg/L	0.412	0.41	0.65	0.85	0.49	1.06	0.60	0.86	1.05	0.32	0.46	0.52	0.32	0.64	1.06	1.03
TP	<1	mg/L	0.678	0.43	0.88	0.96	0.93	1.07	0.97	0.96	1.14	0.45	0.66	0.63	0.43	0.81	1.14	1.06
TOG	<10	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
FC - weir	no limit	cfu/100 ml	144	32	20	8	80	36	56	240	28	8	16	128	8	66	240	142
Pond 1- FC	no limit	cfu/100 ml	8000	2640	3600	1200	200	380	160	860	2200	1040	1180	1480	160	1912	8000	3504
Cumulative monthly discharge	ML		9.9	19.3	29.9	39.7	48.5	57.3	65.8	72.2	85.6	106.3	121.0	137.0	Allowable annual total = 218 ML			
Cumulative monthly inflow	ML		13.3	26.7	27.2	40.9	54.8	66.1	77.2	90.4	97.0	124.3	140.2	156.5				
Report Date			10-Jun	11-Jul	7-Aug	3-Sep	3-Oct	6-Nov	5-Dec	5-Jan	4-Feb	5-Mar	6-Apr	7-May				

Abbreviations: EC (electrical conductivity); TSS (total suspended solids); BOD5 (5-day biochemical oxygen demand); TKN (total Kjeldahl nitrogen); NOx-N (nitrate + nitrite as nitrogen); Total N (total nitrogen); SRP (orthophosphate); TP (total phosphorus); TOG (total oil & grease); FC (faecal coliforms)

The top value on the Y-axis for TSS, BOD5 and TOG are the limits of the licence.

Table 2: Water Quality Monitoring data for licence period



Note: Elevated pH is due to high concentration of algae in the maturation ponds and non compliance in total phosphorus result is due to equipment malfunction for dosing alum.

Guyra Waste Water Treatment Plant, 7776 Guyra Road, GUYRA NSW 2365, Licence No. 1671																				
Monitoring Point 1 - discharge to Laura		Licence Period 01May 2018 to 30 April 2019															Minimum	Average	Maximum	90th %ile
Parameter/month	Licence	Units	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19						
Sample date	Limits		31-May	28-Jun	31-Jul	31-Aug	29-Sep	30-Oct	30-Nov	28-Dec	29-Jan	28-Feb	29-Mar	26-Apr						
pH	6.5-8.5		7.85	8.01	7.66	7.54	9.15	7.74	7.65	8.87	8.86	8.74	7.92	8.92	7.5	8.2	9.15	8.9		
EC	no limit	uS/cm	636	667	622	633	637	665	578	543	411	617	722	632	411	614	722	667		
TSS	<20	mg/L	8	15	8	13	13	13	5	8	13	5	10	13	5	10.3	15	13		
BOD5	<15	mg/L	2.6	4.2	3.6	6.2	1.6	5	4.7	3.3	4.8	3.2	13.7	4.4	2	4.8	14	6.1		
Ammonia-N	<5	mg/L	2.26	1.85	1.53	1.27	0.16	8.23	2.44	0.41	2.17	0.06	7.04	0.10	0.06	2.3	8.23	6.6		
TKN	no limit	mg/L	1.80	3.50	3.40	3.40	1.90	9.90	3.60	3.30	6.30	1.40	8.40	3.00	1.40	4.2	9.90	8.2		
NOx-N	no limit	mg/L	0.51	0.90	0.11	2.39	1.56	0.04	0.10	0.16	0.06	1.10	2.74	0.64	0.04	0.86	2.74	2.3		
Total N	<15	mg/L	2.30	3.70	3.50	5.80	3.50	9.90	3.70	3.50	6.40	2.50	11.10	3.60	2.30	5.0	11.10	9.6		
SRP	no limit	mg/L	0.299	0.19	0.29	0.11	0.56	0.92	0.47	0.31	0.71	0.33	0.54	0.74	0	0.5	1	0.7		
TP	<1	mg/L	0.396	0.46	0.58	0.26	0.72	0.97	0.51	0.56	0.73	0.69	0.35	0.95	0.26	0.60	0.97	0.9		
TOG	<10	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
FC - weir	no limit	cfu/100 ml	60	240	2030	480	32	56	300	100	60	96	344	180	32	332	2030	466		
Inflow FC	no limit	cfu/100 ml	2800	3600	5840	2800	880	220	3040	1320	680	1560	880	3700	220	2277	5840	3690		
Cumulative monthly discharge	ML		14.0	25.1	40.3	50.1	60.8	81.2	97.1	114.8	130.8	140.3	153.0	163.7	Allowable annual total = 218 ML					
Cumulative monthly inflow	ML		15.0	29.4	30.3	45.8	63.2	82.4	96.7	110.3	123.7	133.9	146.5	158.5						
Report Date			06-Jun	05-Jul	17-Aug	07-Sep	03-Oct	07-Nov	08-Nov	07-Jan	04-Feb	06-Mar	04-Apr	02-May						

Abbreviations: EC (electrical conductivity); TSS (total suspended solids); BOD5 (5-day biochemical oxygen demand); TKN (total Kjeldahl nitrogen); NOx-N (nitrate + nitrite as nitrogen); Total N (total nitrogen); SRP (orthophosphate); TP (total phosphorus); TOG (total oil & grease); FC (faecal coliforms)
 The top value on the Y-axis for TSS, BOD5 and TOG are the limits of the licence.

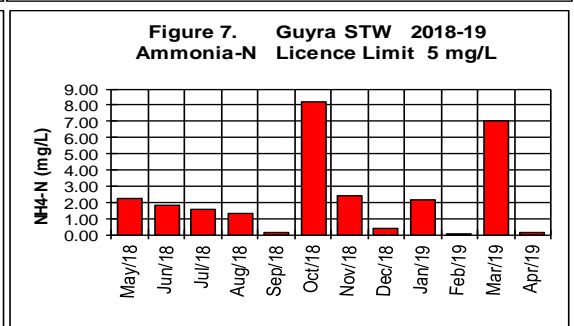
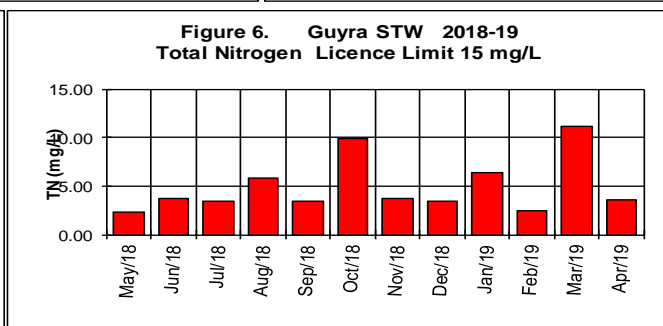
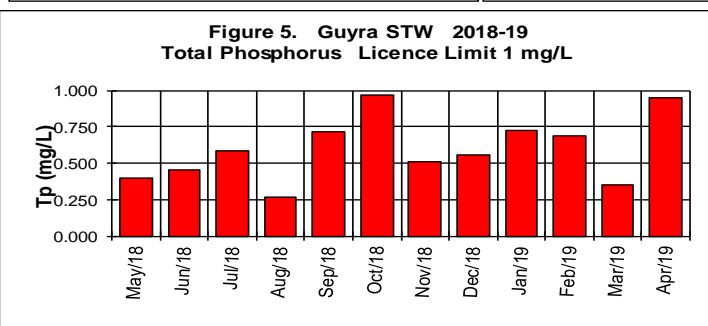
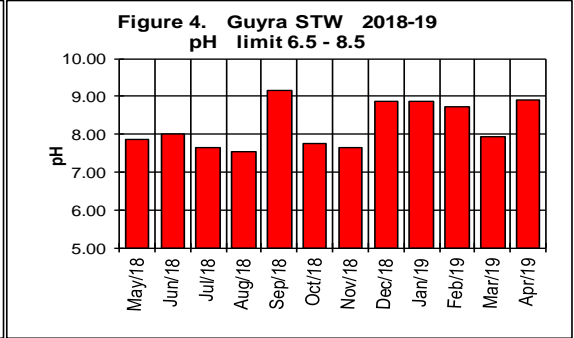
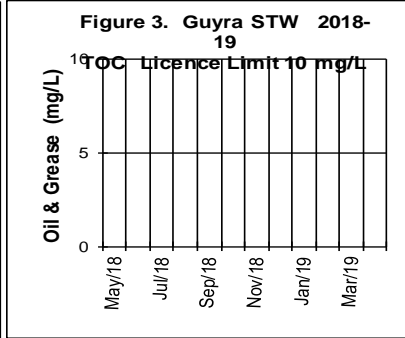
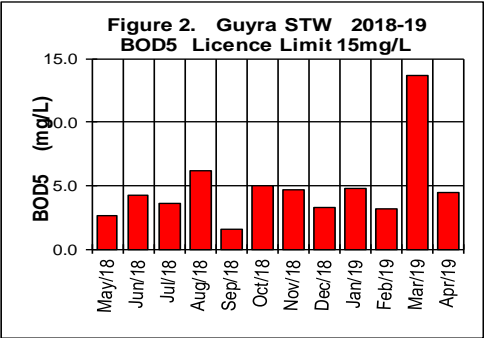
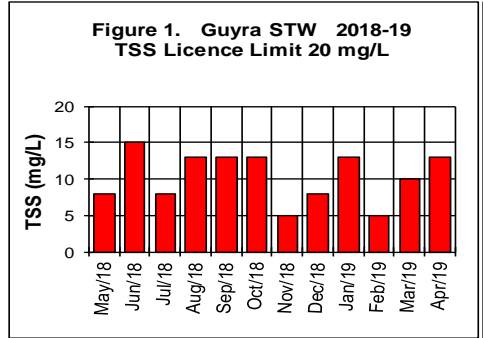


Table 2. Water Quality Monitoring data for licence period

Guyra Waste Water Treatment Plant, 7776 Guyra Road, GUYRA NSW 2365, Licence No. 1671																		
Monitoring Point 1 - discharge to Laura		Licence Period 01May 2017 to 30 April 2018																
Parameter/month	Licence	Units	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	Minimum	Average	Maximum	90th %ile
Sample date	Limits		31-May	29-Jun	31-Jul	31-Aug	28-Sep	31-Oct	30-Nov	28-Dec	31-Jan	28-Feb	28-Mar	27-Apr				
pH	6.5-8.5		7.55	7.56	8.45	8.61	9.33	8.03	8.26	7.8	7.5	8.32	7.45	7.43	7.4	8.0	9.33	8.59
EC	no limit	uS/cm	436	387	421	556	576	477	454	457	854	540	667	673	387	542	854	672
TSS	<20	mg/L	13	8	3	5	5	5	15	10	10	13	10	5	3	8.5	15	13
BOD5	<15	mg/L	2.7	1.7	0.8	0.5	0.6	3	3.9	6.3	7.6	4.8	5.9	5.7	1	3.6	8	6.26
Ammonia-N	<5	mg/L	7.66	0.33	0.93	0.34	0.44	5.50	0.12	1.64	20.20	4.54	5.80	4.37	0.12	4.3	20.2	7.5
TKN	no limit	mg/L	11.1	1.10	1.60	2.60	1.40	6.60	2.40	3.80	28.10	4.30	7.40	5.30	1.10	6.3	28.1	10.7
NOx-N	no limit	mg/L	0.84	0.91	0.98	0.53	0.75	0.27	0.03	0.21	0.27	0.75	0.41	0.21	0.03	0.51	0.98	0.91
Total N	<15	mg/L	11.9	2.00	2.60	3.10	2.10	6.90	2.40	4.00	28.40	5.00	7.80	5.50	2.00	6.8	28.4	11.5
SRP	no limit	mg/L	1.56	0.48	0.19	0.14	0.29	1.47	0.23	0.71	0.97	0.71	0.69	0.52	0.14	0.66	2	1.42
TP	<1	mg/L	2.28	0.66	0.22	0.29	0.38	1.52	0.50	0.87	1.37	0.94	0.79	0.70	0.22	0.88	2.28	1.51
TOG	<10	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Weir FC	no limit	cfu/100 ml	424	448	<1	10	36	480	168	260	208	280	416	192	10	266	480	448
Pond 1-FC	no limit	cfu/100 ml	1560	3120	1400	540	840	280	1040	1980	500	1440	5200	2040	280	1662	5200	3012
Cumulative monthly discharge	ML		24.1	57.1	96.7	115.4	130.5	169.9	194.4	215.3	236.5	250.6	263.1	274.8	Allowable annual total = 218 ML			
Cumulative monthly inflow	ML		25.5	60.8	61.6	82.5	98.5	135.2	157.8	176.0	196.9	209.7	223.2	236.1				
Report Date			06-Jun	04-Jul	08-Aug	07-Sep	05-Oct	08-Nov	07-Dec	03-Jan	07-Feb	07-Mar	03-Apr	07-May				

Abbreviations: EC (electrical conductivity); TSS (total suspended solids); BOD5 (5-day biochemical oxygen demand); TKN (total Kjeldahl nitrogen); NOx-N (nitrate + nitrite as nitrogen); Total N (total nitrogen); SRP (orthophosphate); TP (total phosphorus); TOG (total oil & grease); FC (faecal coliforms)
 The top value on the Y-axis for TSS, BOD5 and TOG are the limits of the licence.

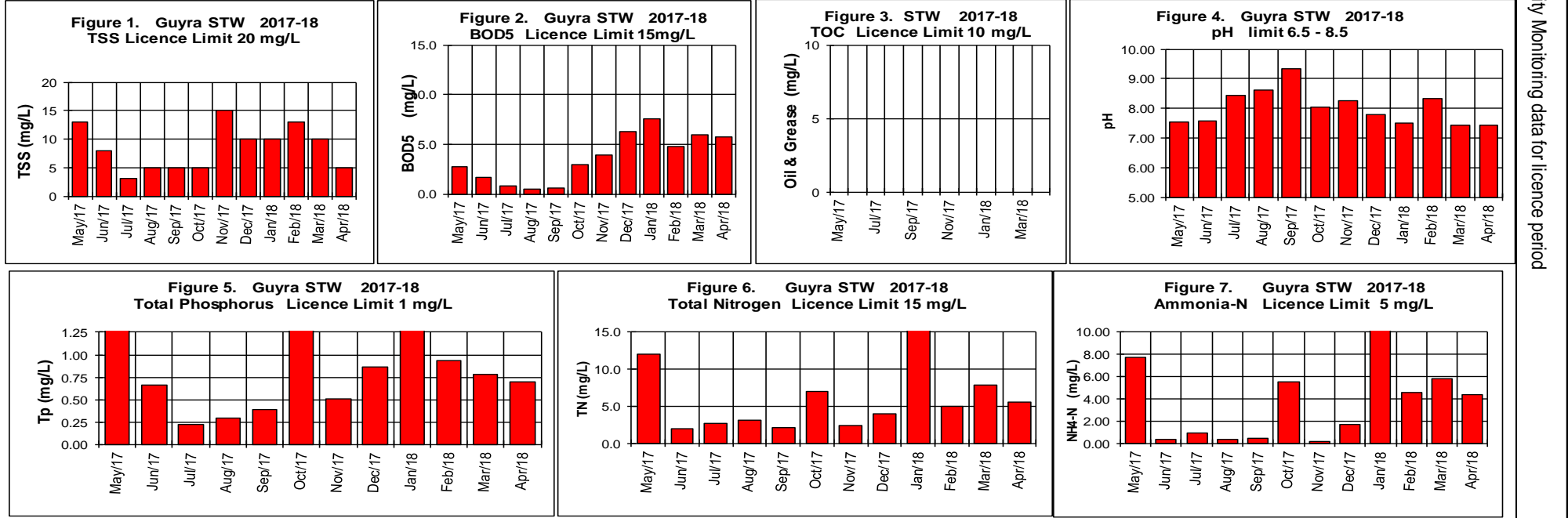


Table 2. Water Quality Monitoring data for licence period

Guyra Waste Water Treatment Plant, 7776 Guyra Road, GUYRA NSW 2365, Licence No. 1671																		
Monitoring Point 1 - discharge to Laura		Licence Period 01 May 2016 to 30 April 2017																
Parameter/month	90th %ile	Units	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Minimum	Average	Maximum	90th %ile
Sample date	Limits		31-May	29-Jun	29-Jul	31-Aug	30-Sep	31-Oct	30-Nov	28-Dec	31-Jan	28-Feb	30-Mar	28-Apr				
pH	6.5-8.5		8	7.42	7.56	7.36	7.52	7.28	7.61	7.63	7.81	7.43	7.37	7.8	7.3	7.6	7.93	7.81
EC	no limit	uS/cm	467	361	367	278	281	352	537	637	401	556	295	331	278	405	637	554
TSS	<20	mg/L	13	8	8	8	5	5	8	10	13	8	3	5	3	7.8	13	12.7
BOD5	<15	mg/L	2	2.4	2.7	3.3	5.1	4	9	12	4.4	2.1	3.6	1	1	4.3	12	8.6
Ammonia-N	<5	mg/L	3	2.19	0.65	0.39	0.15	0.75	10.50	9.12	1.53	7.07	0.42	1.32	0.15	3.1	10.5	8.9
TKN	no limit	mg/L	3	6.90	2.90	2.50	2.60	1.40	11.20	19.90	6.30	19.60	2.70	2.80	1.40	6.8	19.9	18.8
NOx-N	no limit	mg/L	0	0.94	1.05	1.27	0.04	0.31	0.69	1.10	0.31	0.07	0.37	0.58	0.04	0.57	1.27	1.10
Total N	<15	mg/L	3	7.80	3.10	3.80	2.60	2.10	11.90	21.00	6.60	19.70	3.10	3.40	2.10	7.4	21.0	18.9
SRP	no limit	mg/L	1	0.06	0.17	0.19	0.26	0.15	1.43	2.58	0.19	0.19	0.18	1.01	0	0.61	3	1.4
TP	<1	mg/L	1	0.16	0.18	0.20	0.40	0.20	2.42	2.96	0.39	0.38	0.21	1.06	0.16	0.79	2.96	2.3
TOG	<10	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Weir FC	no limit	cfu/100 ml	232	64	100	312	120	520	68	232	56	640	504	288	56	261	640	518
Pond 1-FC	no limit	cfu/100 ml	3400	1480	5000	4200	3000	5200	1240	2160	240	360	1440	2240	240	2497	5200	4920
Cumulative monthly discharge			13.1	43.1	79.0	118.1	180.0	216.5	239.7	256.1	284.8	302.5	353.0	388.9	Allowable annual total = 218 ML			
Cumulative monthly inflow		ML	14.2	49.5	50.2	100.5	171.0	208.4	231.9	245.5	267.9	284.2	332.1	368.0				
Report Date			09-Jun	05-Jul	10-Aug	09-Sep	10-Oct	11-Nov	09-Nov	05-Jan	10-Feb	15-Mar	07-Apr	04-May				

Abbreviations: EC (electrical conductivity); TSS (total suspended solids); BOD5 (5-day biochemical oxygen demand); TKN (total Kjeldahl nitrogen); NOx-N (nitrate + nitrite as nitrogen); Total N (total nitrogen); SRP (orthophosphate); TP (total phosphorus); TOG (total oil & grease); FC (faecal coliforms)

The top value on the Y-axis for TSS, BOD5 and TOG are the limits of the licence.

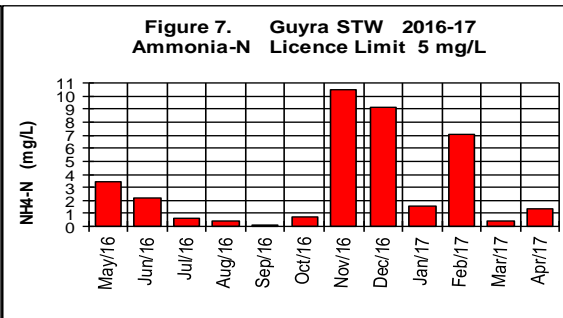
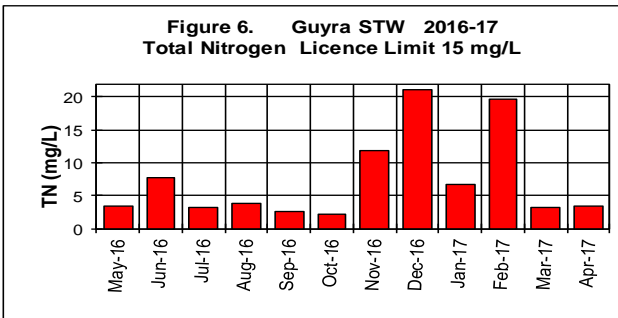
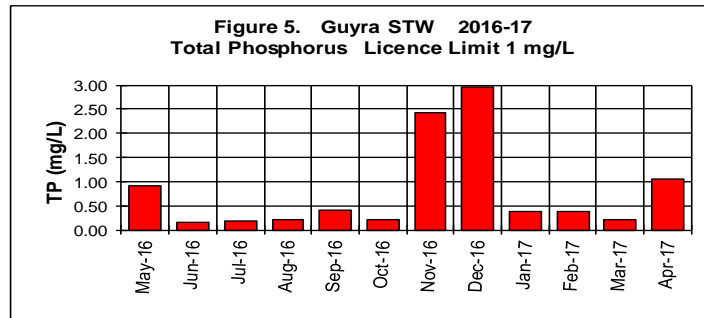
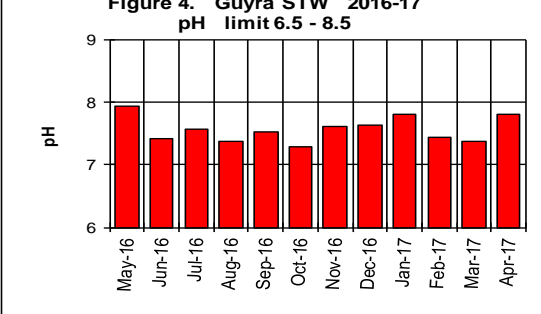
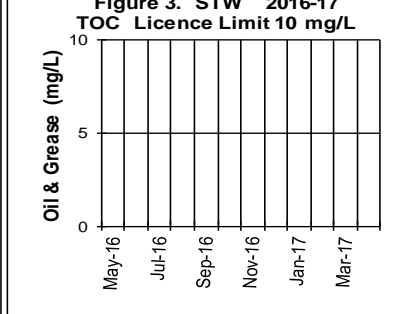
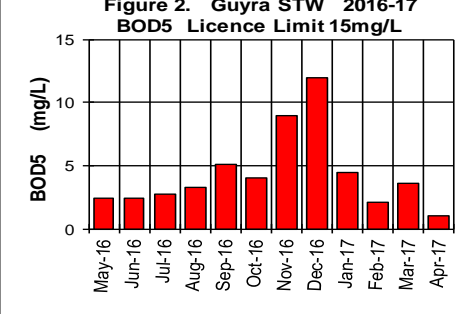
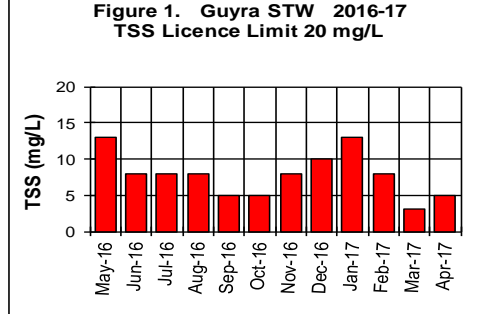


Table 2. Water Quality Monitoring data for licence period