

PRELIMINARY REPORT

TOWNSVILLE/THURINGOWA AREA RAINFALL 28 August to 1 September 1998

1. Rainfall Totals

Daily rainfall totals for the period from 9am Friday 28 August to 9am Tuesday 1 September 1998 in the Townsville area are given for the official and unofficial stations in Table 1. Official stations have a standard 203mm rain gauge, conform to Bureau standards and are recorded for the Bureau by volunteer observers. The gauges at unofficial stations are of unknown types and may not conform to Bureau standards.

For the 4 day period, the highest official total was recorded at Rangeview Ranch with 458 millimetres whilst at unofficial stations 483 millimetres was recorded at Jensen.

The Automatic Weather Station at the Townsville Airport Meteorological Office (AMO) only recorded 270 millimetres for the 96 hour period ending 9am Monday 1 September 1998.

The highest rainfalls appear to have been reported in the area between Jensen and Rasmussen in the Bohle River.

TABLE 1 Daily Rainfall (mm)

(a) Official Stations

CBM Number	Station Name	Latitude	Longitude	August/September 1998				Total
				Sat 29	Sun 30	Mon 31	Tue 1	
032040	Townsville AWS	19 14 52	146 46 01	20	131	96	24	270
032050	Yabulu Refinery	19 09 36	146 36 12	20	36	228	57	341
032157	Yabulu	19 14 37	146 37 19	25	37	298	51	411
032175	Rangeview Ranch	19 20 54	146 27 42	25	26	375	32	458
532015	Bohle River TM*	19 19 00	146 42 00	0	65	348	43	456
-	Bluewater TM*	19 10 00	146 32 00	23	13	183	139	358
533007	Brabons AL	19 28 42	146 37 50	25	20	253	48	346
533043	Nettlefield AL	19 35 10	146 46 43	21	47	198	31	297
533044	McDonalds AL	19 30 48	146 50 51	15	89	264	19	387
533045	Cormacks AL	19 26 15	146 50 48	14	63	236	22	335
533053	Upper Reid AL	19 43 55	146 40 04	17	31	124	26	198
533054	Woodstock AL	19 36 12	146 50 21	20	69	219	22	330

* Estimated only to be confirmed

(b) Unofficial Stations

Station Name	Latitude	Longitude	August/September 1998				Total
			Sat 29	Sun 30	Mon 31	Tue 1	
Alligator Ck	19 23 22	146 57 10	15	60	92	35	202
Bushland Beach	19 11 30	146 40 30	23	101	206	40	370
Cranbrook	19 18 30	146 45 10	21	90	270	28	409
Cungulla	19 22 12	146 05 53	8	6	34	34	82
Douglas	19 20 00	146 46 00	18	90	192		300
Jensen	19 14 40	146 38 45	23	62	347	51	483
Kelso	19 22 30	146 43 50	17	47	347		411
Magnetic Island	19 07 40	146 47 06	35	147	58	50	290
Mt Halifax	19 06 50	146 22 10	26	5	228		259
Mt Low	19 14 00	146 40 00	21	134	140		295
Mundingburra	19 17 50	146 47 10	24	100	127		251
Oak Valley	19 25 30	146 49 50	20	128	263		411
Pallarenda	19 13 00	146 46 00	22	156	120		298
Pangola Park	19 30 00	147 00 00	12	40	310	39	401
Purono Park	19 11 50	146 34 45	22	21	266	62	371
Railway Estate	19 16 45	146 49 00	16	160	155	42	373
Rangewood	19 20 00	146 36 00	16	160	155	53	384
Rasmussen	19 20 30	146 43 10	18	63	341	46	468
Rollingstone	19 03 06	146 23 59	21	2	181	44	248
Rowes Bay	19 15 00	146 47 00	26	172	113		311
Rupertswood	19 20 00	146 34 00	41	32	270		343
Saunders Beach	19 09 20	146 36 10	20	27	226	74	347
Serene Valley	19 22 00	146 53 00	19	61	141	36	257
Vincent	19 17 00	146 47 20	30	150	226	30	436
West End	19 16 00	146 45 40	28	148	120	26	322
Willows	19 19 00	146 43 00	12	64	329	35	440
Wulguru	19 20 00	146 49 00	14	154	129		297

Note: 1. The latitudes and longitudes of the stations in the above table are only approximate.
2. Rainfalls for Tuesday 1 Sep are not yet available

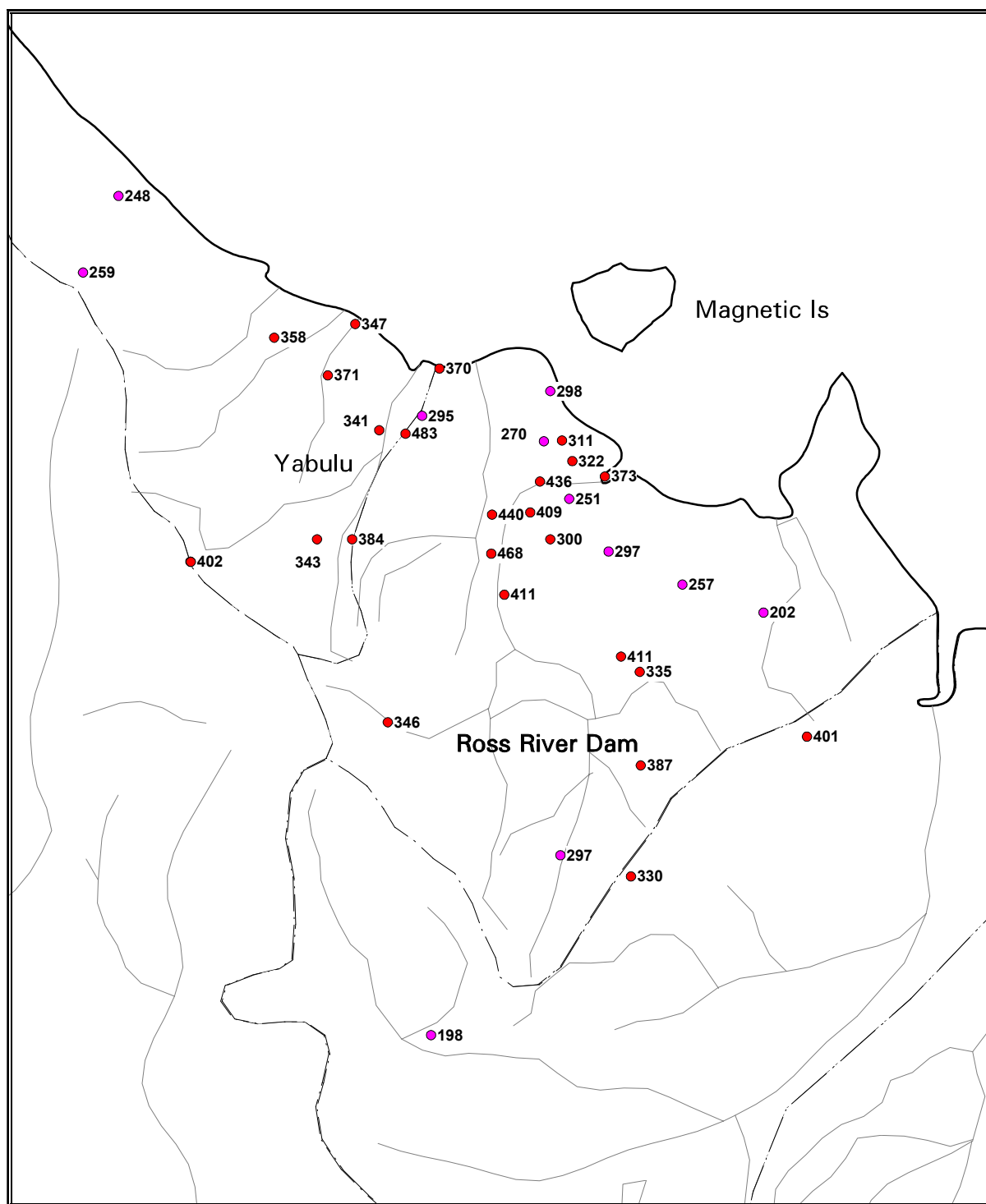


Figure 1
Rainfall Townsville Area 96 hours to 9am Tuesday 1 Sep 1998

Figure 1 shows the Townsville area with the rainfall totals in millimetres which fell in the 96 hour period from 9am Friday 28 August to 9am Tuesday 1 September 1998. The highest totals exceeding 400 millimetres extend from Oak Valley through Kelso and into Jensen.

2 Rainfall Temporal Patterns

One hourly rainfalls from 11pm Saturday 29 August to 6pm Monday 31 August for selected stations in the Townsville area are given in Table 2 while the Townsville AMO and Yabulu Refinery rainfalls are shown in graphical form.

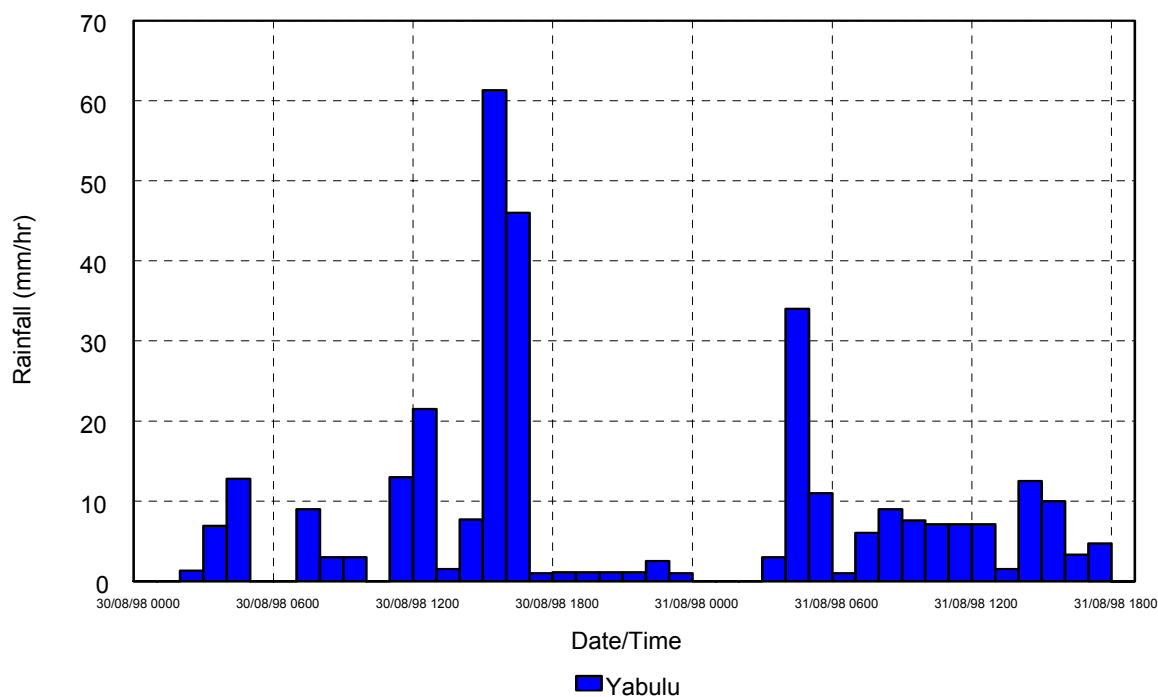
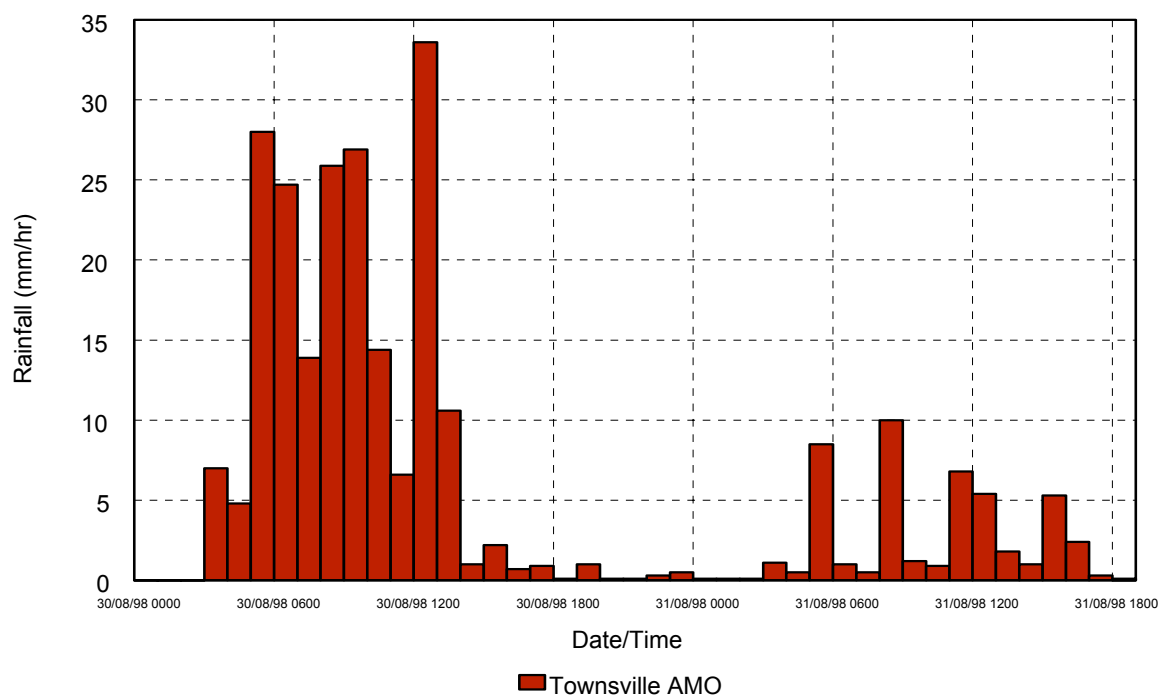
Table 2 Hourly Rainfalls

Date	Time	Townsville AMO	Yabulu Refinery	Brabons ALERT	Nettlefield ALERT	McDonalds ALERT	Cormacks ALERT	Woodstock ALERT			
30/08/98	00:00:00	0	0	0	0	0	0	0			
30/08/98	01:00:00	0	0	0	0	0	0	0			
30/08/98	02:00:00	0	1	0	0	0	0	0			
30/08/98	03:00:00	7	7	0	3	0	0	0			
30/08/98	04:00:00	5	13	2	4	0	0	0			
30/08/98	05:00:00	28	0	3	14	14	8	12			
30/08/98	06:00:00	25	0	1	1	38	31	26			
30/08/98	07:00:00	14	9	1	3	17	15	13			
30/08/98	08:00:00	26	3	5	7	6	3	4			
30/08/98	09:00:00	27	3	2	13	12	5	6			
30/08/98	10:00:00	14	0	5	2	20	22	19			
30/08/98	11:00:00	7	13	2	5	17	11	6			
30/08/98	12:00:00	34	22	13	11	26	15	23			
30/08/98	13:00:00	11	2	1	18	44	24	20			
30/08/98	14:00:00	1	8	1	8	7	5	6			
30/08/98	15:00:00	2	61	14	3	5	3	3			
30/08/98	16:00:00	1	46	18	11	10	18	13			
30/08/98	17:00:00	1	1	6	11	40	24	33			
30/08/98	18:00:00	0	1	3	1	3	4	1			
30/08/98	19:00:00	1	1	0	1	1	0	1			
30/08/98	20:00:00	0	1	2	0	0	0	0			
30/08/98	21:00:00	0	1	1	0	0	0	0			
30/08/98	22:00:00	0	3	3	0	0	0	0			
30/08/98	23:00:00	1	1	3	1	0	0	0			
31/08/98	00:00:00	0	0	15	11	0	0	0			
31/08/98	01:00:00	0	0	55	3	0	0	0			
31/08/98	02:00:00	0	0	44	42	0	14	26			
31/08/98	03:00:00	1	3	28	35	2	5	5			
31/08/98	04:00:00	1	34	15	12	14	13	18			
31/08/98	05:00:00	9	11	4	12	48	45	25			
31/08/98	06:00:00	1	1	4	7	11	25	15			
31/08/98	07:00:00	1	6	2	2	5	3	2			
31/08/98	08:00:00	10	9	5	1	3	2	1			
31/08/98	09:00:00	1	8	10	1	4	1	2			
31/08/98	10:00:00	1	7	11	6	2	2	1			
31/08/98	11:00:00	7	7	10	3	2	1	2			
31/08/98	12:00:00	5	7	7	3	2	1	2			
31/08/98	13:00:00	2	2	3	2	2	3	1			
31/08/98	14:00:00	1	13	4	2	1	2	3			
31/08/98	15:00:00	5	10	7	4	9	5	5			
31/08/98	16:00:00	2	3	4	7	1	6	6			
31/08/98	17:00:00	0	5	2	3	0	2	2			
31/08/98	18:00:00	0	0	0	0	0	0	0			

The highest one hourly totals for each station are highlighted. It is clear from the table that two heavy periods of rainfall; the first commenced about 4am on Sunday 30 August

and finished about 4pm and; the second was between 1am and 6 am Monday 31 August. The first storm appeared to be centred around the Bohle River while the second was centred in the area upstream of Ross River dam.

The heaviest hourly rainfall (constrained "clock hour" value) occurred between 2pm and



3pm Sunday afternoon 30 August when over 60mm was recorded at Yabulu Refinery. Given that higher 24 hour totals were recorded in other areas of Townsville, it is likely that the maximum hourly rainfall was greater than 60mm.