

# **FAIRBAIRN DAM**

# **EMERGENCY EVENT REPORT**

10<sup>TH</sup> Sept 2010 to 1<sup>ST</sup> APR 2011



Exhibit Number:

JM Date: 27 05 11



179 Turbot St., Brisbane-PO Box 15536 City East QLD 4002

## **Emergency Event Recording Sheets**

- Description of the Event
- Instrument Readings and Level Data
- Description of Damage
- Photos during and after the Event
- Details of Communication
- General Comments and/or EAP Recommendations

EMERGENCY EVENT REPORT – FAIRBAIRN DAM – $10^{ m th}$ Sept to $1^{ m st}$ April $201$	EMERGENCY	<b>EVENT REPORT –</b>	FAIRBAIRN DAM - 1	$10^{ m th}$ Sept to $1^{ m st}$ April 20	11
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# **Emergency Event Recording Sheets**

• Description of the Event

#### **EMERGENCY EVENT RECORD**

COMPLETE THIS COVER SHEET AND ATTACH RELEVANT RECORDING SHEET'S FROM SECTION 6.

1. NATURE OF THE EVENT (circle the event)

Spillway discharge Earthquake Piping Water Quality Terrorist Activity

Commencing: Time 7:30 am/pm; Date 10/9/2010 Finishing: Time 2:30 am/pm; Date 1/4/2011

2. DESCRIPTION OF THE EVENT

Attach relevant sheets from Section 6.

#### 3. STATISTICS.

Total inflow	V.A.	
***************************************	2,796,802	Megalitres
Total discharge	3,589,264	Megalitres
Capacity of Storage prior to inflow	94%	%
Volume prior to inflow	1224405	Megalitres
Maximum inflow - DEALVEO	554,900	MLD
Maximum discharge - DERIVED	346,000	MLD

NOTE UNGAUGED INFLOWS BELOW CRAEGMONE

#### 4. EVENT PROGRESS

Attach copies of the Spillway Level versus Time Graph, the Record of Communication, the Log of Events / Actions, and Rainfall during a Flood Event. (Section 6A)

#### 5. GENERAL COMMENTS

Include in this section any observations or comments regarding the Event, such as Equipment maillunctions, improved Reporting, Safety issues, or any suggestions which may Improve monitoring of the Event

INTERNET FAZZEO. ALLESS

PHONZ FAILLIZE. MOBILE

#### 6. DAMAGE REPORT

Detail any damage to the Embankment, Spillway, Abulments or Stream bank in the downstream area of the Dam. Attach photos.

LEFT BANK SIPHON ACTUATOR TORN FROM MOUNTINGS

INCLUDES DECK AND HANDRATLING

LOWER PTEZOMETER PITT FLOODED

Name: MALL CONSTANCE Signed:

#### **SUMMARY**

Fairbairn Dam Storage was at 94% capacity prior to the inflow which was estimated as 2,796,802 ML. Total discharge was 3,589,264 ML. During the event the Maximum Inflow was 554,900 ML/d with a maximum Discharge of 346,000 ML/d.

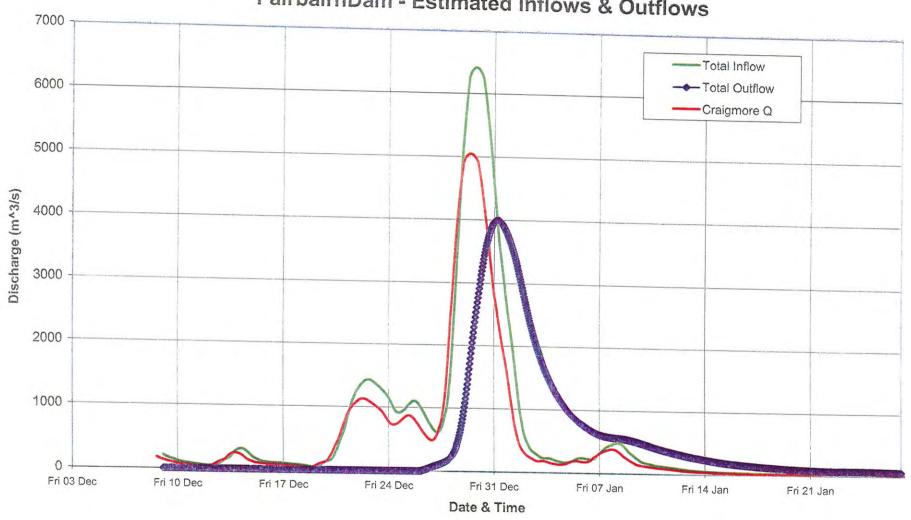
During the event Internet access failed and mobile phone access also failed, causing some problems to communications.

EMERGENCY EVENT REPORT – FAIRBAIR	RN DAM – 10	<sup>in</sup> Sept to 1	st April 2011
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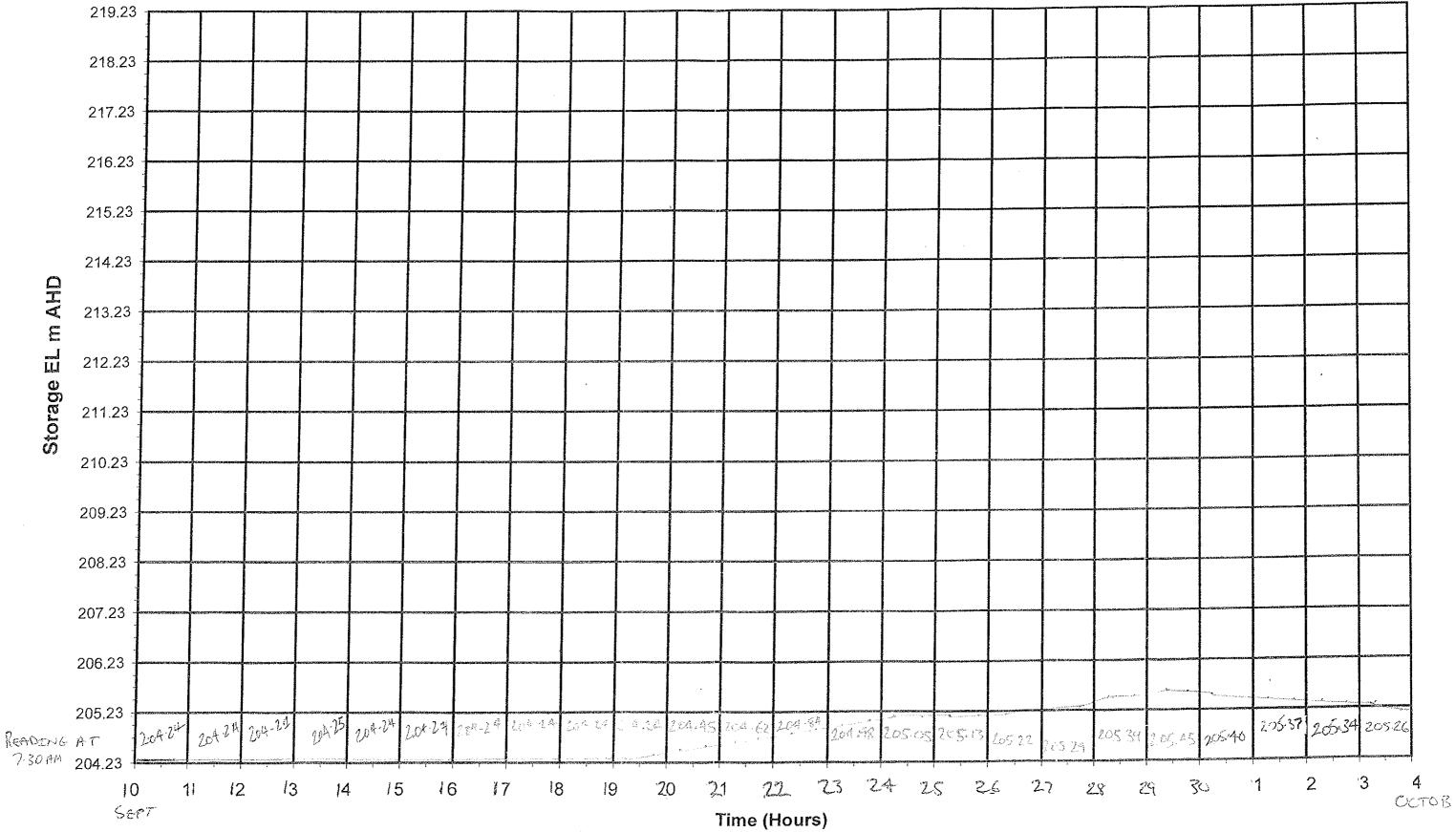
**Emergency Event Recording Sheets** 

• Instrument Readings and Level Data

# FairbairnDam - Estimated Inflows & Outflows



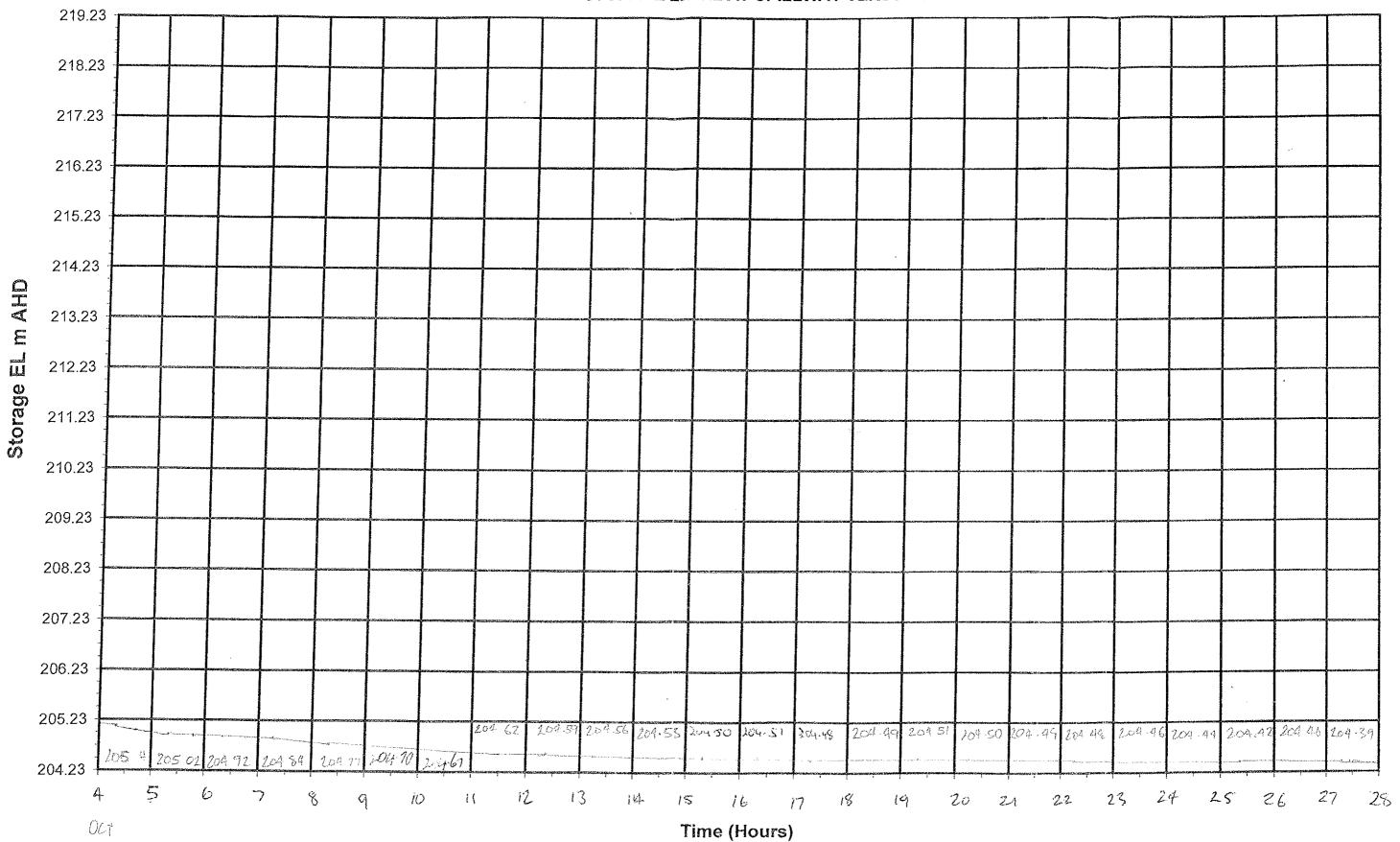
#### STORAGE LEVEL AT SPILLWAY VERSUS TIME

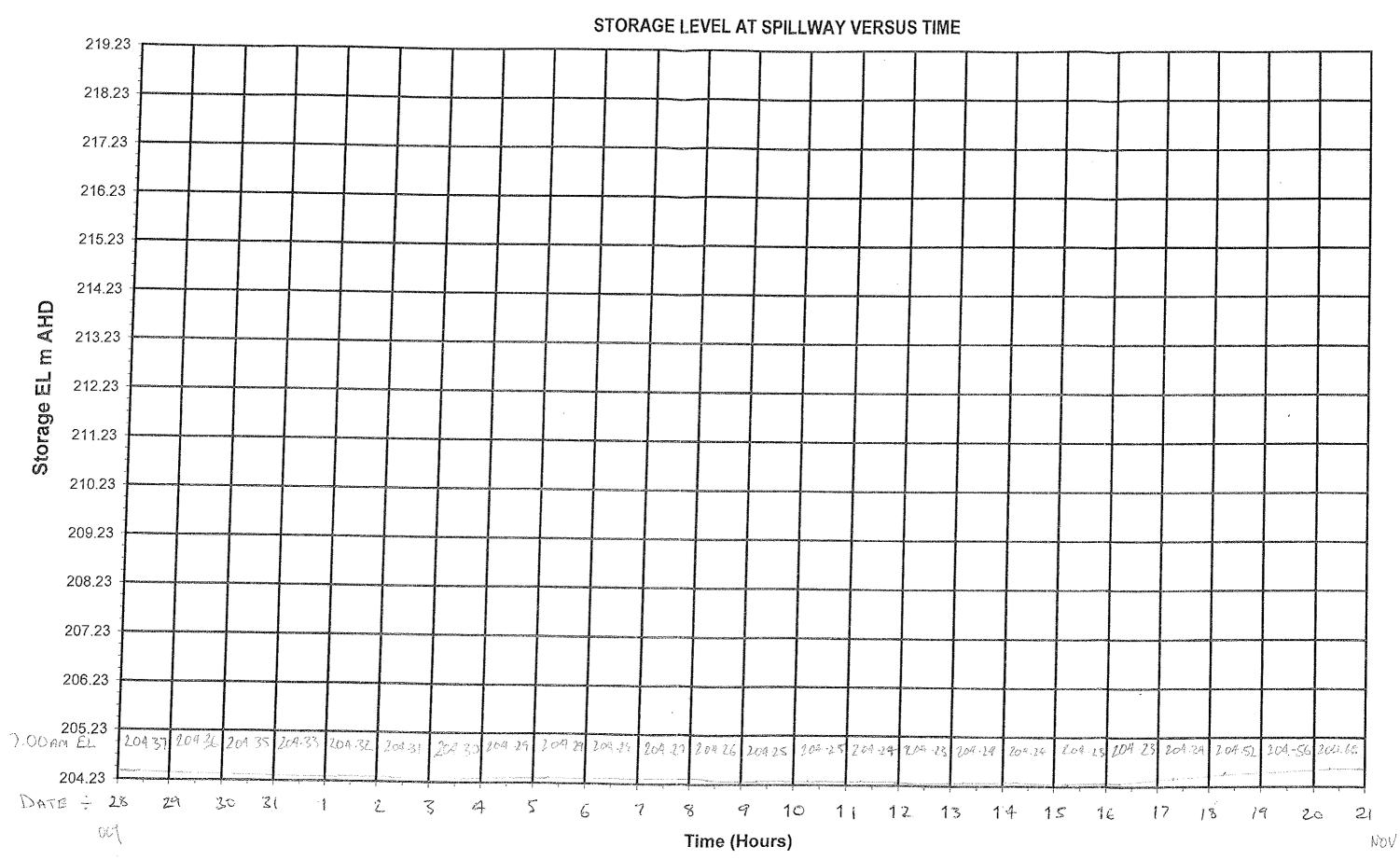


LOMMBILES - 10 SEPTEMBER 2010

GRAPH COMMENCES THE AT DETORER 2010

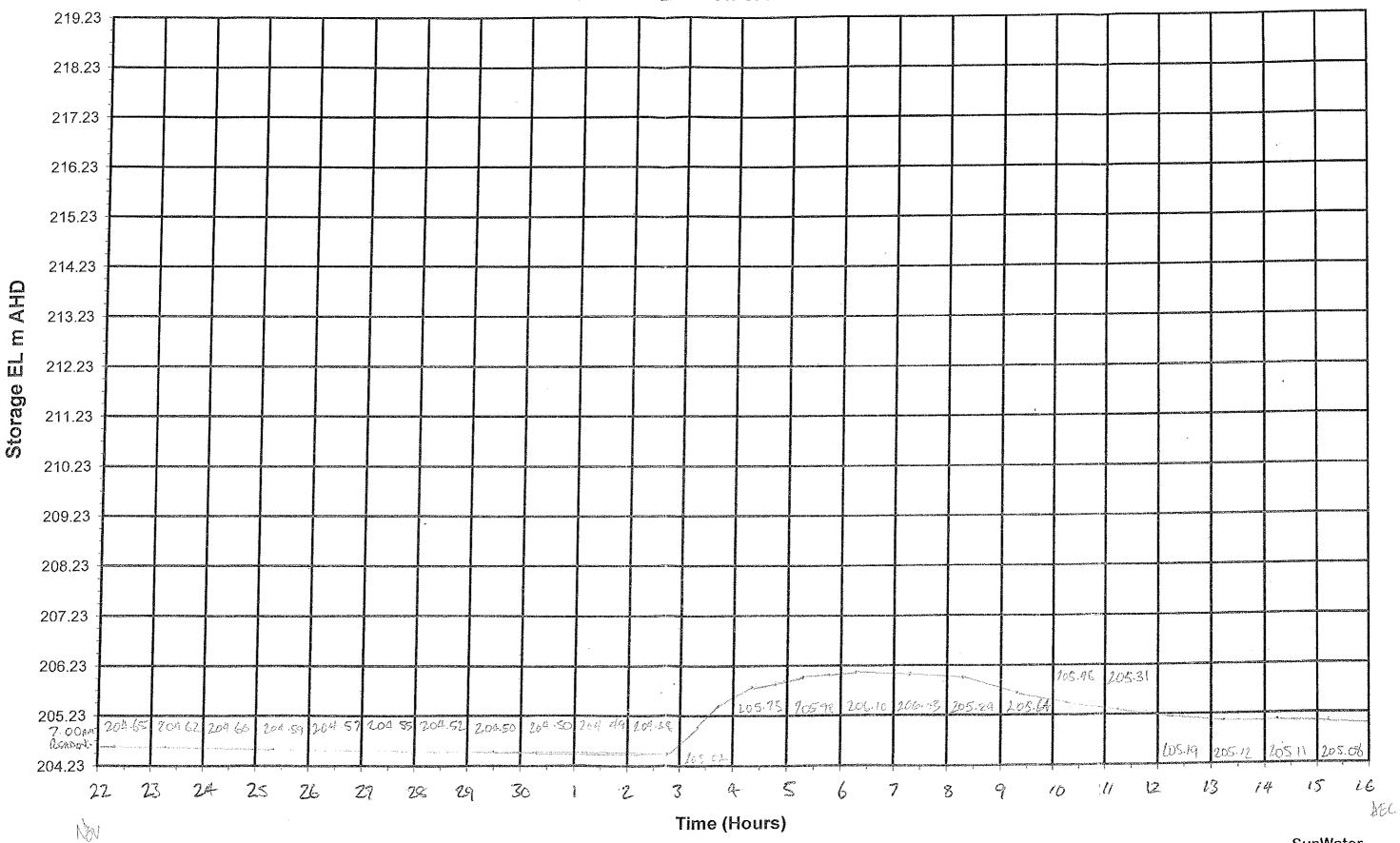
#### STORAGE LEVEL AT SPILLWAY VERSUS TIME

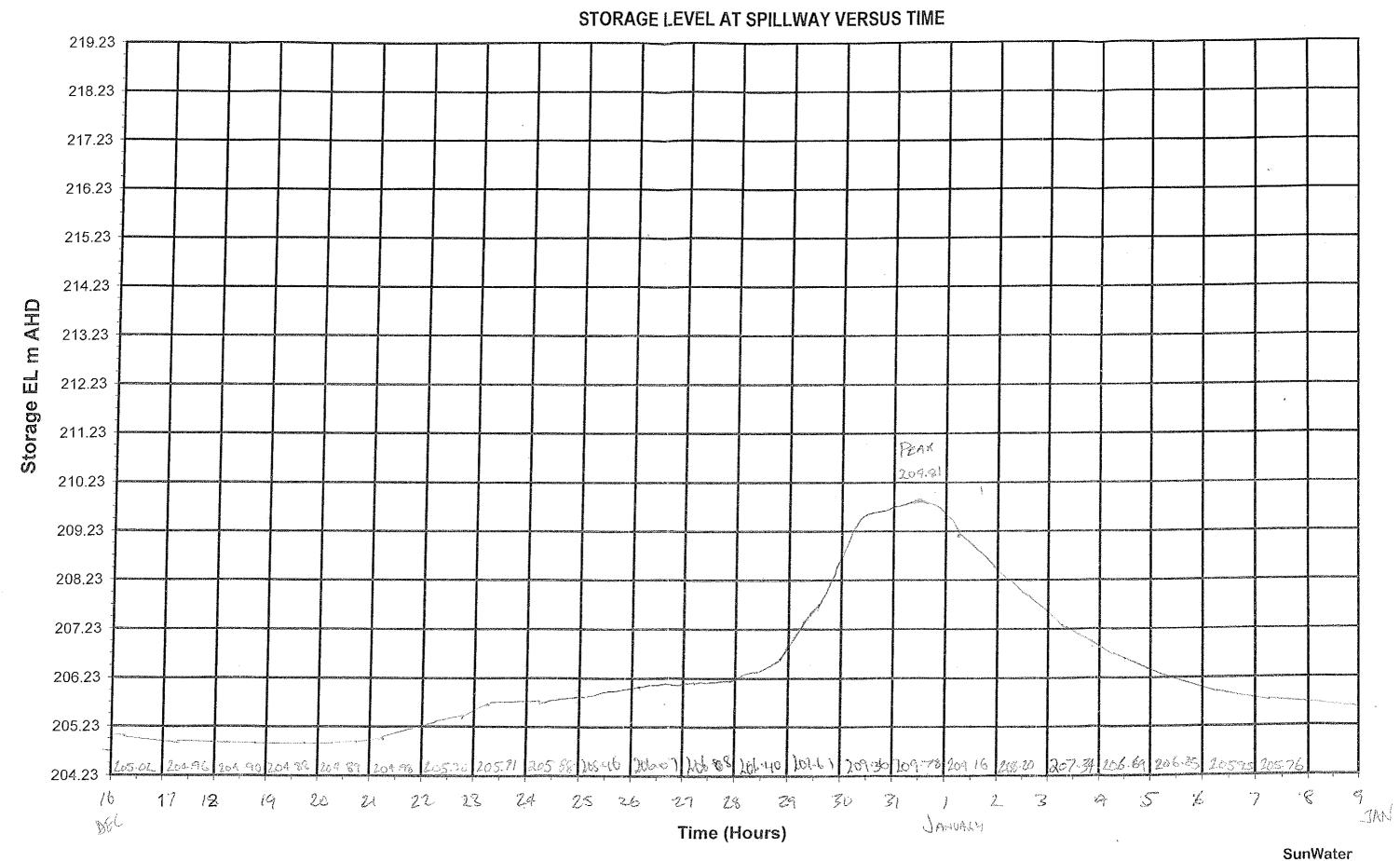




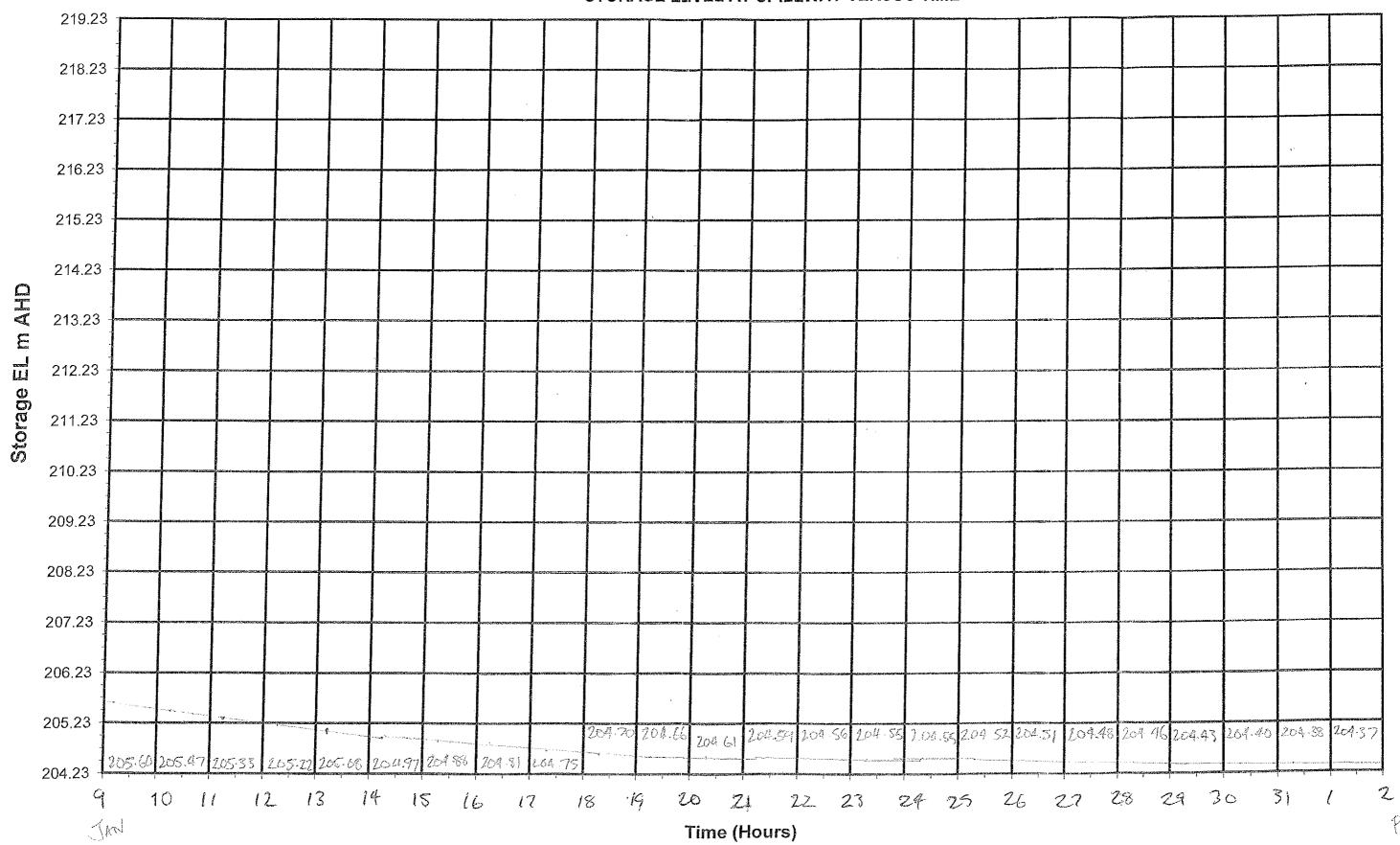
GRAPH COMMENCES 22 DECEMBER 2010

### STORAGE LEVEL AT SPILLWAY VERSUS TIME

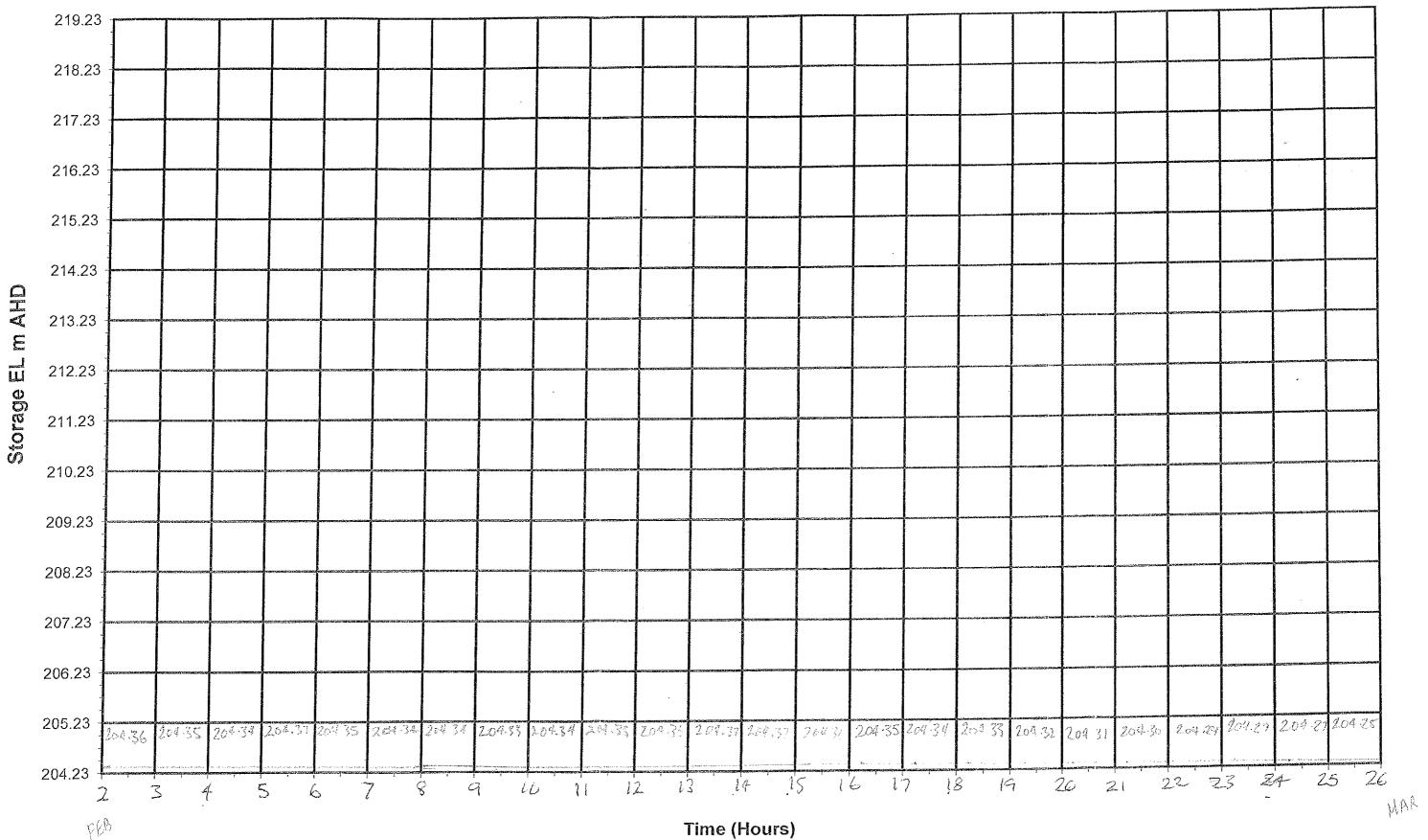


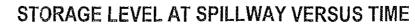


### STORAGE LEVEL AT SPILLWAY VERSUS TIME



## STORAGE LEVEL AT SPILLWAY VERSUS TIME





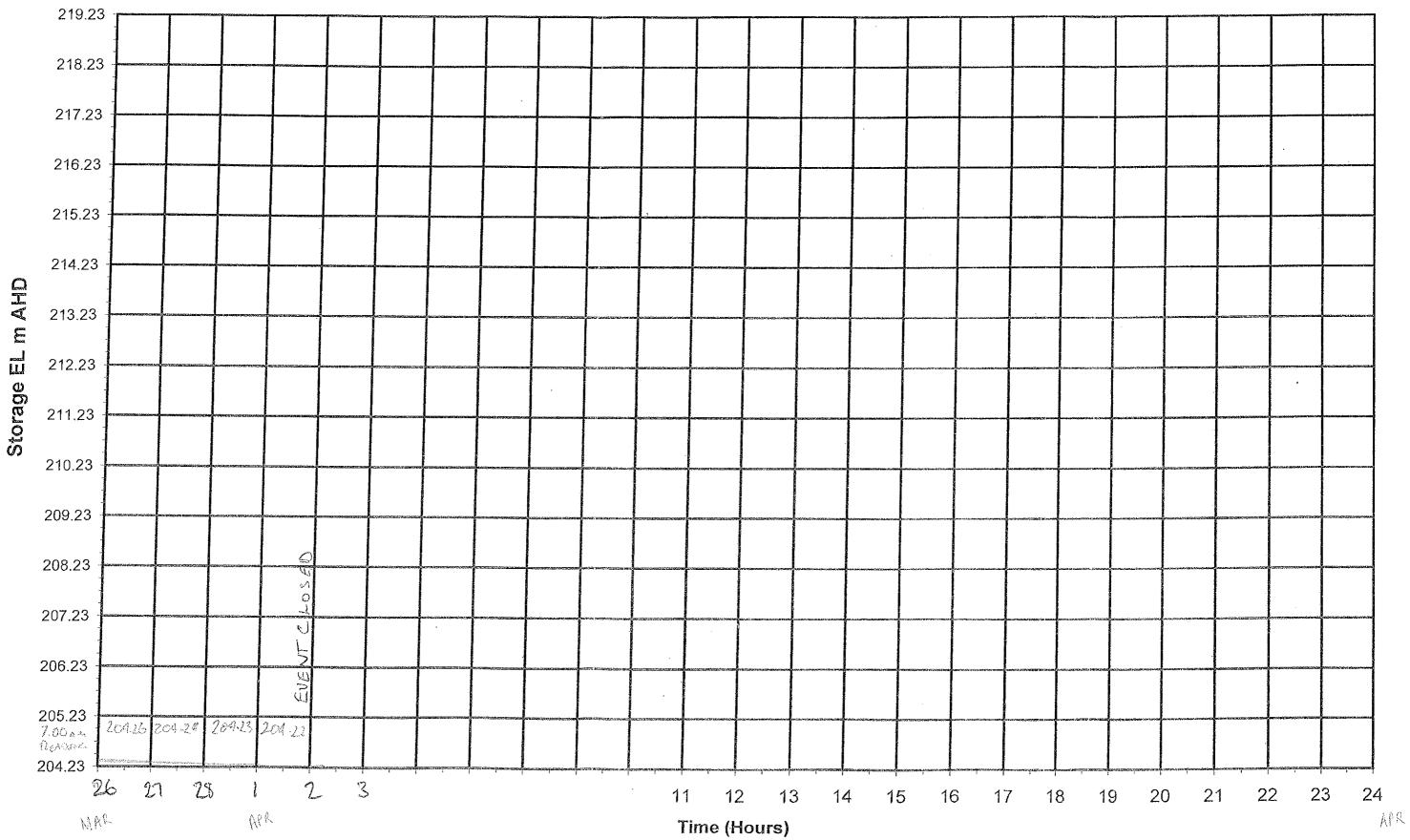


TABLE 1
RECORD OF RAINFALL AND WATER LEVEL DURING FLOOD EVENT

Date	Time	Rainfai mm	l Daily Total	Comments
10-9-10				EAP INITIATED
11-9-10	0800	0.5	0-5	LICHT SHOWER FROMAY AFTERNOW
19-9-10	6700	16m	n Ló	
20-9-10	0700	26.2	26-2	
21-9-60	6700	3.4	3.4	
23-9-10	0760	23.8	2 <b>3</b> .8	
24-9-10	0700	4	4	
25-9-10	0730	22.4	22.4	
26-9-10	0730	6.6	6.6	
17-9-10	Oèo :	0.5	0.5	
28-9-10	07 <i>0</i> 0	0-4	0.4	
29-9-10 6	3706	66	66	YERY MEANY SHOWERS + THUNDESISTERMS CHERNIUM
10-10-10	0200	4.4	4.4	
12-10-10	5700	1.6	1.6	
13.10.10	7 <i>0</i> 0 [	1.0	1.0	
6.10.00	7700	10.4	10.4	
4-11-10 (	7100	2.2	2.2	
5-1(-10 0	702	4.4	9.4	
3-11-10 0	100	6 mm	6 am	
17-11-10 0	2 <i>0</i> 0	69mm	69 m	
18-11-60 0	200	72 ann	4 rmin	
9-11-10 0	200	1-Linn	1-2m-	
0-11-10 0				
2-1(-10 0	200 3	4-8	34.8	
2-11-60				
3-11-10 0				
1-11-10 07				
-11-10 :07	00 4	4.4.	4.4	
-11-16 07	:		800	

TABLE 1
RECORD OF RAINFALL AND WATER LEVEL DURING FLOOD EVENT

	Date	Time	Rainfa mm	li Daily Total	Comments
	1-12-1	0 0700	2-6,	n 2-6	
	2-12-1	0 0700	7.0	1.0	
	3-12-	10 0700	163m	n 183mm	
	d - 12 -	10 0700	5.2 W	in 5-2 am	
	5-12-1				
	7-12-0	60 020	0 6.4	6.4	
	8-12-1	0 0200	0-4	0.4	
	9-12-		1		
	12-12-1	0 0700	7-0	7-0	•
	17-12-	100100	.5.6	5.6	
	19-12-11	0700	22m=	~ 22 am	
	20-12-4	) O 704	10.5	10·5	
7	13-12-4	0100	32	37	
1	4.12-10	0700	8	8	
-	15-12-10	D1 c0	ノファル	17-6	
5	b-12.10	0700	d=31	18-6	
2	マーノフィン	0700	74.0	201-0	
1	فرسريه،ن	870°	J.	.6	
	30-12-10	0 700	©	0	
7	31.12.10	0700	1.2	1.2	
ر در در	5-1-81	0200	5-4	5-4	
6	1.0	0700	12.4	12,4	· · · · · · · · · · · · · · · · · · ·
10	0-1-11	0700	2-0	2.0	
14	1.11	D200	1-6	1-6	y <del></del>
18	11.	0100	3-\$	3-5	
ì	•	0700	0.8	0.8	
1		0700		3.8	
6-	2-11	0100	44.2	442	
9	-2-11	0700	9.0	9.0	

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TABLE 1
RECORD OF RAINFALL AND WATER LEVEL DURING FLOOD EVENT

	Date	Time	Rainfall mm	Daily Total	Comments
	15-2-11	0,250	3	3	
	11-2-11 15-2-11 16-2-11	0100 0760	0.6	0.6	
	16-2-11	0700	7.7	1.4	
	22-2-11	0200	5.0	5.0	•
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# Rainfall Craigmore

Rainfall Craigmore gauging station

Kamia	III Craigmore gauging st
Date	Rainfall: mm
5.9.10	119
6.9.10	1
9.9.10	2
10.9.10	3
17.9.10	7
19.9.10	87
20.9.10	3
22.9.10	10
23.9.10	11
24.9.10	8
25.9.10	39
28.9.10	18
29.9.10	6
9.10.10	11
12.10.10	1
15.10.10	30
24.10.10	2
26.10.10	14.
1.11.10	1
4.11.10	1
12.11.10	20
13.11.10	1
15.11.10	4
16.11.10	77
17.11.10	11
18.11.10	9
20.11.10	33
21.11.10	1
22.11.10	1
23.11.10	1
11.12.10	27
18.12.10	26
19.12.10	22

Rainfall Craigmore

Rangan Craigmore	
22.12.10	35
23.12.10	8
24.12.10	3
25.12.10	23
26.12.10	21
27.12.10	50
30.12.10	1
4.1.11	1
5.1.11	7
18.1.11	16
20.1.11	5
1.2.11	1
5.2.11	5
8.2.11	13
9.2.11	1
19.2.11	4
21.2.11	3
***************************************	s.,-/

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Date   1902/16   Copanity (ML)   ML/Cap)   Discharge for   24 for (ML)   1195.00 (ML)   Rainful (mm)   1302091   1202091   1002091   1203.711   1225999.77   0.00			130216	400040 FI	400040	400000 51	CRAIGMORE	Total estimated
Date   @ 6am		130216 EL		130216 Flow (ML/day) at	130216 Discharge for	130209 Flow for		
2009/2010   203.717   122519.77   0.00   0	Date	@ 6am						
3008/2010   203.716   1228124.77   0.00					0.00			(
4096/2010   203.722   122912546   0.00   0.00   0.00   515.10   119   643.67   6096/2010   203.722   12522645   0.00   0.00   0.00   1028.20   1   1266.57   7099/2010   204.036   1253250.45   0.00   0.00   0.00   9937.60   0   1242.2   8099/2010   204.036   1287119.72   0.00   0.00   0.00   8324.40   0   1242.2   8099/2010   204.134   1296764.86   0.00   0.00   2.00   2.00   2.0   2.00   8099/2010   204.134   1296761.08   0.00   0.00   2.00   2.00   2.00   2.00   8099/2010   204.139   1296610.08   0.00   2.8 70   1131.20   3   144   81099/2010   204.24   130281.99   40.00   0.00   2.00   776.60   0.00   8109/2010   204.24   130281.99   40.00   776.60   0.00   776.60   0.00   8109/2010   204.24   130281.99   40.00   776.60   0.00   776.60   0.00   8109/2010   204.24   130281.99   40.00   776.60   0.00   776.60   0.00   8109/2010   204.24   130281.99   40.00   776.60   0.00   0.00   2.00   0.00   8109/2010   204.24   130281.99   40.72   40.50   40.50   64.50   0.00   65.76   8109/2010   204.24   130281.99   40.72   40.50   64.50   0.00   65.76   8109/2010   204.24   130281.99   40.72   30.70   60.60   20.70   770   60.70   8109/2010   204.22   130281.99   40.72   30.70   60.60   20.70   770   0.24   60.70   770   70.00   770   7								(
6098/2010   203 980   232526 945   0.00   0.00   0.00   155.50   119   643.67			1225129.77					(
6009/2010   220,3908   1283250.46   0.00   0.00   10292.60   1   128667   7/09/2010   204,136   1287119.72   0.00   0.00   83937.80   0   12422.2   8/09/2010   204,136   1287119.72   0.00   0.00   8324.40   0   13405.2   10/09/2010   204,139   1295742.86   0.00   0.00   2301.60   2   287   10/09/2010   204,139   1295742.86   0.00   0.00   28.70   1131.20   3   141   11/09/2010   204,241   1302619.34   20.28   40.90   778.60   0   970.7   12/09/2010   204,242   1302619.34   20.28   40.90   778.60   0   970.7   12/09/2010   204,242   1302619.94   39.00   39.50   422.10   0   52.76   14/09/2010   204,242   1302619.94   37.7   43.50   545.30   0   681.62   14/09/2010   204,242   130291.91   43.72   43.50   545.30   0   681.62   16/09/2010   204,242   130291.91   43.72   43.50   545.30   0   681.62   16/09/2010   204,242   130291.93   36.37   31.10   408.40   0   510.7   16/09/2010   204,242   300382.03   6.05   27.30   23.30   7   31.73   16/09/2010   204,242   300382.03   6.05   27.30   23.30   7   31.73   16/09/2010   204,242   300382.03   6.05   27.30   23.30   7   317.37   16/09/2010   204,242   300382.03   7   74.20   10.20   179.70   0   224.62   20.000000000000000000000000000000000								
1709/2010   204.36   272214.59   0.00   0.00   9937.80   0   12422.5   909/2010   204.136   228719.72   0.00   0.00   3224.40   0   10445.								
8099/2010   204.194   1287149.72   0.00   0.00   3324.40   0   10495   9099/2010   204.194   1289764.86   0.00   0.00   28.70   1131.20   3   141   11/099/2010   204.24   302619.94   20.28   40.90   776.60   0   770.71   1209/2010   204.24   302619.94   20.28   40.90   576.60   0   770.71   1209/2010   204.24   302619.94   30.90   30.90   43.30   569.70   0   712.14   1309/2010   204.24   3002619.94   30.90   39.50   422.10   0   527.62   14/09/2010   204.24   3002619.94   43.72   43.50   545.30   0   681.62   14/09/2010   204.24   3002619.94   43.72   33.570   614.80   0   768.   16/09/2010   204.24   3002619.94   43.72   33.570   614.80   0   768.   16/09/2010   204.224   300281.99   17.42   10.20   179.70   0   224.62   18/09/2010   204.224   300393.09   17.42   10.20   179.70   0   224.62   18/09/2010   204.224   300293.09   17.42   10.20   179.70   0   224.62   18/09/2010   204.242   300293.09   17.42   10.20   179.70   0   224.62   18/09/2010   204.424   303093.07   310.91   317.20   19330.40   3   24150.2   2109/2010   204.624   303093.07   310.91   317.20   19330.40   3   24150.2   2109/2010   204.624   308093.07   40.96   767.67   20099.00   0   3373.7   2209/2010   204.624   308093.50   676.90   12734.90   22995.50   10   33699.12   2209/2010   204.624   438093.60   4360.44   4360.60   4360.44   4360.60   4360.44   4360.60   4360.44   4360.60   4360.44   4360.60   4360.44   4360.40   4360.40		204.036	1272214.59					12422.25
1009/2010   204.242   3002479.9   2022   40.90   776.66   0   970.7				0.00				10405.5
11/19/2010   204.24   1302619.94   20.22   40.90   776.60   0   970.7								2877
1209/2010   204.24   1302619.94   39.09   43.90   568.70   0   712.12   1309/2010   204.24   1302619.94   39.09   39.50   422.10   0   527.62   1409/2010   204.24   1302619.94   43.72   43.50   545.30   0   681.62   1409/2010   204.24   1302619.94   43.72   43.50   545.30   0   681.62   1409/2010   204.22   1302619.94   43.72   43.50   545.30   0   758.   1409/2010   204.22   1302619.94   43.72   35.70   614.80   0   758.   1409/2010   204.22   1302619.34   43.72   43.50   25.59   7   7   31.73   1809/2010   204.22   3109082.23   16.00   21.50   25.59   0   7   31.73   1809/2010   204.22   130282.95   17.42   10.20   170.70   0   224.62   1809/2010   204.24   130282.95   14.02   10.20   170.70   0   224.62   1809/2010   204.24   1302619.95   14.06   78.00   270.66   87   349.   2009/2010   204.64   133025.90   7   110.11   3172.50   1320.40   3   24150   22009/2010   204.64   130808.50   407.90   7676.70   28068.30   10   3868.12   22009/2010   204.64   136083.50   407.90   7676.70   28068.30   10   3868.12   22009/2010   204.82   1394851.39   8764.90   12734.90   28683.30   10   38689.12   22009/2010   204.82   1394851.39   8764.90   12734.90   28683.30   10   38689.12   22009/2010   204.64   14782867.75   16885.14   16112.80   17013.80   8   2077.2   22009/2010   204.64   14782867.75   16885.14   16112.80   17013.80   8   2077.2   22009/2010   205.04   143603.60   18003.88   21325.60   25088.90   3   3361.12   22099/2010   205.04   143603.60   18003.88   21325.60   25088.90   3   3361.12   22099/2010   205.391   144869.85   25993.90   2744/10   42794.70   0   53483.71   2709/2010   205.391   148493.79   28936.29   30782.90   203494.90   18   25483.62   2909/2010   205.451   148493.79   28936.29   30782.90   203494.90   18   25483.25   2909/2010   205.451   148493.79   2909/2010   205.451   148493.79   2909/2010   205.451   149698.65   26706.48   29317.40   5033.40   0   26667.74   200.00   204.458   138492.26   20704.89   30982.64   29481.60   20637.40   0   26667.74   200.00   206.467   206.66   206.66   2								
1309/2010   204.24   1302619.94   39.09   39.50   422.10   0   527.62   1409/2010   204.24   1302619.94   43.72   35.70   614.80   0   788.   1509/2010   204.24   1302619.94   43.72   35.70   614.80   0   788.   1509/2010   204.23   1302632.03   16.09   21.30   255.90   7   317.37   1509/2010   204.228   1300832.03   16.09   21.30   255.90   7   317.37   1509/2010   204.228   1300832.03   16.09   21.30   255.90   7   317.37   1509/2010   204.242   1302317.91   40.86   78.50   278.60   87   349.   2009/2010   204.242   1302317.91   40.86   78.50   278.60   87   349.   2009/2010   204.242   130231.93   17.01   1372.250   130230.40   3   24180.   2009/2010   204.443   1333250.07   1120.11   3172.250   130230.40   3   24180.   2209/2010   204.624   1300838.07   4079.88   7676.70   280960.0   0   36373.   2209/2010   204.824   1308683.39   8764.60   1274.40   269383.30   10   33698.12   23098/2010   204.824   1308683.39   8764.60   1274.40   269383.30   10   33698.12   24098/2010   205.098   146218.33   8764.40   1274.40   269383.30   10   33698.12   24098/2010   205.098   146218.33   8603.88   21329.60   2508.69   3   3361.12   2609/2010   205.098   1465792.36   25099.290   27430.00   2508.69   3   3361.12   2609/2010   205.998   148908.60   3809.80   27440.10   4794.70   0   53493.37   3009/2010   205.998   448908.60   31970.79   28336.29   3078.90   20394.90   18   25493.62   2809/2010   205.386   448908.60   31970.79   28336.29   3078.90   20394.90   18   25493.62   2809/2010   205.386   448908.60   33940.80   2094.70   0   204.84   34908.60   33940.80   2094.70   0   204.84   34908.60   33940.80   2094.70   0   204.84   34908.60   33940.80   2094.70   0   204.84   34908.60   3390.24   4   496.86   304.89   30								
14409/2010   204,242   1302619.94   43,72   43.50   545.30   0   681.62   1509/2010   204,242   1302619.94   43,72   35,70   61.680   0   78.8   1509/2010   204,223   1302619.94   43,72   35,70   61.680   0   78.8   1609/2010   204,223   1300332.93   16.09   21.30   25.590   7   317,37   1809/2010   204,224   1300332.93   16.09   21.30   25.590   7   317,37   1809/2010   204,242   1300332.93   17.42   10.20   170,70   0   224.62   1809/2010   204,242   1302019.98   17.42   10.20   170,70   0   224.62   1809/2010   204,242   1302019.99   17.42   10.20   170,70   0   224.62   1809/2010   204,443   1333259.07   1120.11   3172.50   13320.40   3   24150   2209/2010   204,643   1350635.07   4079.99   7676.70   28090.00   0   35373.7   2209/2010   204,644   1360635.39   4079.99   7676.70   28090.00   0   35373.7   2209/2010   204,644   1360635.39   3744.00   12734.80   26635.30   10   33896.12   2309/2010   204,644   146210.31   13628.47   16401.80   12424.60   11   155307.   2409/2010   205,642   142867.75   16685.14   18112.60   16701.80   6   20077.2   2509/2010   205,048   144803.60   18603.48   21325.60   25068.90   3   31361.12   2509/2010   205,248   144803.60   18603.48   21325.60   25068.90   3   3   3361.12   2509/2010   205,248   146592.36   25093.09   27440.10   42794.76   0   5488.37   2509/2010   205,341   1461433.79   28362.89   2769.40   0   2769.40   0   1648.37   1649.37								
15/08/2010   204.24   1502618.94   43.72   35.70   614.80   0   758.						545.30		681.625
17/10/2/10   204.228   1300832.03   16.09   21.30   253.00   7   317.37   18/08/2010   204.242   302321.98   17.42   10.20   17.70   0   224.52   19/08/2010   204.424   3023217.91   40.86   78.90   279.60   87   349.   20/09/2010   204.443   1333259.07   1120.11   3172.50   19320.40   3   24150   2010/2010   204.443   1333259.07   4707.89   7676.70   29990.00   0   36373.7   2109/2010   204.824   1396651.38   876.90   12734.90   26935.30   10   33667.27   2209/2010   204.824   1396651.38   876.90   12734.90   26935.30   10   33667.27   2409/2010   204.89   41628.91   31622.84   18011.90   1244.60   11   15530.7   2409/2010   205.99   41628.97   16686.14   18112.60   16701.80   8   20877.2   2409/2010   205.99   4142996.75   16686.14   18112.60   16701.80   8   20877.2   2609/2010   205.99   4143996.70   8605.43   24437.30   30396.00   0   379.97   2809/2010   205.29   414598.30   25993.99   27440.10   42744.70   0   53493.74   2809/2010   205.29   414598.30   25993.99   27440.10   42744.70   0   53493.74   2809/2010   205.29   414598.30   25993.99   27440.10   42744.70   0   53493.74   2809/2010   205.29   414598.30   25993.89   3782.90   2034.90   18   25493.82   2809/2010   205.49   414598.39   3362.90   30782.90   2034.90   18   25493.82   4100/2010   205.40   414598.23   4166.84   30459.20   27745.70   0   3248.26   4100/2010   205.40   414598.65   3065.46   30459.20   27746.10   0   3248.26   4100/2010   205.40   414598.66   26708.48   23917.40   2063.74   0   2064.77   3000/2010   205.40   414598.66   26708.48   23917.40   5033.40   0   2064.77   3000/2010   205.40   414598.66   26708.48   23917.40   5033.40   0   2064.77   3000/2010   205.40   4146974.12   23910.49   41967.30   2464.90   2464.90   3168.82   31605.48   30459.20   2474.90   0   3048.97   3160.90   3049.90   0   3049.90			1302619.94	43.72				768.5
18/08/2010   204.243   130231.9.6   17.42   10.20   179.70   0   224.82   18/08/2010   204.424   130281.9.7   40.86   78.90   279.66   87   34.82   20/08/2010   204.434   1332850.07   1120.11   3172.50   18320.40   3   24150.7   22/09/2010   204.824   139.8651.39   8764.90   12734.50   28935.30   10   36373.7   22/09/2010   204.82   139.8651.39   8764.90   12734.50   28935.30   10   36383.241   12.309.22010   204.89   1415219.31   13628.47   16401.80   12424.60   11   15530.7   12.309.22010   205.042   1415219.31   13628.47   16401.80   16701.80   8   20877.2   25/09/2010   205.042   1415219.37   15688.14   18112.60   16701.80   8   20877.2   25/09/2010   205.098   143.8403.60   18603.48   21323.60   25086.80   39   31361.12   27/09/2010   205.218   1458383.62   21624.43   24437.30   30396.00   0   37989   27409/2010   205.218   1458383.62   21624.43   24437.30   30396.00   0   37989   2799/2010   205.218   1481483.79   28336.29   30782.90   20394.90   18   25493.22   2909/2010   205.45   149098.67   3170.79   31840.00   21794.70   6   27243.37   2700/2010   205.391   1481493.79   2336.29   3032.64   29481.60   20337.40   0   23182.61   2710/2010   205.395   1480529.99   3032.64   29481.60   20337.40   0   23182.61   2710/2010   205.365   1480529.99   3032.64   29481.60   20337.40   0   26046.7   3100/2010   205.365   1480529.99   3032.64   29481.60   20337.40   0   26046.7   3100/2010   205.365   145986.65   26708.48   23917.40   50334.0   0   2604.7   510/2010   205.266   145986.65   26708.48   23917.40   50334.0   0   2604.7   510/2010   205.266   145986.65   26708.48   23917.40   50334.0   0   2604.7   510/2010   205.261   145980.65   26708.48   23917.40   50334.0   0   2604.7   510/2010   205.23   1422976.48   18961.17   16220.60   1857.40   0   204.78   38331.39   1650.79   244.30   566.10   0   77.62   57.02010   204.548   33850.79   33850.90   358.30   0   369.57   369.00   0   3383.7   369.00   369.50   0   369.57   369.00   369.50   369.50   369.50   369.50   369.50   369.50   369.50   369.50   369.								510.5
19/09/2010   204,242   1302917.91   40.86   78.90   279.60   87   349.								
2009/2010   204.443   133325.9.07   112.0.11   3172.50   19320.40   3   24150.2010   204.64   136903.50   4079.99   7676.70   29999.00   0   36373.7   22709/2010   204.842   1394651.39   8764.90   12734.90   26935.30   10   33669.12   2309/2010   204.98   1416219.31   32626.47   16401.90   12424.60   11   1550.77   1409/2010   205.042   142596.75   16685.14   18112.60   16701.80   8   20877.2   2509/2010   205.098   1434803.60   18603.49   21323.60   25088.90   39   31361.12   2509/2010   205.098   1434803.60   18603.49   21323.60   25088.90   39   31361.12   2709/2010   205.218   1453833.92   21624.43   24437.30   30395.00   0   3799/2709/2010   205.293   1461979.36   25093.09   27440.10   42794.70   0   53493.37   2809/2010   205.293   1461979.36   25093.09   27440.10   42794.70   0   53493.37   2809/2010   205.391   1481493.79   28336.29   30782.80   20334.90   18   25493.82   2909/2010   205.45   1400688.57   3130.79   31840.00   21794.70   6   27243.37   3009/2010   205.381   1460529.99   30322.64   2461.60   26837.40   0   221022010   205.388   1460529.99   30322.64   2461.60   26837.40   0   22046.78   2710/2010   205.388   1460529.99   30322.64   2461.60   26837.40   0   26046.78   2710/2010   205.388   1460529.99   30322.64   2461.60   26837.40   0   26046.78   2710/2010   205.342   1473632.30   29142.90   27435.80   10887.90   0   1360.87   410/2010   205.256   1459865.66   26708.48   23917.40   5033.40   0   6291.78   410/2010   205.256   1459865.66   26708.48   23917.40   5033.40   0   6291.78   410/2010   205.256   1459865.66   26708.48   23917.40   5033.40   0   6291.78   410/2010   205.256   4189865.67   418986.75   41986.70								
22/10/2010								
22/09/2010		204.624						36373.75
2309/2010	22/09/2010	204.842		8764.90				33669.125
25/09/2010 205.038 1434803.60 18603.48 21323.60 2508.90 39 31361.12: 25/09/2010 205.218 1453833.62 21624.43 24437.30 30386.00 0 37599: 27/09/2010 205.238 1468792.35 25093.09 27440.10 42794.70 0 53493.37: 28/09/2010 205.391 1481493.79 28336.29 30782.90 20394.90 18 25993.62: 28/09/2010 205.391 1481493.79 28336.29 30782.90 20394.90 18 25993.62: 28/09/2010 205.403 1483423.66 31605.48 30459.20 25746.10 0 32182.62: 11/10/2010 205.342 1473832.30 29142.90 27435.80 10887.90 0 13869.87: 21/10/2010 205.342 1473832.30 29142.90 27435.80 10887.90 0 13869.87: 21/10/2010 205.342 1473832.30 29142.90 27435.80 10887.90 0 13869.87: 31/10/2010 205.343 1465492.30 29142.90 27435.80 10887.90 0 32182.62: 41/10/2010 205.334 1469886.56 26708.48 23917.40 5033.40 0 6291.7: 41/10/2010 205.334 1469886.56 26708.48 23917.40 5033.40 0 6291.7: 41/10/2010 205.334 147984.71 140974.14 22931.04 19867.30 2547.00 0 3183.75: 51/10/2010 205.023 1422976.48 19961.17 16320.60 1657.40 0 2071.7: 61/10/2010 204.948 1395585.45 12984.11 11207.30 750.60 0 9.388.22: 81/10/2010 204.948 1395585.45 12984.11 11207.30 750.60 0 9.388.22: 81/10/2010 204.714 1374802.39 8851.71 7784.40 465.60 11 588.22: 91/10/2010 204.667 1367551.35 7552.94 6673.90 403.20 0 50.41 11/10/2010 204.681 1360013.21 6401.07 5702.40 356.00 1 386.02: 11/10/2010 204.681 1360013.21 6401.07 5702.40 356.00 0 444.81 12/10/2010 204.589 1355556.21 5512.45 4994.10 318.60 1 386.00 1 386.22: 11/10/2010 204.589 1355556.21 5512.45 4994.10 318.60 1 386.00 1 386.22: 11/10/2010 204.481 133899.92 308.93 3978.80 6610.10 0 3626.22: 11/10/2010 204.481 133899.93 308.93 3978.80 6610.10 0 3626.22: 11/10/2010 204.481 133899.93 308.93 3978.80 6610.10 0 3626.22: 11/10/2010 204.481 133899.93 308.93 308.93 368.30 0 444.87.87 11/10/2010 204.481 133899.93 308.93 30			1416219.31		16401.90			15530.75
26/09/2010   205.218   1458333.62   21624.43   24437.30   30336.00   0   37989.   27/09/2010   205.239   1465792.36   25993.09   27440.10   42794.70   0   53493.62   28/09/2010   205.391   1461493.79   28336.28   30782.90   20394.90   18   25493.62   29/09/2010   205.45   1490988.57   31370.79   31840.00   21794.70   6   27243.37   30/09/2010   205.45   1490988.57   31370.79   31840.00   21794.70   6   27243.37   30/09/2010   205.45   1490888.53   31605.48   30459.20   25746.10   0   32182.62   1/10/2010   205.385   1480529.99   30322.64   29481.60   20637.40   0   26046.7   2/10/2010   205.256   1459886.56   26708.48   23917.40   5033.40   0   6291.7   3/10/2010   205.256   1459886.56   26708.48   23917.40   5033.40   0   6291.7   3/10/2010   205.033   1422976.48   19861.17   16320.60   1657.40   0   2071.7   3/10/2010   205.033   1422976.48   19861.17   16320.60   1657.40   0   2071.7   3/10/2010   204.931   1408540.72   15618.79   13484.30   1094.90   0   1386.82   3/10/2010   204.769   1383313.19   10650.79   9244.50   666.10   0   707.62   3/10/2010   204.744   1374802.39   8851.71   7784.40   465.60   11   582   3/10/2010   204.618   1380013.21   6401.07   5702.40   356.00   0   444   3/10/2010   204.618   1360013.21   6401.07   5702.40   356.00   0   447.87   3/10/2010   204.629   1363551.35   7552.94   6673.90   368.30   0   447.87   3/10/2010   204.629   1346377.49   4254.54   4394.10   318.60   1   388.2   3/10/2010   204.528   1346377.49   4254.54   4394.10   318.60   1   388.2   3/10/2010   204.529   1345677.93   4254.54   4394.10   318.60   1   388.2   3/10/2010   204.529   1345677.93   4548.93   3599.30   360.00   0   344.87   3/10/2010   204.529   1345687.74   348.93   378.90   778.50   0   366.37   3/10/2010   204.529   1345687.74   348.93   3650.90   378.50   0   378.37   3/10/2010   204.439   1356566   3656.03   398.50   0   778.50   0   366.37   3/10/2010   204.439   134686.03   369.30   3650.00   378.30   0   379.30   3/10/2010   204.439   134686.03   348.93   368.00   378.50   0   366.37								20877.25
27709/2010   205.293   1486792.36   25093.09   27440.10   42794.70   0   53493.37								
2809/2010   205.391   1481493.79   28336.29   30782.90   20334.90   18   25493.62   29/09/2010   205.45   149088.67   31370.79   31840.00   21794.70   6   27243.37   3180.00   21794.70   6   27243.37   3180.00   21794.70   6   27243.37   3180.00   21794.70   7   6   27243.37   3180.00   21794.70   7   6   27243.37   3180.00   21794.70   7   6   27243.37   3180.00   21794.70   7   6   27243.37   3180.00   21794.70   7   6   27243.37   3180.00   205.365   148082.99   30322.64   29481.60   20637.40   0   28046.71   2170/2010   205.365   1489886.56   26708.48   23917.40   5033.40   0   6291.71   3190.2010   205.256   1459886.56   26708.48   23917.40   5033.40   0   6291.71   3190.2010   205.237   1440974.14   22981.04   19867.30   2547.00   0   3183.75   310/2010   205.237   1440974.14   22981.04   19867.30   2547.00   0   3183.75   310/2010   205.231   1429876.48   18961.17   16320.60   1657.40   0   2071.75   3190.00   3183.75   319					24437.30			
29/09/2010   205.45   1490988.57   31370.79   31840.00   21794.70   6   27243.37								
3009/2010   205.403   1483422.36   31605.48   30459.20   25746.10   0   32182.62   1/10/2010   205.385   1480529.99   30322.64   29481.60   20837.40   0   26046.78   1/10/2010   205.385   1480529.99   30322.64   29481.60   20837.40   0   26046.78   1/10/2010   205.256   1459866.50   26708.48   23917.40   5033.40   0   6291.77   1/10/2010   205.256   146986.56   26708.48   23917.40   5033.40   0   6291.77   1/10/2010   205.37   1440974.14   22981.04   19867.30   2547.00   0   3183.78   1/10/2010   205.023   1422976.48   18961.17   16320.60   1657.40   0   2071.78   1/10/2010   204.931   1408540.72   15618.79   13464.30   1094.90   0   1368.62   1/10/2010   204.848   1398585.45   12954.11   11207.30   750.60   0   938.28   1/10/2010   204.769   1363313.19   10650.79   9244.30   566.10   0   707.62   1/10/2010   204.616   1367651.35   7552.94   6673.90   403.20   0   504   1/10/2010   204.618   1360013.21   6401.07   5702.40   356.00   0   448   1/2/10/2010   204.589   1365562.18   5512.45   4994.10   318.60   1   398.2   1/10/2010   204.529   1346377.49   4254.54   3850.90   388.30   0   447.87   1/10/2010   204.529   1346377.49   4254.54   3350.90   358.30   0   447.87   1/10/2010   204.589   1343170.61   3519.58   3489.90   785.50   0   981.87   1/10/2010   204.481   134086.45   3418.99   3641.00   2923.50   0   3654.37   1/10/2010   204.484   1338399.32   3260.93   2978.80   6610.10   0   8262.62   1/10/2010   204.484   1338399.32   3260.93   2978.80   6610.10   0   8262.62   1/10/2010   204.484   1338594.30   3047.08   2774.80   904.10   0   1130.12   1/10/2010   204.529   1346577.59   1673.39   3597.30   400.80   30   501   1/10/2010   204.484   1338699.32   3260.93   2978.80   6610.10   0   8262.62   1/10/2010   204.484   1338699.32   3260.93   2978.80   6610.10   0   8262.62   1/10/2010   204.484   1338694.40   331.99   3641.00   2923.50   0   3654.37   1/10/2010   204.484   1338699.32   3260.93   2978.80   6610.10   0   1130.12   1/10/2010   204.484   1338699.39   340.00   2975.69   341.00   2976.62   1								
1/10/2010		205.403						32182.625
3/10/2010				30322.64	29481.60	20837.40		26046.75
4/10/2010         205.137         1440974.14         22981.04         19867.30         2547.00         0         3183.75           5/10/2010         205.023         1422976.48         18961.17         16320.60         1687.40         0         2071.75           6/10/2010         204.931         1408540.72         15618.79         13484.30         1094.90         0         1368.62           7/10/2010         204.848         1395585.45         12954.11         11207.30         750.60         0         938.25           810/2010         204.768         1383313.19         10650.79         9244.30         566.10         0         707.62           9/10/2010         204.714         1374802.39         881.71         7784.40         485.60         11         583.25           10/10/2010         204.667         1367551.35         7552.94         6673.90         403.20         0         504           11/10/2010         204.688         1360013.21         6401.07         5702.40         356.00         0         445           12/10/2010         204.558         1350812.66         4868.57         4387.20         301.10         0         376.375           14/10/2010         204.508         1343170.61 <td></td> <td></td> <td></td> <td>29142.90</td> <td>27435.80</td> <td></td> <td></td> <td></td>				29142.90	27435.80			
5/10/2010         205.023         1422976.48         18961.17         16320.60         1657.40         0         2071.7°           6/10/2010         204.931         1408540.72         15618.79         13484.30         1094.90         0         1368.67°           8/10/2010         204.848         1395585.45         12954.11         11207.30         750.60         0         938.21°           8/10/2010         204.769         1383313.19         10650.79         9244.30         566.10         0         707.625°           9/10/2010         204.714         1374802.39         8851.71         7784.40         465.60         11         582           9/10/2010         204.667         1367551.35         7552.94         6673.90         403.20         0         500           11/10/2010         204.618         1360013.21         6401.07         5702.40         356.00         0         444           12/10/2010         204.581         135562.18         5512.45         4994.10         318.60         1         398.25           13/10/2010         204.583         1356312.66         4868.57         4387.20         301.10         0         376.375           14/10/2010         204.583         1356312.66		205.256			23917.40			
6/10/2010         204.931         1408540.72         15618.79         13484.30         1094.90         0         1388.625           7/10/2010         204.848         1395585.45         12954.11         11207.30         750.60         0         338.25           8/10/2010         204.769         1383313.19         10650.79         9244.30         566.10         0         707.625           9/10/2010         204.714         1374802.39         8851.71         7784.40         465.60         11         582           10/10/2010         204.667         1367551.35         7552.94         6673.90         403.20         0         500           11/10/2010         204.618         1360013.21         6401.07         5702.40         356.00         0         444           12/10/2010         204.589         1355562.18         5512.45         4994.10         318.60         1         398.25           13/10/2010         204.558         1350812.66         4868.57         4387.20         301.10         0         376.375           15/10/2010         204.503         1342407.66         3719.39         3597.30         400.80         30         501           16/10/2010         204.508         1343170.61			1440974.14					
7/10/2010         204.848         1395585.45         12954.11         11207.30         750.60         0         938.25           8/10/2010         204.769         1383313.19         10650.79         9244.30         566.10         0         707.625           9/10/2010         204.714         1374802.39         8851.71         7784.40         465.60         11         583           10/10/2010         204.667         1367551.35         7552.94         6673.90         403.20         0         564           11/10/2010         204.618         1360013.21         6401.07         5702.40         356.00         0         444           12/10/2010         204.588         1355562.18         5512.45         4994.10         318.60         1         398.25           13/10/2010         204.558         1350812.66         4868.67         4387.20         301.10         0         376.375           14/10/2010         204.529         1346377.49         4254.54         3850.90         358.30         0         447.875           15/10/2010         204.508         1343170.61         3519.58         3489.90         785.50         0         981.875           17/10/2010         204.48         1333899.32								
8/10/2010         204.769         1383313.19         10650.79         9244.30         566.10         0         707.625           9/10/2010         204.714         1374802.39         8851.71         7784.40         465.60         11         582           10/10/2010         204.667         1367551.35         7552.94         6673.90         403.20         0         504           11/10/2010         204.618         1360013.21         6401.07         5702.40         356.00         0         445           12/10/2010         204.559         1355562.18         5512.45         4994.10         318.60         1         398.25           13/10/2010         204.559         1355312.66         4868.57         4387.20         301.10         0         376.375           14/10/2010         204.529         1346377.49         4254.54         3850.90         358.30         0         447.875           15/10/2010         204.508         1343170.61         3519.58         3489.90         785.50         0         981.875           15/10/2010         204.48         1338899.32         3297.80         6610.10         0         8262.625           18/10/2010         204.489         1340272.01         3057.69								938.25
10/10/2010   204.667   1367551.35   7552.94   6673.90   403.20   0   504     11/10/2010   204.618   1360013.21   6401.07   5702.40   366.00   0   445     12/10/2010   204.589   1355562.18   5512.45   4994.10   318.60   1   398.25     13/10/2010   204.558   1350812.66   4868.57   4387.20   301.10   0   376.375     14/10/2010   204.529   1346377.49   4254.54   3850.90   358.30   0   447.875     15/10/2010   204.503   1342407.66   3719.39   3597.30   400.80   30   501     16/10/2010   204.508   1343170.61   3519.58   3489.90   785.50   0   981.875     17/10/2010   204.48   1338899.32   3260.93   2978.80   6610.10   0   8262.625     18/10/2010   204.489   1340272.01   3057.69   3350.00   7136.10   0   8920.125     19/10/2010   204.514   1344086.45   3418.99   3641.00   2923.50   0   3654.375     20/10/2010   204.478   1338594.30   3047.08   2774.80   904.10   0   1132.375     22/10/2010   204.449   134024.54   3346.36   3055.10   1449.90   0   1812.375     22/10/2010   204.449   133899.32   2710.05   2391.60   573.90   0   717.375     24/10/2010   204.452   1330697.32   2710.05   2391.60   573.90   0   717.375     24/10/2010   204.451   1327475.79   1673.30   1479.60   275.00   14   343.75     26/10/2010   204.452   1330061.50   1984.40   1727.00   328.50   0   410.625     26/10/2010   204.453   1327475.79   1673.30   1479.60   275.00   14   343.75     27/10/2010   204.351   132687.28   698.82   593.00   138.00   0   172.55     31/10/2010   204.331   131686.64   841.64   702.70   159.20   0   199     31/10/2010   204.331   131686.68   698.82   593.00   138.00   0   172.55     41/10/2010   204.331   131686.68   698.82   593.00   138.00   0   172.55     41/10/2010   204.296   1310993.44   320.83   298.80   92.50   1   156.625     41/10/2010   204.296   1310993.44   320.83   298.80   92.50   1   156.625     41/10/2010   204.296   1310993.44   320.83   298.80   92.50   1   156.625     41/10/2010   204.296   1310993.44   320.83   298.80   92.50   1   156.625     41/10/2010   204.296   1310993.44   320.83   298.80   92			1383313.19	10650.79	9244.30			707.625
11/10/2010         204.618         1360013.21         6401.07         5702.40         356.00         0         445           12/10/2010         204.589         1355562.18         5512.45         4994.10         318.60         1         398.25           13/10/2010         204.558         1350812.66         4868.57         4387.20         301.10         0         376.375           14/10/2010         204.529         1346377.49         4254.54         3860.90         358.30         0         447.875           15/10/2010         204.503         1342407.66         3719.39         3597.30         400.80         30         501           16/10/2010         204.508         1343170.61         3519.58         3489.90         785.50         0         981.875           17/10/2010         204.48         1338899.32         3260.93         2978.80         6610.10         0         8262.62           18/10/2010         204.489         1340272.01         3057.69         3350.00         7136.10         0         8262.62           19/10/2010         204.481         134086.45         3418.99         3641.00         2923.50         0         3654.375           20/10/2010         204.493         1342712.81 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>582</td>								582
12/10/2010         204.589         1355562.18         5512.45         4994.10         318.60         1         398.25           13/10/2010         204.558         1350812.66         4868.57         4387.20         301.10         0         376.375           14/10/2010         204.558         1350812.66         4868.57         4387.20         301.10         0         376.375           14/10/2010         204.503         1342407.66         3719.39         3597.30         400.80         30         501           16/10/2010         204.508         1343170.61         3519.58         3489.90         785.50         0         981.875           17/10/2010         204.48         1338899.32         3260.93         2978.80         6610.10         0         8262.625           18/10/2010         204.489         1340272.01         3057.69         3350.00         7136.10         0         820.125           18/10/2010         204.514         1344086.45         3418.99         3641.00         2923.50         0         3654.375           20/10/2010         204.595         1342712.81         3594.34         3439.10         2357.70         0         2947.125           21/10/2010         204.478         133859								
13/10/2010         204.558         1350812.66         4868.57         4387.20         301.10         0         376.375           14/10/2010         204.529         1346377.49         4254.54         3850.90         358.30         0         447.875           15/10/2010         204.503         1342407.66         3719.39         3597.30         400.80         30         501           16/10/2010         204.508         1343170.61         3519.58         3489.90         785.50         0         981.875           17/10/2010         204.48         1338899.32         3260.93         2978.80         6610.10         0         8262.625           18/10/2010         204.489         1340272.01         3057.69         3350.00         7136.10         0         8920.125           19/10/2010         204.489         1340272.01         3057.69         3350.00         7136.10         0         8920.125           19/10/2010         204.459         13402712.81         3594.34         3439.10         2235.70         0         2947.125           21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         13								
14/10/2010         204.529         1346377.49         4254.54         3850.90         358.30         0         447.875           15/10/2010         204.503         1342407.66         3719.39         3597.30         400.80         30         501           16/10/2010         204.508         1343170.61         3519.58         3489.90         785.50         0         981.875           17/10/2010         204.48         1338899.32         3260.93         2978.80         6610.10         0         8262.625           18/10/2010         204.48         13400272.01         3057.69         3350.00         7136.10         0         8920.125           19/10/2010         204.514         1344086.45         3418.99         3641.00         2923.50         0         3654.375           20/10/2010         204.505         1342712.81         3594.34         3439.10         2357.70         0         2947.125           21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.478         13								
15/10/2010         204.503         1342407.66         3719.39         3597.30         400.80         30         501           16/10/2010         204.508         1343170.61         3519.58         3489.90         785.50         0         981.875           17/10/2010         204.48         1338899.32         3260.93         2978.80         6610.10         0         8262.625           18/10/2010         204.489         1340272.01         3057.69         3350.00         7136.10         0         8920.125           19/10/2010         204.514         1344086.45         3418.99         3641.00         2923.50         0         3654.375           20/10/2010         204.55         1342712.81         3594.34         3439.10         2357.70         0         2947.125           21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.464         1332954.40         2331.99         2062.90         412.50         2         515.625           26/10/2010         204.421         133								447.875
17/10/2010         204.48         1338899.32         3260.93         2978.80         6610.10         0         8262.625           18/10/2010         204.489         1340272.01         3057.69         3350.00         7136.10         0         8920.125           19/10/2010         204.514         1344086.45         3418.99         3641.00         2923.50         0         3654.375           20/10/2010         204.505         1342712.81         3594.34         3439.10         2357.70         0         2947.125           21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.449         1335697.32         2710.05         2391.60         573.90         0         717.375           24/10/2010         204.441         1332954.40         2331.99         2062.90         412.50         2         515.625           25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.338 <td< td=""><td></td><td></td><td>1342407.66</td><td></td><td></td><td></td><td>30</td><td>501</td></td<>			1342407.66				30	501
18/10/2010         204.489         1340272.01         3057.69         3350.00         7136.10         0         8920.126           19/10/2010         204.514         1344086.45         3418.99         3641.00         2923.50         0         3654.375           20/10/2010         204.505         1342712.81         3594.34         3439.10         2357.70         0         2947.125           21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.459         1335697.32         2710.05         2391.60         573.90         0         717.375           24/10/2010         204.459         1335697.32         2710.05         2391.60         573.90         0         717.375           25/10/2010         204.4541         1332954.40         2331.99         2062.90         412.50         2         515.625           25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.338 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td><td>981.875</td></td<>							0	981.875
19/10/2010         204.514         1344086.45         3418.99         3641.00         2923.50         0         3654.375           20/10/2010         204.505         1342712.81         3594.34         3439.10         2357.70         0         2947.125           21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.459         1335697.32         2710.05         2391.60         573.90         0         717.375           24/10/2010         204.441         1332954.40         2331.99         2062.90         412.50         2         515.625           25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.348         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.361         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         132307								
20/10/2010         204.505         1342712.81         3594.34         3439.10         2357.70         0         2947.125           21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.459         1335697.32         2710.05         2391.60         573.90         0         717.375           24/10/2010         204.441         1332954.40         2331.99         2062.90         412.50         2         515.625           25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.305         1327475.79         1673.30         1479.60         275.00         14         343.75           27/10/2010         204.388         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.361         1323072.33         1195.01         1052.80         208.80         0         261           30/10/2010         204.361         1320799.								
21/10/2010         204.49         1340424.54         3346.36         3055.10         1449.90         0         1812.375           22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.459         1335697.32         2710.05         2391.60         573.90         0         717.375           24/10/2010         204.441         1332954.40         2331.99         2062.90         412.50         2         515.625           25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.405         1327475.79         1673.30         1479.60         275.00         14         343.75           27/10/2010         204.388         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.376         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.337         13186807.28								
22/10/2010         204.478         1338594.30         3047.08         2774.80         904.10         0         1130.125           23/10/2010         204.459         1335697.32         2710.05         2391.60         573.90         0         717.375           24/10/2010         204.441         1332954.40         2331.99         2062.90         412.50         2         515.625           25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.405         1327475.79         1673.30         1479.60         275.00         14         343.75           27/10/2010         204.388         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.376         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.323         1316867.28								1812.375
23/10/2010         204.459         1335697.32         2710.05         2391.60         573.90         0         717.375           24/10/2010         204.441         1332954.40         2331.99         2062.90         412.50         2         515.625           25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.405         1327475.79         1673.30         1479.60         275.00         14         343.75           27/10/2010         204.388         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.376         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.323         1316867.28         698.82         593.00         138.00         0         172.5           2/11/2010         204.323         1315056.67	22/10/2010	204.478	1338594.30	3047.08			0	1130.125
25/10/2010         204.422         1330061.50         1984.40         1727.00         328.50         0         410.625           26/10/2010         204.405         1327475.79         1673.30         1479.60         275.00         14         343.75           27/10/2010         204.388         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.376         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.335         1316867.28         698.82         593.00         138.00         0         172.5           1/11/2010         204.323         1315056.67         579.72         503.50         122.20         1         152.75           2/11/2010         204.313         1313549.98         480.33         416.90         109.90         0         137.375           3/11/2010         204.299         1311444.13         384			1335697.32	2710.05	2391.60	573.90	0	717.375
26/10/2010         204.405         1327475.79         1673.30         1479.60         275.00         14         343.75           27/10/2010         204.388         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.376         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.335         1316867.28         698.82         593.00         138.00         0         172.5           1/11/2010         204.323         1315056.67         579.72         503.50         122.20         1         152.75           2/11/2010         204.313         1313549.98         480.33         416.90         109.90         0         137.375           3/11/2010         204.299         1311444.13         384.39         322.80         100.50         0         125.625           4/11/2010         204.296         1310993.44         320.83							2	515.625
27/10/2010         204.388         1324893.19         1405.57         1247.00         238.10         0         297.625           28/10/2010         204.376         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.335         1316867.28         698.82         593.00         138.00         0         172.5           1/11/2010         204.323         1315056.67         579.72         503.50         122.20         1         152.75           2/11/2010         204.313         1313549.98         480.33         416.90         109.90         0         137.375           3/11/2010         204.299         1311444.13         384.39         322.80         100.50         0         125.625           4/11/2010         204.296         1310993.44         320.83         298.80         92.50         1         115.625								
28/10/2010         204.376         1323072.33         1195.01         1052.80         208.80         0         261           29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.335         1316867.28         698.82         593.00         138.00         0         172.5           1/11/2010         204.323         1315056.67         579.72         503.50         122.20         1         152.75           2/11/2010         204.313         1313549.98         480.33         416.90         109.90         0         137.375           3/11/2010         204.299         1311444.13         384.39         322.80         100.50         0         125.625           4/11/2010         204.296         1310993.44         320.83         298.80         92.50         1         115.625								
29/10/2010         204.361         1320799.09         1017.08         858.60         185.30         0         231.625           30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.335         1316867.28         698.82         593.00         138.00         0         172.5           1/11/2010         204.323         1315056.67         579.72         503.50         122.20         1         152.75           2/11/2010         204.313         1313549.98         480.33         416.90         109.90         0         137.375           3/11/2010         204.299         1311444.13         384.39         322.80         100.50         0         125.625           4/11/2010         204.296         1310993.44         320.83         298.80         92.50         1         115.625			1323072.33					261
30/10/2010         204.347         1318680.54         841.64         702.70         159.20         0         199           31/10/2010         204.335         1316867.28         698.82         593.00         138.00         0         172.5           1/11/2010         204.323         1315056.67         579.72         503.50         122.20         1         152.75           2/11/2010         204.313         1313549.98         480.33         416.90         109.90         0         137.375           3/11/2010         204.299         1311444.13         384.39         322.80         100.50         0         125.625           4/11/2010         204.296         1310993.44         320.83         298.80         92.50         1         115.625	29/10/2010							231,625
31/10/2010     204.335     1316867.28     698.82     593.00     138.00     0     172.5       1/11/2010     204.323     1315056.67     579.72     503.50     122.20     1     152.75       2/11/2010     204.313     1313549.98     480.33     416.90     109.90     0     137.375       3/11/2010     204.299     1311444.13     384.39     322.80     100.50     0     125.625       4/11/2010     204.296     1310993.44     320.83     298.80     92.50     1     115.625	30/10/2010	204.347					0	199
2/11/2010     204.313     1313549.98     480.33     416.90     109.90     0     137.375       3/11/2010     204.299     1311444.13     384.39     322.80     100.50     0     125.625       4/11/2010     204.296     1310993.44     320.83     298.80     92.50     1     115.625	31/10/2010			698.82	593.00		0	172.5
3/11/2010         204.299         1311444.13         384.39         322.80         100.50         0         125.625           4/11/2010         204.296         1310993.44         320.83         298.80         92.50         1         115.625								
4/11/2010 204.296 1310993.44 320.83 298.80 92.50 1 115.625			1313549.98					
	5/11/2010		1310392.82	297.14	270.60	92.50 87.30	0	109.125

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	130216 EL	130216 Capacity (ML)	130216 Flow (ML/day) at	130216 Discharge for	130209 Flow for 24hrs (0:00:00 to	130209	Total estimated Inflow
Date	@ 6am	at 6am	6am	24hr (ML)	11:59:00) (ML)	Rainfall (mm)	(130209*1.25)
6/11/2010	204.283	1309042.81	256.18	220.30	83.50	0	104.37
7/11/2010	204.275	1307844.42	206.57	174.30	77.30	0	96.62
8/11/2010	204.266	1306498.15	162.84	130.20	69.70	0	87,12
9/11/2010	204.257	1305153.97	122.33	92.20	63.60	0	79.5
10/11/2010	204.25	1304110.00	91.11	63.60	58.70	0	73.375
11/11/2010	204.24	1302619.94	59.59	37.90	57.20	0	71.5
12/11/2010	204.232	1301428.03	30.74	43.50	53.50	20	66.875
13/11/2010	204.248	1303811.93	45.29	65.50	56.30	1	70.375
14/11/2010	204.244	1303215.90	61,74	44.20	76.70	0	95.875
15/11/2010	204.232	1301428.03	37.37	19.00	77.20	4	96.5
16/11/2010	204.225	1300384.95	10.46	3.70	99.20	77	124
17/11/2010	204.315	1313851.16	227.02	760.80	603.40	11	754.25
18/11/2010	204.526	1345919.12	2180.78	4090.70	501.40	9	626.75
19/11/2010	204.561	1351271.91	4256.24	4553.70	476.70	Ö	595.875
20/11/2010	204.562	1351425.01	4615.24	5109.30	762.80	33	953.5
21/11/2010	204.65	1364933.60	5596.16	6484.90	1500.80	1	1876
22/11/2010	204.646	1364318.04	6519.92	6403.30	1291.30	il	1614.125
23/11/2010	204.632	1362164.73	6311.01	5982.20	2010.40	1	2513
24/11/2010	204.605	1358016.97	5845.47	5495.30	1735.00	12	2168.75
25/11/2010	204.594	1356329.05	5421.77		1382.00	0	1727.5
26/11/2010	204.594	1353262.93	5088.26	5176.40	1031.00	0	1288.75
27/11/2010	204.574	1349282.43	4607.90	4686.10		0	918.75
28/11/2010		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		4134.60	735.00	0	530
29/11/2010	204.52	1345002.62	4066.60	3745.00	424.00	5	496.25
	204.504	1342560.23 1342560.23	3642.01	3480.70	397.00		710
30/11/2010 1/12/2010	204,504		3491.67	3395.90	568.00	8	811.25
2/12/2010	204.495	1341187.21	3395.42	3232.10	649.00	3	1727.5
	204.481	1339051.83	3138.66	3069.70	1382.00	1	
3/12/2010	204.959	1412925.70	9007.10	23998.50	13109.00	0	16386.25
4/12/2010	205.747	1539278.07	30087.59	47501.10	70000.00	163	87500
5/12/2010	205.974	1576739.42	50372.27	57803.90	66000.00	0	82500
6/12/2010	206.107	1598903.36	59010.34	61664.90	40899.00	0	51123.75
7/12/2010	206.026	1585386.49	60300.12	55756.90	21505.00	6	26881.25
8/12/2010	205.836	1553909.63	53669.44	46981.80	13109.00	1	16386.25
9/12/2010	205.653	1523904.50	45075.74	38961.00	8736.20	0	10920.25
10/12/2010	205.475	1495021.40	37270.30	31752.50	5626.60	0	7033.25
11/12/2010	205.309	1468349.99	30304.54	25883.80	3750.60	27	4688.25
12/12/2010	205,191	1449540.63	24908.59	22002.00	7261.60	0	9077
13/12/2010	205.123	1438757.48	21565.09	20204.40	18483.90	0	23104.875
14/12/2010	205.112	1437017.07	20191.57	19872.70	14625.30	0	18281.625
15/12/2010	205.093	1434013.51	19683.17	18781.40	7973.40	0	9966.75
16/12/2010	205.031	1424235.55	18341.18	16722.30	6809.90	0	8512.375
17/12/2010	204.964	1413709.51	16255.90	14751.40	5450.10	0	6812.625
18/12/2010	204.904	1404319.32	14277.06	13254.40	3661.90	26	4577.375
19/12/2010	204.876	1399948.76	12950.30	12691.80	9286.80	22	11608.5
20/12/2010	204,894	1402757.57	12802.02	13387.80	37094.20	0	46367.75
21/12/2010	204.984	1416847.14	14443.03	17883.20	83111.70	0	103889.625
22/12/2010	205.272	1462438.93	20754.91	29324.60	94667.90	35	118334.875
23/12/2010	205.676	1527658.41	33843.84	44653.90	78861.70	8	98577.125
24/12/2010	205.877	1560674.38	46520.07	52348.00	65176.90	3	81471.125
25/12/2010	205.963	1574913.35	53061.63	56230.90	70852.80	23	88566
26/12/2010	206.069	1592554.88	57748.89	60639.60	47947.00	21	59933.75
27/12/2010	206.076	1593723.38	60599.74	66141.50	86974.80	50	108718.5
28/12/2010	206.405	1649144.11	69932.86	90940.50	350000.00	0	437500
29/12/2010	207.592		120401.00	205932.40	400000.00	0	500000
30/12/2010	209.351		243495.32	344649.90	280000.00	1	350000
31/12/2010	209.784		347961.15	356770.90	177744.80	0	222181
1/01/2011	209.764				55926.90	0	69908.625
2/01/2011	208.2		338291.16	282893.90		0	23725.125
			259888.76	193905.10	18980.10		17762.25
3/01/2011	207.341		177990.53	129968.40	14209.80	0	
4/01/2011	206.717		120241.25	90828.60	11721.50	1	14651.875
5/01/2011	206.265	1625439.02	84674.87	66676.70	15605.90	7	19507.375
6/01/2011	205.972	1576407.32	63256.11	52607.90	20120.70	0	25150.875
7/01/2011		1542067.18	50703.88	44899.20	31073.90	0	38842.375
8/01/2011		1530436.25	44320.37	41936.60	25170.70	0	31463.375
9/01/2011		1516249.01	40861.16	37585.00	12905.00	0	16131.25
10/01/2011	205.47	1494214.38	36160.15	31789.00	8926.40	0	11158

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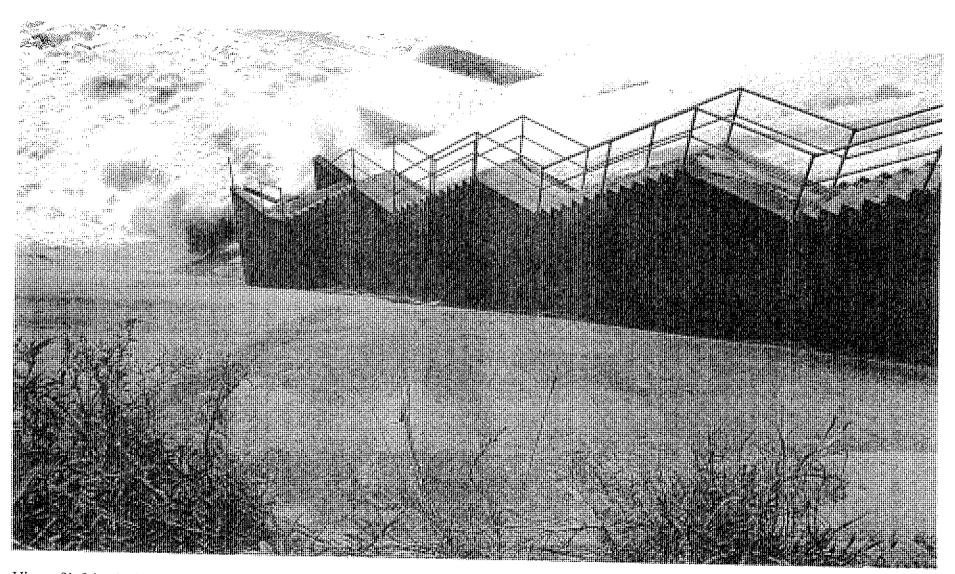
		100010				]	<b>T</b> . I
	400040 51	130216	130216 Flow	130216	130209 Flow for	40000	Total estimated
1 5. 1	130216 EL	Capacity (ML)		Discharge for	24hrs (0:00:00 to	130209	Inflow
Date	@ 6am	at 6am	6am	24hr (ML)	11:59:00) (ML)	Rainfall (mm)	(130209*1.25)
11/01/2011	205.326	1471069.96	30523.88	26486.90	6955.70	0	8694.629
12/01/2011	205.198	1450653.01	25353.69	21978.30	4872.40		6090.5
13/01/2011	205.08	1431960.35	20963.97	18116.80	3594.90	0	4493.625
14/01/2011	204.984	1416847.14	17373.80	15029.40	2932.50	0	3665.625
15/01/2011	204.894	1402757.57	14443.03	12473.90	2633.30	0	3291.625
16/01/2011	204.821	1391384.77	12020.62	10466.10	2381.20	0	2976.5
17/01/2011	204.761	1382073.56	10166.81	8844.90	2164.90	0	2706.125
18/01/2011	204.704	1373257.93	8619.93	7578.80	2018.80	16	2523.5
19/01/2011	204.66	1366473.14	7342.51	6562.70	1997.20	0	2496.5
20/01/2011	204.622	1360627.75	6362.38	5657.30	1953.60	5	2442
21/01/2011	204.589	1355562.18	5557.51	5003.90	2549.10	0	3186.376
22/01/2011	204.56	1351118.82	4889.04	4498.90	6079.70	0	7599.625
23/01/2011	204.555	1350353.49	4533.39	4363.10	4843.30	0	6054.125
24/01/2011	204.547	1349129.45	4401.56	4184.90	3504.10	0	4380.125
25/01/2011	204.527	1346071.90	4123.81	3835.80	2707.70	0	3384.625
26/01/2011	204.508	1343170.61	3746.40	3412.80	2041.80	0	2552.25
27/01/2011	204.483	1339356.86	3294.46	2860.00	1576.70	0	1970.875
28/01/2011	204.458	1335544.89	2755.55	2351.10	1303.30	0	1629.125
29/01/2011	204.433	1331735.99	2247.88	1898.70	1143.50	0	1429.375
30/01/2011	204.409	1328083.94	1802.30	1506.40	1037.30	0	1296.625
31/01/2011	204.388	1324893.19	1437.41	1204.60	953.50	0	1191.875
1/02/2011	204.378	1323375.67	1208.40	1104.70	901.40	1	1126.75
2/02/2011	204.367	1321707.99	1067.38	902.60	879.40	0	1099.25
3/02/2011	204.349	1318982.99	889.54	767.10	909.60	0	1137
4/02/2011	204.344	1318226.99	756.11	695.10	883.50	0	1104.375
5/02/2011	204.331	1316263.44	663.12	700.70	842.30	5	1052.875
6/02/2011	204.359	1320496.25	747.67	826.30	859.80	0	1074.75
7/02/2011	204.347	1318680.54	829.67	745.40	837.90	0	1047.375
8/02/2011	204.339	1317471.42	718.99	676.50	982.60	13	1228.25
9/02/2011	204.335	1316867.28	656.51	655.90	3163.60	1	3954.5
10/02/2011	204.343	1318075.84	677.34	722.60	3180.70	0	3975.875
11/02/2011	204.348	1318831.76	745.28	817.70	5170.10	0	6462.625
12/02/2011	204.366	1321556.47	877.77	1007.40	3956.70	0	4945.875
13/02/2011	204.377	1323224.00	1054.41	1105.90	2512.60	0	3140.75
14/02/2011	204.376	1323072.33	1118.85	1028,10	1660.50	0	2075.625
15/02/2011	204.364	1321253.47	1035.35	902.80	1141.00	0	1426.25
16/02/2011	204.355	1319890.75	904.84	799.50	867.90	0	1084.875
17/02/2011	204.341	1317773.59	774.24	651.30	722.20	0	902.75
18/02/2011	204.327	1315659.90	628.45	536.10	633.90	0	792.375
19/02/2011	204.315	1313851.16	506.79	436.30	572.70	4	715.875
20/02/2011	204,307	1312646.96	422.06	380.90	529.40	0	661.75
21/02/2011	204.3	1311594.41	364.20	346.70	492,40	3	615.5
22/02/2011	204.295	1310843.25	320.99	286.90	464.90	0	581.125
23/02/2011	204.284	1309192.71	269.02	203.00	459.60	0	574.5
24/02/2011	204.269	1306946.68	194.63	131.20	981.90	Ö	1227.375
25/02/2011	204.258	1305303.22	131.18	103.40	935.70	0	1169.625
26/02/2011	204.258	1305303.22	107.46	79.70	647.60	0	809.5
27/02/2011	204.245	1303364.89	82.49	46.10	519.70	0	649.625
28/02/2011	204.24	1302619.94	49.04	25.00	455.70	0	569.625
1/03/2011	204.23	1301130.00	28.92	5.20	400.10	0	500.125

, )

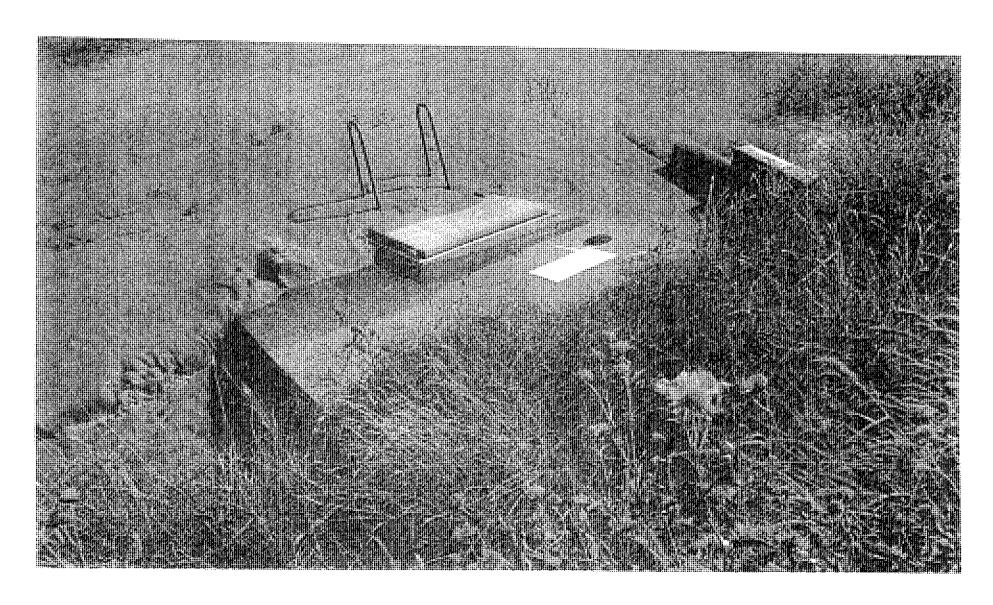
## **Emergency Event Recording Sheets**

# • Description of Damage

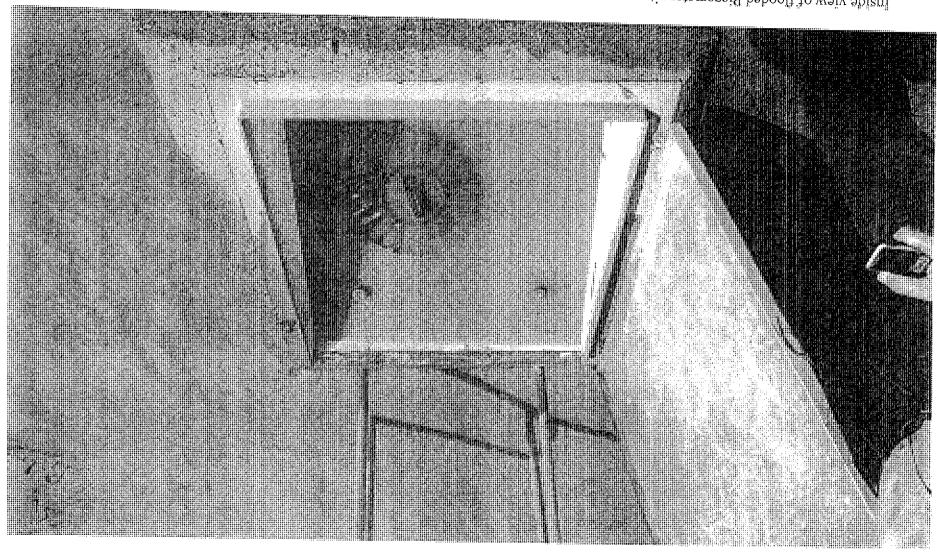
Some damage was sustained during the event and photos are included herewith. Left bank Siphon Actuator torn from mountings including deck and hand railing. Lower Piezometer pit flooded



View of left bank siphon with missing Actuator, deck and handrails torn off by floodwaters



View of water flooding into lower Piezometer pit at peak of flood

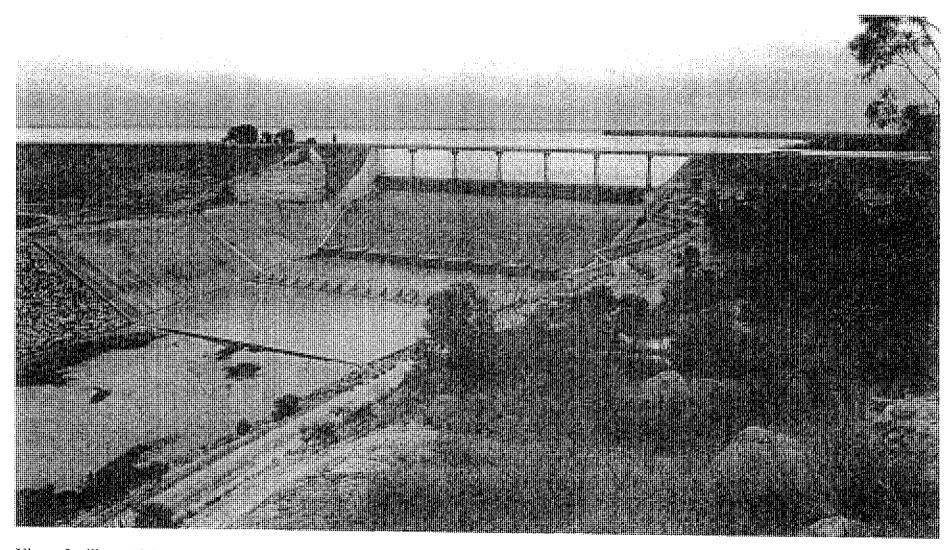


firside view of flooded Piezometer pit

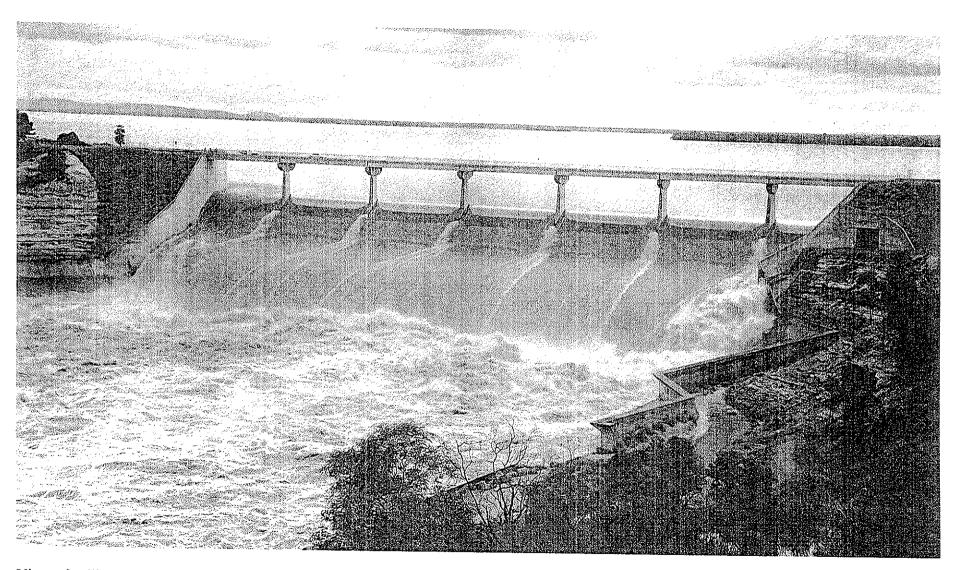
EMERGENCY EVENT REPORT – FAIRBAII	RN DAM – 10 <sup>ti</sup>	<sup>1</sup> Sept to 1 <sup>st</sup> A	April 2011
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## **Emergency Event Recording Sheets**

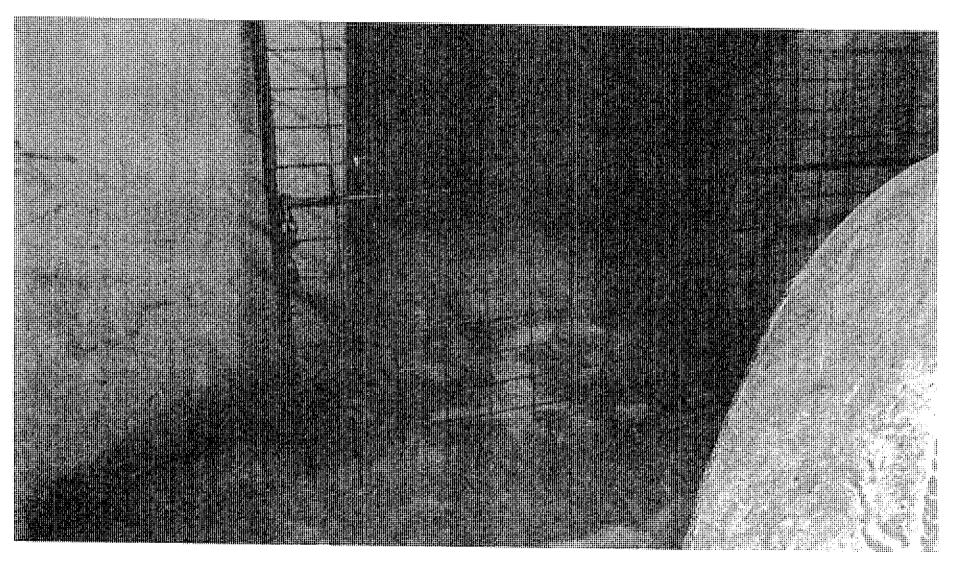
• Photos during and after the Event



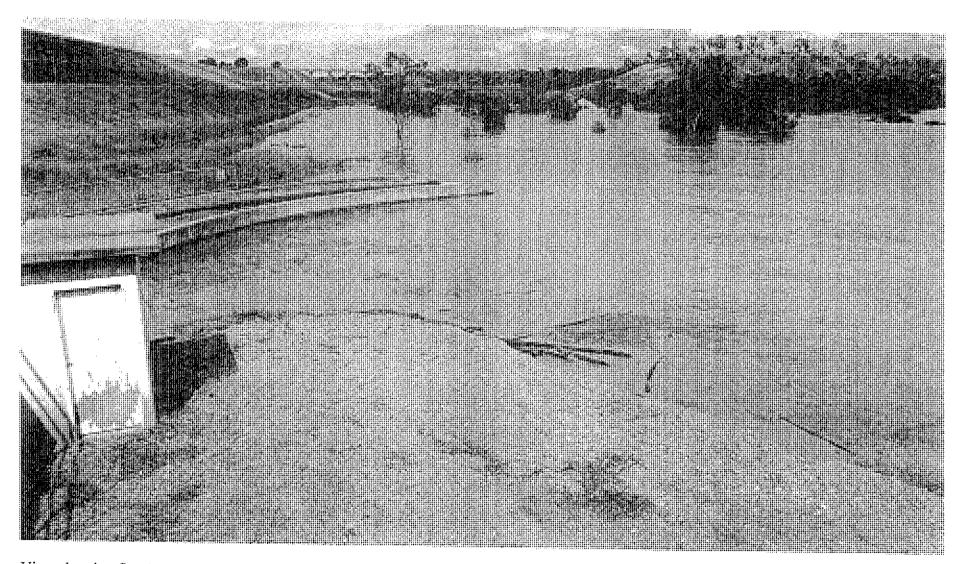
View of spillway 10.9.2010



View of spillway at peak of flood.



View showing leakage through inlet gate in Selma pump station coming out through drainage chute.



View showing flood waters backed up to landing beside bullring. (Right bank outlet works)

## **Emergency Event Recording Sheets**

• Details of Communication



#### **TELEPHONE & RADIO NOTIFICATION LIST**

Central Office Management (Brisbane)								
TITLE/NAME	Phone Business	Phone Mobile	Phone A/H	Fax	Controlled Copy Holder Addresses			
Chief Executive Officer (Peter Boettcher)								
Manager, Asset Management (Rob Keogh) 4								
Principal Engineer Dam Safety (Mal Halwala)				-				
Corporate Relations Manager (Olga Kakourakis)	_							
Media Advisor (Glenn Pfluger)		-						
A/Environmental Manager (Matthew Barret)								
Flood Operations Centre Outy Engineer/Senior Engineer								
Senior Engineer leadworks (Keith Ehm)	3			-				
hief Civil Engineer Peter Richardson)								

Controlled EAP Copy Holders shown numbered (e.g. 2) and shaded grey

Note: All contacts required by the EAP are expected, in the first instance, to be by voice (phone) with email only used to confirm or provide additional details



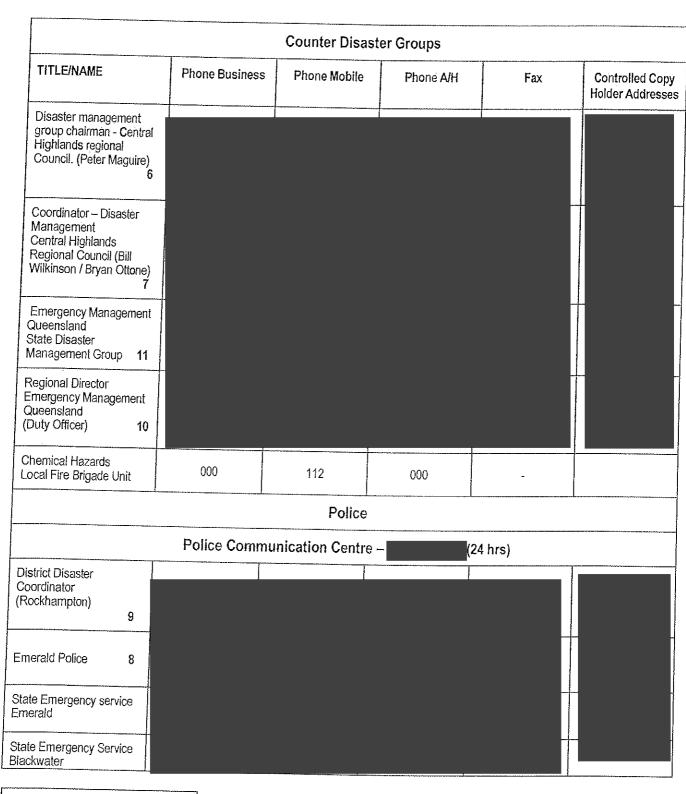
Area Operations Centre – North (Eton) and Emerald Depot								
TITLE/NAME	Phone Business	Phone Mobile	Phone A/H	Fax	Controlled Copy Holder Addresses			
Area Operations Manager (Tom Wallwork) 3								
Service Manager Emerald 2								
Emergency Event Coordinator (EEC)					i-un-			
Operations Supervisor- Emerald					<u></u>			
Civil Supervisor -Emerald								
torage Operator – airbaim Dam 1					_			
andby Storage Operator Fairbairn Dam								

Controlled EAP Copy Holders shown numbered (e.g. 2) and shaded grey

Note: All contacts required by the EAP are expected, in the first instance, to be by voice (phone) with email only used to confirm or provide additional details

SunWater Section 3: Page 3 of 10 Nov 09, Issue 2-1





Controlled EAP Copy Holders shown numbered (e.g. 2) and shaded grey

Note: All contacts required by the EAP are expected, in the first instance, to be by voice (phone) with email only used to confirm or provide additional details

SunWater Section 3: Page 4 of 10 Nov 09, Issue 2-1

### EMERGENCY ACTION PLAN - FAIRBAIRN DAM



	Department of E	nvironment and R	esource Manageme	nt (DERM)	
TITLE/NAME	Phone Business	Phone Mobile	Phone A/H	Fax	Controlled Copy Holder Addresses
Director Dam Safety (Water Supply) - DERM, (Peter Allen) 5				<u>-</u>	
Principal Engineer Dam Safety,( Ron Guppy )				*	
	Nationa	al Security Hotlin	ne – 1800 123 400		
		Stream Gauging	Stations		
Headwater (Storage)Level Recorder	No Phone Connection (Computer Link only)	-	-	~	SunWater Station-
Craigmore	No Phone Connection (Computer Link only)	-	-	_	SunWater Station-
Theresa Ck	No Phone Connection (Computer Link only)	-	-	-	SunWater Station-
		-	-	-	
		2 Way Rad	io		
unWater imerald Depot)					

Controlled EAP Copy Holders shown numbered (e.g. 2) and shaded grey

Note: All contacts required by the EAP are expected, in the first instance, to be by voice (phone) with email only used to confirm or provide additional details

SunWater Section 3: Page 5 of 10 Nov 09, Issue 2-1

### EMERGENCY ACTION PLAN - FAIRBAIRN DAM



Affected Property Owners – Weemah Side						
TITLE/NAME	Phone Business	Mobile Phone	Home Phone	Fax	Address Lot/Plan	
Pacific Century						
Sampson				· · ·		
Ranclaud						
Moriarty J.						
Mattingly D.						
Black T.						
Slack G.				<del></del>	<del></del>	
Cusack J.				<del></del>		
PH Farms						
Campbell J. & J.				····		
ordoma J.			············	······································		
arry S.			•	·····		
smond S. & M.						
otterall P.			*********			

Affected Property Owners – Selma Side						
TITLE/NAME	Phone Business	Mobile Phone	Home Phone	Fax	Address Lot/Plan	
Single P. & G.				······································		
Vendersee					-	
Hales D.& M.				<del>».</del>		
Smith M. & B.						
Reimers P.						

SunWater Section 3: Page 6 of 10 Nov 09, Issue 2-1

### EMERGENCY ACTION PLAN - FAIRBAIRN DAM



	Affected Pro	operty Owners –	Selma Side - Cont	inued	
TITLE/NAME	Phone Business	Mobile Phone	Home Phone	Fax	Address Lot/Pla
Genesis Pty. Ltd.				***************************************	
Wildermuth L. & P.			<del>-  </del>		_
Cupper S					-
Thomasson L. & P.					
Klementsen					_
Pike R.					
Ross J. & J.					-
Villiams E.					
Pilkington W. & S.					
irby Helen				······································	-
ray P.					
dles M.					
carpelli / Imeson					
essler C.				······	
nnon John					
meron D. & S.					
er D.					
rek T. & N.			······		
onard K.					_
rsh B.					-
son D.J.					-
e Amanda			<u></u>		-
ter John and M.					_
s R.M. & L.A.					
H. (Aero Pro)					-

SunWater Section 3: Page 7 of 10 Nov 09, Issue 2-1

### EN\_ERGENCY ACTION PLAN - FA. 3AIRN DAM

# FAIRBAIRN DAM - EMERGENCY ACTION PLAN REGORD OF COMMUNICATION

DATE	TIME	CONTACT PERSON / TELEPHONE NO.	CALL IN / OUT	MESSAGE RECORDED BY
10-9-10	<u>0730</u>	R.BOON P.COLLETT	007	CALLED IN TO PASSIBLE DE
19-9-10	7.30	2.800	at	BANK TOWER SHUT DOWN-DAM E.L. 204-24 Collecte Advad Ez 204-24
				and Record 16mm Ram
00-P-0C	8,30	Pela la llett.	two	Colled and Advid we Had 26-2m
				and EL at 204.45
		EEC NOTIFICATION	OUT	ADVISE COMENT SITUATION
3-12-10	2.30pm	EEC HOFFICATION	DUT	ADVISE OF LARGE INCHERSE IN E.L.
ł		EEL NOTEFECTION	027	UPDATE CURRENT SITUATION
1		EEL NOTIFICATION	007	UPDATE CURRENT SETURTION
1		GEC NOTEFICATION	DVT	or to to
7-12-10		4	٠,	نم ~ م
Q-12-10		`~	^	n v
9-12-10	<i>0</i> 730	7 -		

SunWater Section 6: Page 4 of 5 Jan 08, Issue 2-0

### FAIRBAIRN DAM - EMERGENCY ACTION PLAN REGORD OF COMMUNICATION

DATE	TIME	CONTACT PERSON / TELEPHONE NO.	CALL IN / OUT	MESSAGE	RECORDED BY
20-12-10	0745	Rosa Bon	D <sup>2</sup>	ROBER CHILLED TO ADVISE THAT ALOT OF RASN AT BACK OF CATCHIMENT	(INITIALS)
21-12-10	0830	ROBEN BOON	24	FLOWS COULD REACH 1.8 M OVER	
23-12-10	0730	Rosen Book	IN	200 Kour- Etc NOTEFECUTION	
291-12-10	1100	PAUL JENSEN	JN	LOWER PIEZOMETERS NOT READON	
1-3-11	1/00	KERRY JONES	<i>O</i> ∪ <sub>1</sub>	ADUSED DAM E.L. DROPPED TU 204-22 D 7.30 AM	_
	,				
				·	



MAKING WATER WORK

### SunWater advice on Fairbairn Dam

20 Sep 2010

Advice No.2

Date and Time: 20/09/2010 - 3:45pm Water Storage: Fairbairn Dam

Location: Emerald Dam Level: 100%

Full Supply Level: 1,301,000 megalitres Event/Issue: Increased Spillway Overflow

As owner and operator of Fairbairn Dam SunWater is advising of an increase in spillway overflow.

SunWater is advising that significant inflows into the Fairbairn Dam catchment resulted in the dam overflowing last week.

Dam water storage levels are currently 24cm/m above the spillway crest and discharging at a rate of approximately 2824ML per day.

Inflow monitoring data indicates the spill will remain steady over the next 48 hours which is well within the dam's design parameters.

SunWater will continue to monitor the overflow event and take all necessary action under the dam's normal operating guidelines.

SunWater has contacted all relevant local authorities to advise them of the spillway overflow and will continue to liaise with them as required.

SunWater will provide further updates on the spillway overflow once more information is gathered and assessed.

#### Media Enquiries

Glenn Pfluger Media Advisor



### SunWater advice on Fairbairn Dam

21 Sep 2010

Advice No.3

)

Date and Time: 21/09/2010 - 1:45pm Water Storage: Fairbairn Dam

Location: Emerald Dam Level: 100%

Full Supply Level: 1,301,000 megalitres Event/Issue: Increased Spillway Overflow

As owner and operator of Fairbairn Dam SunWater is advising of an increase in spillway overflow.

SunWater is advising that significant inflows into the Fairbairn Dam catchment resulted in the dam overflowing last week.

Dam water storage levels are currently 57cm above the spillway crest and discharging at a rate of approximately 7800ML per day.

Inflow monitoring data indicates the spill will increase at a rate of 1cm per day over the coming days which is well within the dam's design parameters.

SunWater will continue to monitor the overflow event and take all necessary action under the dam's normal operating guidelines.

SunWater has contacted all relevant local authorities to advise them of the spillway overflow and will continue to liaise with them as required.

SunWater will provide further updates on the spillway overflow once more information is gathered and assessed.

#### Media Enquiries

Glenn Pfluger Media Advisor



### SunWater dams safely passing flood water

19 Dec 2010

Unprecedented and continued rain across Queensland has resulted in the filling and overflowing of almost all SunWater's bulk water storages across the State.

SunWater General Manager Infrastructure Management Barry Jeppesen said that SunWater staff have been working round the clock monitoring and operating SunWater's Dams in Flood Operations Mode.

"During a flood event a range of different organisations play their part in the management, monitoring, reporting or minimisation of flood impacts."

"SunWater's responsibility during flood events is to manage and operate its dams and weirs in accordance with established operational guidelines."

"SunWater's Dams have been designed to safety pass flood water through their purpose built spillways," Mr Jeppesen said.

"SunWater also has gated dams and with these dams, during a flood event, the gates are open and a controlled release of water is passed through the gates."

"Our staff are on site at all our dams regularly monitoring and undertaking operational activities as required during these extreme weather events."

"All of our dams are designed to safely pass water over the spillway when the dam's water storage is above full capacity and there are no concerns associated with the safety of any of our dams. They are operating as they should and are safely passing the floodwaters," Mr Jeppesen said.

SunWater will continue to monitor inflows into its dams' catchments and based on that data will operate its dams in line with established dam operating guidelines.

SunWater is in constant contact with all relevant local authorities to advise them of the water release and the course of action being taken and will continue to liaise with them and other stakeholders as required.

### Summary of SunWater Dam Levels as at 29 December 2010

Region	Dam	Percentage full	Megalitres per day being passed or released
	Tinaroo Falls Dam	102.7%	2,335
	Peter Faust Dam	108.8%	1,694
Far North QLD	Burdekin Falls Dam	154.2%	578,824
	Julius Dam	81.5%	0
	Eungella Dam	103%	1,901
	Kinchant Dam	96.5%	1,065
North QLD	Teemburra Dam	103%	2,426
	Fairbairn Dam	151.6%	213,208
	Callide Dam	89.3%	0
	Kroombit Dam	105.3%	1,141
	Cania Dam	101.6%	71
	Fred Haigh Dam	141.1%	56,123
Central QLD	Wuruma Dam	120.2%	33,395
	Paradise Dam	156%	770,000
	Bjelke-Petersen Dam	131.3%	28,563
	Boondoomba Dam	118.7%	48,936

	Leslie Dam	90.8%	0
South West QLD	Coolmunda Dam	103.4%	839
	Beardmore Dam	100.8%	54,000

### Media Enquiries

Glenn Pfluger Media Advisor



MAKING WATER WORK

### New record for Fairbairn Dam

31 Dec 2010

Fairbairn Dam reached a new record last night with water flowing over the spillway more than one meter over the previous record.

SunWater Acting Service Delivery Manager Neil Farrell said, the peak overflow at the dam was reached at around Midnight on Thursday 30 December 2010, where the water was recorded at 5.58 metres above the spillway.

"At the time Fairbairn Dam was 176% capacity at EL209.81, holding around 2,289,129 ML and discharging 373,016 ML per day," Mr Farrell said.

"The previous peak event was on the 22 January 2008. The corresponding peak level was 4.44 m above the dam's Full Supply Level (EL208.67 m AHD) with an associated volume of 2,060,200 ML. This is equivalent to a volume of 158.3% capacity," he said.

As at Friday 31 December Fairbairn Dam was at 175% (EL 209.78) or 5.55m above the spillway holding 2,282,899 ML and discharging 370,650 ML/day, with the levels receding at a rate of 0.01m/hr.

The dam's total capacity at crest level is 1.3 million megalitres and its catchment takes in 16,000 square km.

SunWater said the inflows were the highest on record for the dam and it was continuing to monitor major inflows into the catchment.

SunWater Acting Area Operations Manager, North Region, Ross Wheeler said SunWater's Dams have been designed to safety pass flood water through their purpose built spillways.

"Our staff are on site at the dam 24 hours a day regularly monitoring and undertaking operational activities as required during these extreme weather events," Mr Wheeler said.

SunWater will continue to monitor inflows into the dams catchments and based on that data will operate its dams in line with established dam operating guidelines.

SunWater is in constant contact with all relevant local authorities to advise them of the water passing through the spillway, and will continue to liaise with them and other stakeholders as required.

### Summary of SunWater Dam Levels as at 31 December 2010

Region	Dam	Percentage full	Megalitres per day being passed or released
	Tinaroo Falis Dam	103.3%	3,263
T N N - 01 D	Peter Faust Dam	108.0%	4,727
Far North QLD	Burdekin Falls Dam	152.4%	553,617
	Julius Dam	81.6%	0
	Eungella Dam	105.9%	5,516
Al-ud-Olb	Kinchant Dam	98.1%	0
North QLD	Teemburra Dam	104.1%	4,100
	Fairbairn Dam	175.8%	370,650
	Callide Dam	92.1%	0
	Kroombit Dam	101.9%	1,621
	Cania Dam	101.9%	Reading not available at this time
Central QLD	Fred Haigh Dam	129.8%	34,868
om ar Q25	Wuruma Dam	107.3%	7,874
	Paradise Dam	142%	343,089
	Bjelke-Petersen Dam	117.5%	12,119

	Boondoomba Dam	107.2%	11,256
	Leslie Dam	91.8%	0
South West QLD	Coolmunda Dam	103.2%	Reading not available at this time
	Beardmore Dam	101.1%	108,697

### Media Enquiries

Glenn Pfluger Media Advisor

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### Morning Bulletin 11-Sep-2010

Page: 16 General News

Market: Rockhampton QLD

Circulation: 18036 Type: Regional Size: 276.30 sq.cms Frequency: MTWTFS-

# CQ dam overflows

### SunWater promises catchment will hold water

EMERALD: The Fairbairn Dam near Emerald is at full capacity and overflowing.

SunWater said significant inflows had resulted in the dam overflowing from 7.30am yesterday morning at the rate of 26 million litres a day.

The overflow is ex-

pected to continue at that rate for the next few days, and SunWater has advised that it is within the dam's design perimeters.

River levels at Emerald will remain well below minor flood level according the the Australian Bureau of Meteorology.

SunWater will continue to monitor the overflow and has contacted all relevant local authorities.

It said it would provide further updates as more information became available.

River levels along the Fitzroy River to Rockhampton were expected to remain well below minor flood level during this week and into next week.

Minor flooding continues along the Dawson River between Isla Delusion Crossing and Knebworth.

### Harrigg Bollowilly and a Market

Nogoa River at Fairbairn Dam: Height: .001m Measured: Noon Friday, Flow: Steady

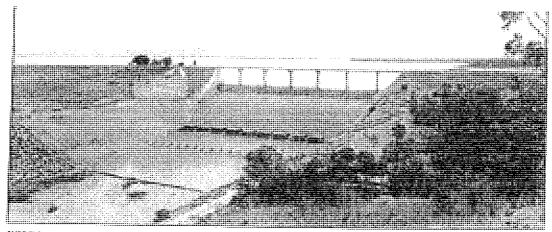
Dawson River at Moura Weir: Height: 1.13m, Measured: Noon Friday, Flow: Steady

■ Comet River at Comet Weir: Height: 3.90m,

Measured: 4pm Friday, Flow: Falling Fitzroy River at Riverslea: Height: 5.38m,

Measured: 4pm Friday, Flow: Steady

Mackenzie River at Riley's Crossing: Height: 5.99m, Measured: 2pm Friday, Flow: Falling



OVERFLOWING: The Fairbairn Dam in Emerald is overflowing at the rate of 26 million fitres a day.

PHOTO: SUPPLIED





### Central Queensland News 15-Sep-2010

Page: 4 General News By: Di Stanley Market: Emerald QLD Circulation: 4875

Type: Regional Size: 284.62 sq.cms Frequency: --W-F--

# Dam spillway trickles over

### First time in 32 years for a September overflow

#### By DI STANLEY

UNSEASONAL rain triggered a rare event in the history of the Fairbairn Dam when one centimetre of water trickled over the spillway at 7.30am last Friday.

It was on September 7, 1978, when the dam was just fouryears-old, that the spillway last crested in spring.

It peaked to 30cm on September 12 and it was all over by October 10, according to SunWa-

ter records.

Currently, the storage water level remains at one centimetre above the spillway and is discharging at a rate of 26 megalitres per day.

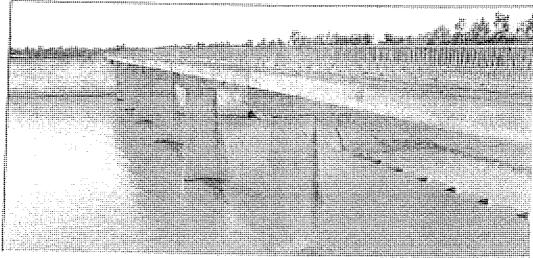
When the rain band passed through the Central Highlands during the weekend of September 4 and 5, falls as high as 160mm were recorded on properties surrounding the dam and the Orion district.

Weatherzone.com.au synoptic charts for the remainder of the week, show more heavy rain is on the way as a trough passes through the region.

It is predicted to bring falls up to 40mm on Friday and Saturday.

Emerald and the Highlands sweltered yesterday as temperatures peaked in the low-30s before the onset of a southerly change.

A spokesperson said SunWater will continue to monitor the dam overflow event.



☑ OVERFLOWING: Fairbairn Dam spills over after heavy rain hit the region recently.





### Morning Bulletin 22-Sep-2010

Page: 8 General News

By: Emma Mcbryd[ And Adrian Taylor

Market: Rockhampton QLD

Circulation: 18036 Type: Regional Size: 482.89 sq.cms Frequency: MTWTFS-

# Forecasters warn GQ to gear for more weather

Rain next week and substantial falls tipped next month

By EMMA MCBRYDE AND ADRIAN TAYLOR THE risk of flooding has

THE risk of flooding has reduced, but Rock-hampton and Central Queensland can expect more wet weather until the middle of next week.

And forecasters are predicting further rainfall in October with a high chance of substantial rain activity in the middle of the month.

Although the Rockhampton region escaped the worst of the storms that swamped Mackay and isolated both Proscrpine and Airlie Beach on Monday, Rocky has already received double its average September rainfall while Biloela has set a new record with 132mm in the first 20 days.

It's a stark contrast to the same period last year when Capricornia was suffering a dry spell ahead of the worst bushfire season in memory.

There's little chance of a repeat of those destructive fires for the rest of this year as Bureau of Meteorology climate scientist Jeff Sabburg predicts above-average rainfall for the region in October and November.

It's already the wettest September in Rockhampton since 1998, with more to come.

The average for rainfall in Rocky to September is 578mm. The city has enjoyed 629mm so far.

Rockhampton senior forecaster Mike Marrinan said yesterday he expected rain overnight and today, with lighter falls on Thursday and Friday.

Shower activity will dampen the weekend across Capricornia and the Central Highlands.

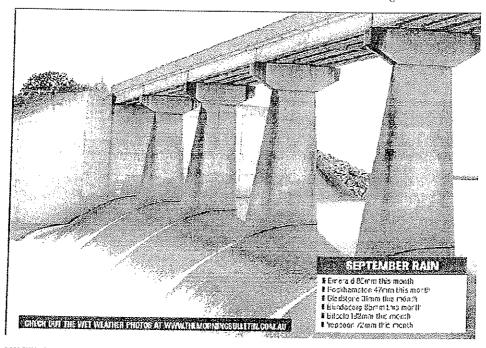
Maximum temperatures are expected to rise from 25 degrees today to 27 degrees on Friday and for the weekend, with the constant risk of a shower throughout.

The leaden skies across Central Queensland have caused rejoicing in rural communities and farming areas.

And Fairbairn Dam at Emerald is spilling in September for the first time since 1978.

The dam is currently discharging 7800 megalitres per day over its spillway.

#PAGE 11: Crops ruined.



DAM FULL: Emerald's Fairbairn Dam is spilling in September for the first time since 1978.

MEDIA MONITORS



### **Central Queensland News** 24-Sep-2010

Page: 1 **General News** By: Di Stanley Market: Emerald QLD Circulation: 4875

Type: Regional Size: 662.84 sq.cms Frequency: --W-F--

# But don't panic yet

By DI STANLEY

DAYS of rain across the Central Highlands have left road surfaces slick and saturated with closures starting to affect traffic flow in and out of major towns.

With the inclement weather set to continue and heavy falls predicted into the weekend, Central Highlands Regional Council Mayor Pe-

heads to prevail against fears of a repeat of widespread flooding in the region.

Yesterday, the Blackwater-Rolleston Road remained closed, as were roads on the Gemfields, and the Capricorn Highway from Anakie to Alpha which was cut at the Belyando River crossing.

"We are monitoring the situation

ter Maguire is calling for calm and there's a lot of water around, but no real problems yet," said Cr Maguire.

> "We are expecting the dam spillway to reach around one metre in coming days.

> "With the dam full, we've been going around checking drains in

> > Continued page 2



MACCESS DENIED: The John Gay Bridge was closed to traffic yesterday morning after a two-car collision in the wet.



Central Queensland News 24-Sep-2010

Page: 1 General News By: Di Stanley Market: Emerald QLD Circulation: 4875

Type: Regional Size: 662.84 sq.cms Frequency: --W-F--

### Be alert not alarmed in wet weather

From page 1

all communities, checking blockages to make sure everything works.

"This is forecast to be a pretty wet season and one of the big problems we have is repairing our roads and while it keeps raining, we can't get to them."

A SunWater spokesperson said at 12.10pm yesterday, Fairbairn Dam was at 109 per cent of capacity.

The crest on the spillway was 77cm, representing a 1.4 per cent increase in the 24 hours to yesterday, an inflow of 18,725 megalitres.

The dam is now storing

1,416,219ML. SunWater will continue to monitor dam inflows overnight.

The unseasonal rain has wheat farmers lamenting what would have been a bumper crop, but it's also led to the rewriting of rainfall record books.

Springsure, with 232mm up until Wednesday, can lay claim to the largest September rainfall in 145 years.

The widespread soaking has police urging motorists to slow down and be wary of wet roads.

"We want motorists to take a lot more care and a lot more time between where they are and where they're going," said Emerald officer-incharge Senior Sergeant Marcus Cryer.

"There's a lot of water around at the moment.

"Slow down because we don't want any serious accidents."

"Slow down because we don't want any serious accidents."

Senior Sergeant Marcus Cryer



☑ BITUMEN BLUR: A truck on the Capricorn Highway near Black Gully Creek, 5km east of Emerald, which overflowed yesterday afternoon.





### Central Queensland News 05-Nov-2010

Page: 3 General News Market: Emerald QLD Circulation: 4875

Type: Regional Size: 137.99 sq.cms Frequency: --W-F--

### Fairbairn Dam still spilling after 53 days

RAIN tumbled gently over the Central Highlands yesterday, just as water continued to fall over the Fairbairn Dam spillway.

The state's second largest water storage facility has passed more than 440,000 megalitres over its spillway since it began overflowing on September 11 this year.

SunWater Area Operations manager Tom Wallwork said this was the first time in 25 years that the dam had overflowed twice in the same year. Mr Wallwork said while not the longest continuous overflow event, which occurred between December 1975 and April 1976 for 108 days, it was still pleasing to see the 1.3 million megalitre dam at full capacity after reaching critical lows of about 13 per cent capacity in 2007 during the peak of Queensland's drought.

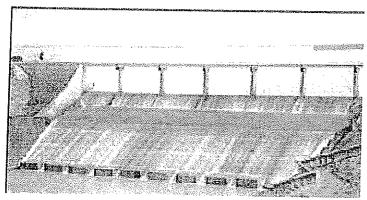
"We have gone from holding only 173,000 megalitres in storage in 2007 to now witnessing almost a third of the dam's total storage capacity going over the

Mr Wallwork said while not spillway in just a couple of e longest continuous over- months," Mr Wallwork said.

Water is currently 5cm above the spillway crest after reaching a height of 123cm during the peak of the most recent overflow event.

The highest overflow water level ever reached at the dam was in 2008 when water was 4.4m above the spillway crest.

Mr Wallwork said this time last year, the dam was at 75 per cent.



國 FULL UP: Fairbairn Dam continues to spill and currently has 5cm of water flowing over the spillway.

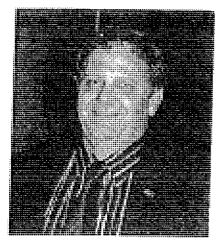
### MEDIA MONITORS



### Central Queensland News 08-Dec-2010

Page: 1 **General News** By: Di Stanley Market: Emerald QLD Circulation: 4875 Type: Regional

Size: 215.48 sq.cms Frequency: --W-F--



CHILL OUT: Mayor Peter Maguire.

# Chill out and have a barbie - Wayor

By DI STANLEY

TAKE a chill pill, fire up the barbie and have a beer, the Mayor has told his community.

Cr Peter Maguire was attempting to allay public fears of a repeat of the 2008 Emerald flood, as rumours of an impending deluge continued to plague the town.

Panic buying seen in Emerald last Friday was repeated yesterday, forcing the Mayor to issue the "chill pill" edict.

Cr Maguire said it was important residents retained faith in the best expert advice given to the Central Highlands Council and its local disaster management group.

"Last weekend there were rumours everywhere.'

Continued page 7

## Mayor calls fo

From page 1

"Yesterday they've started again," he said.

"And there's apparently an indication of panic buying (on Tuesday)." He said calls from shopping centre management had confirmed this.

"People have got to understand that the council, and myself as Mayor and chairman of the local disaster management group, are the point of truth.

"I want to be as clear as I can, if there are going to be any errors in information or advice, I will take the blame."

Cr Maguire said it was local-

Friday when close to 200mm of rain fell, and the Fair bairn Dam spillway failed to reach the maximum predicted peak of 2.5m this week.

Regular briefings, if not hourly as the situation demanded, were being taken by council and the disaster group, he said.

"We are in a situation now where we have to continue to monitor the weather situation.

"The dam is running over, the whole place is full of water, but people need to not listen to the rumours.

"We have been trying to get information out to the media.

ised flooding across Emerald on the ABC is the emergency disaster radio station, and we have briefings posted on our website, people manning the phones to answer any question.

'What people need to understand is we take the best information we get from the Bureau of Meteorology hydrologists, the SunWater hydrologists, the BOM chief weather forecaster and local people-that's what we work off.

"We said on Friday the dam would go to about 2.5m. and it didn't even hit 2m; so these people were right.

"Also, the Vince Lester Bridge is in no danger of going over."

From:

Constable, Mark

Sent:

Monday, 14 March 2011 2:21 PM

To:

Constable, Mark

Subject:

FW: Emailing: height\_FAIRBAIRN.png

Attachments: height\_FAIRBAIRN.png

From: Ayre, Rob

Sent: Saturday, 4 December 2010 5:49 PM

To: Halwala, Mal; Constable, Mark

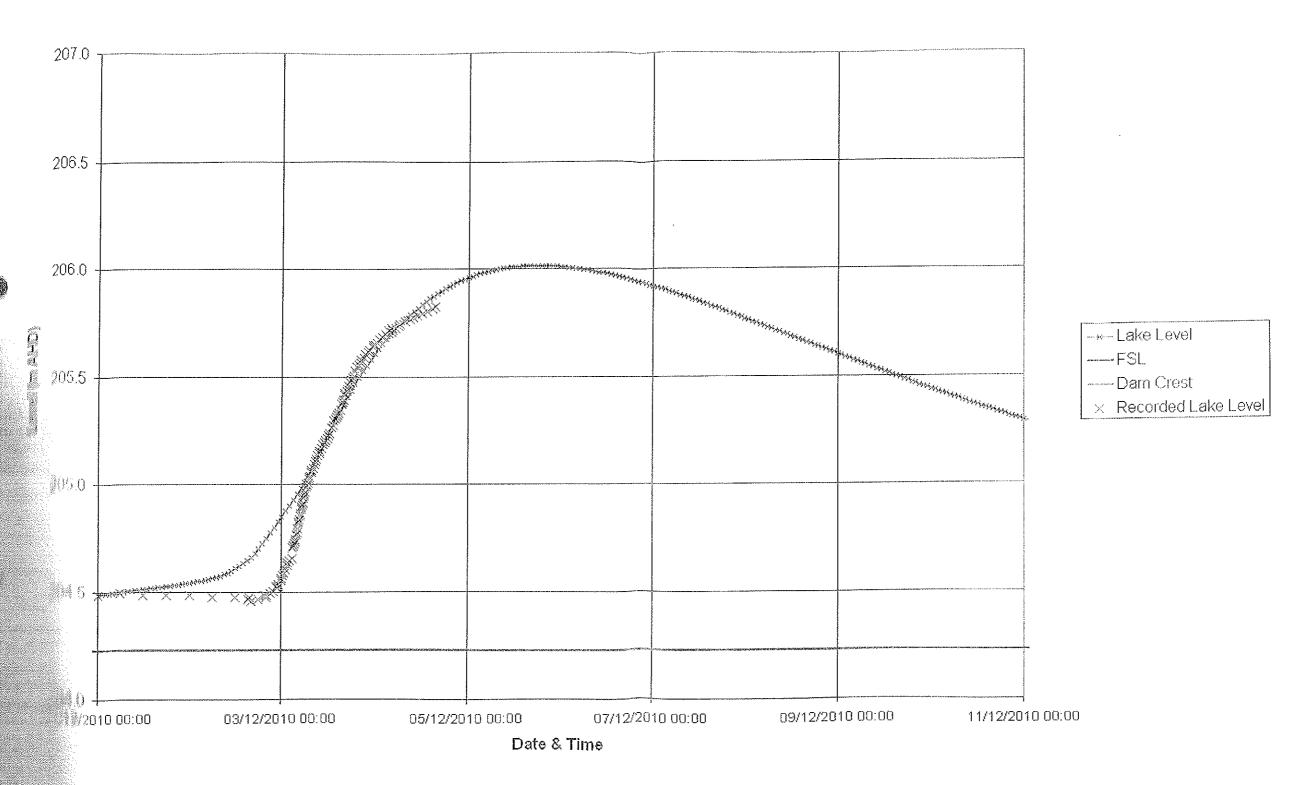
Cc: Keogh, Rob; Brigden, Daryl
Subject: FW: Emailing: height\_FAIRBAIRN.png

Mal/Mark

The BoM updated their Nogoa Model at 15:00 today. The attachment shows their predicted water level in Fairbairn Dam. BoM predict that the lake will peak at just over 2.0 m on Monday morning.

Also enclosed is a graph of the SunWater FOC storage routing model based upon Craigmore flows to 16:00 today.

### Fairbairn Dam - Estimated Levels



suggests a peak of about 1.8m but peaking earlier at around 17:00 on Sunday 5 December. Note I have translated the modelled levels to coincide with the recorded values.

From: Constable, Mark

**Sent:** Monday, 14 March 2011 2:20 PM

To: Constable, Mark

Subject: FW: Fairbairn Dam SunWater FOC prediction - Saturday 4 December 2010

From: Ayre, Rob

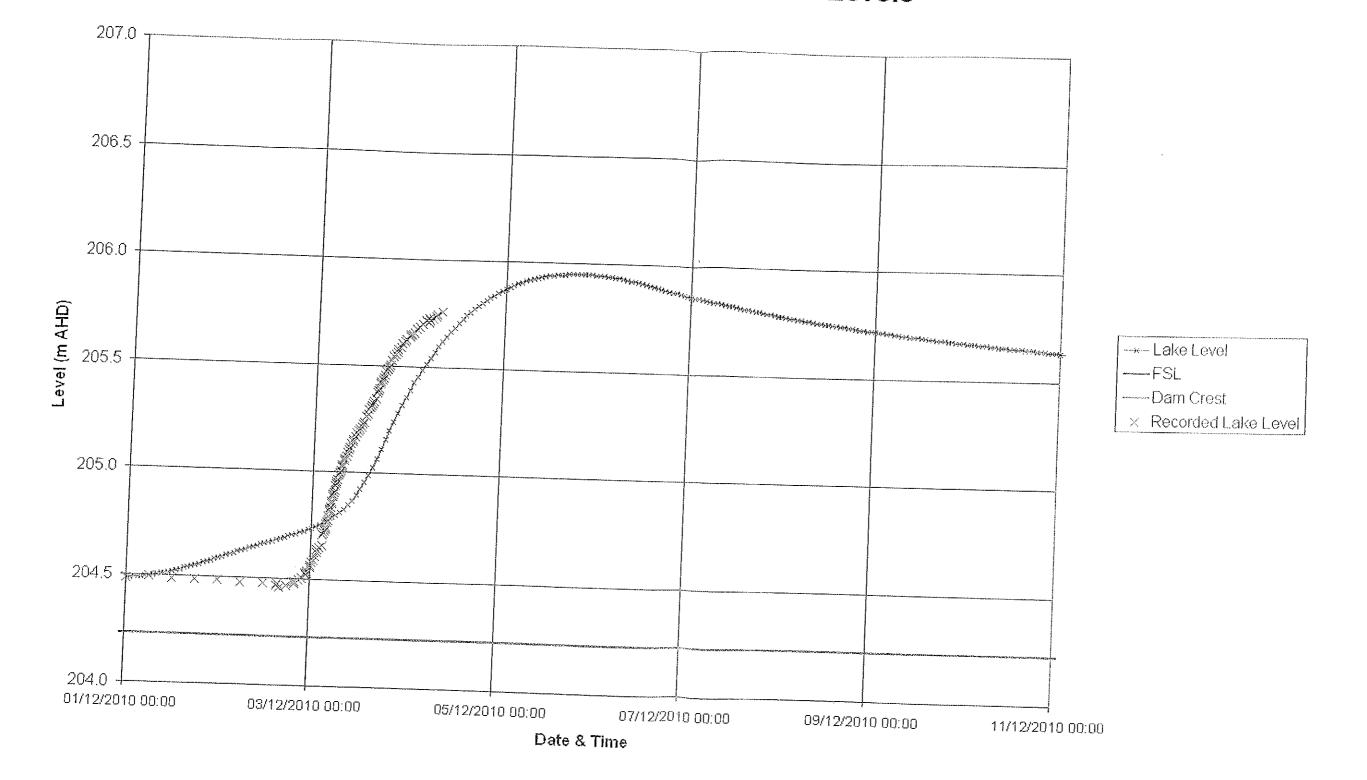
Sent: Saturday, 4 December 2010 9:35 AM
To: Halwala, Mal; Constable, Mark
Cc: Keogh, Rob; Brigden, Daryl

Subject: Fairbairn Dam SunWater FOC prediction - Saturday 4 December 2010

#### Mal/Mark

The BoM have not updated their forecast for the Nogoa River yet. Based upon our storage routing model using Craigmore as the basis of the inflow we have estimated the following response:-

### Fairbairn Dam - Estimated Levels



The model suggests that the peak will occur at around 12:00 (mid-day Sunday 6 Dec 2010) allowing for the difference in actual to modelled levels. The peak level should be about 206.0 m (about 1.8m above spillway). This should equate to a

This forecast assumes no further rainfall and so should be considered the minimum expected level.

I will check the BoM website and advise if they adjust their forecast.

From: Constable, Mark

**Sent:** Monday, 14 March 2011 2:22 PM

To: Constable, Mark

Subject: FW: SunWater FOC - Fairbairn Dam Forecast - Sunday 5 December 2010 at 08:00am

From: Ayre, Rob

Sent: Sunday, 5 December 2010 8:36 AM To: Halwala, Mal; Constable, Mark Cc: Keogh, Rob; Brigden, Daryl

Subject: SunWater FOC - Fairbairn Dam Forecast - Sunday 5 December 2010 at 08:00am

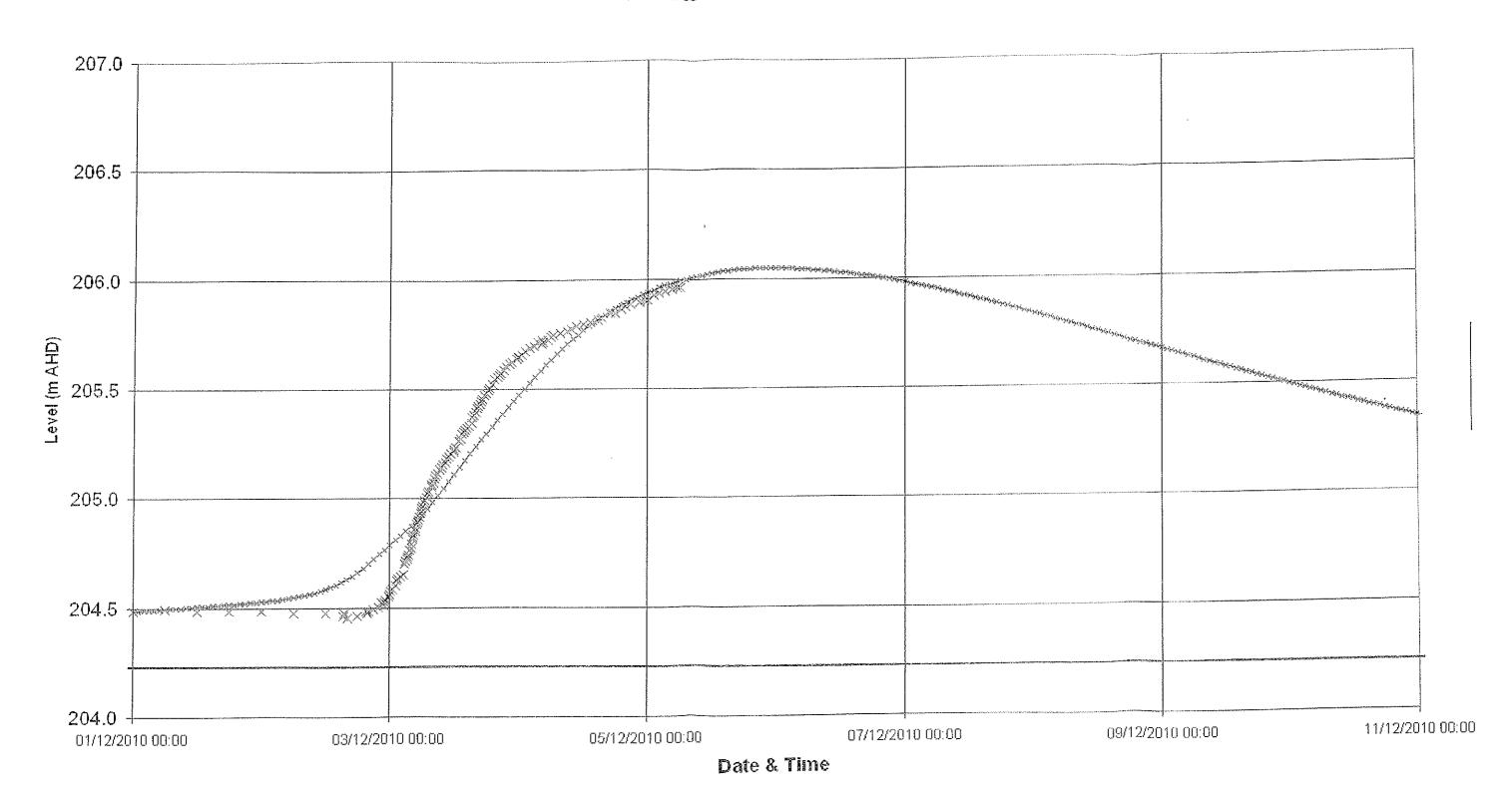
#### Mal/Mark

Appears to have been little rainfall overnight and Craigmore peaked at 10.56 m GH at around 21:00 last night. Fairbairn Dam was at 205.694 m AHD or 1.74 m over the spillway at 06:00 today.

Based upon these flows the SunWater storage routing model suggests that Fairbairn Dam will peak tonight between 16:00 to 20:00 with a depth of flow over the spillway of 1.85 m or about 690 cumecs (nearly 59,000 ML/day).

Refer to the attached plot:-

### Fairbairn Dam - Estimated Levels



Will update again later this afternoon.

Regards

Rob Ayre

From:

Collett, Peter

Sent:

Tuesday, 7 September 2010 2:57 PM

To:

Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn;

Barrett, Matthew, Wallwork, Tom; Hardy-Page, Jo; Ehm, Keith; Costa, Michael j

Cc:

All Emerald Office; Greer, Anthony; Douglas, Petrina; Hodgon, Donna

Subject:

Fairbairn Dam EAP Warning (Flood Event)

Attachments: 100907 Fairbairn Dam EL 204.06.JPG

Good Afternoon,

At 1200 today, Fairbairn Dam was at EL204.07 and rising at approximately 1cm every 2 hours. There is a 75% that the dam will spill before the weekend.

Fairbairn Dam received 70mm from the rain depression that past through central Queensland on the weekend of 04/05 September. The depression delivered heavy showers and storms across the area generating good in-flows into Fairbairn Dam.

The situation at 1200 today was:

- Dam EL 204.07 98.3% of capacity 1,217,214ML
- 24 hour change +1.5% / +19,617ML
- Remaining air space 16cm / 28,919ML

In-flows through Craigmore are steady at 9,000ML/day. However, we are still receiving inflows from the Borilla Creek catchment which does not pass through a gauging station before Fairbairn Dam.

The weather has been fine and warm since Monday morning.

At the current rate of in-flow, Fairbairn Dam could spill as early as late Wednesday. However, it is expected that in-flows will slow over the next 24-48 hours.

The most likely scenario is that the dam will spill late on Thursday. Although there is a chance that the in-flows might pull up just short of FSL – EL204.23.

Unless there are more widespread rains, the discharge from a spill event is anticipated to be small.

Local irrigators have been warned of the impact on Carry-over water entitlements.

The local Council and Disaster Management Group have been warned. Residents living downstream of the spillway will be contacted Wednesday morning.

Regards,

Peter Collett

From: Collett, Peter

Sent: Friday, 10 September 2010 9:17 AM

To: Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn;

Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Ehm, Keith; Costa, Michael j; Jeppesen,

Barry

Cc: All Emerald Office; Greer, Anthony; Douglas, Petrina; Hodgon, Donna

Subject: Fairbairn Dam EAP Stage 1 - Flood Event

### Good Morning,

At 0730 this morning Fairbairn Dam spilled with one cm over the spillway.

From Wednesday, inflows were almost balanced by outflows as Irrigators ordered water to store in ring tanks before the dam spilled and Carry-over Water allocations are zeroed. Irrigators have now cancelled most orders. As a result the dam EL should rise slightly over the next 24 hours.

The weather in the Fairbairn Dam catchment has been fine since Monday. In-flows through Craigmore have decreased from a high of 11,278ML on Monday to 1,217ML this morning. The weather forecast for the Central Highlands for the weekend is patchy light rain in south, isolated storms elsewhere.

The situation at 0730 today was:

- Dam EL 204.24 100.3% of capacity 1,305,036ML
- 24 hour change +0.5% / +6,147ML
- Discharge over Spillway one cm 32.2ML

Unless there are more widespread rains, the discharge from the spill event is anticipated to be small.

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed. Residents living downstream of the spillway were contacted yesterday.

Regards,

Peter Collett

From: 0

Collett, Peter

Sent:

Monday, 13 September 2010 9:32 AM

To:

Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Ehm, Keith; Costa, Michael j; Jeppesen,

Barry

Cc:

All Emerald Office; Greer, Anthony; Douglas, Petrina; Hodgon, Donna

Subject: RE: Fairbairn Dam EAP Stage 1 - Flood Event

### Good Morning,

At 0600 this morning the discharge over the Fairbairn Dam Spillway remained at one cm. The discharge flow has varied over the weekend between 36ML and 50ML per day. The flow at 0600 this morning was 40ML.

Inflows from Craigmore have reduced to 439ML.

The weather in the Fairbairn Dam catchment has been fine over the weekend with no rain forecast for the next 48 hours.

The situation at 0600 today was:

- Dam EL 204.24 100.3% of capacity 1,305,036ML
- 24 hour change +0.0% / +150ML
- Discharge over Spillway one cm 40.6ML
- Craigmore 439.4ML

The discharge from the spill event is anticipated to be small.

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed.

Regards,

Peter Collett

From: Collett, Peter

Sent: Monday, 27 September 2010 11:38 AM

To: Constable, Mark

Subject: FW: Fairbairn Dam EAP Stage 1 - Flood Event

Mark,

Are you ready to take over as EEC?

Regards,

)

Peter Collett

Service Manager, Emerald SunWater

From: Collett, Peter

Sent: Monday, 27 September 2010 11:33 AM

To: Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett,

Matthew; Wallwork, Tom; Hardy-Page, Jo; Ehm, Keith; Costa, Michael j; Jeppesen, Barry

Cc: All Emerald Office; Greer, Anthony; Douglas, Petrina; Hodgon, Donna

Subject: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Good Morning,

At 0600 this morning the discharge over the Fairbairn Dam Spillway was 1.06m / 26,468ML/day and rising.

There were good rains over the weekend generally in excess of 20mm across the catchment with 39mm recorded at Craigmore. Inflows from Craigmore have increased to 46,957ML/day.

The weather in the Fairbairn Dam catchment is cloudy with a chance of Thunderstorms today and tomorrow, generally clear until the weekend and 80% chance of 40mm+ on the weekend.

The situation at 0600 today was:

- Dam EL 205.29 112.90% of capacity 1,465,792ML
- 24 hour change +0.9% / +11,958ML
- Discharge over Spillway 1.06m 26,468ML
- Craigmore 46,957ML

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed.

From: C

Collett, Peter

Sent:

Monday, 20 September 2010 8:17 AM

To:

Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Ehm, Keith; Costa, Michael j; Jeppesen,

Barry

Cc:

All Emerald Office; Greer, Anthony; Douglas, Petrina; Hodgon, Donna

Subject: RE: Fairbairn Dam EAP Stage 1 - Flood Event

### Good Morning,

At 0630 this morning the discharge over the Fairbairn Dam Spillway had increased to 24 cm / 2,824ML/day.

There were good rains over the weekend generally in excess of 40mm across the catchment with 93mm recorded at Craigmore. Inflows from Craigmore have increased to 1,976ML/day.

The weather in the Fairbairn Dam catchment is cloudy with a 70%+ chance of 10-20mm of rain each day for the next week.

The situation at 0630 today was:

- Dam EL 204.47 103.0% of capacity 1,333,258ML
- 24 hour change +2.7% / +35,364ML
- Discharge over Spillway 24 cm 2,824ML
- Craigmore 1,976ML

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed.

Regards,

Peter Collett

Regards,

Peter Collett

From:

Constable, Mark

Sent:

Tuesday, 5 October 2010 8:30 AM

To:



Cc:

Constable, Mark

Subject: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Subject: Fairbairn Dam EAP Stage 1 - Flood Event

Good Morning,

At 0600 this morning the discharge over the Fairbaim Dam Spillway was 0.79m / 17,062 ML/day with a decrease of 12 cm in the previous 24 hrs and is expected to continue falling over the next few days provided there are no further weather events.

Inflows from Craigmore have fallen sharply with a flow of 1,819 ML/day recorded at 0600hrs .

The weather in the Fairbairn Dam catchment is fine and sunny with a low chance of showers of around 1-5mm predicted per day over the next 3 days.

The situation at 0600 today was:

- Dam EL 205.02 109.60 % of capacity 1,422,976 ML
- 24 hour change 1.4% / 3,797ML
- Discharge over Spillway 0.79 m 17,062 ML/day
- Craigmore 1,819 ML/day and falling

Please give me a call if you have any questions.

Regards,

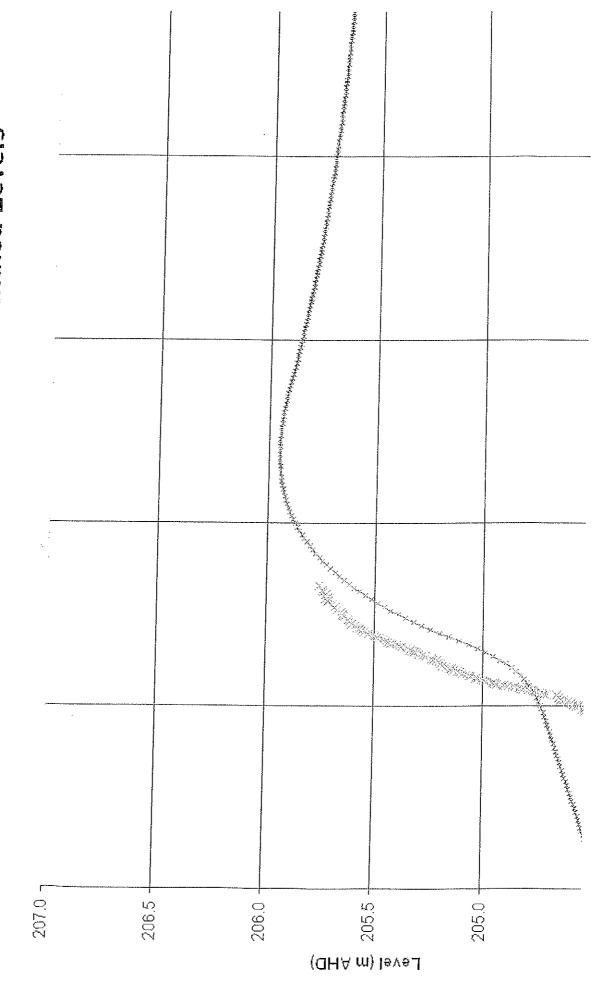
Mark Constable

Storage Supervisor, Fairbairn Dam Emerald SunWater

Regards,

)

Faith Jan - Estinated Levels



From:

Boon, Robin

Sent:

Tuesday, 7 December 2010 8:44 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Collett, Peter; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil

Subject: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Good Morning

Fairbairn Dam level is falling, the EL @ 6am today is 206.04 or 1.81m over the spillway and falling 0.01m an hour.

Craigmore is falling and @ 6am is 7.76m.

The currant situation.

Fairbairn Dam EL 206.04= 122% capacity or 1,587,719ML. Discharging 58,908ML/Day @ 1.81m over the spillway.

Craigmore 7.76m discharging 21,007ML/Day.

Rainfall at Fairbairn Dam in the last 24 hrs was 6.4mm, weather is generally cloudy with forcasts of storms and some rain possible

for the rest of the week.

#### Robin

From: Constable, Mark

Sent: Monday, 6 December 2010 9:30 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; 'IM - Headworks Brisbane'; Ayre, Rob

**Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Collett, Peter; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil

Subject: RE: RE: Fairbairn Dam EAP Stage 1 - Flood Event

### Good Morning

Based on current data Fairbairn Dam appears to have peaked at 206.11or 1.88 metres (62415 ML/day) over the spillway at 0600 hrs this morning.

Current weather is cool and mostly cloudy with a high chance of thunderstorms over the next few days.

No rain was recorded at Fairbairn dam in the previous 24hrs to 0700hrs this morning.

Craigmore has fallen to approximately 9.00Metres or around 40,000 ML/day.

The situation at 0700hrs today:

- Dam EL 206.10= 123% of capacity=1,598,902 ML
- 24hr change +2% = 22,163 ML
- Discharge over spillway 62,269 ML/day and steady

Craigmore 40,000 ML/day and falling

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed

Regards.

Mark Constable Storage Supervisor Fairbairn Dam

From: Constable, Mark

Sent: Sunday, 5 December 2010 10:51 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; 'IM - Headworks Brisbane' **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Collett, Peter; Davidson, Ian **V**; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil

Subject: RE: RE: Fairbairn Dam EAP Stage 1 - Flood Event

### Good Morning

At 0700 hrs this Morning Fairbairn Dam had risen to 205.98 or 1.75 Metres over the spillway a 24hr increase of 0.24 Metres. Estimated peak is around the low 2 Metre mark or below or up to 60,000 ML/day to 70,000 ML/day over the spillway this evening.

0.5mm of rain was measured at the Fairbairn Dam Depot for the previous 24hrs up to 0700hrs this morning. The current weather is high cloud with some scattered showers.

Craigmore peaked at 10.56m or 84,882 ML/day at around 2100hrs last night and is slowly falling

The situation at 0700hrs today:

- Dam EL 205.98= 121% of capacity=1,576,739 ML
- 24hr change +3% = 39,100 ML
- Discharge over spillway 55999 ML/day and rising slowly
- Craigmore 74,000 ML/day and falling

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed

Regards Mark Constable

#### Mobile

From: Constable, Mark

Sent: Saturday, 4 December 2010 10:56 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; 'IM - Headworks Brisbane' **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Collett, Peter; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil

Subject: RE: RE: Fairbairn Dam EAP Stage 1 - Flood Event

#### **Good Morning**

)

At 0700 hrs this morning Fairbairn Dam had risen to 205.74 or 1.51Metres over the spillway an increase of 0.47 Metres since 1300hrs yesterday. Estimation of the peak flow through the spillway is now expected to be late Sunday and current indications are putting the peak between low 2 Metre mark to mid 2 Metre mark or around 80,000ML/day.

5.2mm of rain was measured at the Fairbairn Dam Depot for the previous 24hrs up to 0700hrs this morning. The current weather is high cloud with some scattered showers.

Craigmore continues to rise and passed over the 10 Metre mark at 0700hrs this morning or around 67,000 ML/day.

The situation at 0700hrs today:

- Dam EL 205.76= 118.% of capacity=1,537,639 ML
- 18hr change =9.6% = 124,713 ML
- Disccharge over spillway 45556 ML/day and rising
- Craigmore 67,000 ML/day and rising

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed

Please give me a call if you have any questions.

Regards

Mark Constable

Storage Supervisor Fairbairn Dam

From: Constable, Mark

Sent: Friday, 3 December 2010 2:34 PM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; IM - Headworks Brisbane **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Collett, Peter; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan;

Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil

Subject: RE: Fairbairn Dam EAP Stage 1 - Flood Event

#### Good Afternoon

At 1600hrs on the 2nd of December Fairbairn Dam was at 204.47 or 24cm and falling slowly. Overnight 163mm of rain was recorded at fairbairn Dam depot up to 0700hrs.

A sharp rise in the EL has been experienced with the dam EL at 205.27 104cm/25469ML/day passing through the spillway at 1245hrs. The dam is currently rising at 3.5cm per hour with current indications putting a peak at the dam through the spillway in the low 2 metre mark or around 70,000ML/day through the spillway late Saturday evening early Sunday morning pending no further rain events.

Current weather conditions are cloudy with a few scattered showers and further light showers expected over the next 48hrs.

Craigmore received 113mm of rain overnight with 16,500ML/day being recorded at 1300hrs and is currently rising quickly but no large flows are expected from the back of the catchment.

The situation at 1300hrs today is:

- Dam EL 205.27 = 108.8% of capacity =1,412,926 ML
- 21 hour change + 5.7% = 73,874 ML
- Discharge over spillway 25469 ML/day and rising
- Craigmore 16,500 ML/day and rising

The local Council, Disaster Management Group and the Irrigation Advisory Committee have been informed.

Please give me a call if you have any questions.

Regards

Mark Constable

Storage Supervisor Fairbairn Dam

#### Constable, Mark

From: Boon, Robin

Sent: Wednesday, 22 December 2010 2:11 PM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga;

Pfluger, Glenn; Barrett, Matthew, Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob

Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil;

Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip, Pyne, Gerard;

Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones,

Kerry

Subject: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

#### Good Afternoon

The rainfall event last weekend triggered falls over Fairbairn Dam catchment that totalled between 30mm and 140mm over the three days.

Fairbairn Dam is at EL 205.27 or 1.04m above the spillway and rising 0.01m/hr.

Raymond peaked 6pm yesterday at 65,900ML/Day and is now falling 0.05m/hr

Craigmore peaked at 7am this morning at 97,367ML/Day and is now falling at 0.01m/hr.

The currant situation.

Fairbairn Dam 6am EL 205.27 = 112% capacity or 1,462,120ML. Discharging 25,690ML/day at 1.04m over the spillway.

Raymond 7am 7.7m discharging 50,132 ML/day.

Craigmore 6am 10.883m discharging 97,246ml/day.

Forecast peak spill level at Fairbairn Dam would be around 1.5 to 2.0m Thursday or Friday.

Weather forecast for the next week is for rain in varying amounts.

Robin

From:

Boon, Robin

Sent:

Saturday, 25 December 2010 8:21 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrelf, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry; Wheeler,

Ross;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Good morning

Rainfall in the area overnight was only 2mm to 8mm in the catchment.

Fairbairn Dam is at 205.96 or 1.73m above the spillway and rising 0.001m/hr.

Raymond is still falling.

Craigmore is rising 0.01m/hr.

The currant situation.

Fairbairn Dam at 6am is at EL 205.96 = 121% capacity or 1,574,416ML.Discharging 55,081ML/day at

1.73m over the spillway.

Raymond at 6:45am 5.45 discharging 9,459ML/day. Craigmore at 6am 10.256 discharging 74,379ML/day.

Forecast is still around 1.8m.

#### Robin

From: Boon, Robin

Sent: Friday, 24 December 2010 8:24 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger,

Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob

Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer,

Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Good morning

Rainfall in the area overnight was minimal with only around 10mm falling in the catchment.

Fairbairn Dam is at EL 205.88 or 1.65m above the spillway and rising 0.004m/hr. Raymond is falling again after peaking at only 13,700ML/day at 8pm last night.

Craigmore is still falling but only at 0.004m/hr.

The currant situation.

Fairbairn Dam at 6am 205.88 = 120% capacity or 1,561,170ML. Discharging 51,042ML/day at 1.65m over the spillway.

Raymond at 6:15am 6.1 discharging 13,111ML/day.

Craigmore at 6am 9.86 discharging 62.224ML/day.

Forecast is now around 1.8m.

#### Robin

From: Boon, Robin

Sent: Thursday, 23 December 2010 1:52 PM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger,

Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob

**Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard: Youngnickel, Alan: Greer,

Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

#### Good Afternoon

Rainfall over Fairbairn Dam catchment for the last 24 hrs was 20mm to 60mm.

Fairbairn Dam is at EL 205.68 or 1.45m above the spillway and rising 0.018m/hr.

Raymond was falling but has stopped at 12,806ML/day and is starting to rise.

Craigmore is still falling at 0.02m/hr.

The currant situation.

Fairbairn Dam at 6am 205.68 = 117% capacity or 1,528,312ML. Discharging 41,998ML/day at 1.45m over the spillway.

Raymond at 6:45am 6.05 discharging 12,806ML/day.

Craigmore at 10.554 discharging 84,664ML/day.

Forecast peak is still around the 2m but could change because of rain last night.

#### Robin

From: Boon, Robin

Sent: Wednesday, 22 December 2010 2:11 PM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger,

Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob

Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony;

Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry **Subject:** FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

#### Good Afternoon

The rainfall event last weekend triggered falls over Fairbairn Dam catchment that totalled

between 30mm and 140mm over the three days.

Fairbairn Dam is at EL 205.27 or 1.04m above the spillway and rising 0.01m/hr.

Raymond peaked 6pm yesterday at 65,900ML/Day and is now falling 0.05m/hr

Craigmore peaked at 7am this morning at 97,367ML/Day and is now falling at 0.01m/hr.

The currant situation.

Fairbairn Dam 6am EL 205.27 = 112% capacity or 1,462,120ML. Discharging 25,690ML/day at 1.04m over the spillway.

Raymond 7am 7.7m discharging 50,132 ML/day.

Craigmore 6am 10.883m discharging 97,246ml/day.

Forecast peak spill level at Fairbairn Dam would be around 1.5 to 2.0m Thursday or Friday.

Weather forecast for the next week is for rain in varying amounts.

Robin

From:

Boon, Robin

Sent:

Sunday, 26 December 2010 8:32 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry; Wheeler,

Ross;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Good Morning.

Rainfall over the area again was low with only 10mm to 30mm being recorded over the catchment.

Fairbairn Dam is at EL 206.07 or 1.84m above the spillway and is still rising slowly at 0.003m/hr Raymond is rising slowly.

Craigmore is falling at 0.06m/hr.

The currant situation.

Fairbairn Dam 6am is at EL 206.07 = 122% capacity or 1,592,722ML discharging 60,417ML/day at 1.84m above the spillway.

Raymond at 3:45am 5.75 discharging 11,057ML/day.

Craigmore at 6am 9.49 discharging 52,300ML/day.

Fairbairn is now spilling more than is coming in through Craigmore so the EL should level out today. (depending on the weather)

Forecast for tomorrow is for falls up to 80mm.

Robin

From: Boon, Robin

Sent: Saturday, 25 December 2010 8:21 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony: Douglas, Petrina: Hodgon, Donna; Farrell, Neil; Jones, Kerry; Wheeler, Ross;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Good morning

Rainfall in the area overnight was only 2mm to 8mm in the catchment.

Fairbairn Dam is at 205.96 or 1.73m above the spillway and rising 0.001m/hr.

Raymond is still falling.

Craigmore is rising 0.01m/hr.

The currant situation.

Fairbairn Dam at 6am is at EL 205.96 = 121% capacity or 1,574,416ML. Discharging 55,081ML/day at 1.73m over the spillway.

Raymond at 6:45am 5.45 discharging 9,459ML/day.

Craigmore at 6am 10.256 discharging 74,379ML/day.

Forecast is still around 1.8m.

Robin

From: Boon, Robin

Sent: Friday, 24 December 2010 8:24 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger,

Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob

From:

Boon, Robin

Sent:

Monday, 27 December 2010 10:14 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony: Douglas Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry; Wheeler,

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good Morning.

Rainfall in the last 24hrs over the catchment varied from 20mm to 250mm.

Fairbairn Dam is at EL 206.1 or 1.87m above the spillway and rising 0.01m/hr

Raymond is rising 0.09m/hr.

Craigmore is rising 0.12m/hr.

The currant situation.

Fairbairn Dam at 7:40am EL 206.10 = 123% or1,597,733ML. Discharging 61,940ML/day at 1.87m over

Raymond at 8:30am 9.15 discharging 143,544ML/day.

Craigmore at 7am 9.64 discharging 56,191ML/day.

Forecast of a 3.5m discharge would be reasonable but as usual no event is the same and more rain

for the next two days could change everything.

Robin

From: Boon, Robin

Sent: Sunday, 26 December 2010 8:32 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry; Wheeler, Ross;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 1 - Flood Event

Good Morning.

Rainfall over the area again was low with only 10mm to 30mm being recorded over the catchment.

Fairbairn Dam is at EL 206.07 or 1.84m above the spillway and is still rising slowly at 0.003m/hr Raymond is rising slowly.

Craigmore is falling at 0.06m/hr.

The currant situation.

Fairbaim Dam 6am is at EL 206.07 = 122% capacity or 1,592,722ML. discharging 60,417ML/day at 1.84m above the spillway.

Raymond at 3:45am 5.75 discharging 11,057ML/day.

Craigmore at 6am 9.49 discharging 52,300ML/day.

Fairbairn is now spilling more than is coming in through Craigmore so the EL should level out today. ( depending on the weather)

Forecast for tomorrow is for falls up to 80mm.

Robin

From: Bo

Boon, Robin

Sent:

Tuesday, 28 December 2010 10:21 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mai; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Base

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good morning

Rainfall over the oatchment in the last 24hrs was 5mm to 45mm.

Fairbairn Dam is at EL 206.4 or 2.17m above the spillway and rising 0.01m/hr

Raymond probably peaked at 12.2m

Craigmore is rising 0.27m/hr.

The currant situation.

Fairbairn Dam at 6am EL 206.40 = 127% or 1,648,294ML. Discharging 79,083ML/day at 2.17m over the spillway.

Raymond possible peak now at 12.2m discharging an est of 300,000ML/day

Craigmore at 6am 15.07 discharging 269,892ML/day.

Forecast is now for a flood level around 2008.

Robin

From: Boon, Robin

Sent: Monday, 27 December 2010 10:14 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry; Wheeler, Ross;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good Morning.

Rainfall in the last 24hrs over the catchment varied from 20mm to 250mm.

Fairbairn Dam is at EL 206.1 or 1.87m above the spillway and rising 0.01m/hr

Raymond is rising 0.09m/hr.

Craigmore is rising 0.12m/hr.

The currant situation.

Fairbairn Dam at 7:40am EL 206.10 = 123% or1,597,733ML. Disoharging 61,940ML/day at 1.87m over the spillway.

Raymond at 8:30am 9.15 discharging 143,544ML/day.

Craigmore at 7am 9.64 discharging 56,191ML/day.

Forecast of a 3.5m discharge would be reasonable but as usual no event is the same and more rain forecast

for the next two days could change everything.

Robin

From: Boon, Robin

Sent: Sunday, 26 December 2010 8:32 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross

From:

Boon, Robin

Sent:

Wednesday, 29 December 2010 9:36 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel,

Alan; Greer, Anthony: Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good morning

Rainfall over the catchment in the last 24hrs was minimal.

Fairbairn Dam is at EL 207.52 or 3.29m above the spillway and rising 0.09m/hr

Raymond is probably around 9.0m and falling

Craigmore is rising 0.01m/hr.

The currant situation.

Fairbairn Dam at 6am EL 207.52 = 142% or 1,844,683ML. Discharging 155,819ML/day at 3.29m over the

Raymond est at 9.0m discharging an est of 100,000 to 150,,000ML/day.

Craigmore at 6am 18.11 discharging an est of 440,000ML/day.

Forecast is now for a discharge of around 5.0m. (2008 = 4.44m)

Robin

From: Boon, Robin

Sent: Tuesday, 28 December 2010 10:21 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good morning

Rainfall over the catchment in the last 24hrs was 5mm to 45mm.

Fairbairn Dam is at EL 206.4 or 2.17m above the spillway and rising 0.01m/hr

Raymond probably peaked at 12.2m

Craigmore is rising 0.27m/hr.

The currant situation.

Fairbairn Dam at 6am EL 206.40 = 127% or 1,648,294ML. Discharging 79,083ML/day at 2.17m over the spillway.

Raymond possible peak now at 12.2m discharging an est of 300,000ML/day

Craigmore at 6am 15.07 discharging 269,892ML/day.

Forecast is now for a flood level around 2008.

Robin

From: Boon, Robin

Sent: Monday, 27 December 2010 10:14 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Jones, Kerry; Wheeler, Ross;

From:

Boon, Robin

Sent:

Wednesday, 29 December 2010 10:15 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel,

Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

**Subject:** FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event Sorry people this should be Fairbairn Dam EAP Stage 4 - Flood Event

From: Boon, Robin

Sent: Wednesday, 29 December 2010 9:36 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good morning

Rainfall over the catchment in the last 24hrs was minimal.

Fairbairn Dam is at EL 207.52 or 3.29m above the spillway and rising 0.09m/hr

Raymond is probably around 9.0m and falling

Craigmore is rising 0.01m/hr.

The currant situation.

Fairbairn Dam at 6am EL 207.52 = 142% or 1,844,683ML. Discharging 155,819ML/day at 3.29m over the spillway.

Raymond est at 9.0m discharging an est of 100,000 to 150,,000ML/day.

Craigmore at 6am 18.11 discharging an est of 440,000ML/day.

Forecast is now for a discharge of around 5.0m. (2008 = 4.44m)

Robin

From: Boon, Robin

Sent: Tuesday, 28 December 2010 10:21 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Whoeler, Ross;

Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good morning

Rainfall over the catchment in the last 24hrs was 5mm to 45mm. Fairbairn Dam is at EL 206.4 or 2.17m above the spillway and rising 0.01m/hr

Raymond probably peaked at 12.2m

Craigmore is rising 0.27m/hr.

The currant situation.

Fairbairn Dam at 6am EL 206.40 = 127% or 1,648,294ML. Discharging 79,083ML/day at 2.17m over the spillway.

Raymond possible peak now at 12.2m discharging an est of 300,000ML/day

Craigmore at 6am 15.07 discharging 269,892ML/day.

From:

Boon, Robin

Sent:

Thursday, 30 December 2010 2:53 PM

To:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel,

Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good Afternoon.

Rainfall again was minimal with the next weeks forecast looking the same.

Fairbairn Dam is at EL 209.35 or 5.12m above the spillway and rising 0.05m/hr

Craigmore peaked at 18.16 9am yesterday 29/12/10, est discharge 442,000ML/day.

The currant situation.

Fairbairn Dam at 6am EL 209.35 = 168% or 2,194,826ML. Discharging 325,271ML/day at 5.12m over the

spillway.

Craigmore at 6am 16.82 discharging an est of 364,000ML/day. Forecast is now for a discharge of around 5.6 m. (2008 = 4.44m)

Robin

From: Boon, Robin

Sent: Wednesday, 29 December 2010 10:15 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Sorry people this shoul be Fairbairn Dam EAP Stage 4 - Flood Event

From: Boon, Robin

Sent: Wednesday, 29 December 2010 9:36 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 2 - Flood Event

Good morning

Rainfall over the catchment in the last 24hrs was minimal.

Fairbairn Dam is at EL 207.52 or 3.29m above the spillway and rising 0.09m/hr

Raymond is probably around 9.0m and falling

Craigmore is rising 0.01m/hr.

The currant situation.

Fairbairn Dam at 6am EL 207.52 = 142% or 1,844,683ML. Discharging 155,819ML/day at 3.29m over the

Raymond est at 9.0m discharging an est of 100,000 to 150,,000ML/day.

Craigmore at 6am 18.11 discharging an est of 440,000ML/day.

Forecast is now for a discharge of around 5.0m. (2008 = 4.44m)

Robin

From: Boon, Robin

Sent: Friday, 31 December 2010 9:33 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga;

Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil;

Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip, Pyne, Gerard; Youngnickel,

Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good morning.

Rainfall again was minimal.

Fairbairn Dam is at EL 209.78 or 5.55 above the spillway and falling 0.01m/hr.

Peak at midnight last night was 209.81 =176% or 2,289,129ML, 5.58m above the spillway. Discharging 373,016ML/day.

Craigmore is falling 0.14m/hr.

The currant situation.

Fairbairn Dam at 6am EL 209. 78 = 175 % or 2, 282,899 ML. Discharging 370,650ML/day at 5.55m over the spillway.

Craigmore at 6am 13.751 discharging 208,239 ML/day.

#### Robin

From: Boon, Robin

Sent: Thursday, 30 December 2010 2:53 PM

To: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson,

Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer,

Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good Afternoon.

Rainfall again was minimal with the next weeks forecast looking the same.

Fairbairn Dam is at EL 209.35 or 5.12m above the spillway and rising 0.05m/hr

Craigmore peaked at 18.16 9am yesterday 29/12/10, est discharge 442,000ML/day.

The currant situation.

Fairbairn Dam at 6am EL 209.35 = 168% or 2,194,826ML. Discharging 325,271ML/day at 5.12m over the

spiliway.

Craigmore at 6am 16.82 discharging an est of 364,000ML/day.

Forecast is now for a discharge of around 5.6 m. (2008 = 4.44m)

#### Robin

From: Boon, Robin

Sent: Wednesday, 29 December 2010 10:15 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer,

Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Sorry people this shoul be Fairbairn Dam EAP Stage 4 - Flood Event

From:

Boon, Robin

Sent:

Saturday, 1 January 2011 7:23 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good Morning,

Fairbairn Dam at 6am EL 209. 16 = 166 % or 2,156,633 ML. Discharging 305,931ML/day at 4.93m over the spillway,

Failing 0.03m/hr

Robin

From: Boon, Robin

Sent: Friday, 31 December 2010 9:33 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross; Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good morning.

Rainfall again was minimal.

Fairbairn Dam is at EL 209.78 or 5.55 above the spillway and falling 0.01m/hr.

Peak at midnight last night was 209.81 =176% or 2,289,129ML, 5.58m above the spillway. Discharging 373,016ML/day.

Craigmore is falling 0.14m/hr.

The currant situation.

Fairbairn Dam at 6am EL 209. 78 = 175 % or 2, 282,899 ML. Discharging 370,650ML/day at 5.55m over the spillway.

Craigmore at 6am 13.751 discharging 208,239 ML/day.

Robin

From: Boon, Robin

Sent: Thursday, 30 December 2010 2:53 PM

To: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good Afternoon,

Rainfall again was minimal with the next weeks forecast looking the same. Fairbairn Dam is at EL 209.35 or 5.12m above the spillway and rising 0.05m/hr

Craigmore peaked at 18.16 9am yesterday 29/12/10, est discharge 442,000ML/day.

The currant situation.

Fairbairn Dam at 6am EL 209.35 = 168% or 2,194,826ML. Discharging 325,271ML/day at 5.12m over the spiliway.

From:

Boon, Robin

Sent:

Sunday, 2 January 2011 9:26 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good Morning.

Fairbairn Dam at 6am EL 208.20 = 151 % or 1,970,384 ML. Discharging 213,846 ML/day at 3.97m over the spillway,

Falling 0.04m/hr

Robin

From: Boon, Robin

Sent: Saturday, 1 January 2011 7:23 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard: Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good Morning.

Fairbairn Dam at 6am EL 209. 16 = 166 % or 2,156,633 ML. Discharging 305,931ML/day at 4.93m over the spillway. Falling 0.03m/hr

Robin

From: Boon, Robin

Sent: Friday, 31 December 2010 9:33 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross; Jones, Kerry

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Craigmore at 6am 13.751 discharging 208,239 ML/day.

From:

Boon, Robin

Sent:

Monday, 3 January 2011 10:28 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good mornina.

Fairbaim Dam at 6am EL 207.38 = 140% or 1,819,412MI/day. Discharging 145,258ML/day at 3.15m over the spillway.

Robin

From: Boon, Robin

Sent: Sunday, 2 January 2011 9:26 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross Cc: Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard: Youngnickel. Alan: Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross; Jones, Kerry

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From:

Boon, Robin

Sent:

Tuesday, 4 January 2011 10:15 AM

To:

Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob;

Wheeler, Ross

Cc:

Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross;

Jones, Kerry

Subject: FW: FW: RE: Fairbairn Dam EAP Stage 4 - Flood Event

Good morning.

Fairbairn Dam at 5am EL 206.74 = 131% or 1,706,590ML/day. Discharging 99,705ML/day at 2.51m over the spillway.

This will be the last E Mail for this flood event.

Robin

From: Boon, Robin

Sent: Monday, 3 January 2011 10:28 AM

**To:** Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger, Glenn; Barrett, Matthew; Wallwork, Tom; Hardy-Page, Jo; Jeppesen, Barry; Ayre, Rob; Wheeler, Ross **Cc:** Armstrong, Jeff; Boon, Robin; Chappell, Adam; Davidson, Ian V; Farlow, Scott; Farrell, Neil; Grayson, Ian; Kinna, Gary; Maher, Pat; Molloy, Craig; Neville, Philip; Pyne, Gerard; Youngnickel, Alan; Greer, Anthony; Douglas, Petrina; Hodgon, Donna; Farrell, Neil; Wheeler, Ross; Jones, Kerry

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Sent: Saturday, 1 January 2011 7:23 AM

To: Constable, Mark; Boettcher, Peter; Keogh, Rob; Miller, Phil; Halwala, Mal; Kakourakis, Olga; Pfluger,

#### Constable, Mark

From: Constable, Mark

Sent: Tuesday, 1 March 2011 10:59 AM

To: Boon, Robin; Jones, Kerry Cc: Molloy, Craig; Farrell, Neil

Subject: Fairbairn dam EAP commencing 10/9/2010

#### Gents

On checking the shaft encoder at the right bank tower this morning at 7:30 am the reading come up at 204.228 metres.

This would mean officially that the EAP for spillway discharge commencing on 10th September 2010 is now closed.

Although looking at the forecast this will be short lived.

Re

Mark

### Constable, Mark

From: Constable, Mark

Sent: Wednesday, 2 March 2011 9:04 AM

To: Costa, Michael j; Ehm, Keith; Mewett, Ross; Read, John; Richardson, Peter; Thomas, David;

Williem, Leonard

Cc: Jones, Kerry

Subject: Fairbairn EAP Sept 2010

#### Gents

The EAP activated on the 10th of September 2010 was closed on the 1st of March 2010 at 7:30 am with the dam EL at 204.228 metres.

Expected that this will be short lived as rain is forecasted for the weekend.

#### Regards

Mark

## EMERGENCY ACTION PLAN - IRBAIRN DAM

## FAIRBAIRN DAM EMERGENCY AGTION PLAN. LOG OF EVENTS / AGTIONS

10-9-10 0000	Event description / Action carried out	Poppedado
- 10 0780 FM	ENGANCY ACTION A.	Recorded By (initials
	ERGONLY ACTION PLAN INTRIATED	
10-7-10 1500 Tw	THE DADLY MEDZ	
93 9 10 112-	THE DATE THISPETTIONS OF MAIN BUBBANHAIRNT	ľ
SPI-10 1150 NOTE	GATES IN POSE ON	***************************************
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2-12-10 0200 140000	RECY. TWILE DAILY INSPECTIONS STATEM	
- ON DR	Stillway Snown	
-12-10 0700 LOWE	R PERZO PAT 12200DED	4.

## EMERGENCY ACTION PLAN - 1 ARBAIRN DAM

# FAIRBAIRN DAM EMERGENCY ACTION PLAN LOG OF EVENTS/ ACTIONS

1	0700 DAM E.L. REG	Recorded By (initials
	0700 DAM E.L. RECEDING. NO WATER UP TO	
	LEVERS. CENERA	
<i>y</i>	· · · · · · · · · · · · · · · · · · ·	The state of the s
5-1-11	DIOD DAM E.L. RETURNED BACK TO EAP LEVEL COMPRENSIVE THISPETH	this could be a second be a se
	COMPRENSIVE COMPRENSIVE	3
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0 1		
0-11-11:0	DAM E.L. BACK TO LEVEL Z. RETURNED	
	BACK TO GOLD	(matter many)
25-1-17 10	BACK TO STANDARO SURVETLLUNCE	
	DUTY VALCUM PUMP USED TO	
	DUT LOWER PIEZOS	
5.7.11 /0	DO MANUAL READ OF PLEZOS	111111111111111111111111111111111111111
-3-11 m	30 FAD GO	
1	30 EAP FOR CURRENT SPILL EVENT CLOSED	

FAIRBAIRN DAM EAP

Visual Inspection and Storage Report Note: See Page 5 for instructions **	t	24.29.20 <u>01.00</u> 2.29.000		Operation Page (Sora
VISUAL	INSPECTION	First Inspection	(+6 hrs)	Third Inspection (+12 hrs)
	DAT		100	29-12.10
(Walk O	TIM R Drive at 10 km/hour. Write 'W' for walk and 'D	ドーハノフトー		1730
Main Dam Embankment	William Mark and O			
No comments of the comments of		$\mathcal{I}$		D
Note that	General Condition	Į 12		V
	Cracks, subsidence in pavemen	1		/
Upstream Face (Use binoculars):	Settlement	<u>-</u>		
The state of the s	Displacement of riprap materia	~		
Downstream face:	Subsidence, slides, erosion	1 /		
	Sign of constant Mark	1		
	Sign of seepage, Wet spots / seams			
Area Downstream of Dam				1
Seepage from a	any location apart from seepage point			
Seepage				
Seen	age water - Clear or Turbid (Tick for clear)	/1	<del></del>	
Spillway	-go water - Olear of Turbia (Tick for clear)			$\nu$
Spillway Channel Erc				2
Tue	osion, damage to concrete structure			
<u> </u>	General Condition/Cracking/Spalling			
U/S Face (if visible):	General Condition			
Apron (if visible):		V		
Crest (if visible):	eneral Condition / Impact Damage			
	General Condition			
Bridge: General Condition/Con	Impact Damage	//		
	ncking/Spalling/Construction Joints			<del>-  </del>
Details of significant changes. New occurrences	and issues warranting further attention			
Ash. O.K.				
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	Inspecting Officer's initials			一十量
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,	Tev (C)   Mananer	яніў імападог	/ Service Delive	ery
	(tick if faxed) Principal Engir	eer (Dam Saf	etv)	
		· (Dailt Da)	~1/	

SunWater Section 6A: Page 1 of 9

	DAM EAP			FIRES	
Visual Inspecti Note: See Pag	on and Storage Report te 5 for instructions **				Operation Page 2 of
7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-	VISUAL INSPECTION		First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
77.57		DATE	29-12-10	1.01113)	25-12-10
V	(Walk OR Orive at 10 km/s	TIME			1750
River	(Walk OR Orive at 10 km/hour. Wri	le 'W' for walk and 'D' fo	or Drive)		
Left Bank:	General Condition/Seep	age/Slips/Slumps		,	
	Seepage,	Erosion/Deposits	/		
Right Bank:	General Condition/Seepa	age/Slips/Slumps			
Intake Structure		o statites	/_		$V_{\perp}$
Structure:	General Condition/Cracking/Spalling/	(man)			$\nu$
Trashracks/Baulk	S: General Condition (Condition)	Impact Damage			V
Access Bridge:		mpact Damage			/
Outlet Works Righ	General Condition/Cracking/Spalling/	mpact Damage			
Outlets:					
L	General Condition/Cavitation/Cr	acking/Spalling			
Channel;	General Condition/Loose Rock/Er	Osion/Dangoit-			V
Culverts:	General Condition/Cracking/Spall	osion/Deposits	SUBMER	460	
Bull Ring:	General Condition/Crosking/Span	ng/Settlement			
Outlet Works Left B	General Condition/Cracking/Spalling/E	amage/Joints	V		
Outlets:					
	General Condition/Cavitation/Cra	cking/Spalling	1		
Channel;	General Condition/Loose Rock/Eros	sion/Deposits			
Culverts:	General Condition/Cracking/Spallin	r/Settlement			
ump House:	General Condition/Crack	ing/Daws	V		
elma Channel Gate I	louse: General Condition (C.)	ina\namade			
		ing/Damage			<b>/</b>
=	s. New occurrences and issues warranting furth	ner attention			
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		(**************************************		**********	
	***************************************	*********	<	1141214	
					7
	Inspecting Office	er's initials			V
		Asset Engineerin	ng Manager / S	lenice Dolle	
	Fax to (tick if faxed)	Manager Manager	J = 1.45 (01 / 0	CINCO DONA	'y
	( with the state of the state o	Principal Enginee	er /Dam Safatu	1	

SunWater Section 6A: Page 2 of 9

EAIRBA	IRN DAM EAR	V. 2017 S. 1100		Bloom and a second
Visual In:	spection and Storage Report		11000	Operation
	e Page 5 for instructions **		ļ	Page 3 of 4
Committee of the commit	VISUAL INSPECTION	First Inspection	Second Inspection	Third Inspection (+12 hrs)
	DAT	***************************************	(+6 hrs)	(+12 hrs)
The state of the s				
Saddle Dan	(Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' LEmbankments (Earth & Rockful Structure)	for Drive)	5-1	
Saddle Dam	1	· , · <u>· , · , · , · , · , · , · , · , ·</u>	*	
Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion	1 W_		
D/S Slope: C	racks/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
\ <b>=</b>	Drainage System			
U/S Slope:	Slides/Sinkholes/Beaching/Freder			
Right Abutment	Cracks/Metenote/Sliden			
Saddle Dam 2	Ufacks/Wetenote/Stides			
Crest:		$\tilde{\tau}$		- Company of the Comp
	Depressions/Cracks/Sinkholes/Alignment/Erosion			7-
D/S Slope; Crad	cks/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion	<u></u>		
U/S Slope:	Drainage System			
Left Abutment:	Slides/Sinkholes/Beaching/Erosion			77.
Right Abutment:	Cracks/Wetspots/Slides Cracks/Wetspots/Slides			
Saddle Dam 3	- Copus/Jides			
Crest;	Depressions/Cracks/Sinkholes/Alignment/Erosion	D		
D/S Slope: Cracks	s/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
U/S Slope:	Drainage System			
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Right Abutment:	Cracks/Wetspots/Slides			P1
	Cracks/Wetspots/Slides			
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	I DAN L. A P.	· · · · · · · · · · · · · · · · · · ·		
	Inspecting Officer's initials			watership and a series of the
	Fax to Asset Engineer  Wanager	ing Manager /	Service Delive	гу
	(tick if faxed) Principal Engine	eer (Dam Safe	(y)	

SunWater Section 6A: Page 3 of 9

-	FAIRBAIRN	DAM EAP		i Elongia	Pperation
<u> </u>	Visual Inspection Note: See Pag	on and Storage Report e 5 for instructions **	A. CARRELLINE	1	Page 4 of 4
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-		DATE	29-12-10		7
		TIME (Walk OR Drive at 10 km/hour, Write 'W' for walk and 'D' fe	10.00		
	Saddle Dam Em	bankments (Earth & Rockfill Structure)	or Direct	n'	
777	Saddle Dam 4			,	
	Crest;	Depressions/Cracks/Sinkholes/Alignment/Erosion	W		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	D/S Slope: Cracks	s/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
		Drainage System			
-	U/S Slope:	Slides/Sinkholes/Beaching/Erosion			
·	Left Abutment:	Cracks/Wetspots/Slides			
~~~	Right Abutment:	Cracks/Wetspots/Slides			
	Saddle Dam 5		~		
	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion			7/m
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57		Drainage System			
	U/S Slope;	Slides/Sinkholes/Beaching/Erosion			
	Left Abutment:	Cracks/Wefspots/Slides			777
	Right Abutment:	Cracks/Wetspots/Slides			
	Saddle Dam 6				1 man
``	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion		_	Note:
	D/S Slope: Cracks/Si	nkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
		Drainage System			By a distant
Ī	J/S Slope:	Slides/Sinkholes/Beaching/Erosion			
L	.eft Abutment:	Cracks/Wetspots/Slides			
R	light Abutment:	Cracks/Wetspots/Slides	**		
100	etails of significant chance	es. New occurrences and issues warranting further attention			Nation, Pala
	Sodale 7	Somewhere the state of the stat			The state of the s
					ACTION TO SECURE
		Inspecting Officer's initials			
		Fax to Asset Enginee Manager	ring Manager	/ Service Deli	very
		(tick if faxed) Principal Engin	eer (Dam Saf	ety)	

SunWater Section 6A: Page 4 of 9

Jan 08 Issue 7-0
ZE: ET TT0Z/p0/20

VISUAL INSPECTION    First   Second   Inspection   Inspec	Visual Inspection a	nd Storage Report		110003	Operation Hage 4 pt 4
Inspection   Inspecting   Ins	Note, dee Page 5	ior instructions **		!	
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Fax to   Asset Engineering Manager / Service Delivery   Manager   Manager   Fax to   Manager   M		Fax to   Manager	ering Manager /	Service Delív	өгу

SunWater Section 6A: Page 4 of 9 Jan 08. Issue 2-0

FAIRBAIRN DAN  Visual Inspection and			Flo	od Opera	ition
Note: See Page 5 for	instructions **				1614
NAME OF THE PROPERTY OF THE PR	VISUAL INSPECTION	Fi Inspe	1	ction Inspe	aird ection
According to the second	DA'		20		hrs) /2-/o
Name of the state	(Walk OR Drive at 10 km/hour, Write 'W' for walk and 'I	ME OG3	6	170	>0
Main Dam Embankme	nt				
	General Condition	D	<del></del>		
MAAAAAA AAAAAAAA AAAAAAAA AAAAAAAAA AAAAA	Cracks, subsidence in pour	, ~		V	
Upstream Face (Use binoc	Culars) ; Settlemen				
Downstream face:	Displacement of riprap materia	, ,		I V	
Downstream face:	Subsidence, slides, erosion		,	1 /	
	Sign of seepage, Wet spots / seams		_	1	
77		1		10	
Area Downstream of Da	m				
See	page from any location apart from seepage point	T			
Seepage	sociale point				
0.44	Seepage water - Clear or Turbid (Tick for clear)	N/U		1.0.	-  [
Spiliway	(This of clear)	19/4		NA	<u> </u>
Spillway Channel	Erosion, damage to concrete structure	C			
Trainings Walls:	General Condition/Cracking/Spalling	SOR	MERCO	1	
U/S Face (if visible):	General Condition		-	1	
Apron (if visible):	General Condition / Impact Damage			1	
Crest (if visible):	General Condition	<u> 50B</u>	MERCE	P	
	Impact Damage				1
Bridge: General Co	andition/Cracking/Snalling/Construction			-	
betalla of significant changes. New a	OCCUPTEDOES and incuration			L	
and the state of t	Lov Hood Eund with	ا وج	See at	C.	
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	Inspecting Officer's initials				

Principal Engineer (Dam Salety)

SunWater Section 6A: Page 1 of 9

### FAIRBAIRN DAM EAP

Flood Operation

Visual Inspection and Storage Report Note: See Page 5 for instructions \*\* Page 2 of 4

		VIS	JAL INSPECTION		Firs Inspec	lion	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
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	Left Bank:				D			0.
	LOIL DAIR.			Seepage/Slips/Slump	ت حن ∤	BU	180050	
			See	page/Erosion/Deposit	s. I		E2650	
	Right Bank:		General Condition/S	Seepage/Slips/Slump	s ,	/		U
4.	Intake Structure	A. J.		***************************************				
	Structure:	General C	Condition/Cracking/Spa	alling/Impact Damage	1 .			i
=======================================	Trashracks/Baulks		General Condition/Co		<del></del> -	1/	74. 7	
	Access Bridge:	General C	Condition/Cracking/Spa			, , , ,	CALLER	· · · · · ·
	Outlet Works Right	Bank		*	-	-		
	Outlets:	Gen	eral Condition/Cavitat	ion/Cracking/Spalling	1			2
	Channel:		ral Condition/Loose Re	· · · · · · · · · · · · · · · · · · ·			20120	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	Culverts;	Gene	ral Condition/Cracking	/Spalling/Settlement	0017	7/4	30681	2
L	Bull Ring:	General C	ondition/Cracking/Spa	alling/Damage/Joints		7		<u> </u>
_	Outlet Works Left B	ank (if Acc	essable)		ļ	-		
	Outlets:	Gene	eral Condition/Cavitation	on/Cracking/Spalling				·
	Channel:	Genera	l Condition/Loose Roo	ck/Erosion/Deposits	500		EA CEO	70.
	ulverts:	Genera	al Condition/Cracking/	Spalling/Settlement				v
	ump House:		General Condition	/Cracking/Damage	1,	_		~
	elma Channel Gate		General Condition	/Cracking/Damage	سرسا			
De	etails of significant change	es, New ocçu	rences and issues warran	ting further attention		l		
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SunWater
Section 6A: Page 2 of 9
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	Note: See Page 5	and Storage Report i for instructions **		É	
		VISUAL INSPECTION	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
		DATE	30-12-10	1	
		TIME	1230		
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	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion	R,		
: L		Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion	V		
-	-,, -, -, -, -, -, -, -, -, -, -, -,	Drainage System			
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ł	light Abutment:	Cracks/Wetspots/Slides	V/		·
I	addle Dam 2	Ordensi v vegaposis onices	V		
	rest:	Depressions/Cracks/Sinkholes/Alignment/Erosion	B		
l		inkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
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	ddle Dam 3	Orders (Verspots/Singles			
Cre		Depressions/Cracks/Sinkholes/Alignment/Erosion			
D/S	Slope: Cracks/Sir	nkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
		Drainage System	V		
U/S	Slope:	Slides/Sinkholes/Beaching/Erosion	V		
Left	Abutment:	Cracks/Wetspots/Slides			
Righ	ıt Abutment:	Cracks/Wetspots/Slides			
etai	ls of significant change	es. New occurrences and issues warranting further attention			
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/	N 3PE (110)	V NO 1 + No 2 W 6002	LON J. L	7104	,
		Inspecting Officer's initials			
		Fax to Manager (tick if faxed)	MINIO WEDSON	er / Service D	elivery

SunWater Section 6A: Page 3 of 9

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	FAIRBAIRN	DAMEAP		Flood C	peration
	Visual Inspection Note: See Pag	on and Storage Report e 5 for instructions **	A STATE OF THE STA		flage 4 of a
	THE STATE OF THE S	VISUAL INSPECTION	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
		DATE			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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	Saddle Dam Em	pankments (Earth & Rockfill Structure)	or Drive)	<del></del>	
	Saddle Dam 4	The second secon	1	<u>.</u> 	1
~~~~~	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion			
	D/S Slope: Cracks	s/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
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	U/S Slope:	Drainage System	V		
******	Left Abutment:	Slides/Sinkholes/Beaching/Erosion			
		Cracks/Wetspots/Slides			
	Right Abutment:	Cracks/Wetspots/Slides			
	Saddle Dam 5		67		
≣,	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion	£.		
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<b>]</b>	U/S Slope:	Drainage System	0		
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	Saddle Dam 6		R		
,	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion	<u> </u>		
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_		Drainage System			
Ū	VS Slope:	Slides/Sinkholes/Beaching/Erosion			
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0	ight Abutment:	Cracks/Wetspots/Slides			
		Cracks/Wetspots/Slides			
De	tails of significant change	s. New occurrences and issues warranting further attention			
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No.	5 \$ b 10 60	00 CONDINEN NO 6 NAT 4 SMAKE	SUNK H	OSES	
	Port Port S Notice Control of the Co	Inspecting Officer's initials			1
		Fax to Asset Enginee  (tick if faxed) Asset Enginee	ring Manager /	Service Delive	ery
		Principal Engin	eer (Dam Safe	ty)	

SunWater Section 6A: Page 4 of 9

1 3000	RBAIRN DAM	EAP			Elood	Operation
Vi	sual Inspection and S ote: See Page 5 for in	torage Report structions **		<u>Manual Manual de Sergi</u>		Page flot
Programme Control of C		VISUAL INSPECTION		First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
			DATI	E 31-12-1	0	31-12-16
1900 p. 1	A A A A A A A A A A A A A A A A A A A	(Walk OR Drive at 10 km/hour. Write	TIME	0630		1700
Main I	Dam Embankmer	nt	. An tor walk and D.	for Drive)		
	-			0	e.	
			eneral Condition	1		L
Unetro	Am. IT.	Cracks, subside	nce in pavement	10		U
Opsite	am Face (Use binoci	ılars) :	Settlement	\ \ \ \ \		V
		Displacement c	f riprap material		-	
Downst	ream face:		slides, erosion			
170		Sign of seepage, We				
7747		1 7 - 7	r opoto / scams			1
Area Do	wnstream of Dan			[		
	Seer	San from our land				
Seepage	000)	age from any location apart from	seepage point			
ļ					·	
Spillway		Seepage water - Clear or Tu	rrbid (Tick for clear)	N/4		N/A
Spillway (	Champel			· · · · · · · · · · · · · · · · · · ·		
<u> </u>		Erosion, damage to conc		SUBIA	ERUES	
Trainings		General Condition/Crac	king/Spalling	300011	EKOE,	)
U/S Face (	if visible):		al Condition			
Apron (if vi	sible):					
Crost (if vis	ible):	General Condition / Imp	al Condition	SUBME	RUGO	
						_
Bridge:	General Co	imp ndition/Cracking/Spalling/Constru	act Damage	V		_ 1
Details of sìonit	icani changer No	Tourse or acking/Spalling/Constru	action Joints			
. 2.9.111	CO -	occurrences and issues warranting furth	er attention		<del></del>	
	W.A.E	LLWAY MEAUTLY	Surnez	RUSO	***********	
	owen Pr	EZO PIT PLOODI	5 D			
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	the production of the second o	## +				
		Inspecting Offic	er's initials			7.3
		Fax to (tick if faxed)	Asset Enginee Manager	ting Manager	/ Service Defin	very

SunWater Section 6A; Page 1 of 9
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### FAIRBAIRN DAM EAP

Visual Inspection and Storage Report Note; See Page 5 for instructions \*\*

Flood Operation

Rage 2 of 4

VISUAL INSPECTION	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
DATE	31-12-10		31-12-10
THEFT	11/11	,	1700
(Walk OR Drive at 10 km/hour, Write 'W' for walk and 'D' for River	Drive)		
Left Bank: General Condition/Seepage/Slips/Slumps	_ <u>D</u>	÷	
Seepage/Erosion/Deposits	<u> </u>	TERCER	)
General Condition/Seepage/Slips/Stumps		ELLOD	
Tittake Structure	\$ U(\$ PM	GRIED	
Structure: General Condition/Cracking/Spalling/Impact Damage			
Trashracks/Baulks: General Condition/Coatins/Impact Damage			V
Access Bridge: General Condition/Cracking/Spalling/Imaget Damage	- ?718	mence	
Outlet Works Right Bank			
Outlets: General Condition/Cavitation/Cracking/Spalling			
Charmer: General Condition/Loose Rook/Proving 19	C		
General Condition/Cracking/Spalling/Settlement	SUBMO	2000	Page 1
General Condition/Cracking/Spalling/Damage/ Joints			5
Order Works Len Bank (if Accessable)	~		
Outlets: General Condition/Cavitation/Cracking/Spalling	$D_{/}$		
General Condition/Loose Production	<u> </u>		
General Condition/Cracking/Spalling/Settlement	013 M10	ncep	
General Condition/Cracking/Carrage			
General Condition/Cracking/Domes-	/		
letails of significant changes. New occurrences and issues warranting that are			
WATER LEAKING INTO ROOF TUNKEN	AT I	PUMP C	2 27/1,
			Transport
Inspecting Officer's initials			Service of the servic
Fax to Asset Engineering (tick if faxed) Asset Engineering (tick if faxed) Principal Engineer		·	ery

SunWater

	FAIRBAIRNI	DAM EAP		Flood	peration		
	Visual Inspection Note: See Page	and Storage Report 5.5 for Instructions **			Tage 3 of 3		
	A STATE OF THE STA	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)			
		31-12-10	<del></del>				
		TIME	1030				
(Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' for Drive)  Saddle: Dam Embankments (Eaith & Rockfill Structure)							
	Saddle Dam 1	adioporation of the state of th	· · · · · · · · · · · · · · · · · · ·	•*			
	Crest:						
	≣	Depressions/Cracks/Sinkholes/Alignment/Erosion		*			
	D/S Slope: Cracks	s/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion					
		Drainage System	,				
≣	U/S Slope:	Slides/Sinkholes/Beaching/Erosion					
	Left Abutment:	Cracks/Wetspots/Slides	,				
	Right Abutment:	Cracks/Wetspots/Slides	,				
	Saddle Dam 2		<del>-,,  </del>				
77	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion					
111111	D/S Slope: Cracks/	Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion	~~/				
117171111111111111111111111111111111111		Drainage System					
	U/S Slope;	Slides/Sinkholes/Beaching/Erosion					
	Left Abutment:						
	Right Abutment:	Cracks/Wetspots/Slides		Account to the state of the sta			
-		Cracks/Wetspots/Slides					
L	Saddle Dam 3		W				
1	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion					
L	D/S Slope: Cracks/S	inkholes/Bulging/Wetspots/Boils/Depressions/Erosion					
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l	eft Abutment:	Cracks/Wetspots/Slides			***************************************		
ſ	Right Abutment:	Cracks/Wetspots/Slides	/-				
D	otails of significant chang	res. New occurrences and issues warranting further attention					
	·	Control of the Contro					
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	and the second s						
		Inspecting Officer's initials		}			
			ering Manage	r / Service De	livery		
		Fax to Manager (tick if faxed)					
		Principal Eng	ineer (Dam Sa	afety)			

SunWater Section 6A: Page 3 of 9

	FAIRBAIRN	PAMEAP		Flood	peration
	Visual Inspection	and Storage Report	t ing Mangelini	330111157035	Page 4 of 4
Note: See Page 5 for instructions **					
iu.	Manager Andrews Andrew	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)	
	DATE 31-12.16				(. (21113)
TIME 11.30					
(Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' for Drive)  Saddle Dam Embankments (Earth & Rockfill Structure)					
	Saddle Dam 4	and the state of t	1	<u> </u>	
	Crest;	Depressions/Cracks/Sinkholes/Alignment/Erosion			
	D/S Slope: Cracks	/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
		Drainage System			
) i	U/S Slope:	Slides/Sinkholes/Beaching/Erosion			
	Left Abutment:	Cracks/Wetspots/Slides	V		
	Right Abutment:	Cracks/Wetspots/Slides	-		***************************************
	Saddle Dam 5	Oracks/Wetspots/Sittles			
===	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion			
=	D/S Slope: Cracks/S	Binkholes/Bulging/Wetspots/Bolls/Depressions/Erosion			
HIMME					
1111111	U/S Slope:	Drainage System			
	Left Abutment:	Slides/Sinkholes/Beaching/Erosion			
	Right Abutment:	Cracks/Wetspots/Slides			
ŀ	Saddle Dam 6	Cracks/Wetspots/Slides			
L	Crest:	Depressions (Cr L. IO', L.			Part
ı		Depressions/Cracks/Sinkholes/Alignment/Erosion			
-	or o	nkholes/Bulging/Wetspots/Boils/Depressions/Erosion			
-	U/S Slope;	Drainage System			
<u></u>	_eft Abutment:	Slides/Sinkholes/Beaching/Erosion			
		Cracks/Wetspots/Slides			100
F	Right Abutment;	Cracks/Wetspots/Slides	,		
D	etails of significant change	es. New occurrences and issues warranting further attention			
• 1 1	No WATER	<b></b>	JAM 6	INSPE	[   ETD/2
٠	Dove Prev		*****************		Lardar La
		Inspecting Officer's initials			
		Fax to Asset Enginee  Wanager	ering Manage	r / Service De	
		(lick if faxed) Principal Engir	ieer (Dam Sa	rfety)	winn

SunWater Section 6A: Page 4 of 9

47	× ==	FAIRBAIRN	DAMEAR		Floodi	operation		
».		Visitat Inspect Note: See Pa	ion and Storage Report ge 5 for instructions **			Page 4 of 4		
			VISUAL INSPECTION	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)		
	DATE 31-12-10							
11111111			(Walk OR Drive at 10 km/hour, Write 'W' for walk and 'O' f	9-00				
		Saddle/Dam En	nbankments (Earth & Rockfill Structure)	100	**			
		Saddle Dam 4		TUST				
		Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion	,	···			
<u> </u>	., .,	D/S Slope: Cracl	rs/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion		·			
).			Drainage System			NA.		
, =		U/S Slope:	Slides/Sinkholes/Beaching/Erosion			(Maryan		
	≡	Left Abutment:	Cracks/Wetspots/Slides					
L. Carrier		Right Abutment:	Cracks/Wetspots/Slides			Marie Marie		
YEAR TO SEE STATE OF THE SEC STATE OF TH		Saddle Dam 5		W		AL WIN		
		Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion	7/				
		D/S Slope: Cracks.	/Sinkholes/Bulging/Wetspots/Boils/Depressions/Erosion	~				
-			Drainage System	$\rightarrow$		Promote and the second		
		U/S Slope:	Slides/Sinkholes/Beaching/Erosion	7		Nacro		
		Left Abutment:	Cracks/Wetspots/Slides					
		Right Abutment:	Cracks/Wetspots/Slides	- <u>`</u>		10.00		
**************************************	Į	Saddle Dam 6				A CONTRACTOR OF THE PARTY OF TH		
	į.	Crest:	Depressions/Cracks/Sinkholes/Alignment/Erosion			777		
<u> </u>		D/S Slope: Cracks/S	inkholes/Bulging/Wetspots/Bolls/Depressions/Erosion					
			Drainage System					
27,272	ļ	J/S Slope:	Slides/Sinkholes/Beaching/Erosion			A. Nilita y		
	-	eft Abutment:	Cracks/Wetspots/Slides			MANAGE AND		
	R	ight Abutment:	Cracks/Wetspots/Slides			Property of the second		
	De	etails of significant chang	ges. New occurrences and issues warranting further attention					
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	* 1 1 1	Sille	Darring St.		************	A Principal Prin		
		The second of the A.P. Second of	Inspecting Officer's initials			Will Provide the Control of the Cont		
			Fax to Asset Enginee (tick if faxed)	ring Manager /	Service Deli	Ivery		
<u> EL</u>			Principal Engin	eer (Dam Safe	ety.			

SunWater

Section 6A: Page 4 of 9

## FAIRBAIRN DAM EAP

Flood Operation

Visual Inspection and Storage Report Note: See Page 5 for instructions \*\*

	ilistration in	Vol.		VISU	IAL INSPECTION		First Inspection	Second Inspection (+6 hrs)	Third Inspecti (+12 hr
	1				A	DATE		7 11107	1-1-1
		1741	Main Dam Emba	(W. ankment	alk OR Drive at 10 km/hour. V	TIME rile 'W' for walk and 'D' f	0630 or Drive)		1630
					-		D	, if	<u> </u>
	C.170					General Condition			
History	. v. t		Upstream Face (	Use binoculars) -	Gracks, subsi	dence in pavement	/		
	100.00				Dia-(	Settlement			/
77			Downstream face		Oisplacemen	t of riprap material	/_		/
	*****			**************************************	Sign of soon	e, slides, erosion			(
7		L			Sign of seepage, v	Vel spots / seams			/
		L	krea Downstream	of Dam					
77		s	copage	Seepage fro	om any location apart fro	m seepage point	_0		
		Sp	pillway	Se	epage water - Clear or	Furbid (Tick for clear)	J)or	14	Vis
		Sp	illway Channel			-			
			inings Walls:		Erosion, damage to cor General Condition/Cra	icrete structure	SUBME	2.000	
77	L	U/S	Face (if visible):	V		ral Condition		L	
	Apron (if visible): Crest (if visible):							-	
					General Condition / Impact Damage General Condition			WRUND	
					Jp.	naat Day	4	4	
-		ricig	# 011¢	ral Condition/	Cracking/Spalling/O				
1	Dθ	ellere S	B all all all all all	PLINAM OCCULLEUC	es and issues warranting fud	her attention			
	1 , , ,		PALLUAY	4 CAU	LY SUBMER	4050			
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۲.			********************	***************************************		***************************************	*************	49	716
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	·	· • • • • • • • • • • • • • • • • • • •			Inspecting Offi	cer's initials	- Ann		
					Fax to (tick if faxed)	Asset Engineering Manager			
					(See a reviou)	Principal Engineer	(Dam Safety)		

SunWater Section 6A: Page 1 of 9 Jan 08. Issue 2-0

### FAIRBAIRN DAM EAP

Flood Operation

Visual Inspection and Storage Report Note: See Page 5 for instructions \*\*

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			VISUAL INSPECTION		First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
	× 3-16.6		DA	TE	1-1-11		1-1-11
			(Walk OR Drive at 10 km/hour, Write 'W' for walk and	VIE :	0700		1700
CO.	b/4.//	River	A Minimodi, Write W for Walk and	.01 (C)	<u> </u>		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	344	Left Bank:	General Condition/Seepage/Slips/Slum	ps	<u>D</u>	-	
			Seepage/Erosion/Depos	- 1		onco	
		Right Bank:	General Condition/Seepage/Slips/Slum			nenco	
	<b>#</b>	Intake Structure		_	30130	1057200	5)
	=	Structure;	General Condition/Cracking/Spalling/Impact Damag	E)			·/
10 11	= [	Trashracks/Bau <b>i</b> k	s; General Condition/Coatins/Impact Damag	<b>∍</b>	SUD	40.0 %	
**************************************		Access Bridge:	General Condition/Cracking/Spalling/Impact Damag	e	V	18POVED	ار ا
	J	Dutlet Works Righ					
.,	<u> </u>	Outlets:	General Condition/Cavitation/Cracking/Spalling	]			
-211	ļ	hannel:	General Condition/Loose Rock/Erosion/Deposits	-	Sugar	4.000	
		ulverts:	General Condition/Cracking/Spalling/Settlement	+	0080	nenver	3 /
de	1	ull Ring:	General Condition/Cracking/Spalling/Damage/Joints	-	<del>-                                    </del>		
			lank (if Accessable)	-			
		utlets:	General Condition/Cavitation/Cracking/Spalling	-	<del></del>		
		iannel:	General Condition/Loose Rock/Erosion/Deposits	<del> </del>			
	Cu	Iverts:	General Condition/Cracking/Spalling/Settlement		0000	nenwen	
- L_		mp House:	General Condition/Cracking/Damage	ļ			
: t		ma Channel Gate	House: General Condition/Cracking/Damage			~	
	Dela	ails of significant change	es. New occurrences and issues warranting further attention	<u></u>	.,,,		
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		***************************************					***************************************
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	· · · · · · · · · · · · · · · · · · ·		Inspecting Officer's factor I	•			
			Inspecting Officer's initials			- (A) - 1	
			Fax to   Manage	neen	eig Mänadei	/ Service Del	livery
			(tick if faxed) Principal E	វិញពេធ	eσε (Dam Sa	fety)	

SunWater Section 6A: Page 2 of 9 Jan 08, Issue 2-0

Visual Inspection an Note: See Page 5 fc	d Storage Report or instructions **			Flood (	<b>⊃perat</b> ∠Page t
art and	VISUAL INSPECTION		First Inspection	Second Inspection (+6 hrs)	Thir
Main Dam Embankm	(Walk OR Drive at 10 km/hour. W	DATE TIME /rite 'W' for walk and 'D' fo	2-1-11 0636 or Drive)		(+12h 2-1- 170
I I		Carrie	O.	,	
Total Hooften	Cracks, subsi	General Condition dence in pavement			レ
Upstream Face (Use bin	oculare) ;	Settlement			
Downstream face:	Displacemen	t of riprap material			
No.	Sign of seepage, V	e, slides, erosion Vet spots / seams			
Area Downstream of D		The state of other states			
Society	epage from any location apart fro	m seepage point	0		
Seepage Spillway Spillway Channel	Seepage water - Clear or	Furbid trace	//.		
Spillway  Spillway Channel			1/4	N	1/24
Trainings Walls:  U/S Face (if visible):	Erosion, damage to cor General Condition/Cra	crete structure	SUBME	2000	
Apron (if visible)	Gene	eral Condition			
Crest (if visible):	General Condition / In	npact Damage ral Condition	SUB MER	6-00	
Bridge: General C		rai Condition			
Details of significant changes. New	occurrences and issues warranting furt	ruction Joints her attention		v	
			*******************************		
			*************	***************************************	
	American (1987)		***************************************		
	Inspecting Offi	cer's initials			
	Fax to (tick if faxed)	Asset Engineering Manager	Manager / Se	rvice Delivery	

SunWater Section 6A: Page 1 of 9 Jan 08, Issue 2-0

## FAIRBAIRN DAM EAP

Flood Operation

Visual Inspection and Storage Report Note: See Page 5 for instructions \*\*

Page 2 of 4

TE PRESENTE	A Comment		VISUAL INSPECTION		First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
=				DATE	<del></del>		2-1-1
1111	Ç		(Walk OR Drive at 10 km/hour, Wri	TIME	0700		1730
400		River		The state of the s		<del>                                     </del>	
		Left Bank:	General Condition/Seep	20s/Sline/Slumes	0	,.	
	7/2/			Erosion/Deposits		RERLEV	
		Right Bank:	General Condition/Seepa		SVBU	rencos	
		Intake Structure	THE THE PERSON OF THE PERSON O	age/onha/onnibs	808	merco	3-()
		Structure:	General Condition/Cracking/Spalling/	Import D			
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the		Access Bridge:	General Condition/Cracking/Spalling/	impact Damage	SUBA	ternes	
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# FAIRBAIRN DAM EAP Visual Inspection and Storage Report Note: See Page 5 for instructions \*\* Page 1 for 14

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SunWater Section 6A: Page 1 of 9 Jan 08, Issue 2-0

Visual Inspection and Storage Roport Note. See Page 5 to Instructions **  VISUAL INSPECTION  DATE  L/-// (Val. OR Days at 10 km/nour. Write W for wask and 0' for Drope  Cracks, subsidence in pavement  Cracks, subsidence in pavement  Upstream Face (des becomes): Stellement  Cracks, subsidence in pavement  Cracks, subsidence, slides, erosion  Sign of seepage, Wet spots / seams  Afea Downstream of Dam  Seepage water - Clear or Turbid (Tak bream)  Seepage water - Clear or Turbid (Tak bream)  Spillway  Spillway  Spillway Channet  Erosion, damage to concrete structure  Training Waffs: General Condition  Cracking/Spalling  U/S Face (if visible): General Condition / Impact Damage  Bridge: General Condition / I	EAIRBAIRN DAI	MEAP	16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		200
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Spillway  Spillway Channel  Erosion, damage to concrete structure  Trainings Walls:  General Condition/Cracking/Spalling  U/S Face (if visible):  General Condition / Impact Damage  Crest (if visible):  General Condition  Impact Damage  Bridge:  General Condition/Cracking/Spalling/Construction Joints  Details of significant changes. New occurrences and issues warranting further attention  Inspecting Officer's initials  Fax to (lick if faxer)  Alager  Asset Engineéring Manager  Asset Engineéring Manager  Asset Engineéring Manager	The state of the s	Subsidence, slides, erosion			V
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Details of significant changes. New occurrences and issues warranting further attention  Inspecting Officer's initials  Fax to (lick if faxed)  Manager	Bridge: General Co	Impact Damage		,	5.0
Inspecting Officer's initials  Fax to Asset Engineering Manager / Service Delivery Manager  (tick if faxed)		Ortalition/Cracking/Spalling/Construction Joints			
Fax to Asset Engineering Manager / Service Delivery  (tick if faxed)  Asset Engineering Manager / Service Delivery		occurrences and issues warranting further attention			77
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(tick if faxed) Manager		Fax to Asset Engineérin	g Manager / S	ervice Delivery	
Trinipal Zayineer (Dam Satety)		(tick if faxed)	IF (Dans D. F. i.)		
		Frincipal Enginee	r (Dam Safety)		

SunWater Section 6A: Page 1 of 9

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T TEAKBAIKN DAME		SAS WAR		A THE WITH STREET
Visual Inspection and Stor Note: See Page 5 for inst	rage Report ructions **		1.40°C	d Operation
V	ISUAL INSPECTION		tion Inspecti	on Inspection
	DAT	TE 5-1.	-1/	(+12 hrs)
	(Walk OR Drive at 10 touts	d beet in the		
Main Dam Embankment	To knimrour, vvrite 'W' for walk and 'E	D' for Drive)		
Upstream Face (In-1)	Cracks, subsidence in pavemer	nt ,		
- Postovii r ace (Use binocular	s): Settlemen			
Dosant	Displacement of riprap materia	1/		
Downstream face:		1 /	<u></u>	
		+ '/	-	
		-		<del>  </del>
Area Downstream of Dam				
Seepac	ge from any location anart from seconds		<del></del>	T
Seepage	- in abate non seehage point			
	Seenage water. Class at T	7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
pillway	Page Mater - Clear of Turbid (Tick for clear)	NH		
pillway Channel	Fresion damage to several			
ainings Walls;	General Constitution	SUDMA	mas	
S Face (if visible)		₹		
				70
	General Condition / Impact Damage	SUMM	tains	
ose (ii visibile).	General Condition	3/11	27-000	20.
1	Impact Damage	-		
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ils of significant changes. New occ	surrences and issues warranting further attention			
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	Inspecting Officer's initials  Asset Engineer	ering Manani	er / Service De	Rivery
			er / Service De	Rivery
	Visual Inspection and Stor Note: See Page 5 for inst  V  Main Dam Embankment  Upstream Face (Use binocular  Downstream face:  Area Downstream of Dam  Seepage  pillway  pillway  pillway Channel  rainings Walls;  S Face (if visible):  pron (if visible):  past (if visible):	Visual Inspection and Storage Report Note: See Page 5 for instructions **  VISUAL INSPECTION  DAT TIM (Walk OR Drive at 10 km/hour. Write 'W' for walk and 'E  General Conditio Cracks, subsidence in pavemer Upstream Face (Use binoculars): Settlement  Displacement of riprap materia Displacement of riprap materia Subsidence, slides, erosion Sign of seepage, Wet spots / seams  Area Downstream of Dam Seepage from any location apart from seepage point Seepage Seepage water - Clear or Turbid (tick for clear) pillway pillway Channel Erosion, damage to concrete structure rainings Walls: General Condition/Cracking/Spalling S Face (if visible): General Condition / Impact Damage past (if visible): General Condition Impact Damage	Visual Inspection and Storage Report Note: See Page 5 for instructions **  VISUAL INSPECTION  DATE 5-/-  TIME 7-/-  (Walk OR Drive at 10 km/hour. Write W for walk and 'D' for Drive)  Main Dam Embankment  General Condition  Cracks, subsidence in pavement  Displacement of riprap material  Displacement of riprap material  Downstream face:  Subsidence, slides, erosion  Sign of seepage, Wet spots / seams  Area Downstream of Dam  Seepage from any location apart from seepage point  Seepage  Seepage water - Clear or Turbid (tick fer door)  pillway  pillway  pillway  Canada Condition/Cracking/Spalling  S Face (if visible):  General Condition / Impact Damage  Seepage  General Condition  Impact Damage  John  J	Visual inspection and Storage Report Note; See Page 5 for instructions **  VISUAL INSPECTION  DATE 5-1-11 TIME 7/Am.  (Walk OR Drive at 10 km/hour, Write W for walk and 'D' for Drive)  Main Dam Embankment  General Condition  Cracks, subsidence in pavement  Displacement of riprap material  Displacement of riprap material  Displacement of riprap material  Stepage, Wet spots / seams  Area Downstream of Dam  Seepage Water - Clear or Turbid (Tick for dear)  Seepage  Seepage water - Clear or Turbid (Tick for dear)  Pillway  Pillway  Pillway Channel  Erosion, damage to concrete structure  John Main Damage  Seepage Seepage (If visible):  General Condition  General Condition  Impact Damage  Area Condition  Impact Damage  Age: General Condition/Cracking/Spalling  Impact Damage  Age: General Condition/Cracking/Spalling  General Condition  Impact Damage  Age: General Condition/Cracking/Spalling  Impact Damage  Age: General Condition/Cracking/Spalling  Impact Damage

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# FAIRBAIRN DAM EAP

Flood Operation

Visual Inspection and Storage Report Note: See Page 5 for instructions \*\*

Page 2 of 4

	***************************************		VISUAL INSPECTION	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
1725	*****		DATE	1		
		River	(Walk OR Drive at 10 km/hour, Write 'W' for walk and 'D' fo	7Ann		**************************************
					Т	
	=	Left Bank:	General Condition/Seepage/Slips/Slumps			
			Seepage/Erosion/Deposits	-		
717.0		Right Bank:	General Condition/Seepage/Slips/Slumps			
)		intake Structure	, composition			
		Structure:	General Condition/Cracking/Spalling/Impact Damage			
		Trashracks/Baulks.	General Condition/Coatins/Impact Damage			
	1	Access Bridge:	General Condition/Cracking/Spalling/Impact Damage			_
	1	Outlet Works Right	Bank			
	F	Outlets:		W		and the state of the second state of the second second
	<u></u>	Channel:	General Condition/Cavitation/Cracking/Spalling			
=	L	Sulverts:	General Condition/Loose Rock/Erosion/Deposits			
			General Condition/Cracking/Spalling/Settlement			
		ull Ring:	General Condition/Cracking/Spalling/Damage/Joints			
		utiet Works Left Ba	nk (if Accessable)			
	·	utlets:	General Condition/Cavitation/Cracking/Spalling			
		rannel:	General Condition/Loose Rock/Erosion/Deposits			
	~~~~	Iverts:	General Condition/Cracking/Spalling/Settlement			
- L.		mp House;	General Condition/Cracking/Damage			
1		ma Channel Gate F	louse: General Condition/Cracking/Damage	/-		
1	Deta	alls of significant changes	. New occurrences and issues warranting further attention	<u></u>		
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بدا برساست	*********************					
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			Fax to Asset Engineer Manager	ing Manager /	Service Deliv	ery
			(lick if faxed) Principal Engine	eer (Dam Safe	ty)	
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## FAIRBAIRN DAM EAR

Flood Operation

Visual Inspection and Storage Report Note: See Page 5 for instructions \*\*

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	100		VISUAL INSPECTION		DATE	First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
Ė				<del>- 12</del> 00	DATE TIME	6-1-11 7.30m		
	<b>=</b>  -	River	(Walk OR Drive at 10 km/hour, Wr	ite 'W	for walk and 'D' fo	r Drive)		
							· [	
		Left Bank:	General Condition/See	age	/Slips/Slumps			<u> </u>
					sion/Deposits			
		Right Bank:	General Condition/Seep					
		ntake Structure						
	S	structure:	General Condition/Cracking/Spalling	/limp	act Damage			
	T	rashracks/Baulks:	General Condition/Coatins			$\rightarrow$		
~	A	ccess Bridge:	General Condition/Cracking/Spalling	/lmp	act Damage			
1111	0	utlet Works Right I	Bank					
	O.	utlets:	General Condition/Cavitation/C	rack	ing/Spalling			
	Cł	iannel:	General Candition/Loose Rock/E					
	Cu	Iverts:	General Condition/Cracking/Spa	(lina/	Settlement			
	Bu	II Ring; (	General Condition/Cracking/Spalling	Dan	age/Joints			
ľ	Ou.	tlet Works Left Bai	rk (if Accessable)				****	
2777		tlets:	General Condition/Cavitation/Cr	acki	ng/Spalling			
(	Cha	ınnel:	General Condition/Loose Rock/Er	osio	7/Deposits			
(	Cul	verts:	General Condition/Cracking/Spall					
F	onu <sup>2</sup>	ıp House:	General Condition/Crac					
S	eln	na Channel Gate H	ouse: General Condition/Crac					
D	etail	s of significant changes	. New occurrences and issues warranting fu	rther	altention			
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					***************************************	******************	***************************************	
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	····		Inspecting O	ffice	r's initials	The state of the s		very
			, , , ,		Asset Enginee	ring Manager	/ Service Deli	werv =
	Fax to Manager					The tributant (	COLVICE DOIL	TOI y
			(tick if faxed)		Principal Engin	eer (Dam Safe	∍ty)	

#### FAIRBAIRN DAM EAP Flood Operation Visual Inspection and Storage Report Note: See Page 5 for instructions \*\* Page for a VISUAL INSPECTION First Second Third Inspection Inspection Inspection (+6 hrs) (+12 hrs) DATE TIME (Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' for Drive) Main Dam Embankment General Condition Cracks, subsidence in pavement Upstream Face (Use binoculars): Settlement Displacement of riprap material Downstream face: Subsidence, slides, erosion Sign of seepage, Wet spots / seams Area Downstream of Dam Seepage from any location apart from seepage point Seepage Seepage water - Clear or Turbid (Tick for clear) Spillway Spillway Channel Erosion, damage to concrete structure Trainings Walls: General Condition/Cracking/Spalling U/S Face (if visible): General Condition Apron (if visible); General Condition / Impact Damage N/N Crest (if visible): General Condition Impact Damage Bridge: General Condition/Cracking/Spalling/Construction Joints Details of significant changes. New occurrences and issues warranting further attention Inspecting Officer's initials Asset Engineering Manager / Service Delivery Fax to Маладег (tick if faxed) Principal Engineer (Dam Safety)

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# FAIRBAIRN DAM EAP.

# Flood Operation

3	Visual Inspection and Storage Report	WEXTER			Flood	Operation
-	Note: See Page 5 for instructions **			•		Page 1 of 4
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	VISUAL INSPECTION	į	First Inspecti	. 1	Second spection	Third
				, ,	spection ≁6 hrs)	Inspection (+12 hrs)
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Testing Park	General Condit	on		-	Т	
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	(USE DIROCUIAre)					
	Settleme			L		
	Displacement of riprap materi					19.
<b>=</b>  -	Subsidence, slides, erosion	,		1		
圖上	Sign of seepage, Wet spots / seam	8		<del> </del>		Third Inspection (+12 hrs)
<u></u>				<del> </del>		
	rea Downstream of Dam			<u> </u>		
<b>E</b>	Seepara from		,		-	1
S	Seepage from any location apart from seepage poin	1			7	
<u> </u>			·,····································	l		
1-	Seepage water - Clear or Turbid (Tick for clear)	<del></del>	1-			7', v'-
L		TV	14			77516
Sp	illway Channel Frosion, damage to	7 774000434444				-734
Tra	inings Walls: Erosion, damage to concrete structure		/			
	Face (if visible):  General Condition/Cracking/Spalling	1	$\overline{}$	a,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
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······	Inspecting Officer's initials				7	
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	Fax to Asset Engine Manager	ering	Manager	/ Servic	e Deliver	y   =====
	(tick if faxed) Principal Eng	nace (	Dane Oct		<u> </u>	773-3
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SunWater Section 6A: Page 1 of 9 07/04/2011 13:32

# FAIRBAIRN DAM EAP

Flood Operation

Visual Inspection and Storage Report Note: See Page 5 for Instructions \*\*

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	TOTAL STATE OF THE	VISUAL INSPECTION		First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)
			DATE	7-1-11		12.1113)
v-1117		(Walk OR Drive at 10 km/hour, Write '	TIME	7-30		
	River	William Car. Valles	A tot Malk and ID to	r Drive)		
	Left Bank:	General Condition/Seepag	e/Slips/Slumps	2		
		Seepage/Er	osion/Deposits			
	Right Bank:	General Condition/Seepage	e/Slips/Slumps			
Ξ	Intake Structure					
	Structure;	General Condition/Cracking/Spalling/Im	pact Damage			· · · · · · · · · · · · · · · · · · ·
	Trashracks/Baulks	: General Condition/Coatins/Im	pact Damage			
	Access Bridge:	General Condition/Cracking/Spalling/Im	pact Damage			
	Outlet Works Right	Bank :	, , , , , , , , , , , , , , , , , , , ,			
	Outlets:	General Condition/Cavitation/Crac	king/Spalling			
	Channel:	General Condition/Loose Rock/Eros	ion/Denosite			
	Culverts:	General Condition/Cracking/Spalling	1/Settlement			
	Bull Ring:	General Condition/Cracking/Spalling/Date	mage/Joints			
[	Dutlet Works Left Ba	ank (if Accessable)	Tragerdollits			
C	Outlets:	General Condition/Cavitation/Crack	ing/Spalling		~	
Ç	hannel:	General Condition/Loose Rock/Erosic	on/Deposits	<u>'</u>		····
C	ulverts:	General Condition/Cracking/Spalling/	Settlement			
P	ump House:	General Condition/Cracking				
Se	elma Channel Gate f	louse: General Condition/Crackin				
De	tails of significant changes	s. New occurrences and issues warranting further	altention	·		
			addition.			
			***************************************	*************************	***************************************	•
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7111	***************************************		*************		,,	
•••••		Park			annumental to the street of the second	
	· · · · · · · · · · · · · · · · · · ·	Inspecting Office	er's initials			
		Fax to	Asset Engineer Manager	ing Manager /	Service Deliv	ery
		(tick if faxed)	Principal Engine	er (Dam Safe	(y)	

### FAIRBAIRN DAM - EMERGENCY EVENT REPORT

## **Emergency Event Recording Sheets**

 General Comments and/or EAP Recommendations

Note: These sheets must be completed for all Emergency Event Scenarios and be included in the emergency Event Report

#### FAIRBAIRN DAM - EMERGENCY EVENT REPORT

**EAP Recommendations:** This was a longer than usual event due to the protracted wet season and continuous inflows over a long period of time.

The EAP was considered adequate, with no major issues noted during the event. A review of the EAP was completed after the event and some improvements identified. These will be incorporated in the new EAP format that is currently being finalised.