Fitzroy River Water

(A business unit of Rockhampton Regional Council)

DROUGHT MANAGEMENT PLAN

Registered Water Service Provider No. 493

October 2009



CERTIFICATION OF DROUGHT MANAGEMENT PLAN

Water Service Provider's Name: Rockhampton Regional Council

Water Service Provider's Registered Number: 493

The attached document has been prepared as the Drought Management Plan for Fitzroy River Water.

I certify that this Drought Management Plan is appropriate for the infrastructure and the registered services of Fitzroy River Water and has been formally adopted by Rockhampton Regional Council resolution on the 6 October 2009.

In determining the appropriateness of the Drought Management Plan, I have taken the following matters into account:

- 1. The Drought Management Plan complies with, and addresses, all requirements of Chapter 3, Part 3 of the *Water Supply (Safety and Reliability) Act 2008* and the Guidelines for the Preparation of a Drought Management Plan; and
- 2. That the proposed financial arrangements put in place by Fitzroy River Water should be sufficient/adequate to implement the Drought Management Plan as presented; and
- 3. That the strategies, processes, procedures and actions in this plan will minimise the economic and social impacts on our customers.

Contified by			
Certified by:	(Print Name)	(Signature)	• • •

On behalf of: Fitzroy River Water

TABLE OF CONTENTS

		Page No.
1.0	INTRODUCTION	2
2.0	POLICY STATEMENT	2
3.0	PURPOSE	2
4.0	SERVICES & SYSTEMS OVERVIEW	2
4.1	Registered Water Service	
3.1	Nature and Extent of Water Services	
3.2		
3.3		
J.J	3.3.1 Fitzroy River	
	3.3.2 Capricorn Coast	
	3.3.3 Marlborough and Ogmore	9
3.4	3.3.4 Mt Morgan	
3.4	The state of the s	
	3.4.1 Rockhampton, Gracemere and The Caves	
	3.4.2 Mt Morgan	
4.6		
5.0	SYSTEM OPERATING AND MANAGEMENT STRATEGY	15
5.1	General	15
5.2	Restriction Trigger Levels – Rockhampton, Gracemere and The Caves	15
5.3		
5.4	·	
5.5		
5.6		
6.0		
6.1	Drought Management Response Team	
6.2		
6.3	3	
6.4		
6.5	•	
6.6		
7.0	•	
7 1	Exemption Request Form	24

1.0 INTRODUCTION

The Water Supply (Safety and Reliability) Act 2008 requires all Water Service Providers in Queensland to prepare a Drought Management Plan (DMP) and submit it for registration for each service/authority area in which the service provider supplies water.

The plan details the restrictions and actions to be implemented during various stages of drought events and which are incrementally lifted as the drought recedes.

2.0 POLICY STATEMENT

Fitzroy River Water is tasked by Council with ensuring the sustainable management of water resources to satisfy the needs of the region.

Fitzroy River Water actively plans for the provision of water supplies to meet growing demands in the most optimum means available considering all possible alternatives including:

- water recycling;
- · demand management; and
- provision of new infrastructure.

In the event that climate conditions result in periods of reduced system inflows or drought, short term restrictions will be implemented to extend the life of existing supplies through the critical period. The restriction regime is designed to balance the impacts on the residential, commercial and industrial sectors and the resultant impacts on the wider community.

3.0 PURPOSE

The purpose of this strategy is to:

- a) outline the plan for regulating the use of water from the water supply system during periods of water shortage;
- b) identify other water sources and actions that Fitzroy River Water will consider during periods of extreme drought to maintain essential water services sufficient to ensure minimum health requirements; and
- c) comply with Chapter 3 of the Water Supply (Safety and Reliability) Act 2008.

4.0 SERVICES & SYSTEMS OVERVIEW

4.1 Registered Water Service

Rockhampton Regional Council (Fitzroy River Water) is the registered Water Service Provider to an estimated population of over 87,000 people in Rockhampton, Gracemere, The Caves, Capricorn Coast, Mt Morgan, Marlborough and Ogmore.

Table 1 summarises the types of services provided by Fitzroy River Water to which this Drought Management Plan applies.

Table 1: Types of Service

Туре	✓ if applicable	Service Area
Retail Water	√	Rockhampton (Glenmore Water Treatment Plant) Gracemere (Glenmore Water Treatment Plant) The Caves (Glenmore Water Treatment Plant) Capricorn Coast (Woodbury Water Treatment Plant) Mt Morgan (Mt Morgan Water Treatment Plant) Marlborough (Non-potable) Ogmore (Non-potable)

4.2 Nature and Extent of Water Services

The nature and extent of services provided by Fitzroy River Water are summarised in Table 2.

Table 2: Overview of Service Areas

Service Area	Communities Served	No. of Connections	Potable
Rockhampton	Rockhampton, The Caves, Gracemere	28,458	✓
Capricorn Coast	Yeppoon, The Causeway, Kinka Beach, Emu Park, Zilzie, Keppel Sands	8,258	√
Mt Morgan	Mt Morgan	1,426	✓
Marlborough	Marlborough	48	
Ogmore	Ogmore	25	

Ten (10) year projections of demands are summarised in Table 4.3.

Table 3: Projected Demand

Water Supply Services						
Camileo Area		Water Demand ML / annum				
Service Area	Current	5 years	10 years			
Rockhampton	17,523	17,803	18,068			
Capricorn Coast	3,128	3,657	4,070			
Mt Morgan	438	470	482			
Marlborough	14	14	14			
Ogmore	12	12	12			

4.3 Infrastructure Details

This section provides a brief description of the water supply infrastructure used to deliver the services identified in Section 4.2.

Table 4 outlines the infrastructure used for water supply for Rockhampton, Gracemere and The Caves.

<u>Table 4: Summary of Water Supply Infrastructure for Rockhampton, Gracemere and The Caves</u>

Rockhampton, Gracemere and The Caves Water Supplies			
Source		Fitzroy River 50,383 ML/ annum	
Treatment Plant		coagulation, flocculation, sedimentation, filtration, pH correction and disinfection Capacity = 140 ML/d	
Reservoirs	Qty	19	
iveservoirs	Capacity	110.3 ML	
Pump Stations		32	
Length of Mains and Common Services		816.9 km	
No of Connections		28,458	
Annual Water Consumption		17,523 ML	

Table 5: Summary of Water Supply Infrastructure for Capricorn Coast

Service Area		Capricorn Coast Water Supply Scheme	
Source		Waterpark Creek & Sandy Creek 8,400 ML/ annum*	
Treatment Plant		Coagulation, flocculation, sedimentation, filtration, pH correction and disinfection Capacity = 21.6 ML/d	
Reservoirs	Qty	11	
Reservoirs	Capacity	31.95 ML	
Pump Statio	ons	12	
Length of Mains and Common Services		361 km	
No of Connections		8,258	
Annual Wate	er Consumption	3,128 ML	

^{* 3,400}ML allocation for Sandy Creek has been surrendered (May 2009) in accordance with the Memorandum of Understanding for the construction of the Rockhampton to Yeppoon pipeline. The remaining 4,000ML on Sandy Creek will be traded for a 4,000ML allocation from the Fitzroy River upon the completion of the pipeline and construction of new Fitzroy River infrastructure.

Table 6: Summary of Water Supply Infrastructure for Mt Morgan

Service Area		Mt Morgan Water Supply Scheme
Source		Dee River – Allocation 584 ML/ annum Fletcher Creek Weir – Order in Council (06/02/1986) to take 700 ML/annum
Treatment Plant		Aeration, sedimentation, filtration, pH correction and disinfection Capacity = 2.1 ML/d
Reservoirs	Name	2
Reservoirs	Capacity	5.3 ML
Pump Stations		10 plus 6 bore pumps
Length of Mains and Common Services		66.4 km
No of Connections		1,426
Annual Water Consumption		438 ML

Table 7: Summary of Water Supply Infrastructure for Marlborough

Service Area		Marlborough Water Supply Scheme		
Source		Shallow bores adjacent to Marlborough Creek 16 ML/ annum		
Treatment Plant		Process: None Non-potable supply		
Reservoir	Name	1		
	Capacity	100 kL		
Pump Stations		1 plus 2 bore pumps		
Length of Mains and Common Services		4.6 km		
No of Connections		48		
Annual Water Consumption		13.9 ML		

Table 8: Summary of Water Supply Infrastructure for Ogmore

Service Area		Ogmore Water Supply Scheme
Source		Montrose Creek 14 ML/ annum
Treatment Plant		Process: None Non-potable supply
Reservoir	Name	4
Reservoir	Capacity	88 kL
Pump Stations		1
Length of Mains and Common Services		8 km
No of Connections		25
Annual Water Consumption		12 ML

4.4 Water Sources Assessment

4.4.1 Fitzroy River

Fitzroy River Water draws raw water from Rockhampton Regional Council's 50,383ML/annum high priority water allocation, which is stored behind the Fitzroy River Barrage.

The Barrage sits at the bottom of the Fitzroy River Catchment which is the second largest in Australia covering in excess of 140,000km². Due to the size of the catchment and the predominantly sub-tropical climate, the system is subject to highly variable but historically reliable flows with an average discharge in the vicinity of 6,000,000 ML per year.

Between 2003 and 2006, the Central Queensland Regional Water Supply Strategy (CQRWSS) was carried out to assess the future demands on water supply in the Central Queensland region. The study looked at short term and long term demand scenarios while also conducting an assessment of the alternative sources of water available in the region to meet these additional demands. The study considered options such as:

- groundwater
- recycling
- desalination
- demand management
- additional water storage

As part of the CQRWSS, a Reliability and Risk Working group was established to further investigate the performance of the existing system considering historical records and a number of climate change scenarios.

With the use of an Integrated Quality and Quantity Model, the performance of the system was assessed with consideration of historical environmental conditions, environmental flow requirements and impact of all system users.

The outcome of this work showed that the reliability of Rockhampton Regional Council's 50,383ML allocation is over 99%, based on the last 95 years.

Fitzroy River Water considered it appropriate to check whether the data set upon which the Water Resource Plan was based was truly reflective of a longer period in time and representative under future climate change. In concert with the Gladstone Area Water Board, SunWater, and the Department of Environment and Resource Management (DERM), consulting engineers were commissioned to consider this matter.

The study results showed the Water Resource Plan slightly overstated reliability as compared to that of the past 350 years (based on coral cores). More importantly it highlighted that the Fitzroy River tends to fail in long events separated by a large number of years. It was found that there was 1:160 year probability of no inflow and the Barrage storage would be depleted with full allocation use.

This raised concerns from three perspectives. These are:

- Rockhampton, Gracemere and The Caves have no alternative water supply;
- the construction of the new storages upstream on the Barrage could adversely impact upon the Barrage's ability to supply these communities in low flow years unless the Resource Operations Plan (ROP) is modified to require that the Barrage is allowed to fill as a priority; and
- with future climate change the existing 1:160 probability events may occur with increasing but as yet unknown frequency.

Rockhampton Regional Council has considered reports from Fitzroy River Water on this matter and has endorsed the approach of ensuring that the surrounding communities have a volume of water stored in the river above dead storage level that will meet the City's needs for two years without inflow. To enable Council to meet this requirement equitably and to maximise return on its investment, Council has flagged that the ROP will need to be amended to allow for allocation holders to have their allocations "carryover" from year to year. Without such an amendment, other allocation holders obtain utilisation of Rockhampton Regional Council's allocation and increase their reliability at the expense of RRC reliability.

Council has brought this matter to the notice of the State Government in order to arrange such an amendment to bring the Fitzroy ROP in line with those of other catchments.

Future sources of supply

As mentioned previously, despite the historical reliability of the system, the water source assessment work carried out has identified the susceptibility of the system to even minor shifts in climate patterns and summer rainfall events and to the increased demand that will be placed upon it as Rockhampton Regional Council's allocation is increasingly utilised and other demands placed on the system eg Capricorn Coast, Gladstone, Mt Morgan etc.

As such, the long-term strategy for meeting future demands and protecting against drought, as identified in the CQRWSS, is via the introduction of additional infrastructure. Recycling and demand management initiatives will also be encouraged/ adopted where viable. In addition to the infrastructure requirements identified in the CQRWSS, Fitzroy River Water is investigating raising of the Barrage storage level parallel to similar studies being undertaken for Eden Bann and Rookwood.

Fitzroy River Water will continue to monitor the progress of new storages and issues surrounding the possible raising of the Fitzroy River Barrage.

Options currently being progressed include:

- A weir on the Fitzroy River in the vicinity of Rookwood Crossing
- Raising of the Eden Bann Weir
- Raising of the Fitzroy River Barrage

Emergency sources of supply

Due to the short draw down period associated with a system such as the Barrage, sourcing of emergency supplies via large reactive infrastructure, financially viable options such as desalination are limited to non-existent. Similarly, the transport of water via tanker to meet the required demands could only be considered as an absolute last resort.

Until further studies have been completed, Council will not exceed using more than 25,000ML of its allocation to ensure that it has two years supply of water. Early work has shown that such an annual draw down together with a modification of the ROP to allow for carryover water would meet this requirement.

For the purposes of this iteration of the Drought Management Plan, the final emergency source of supply would be the water remaining below the dead storage level of the Barrage. This would be accessed after all drought response measures are exhausted. The volume stored below the existing restriction level of -1.2m AHD

is in the vicinity of 20,000ML and with the approval of the Chief Executive Officer of Natural Resources and Water could be accessed providing several months additional supply.

However, as the water level in the river has never approached these levels since the Barrage was built, water quality will need to be closely monitored. There is considerable concern that the water quality may be unacceptable due to high levels of sodium and water hardness. In the event the emergency supply is required, additional pumps will be required to lift the water to the intake of the pump station supplying the Glenmore Water Treatment Plant.

4.4.2 Capricorn Coast

The yield from Waterpark Creek is based on just over 100 years of records. The historical no failure yield over this period is 2,020 ML/ annum.

If an event that occurred in 1902 is excluded from the calculation of yield then Waterpark Creek has a safe yield of 4,020 ML/ annum (Water Supply Sources Study, Cardno, 2005). Both of the abovementioned yields include the operation of the existing Kellys off stream storage. Rockhampton Regional Council holds an Order in Council for 4,400 ML/ annum from Waterpark Creek and 7,400 ML/ annum from Sandy Creek (to be used as an emergency supply).

An agreement has been entered into with the State Government to relinquish the Sandy Creek Order in Council in exchange for a 4,000 ML/ annum allocation from the Fitzroy River. The exchange will finalise upon construction of infrastructure on the Lower Fitzroy which realises the allocation.

Council also operates two recycled water schemes. Recycled water from the Yeppoon Sewerage Treatment Plant is pumped to sporting ovals, golf courses and median strips with excess effluent discharged in accordance with licence conditions. Council achieves 100% recycled water use with the Emu Park sewerage scheme.

Future sources of supply

The long term solution to the Capricorn Coast's water needs has been determined as a new pipeline from the Fitzroy River. The new pipeline is expected to be operational early in 2010. When the Capricorn Coast is connected to Rockhampton for its water supply, reliability and supply issues in drought will be common to both.

Emergency sources of supply

In order to ensure continuing supply until the long term solution is in place, an emergency (and temporary) pumping facility and pipeline has been installed at Sandy Creek. This facility pumps water back to the high lift pumps at Waterpark Creek which supply to Kellys off stream storage and Woodbury Water Treatment Plant.

4.4.3 Marlborough and Ogmore

Water at Marlborough is used for domestic purposes but not potable water. Residents operate separate rainwater tanks for drinking water.

The water quality at Ogmore is poor and is non-potable.

Fitzroy River Water will consider the longer term options for each water supply.

Future sources of supply

Future water sources for Marlborough have been determined as new bores. Ogmore could also investigate suitable locations for bores to meet supply needs if the Montrose Creek source diminishes.

As stated previously, a broader assessment of the service provided to these communities is expected to occur in the next 12 months.

Emergency sources of supply

In the event of failure of the water sources due to drought, Marlborough and Ogmore may require trucking of water. The quantity will initially be based on 100L/person/ day for public health purposes only, but as the supply is not for drinking, actual requirements will be reviewed as necessary.

4.4.4 Mt Morgan

Mt Morgan's primary source of water is the No 7 Dam on the Dee River. An additional source is from the alluvial gravels adjacent to Fletcher Creek.

Future sources of supply

The most likely possible future water source for Mt Morgan is supply from the Fitzroy River.

The construction of a pipeline from Stanwell to Gladstone may offer the opportunity to connect Mt Morgan but this is subject to a broad range of issues that are yet to be determined.

Emergency sources of supply

A consulting engineer's report recommended the construction of a pipeline from Gracemere to Mt Morgan to supply potable water be undertaken. This proposal was based on an immediate need however as the No.7 Dam has sufficient capacity to supply for the coming years a more structured and strategic assessment is now possible.

Table 4.9 details the status of sources assessment work undertaken by Fitzroy River Water.

Table 9: Source Assessment

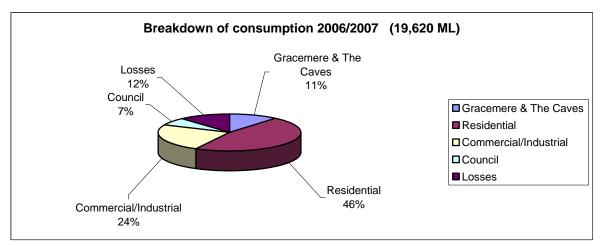
Source	Rainfall Dependent Y / N	Date of Last Yield Review and performance assessment	Have Any Environmental Flow Requirements Been Considered? Y/N	Have Preliminary Cost Estimates Been Prepared for Future or Emergency Sources?	Have the Performance of the Current Sources Been Modelled in the Past 5 Years?
Rockhampton, Gra	acemere and	The Caves			
Current Sources:	Yes	2007	Yes	Yes	
Fitzroy River (Barrage Storage)		(DERM Modelling)		(Fitzroy River Water)	
Future Sources:	Yes	2007	Yes	Yes	
Fitzroy River (Additional storages)		(DERM Modelling)		(CQRWSS)	
Emergency	Yes	2007	Yes	No	
Sources: Fitzroy River (Barrage Dead Storage level)		(FRW in-house demand model)	(from analyses of water quality deterioration when there has been no flow for extended period)		
Capricorn Coast		T			1
Current Sources: Waterpark Creek	Yes	Capricorn Coast Water Sources Study 2005	Yes – 50L/s	Yes – Sandy Creek Emergency Source is operational	Yes – Capricorn Coast Water Sources Study 2005
Future Sources: Fitzroy River	Yes	Central Queensland Regional Water Supply Strategy 2006	Yes	Yes	Yes
Emergency Sources: Sandy Creek	Yes	Capricorn Coast Water Sources Study 2005	Yes – 100L/s	N/A	Yes – Capricorn Coast Water Sources Study 2005
Mt Morgan		•	l	1	1
Current Sources: 1. No. 7 Dam	Yes		River naturally ceases to run except in major storm events.	Yes	No
2. Fletchers Creek	Yes		No – Creek ceases to flow in dry periods		No
Future Sources: Pipeline from Gracemere	Yes		No	Yes	
Emergency Sources: Pipeline from Gracemere	Yes		N/A	Yes	
Marlborough		•	•	•	•
Marlborough shallow aquifer bores	Yes	Unknown	No	Yes – emergency water carriers	No
Ogmore		•	•	•	•
Montrose Creek	Yes	Unknown	No	Yes – emergency water carriers	No

4.5 Demand and Consumption Characteristics

4.5.1 Rockhampton, Gracemere and The Caves

Rockhampton's water usage based on 2006/07 data can be characterised as follows:

Figure 1: Consumption by sectors



Elasticity in the residential sector demand (observed impact of rain periods) shows that restrictions on the use of external water has the potential to reduce usage in the short term.

The focus of this plan will be to restrict residential usage while also requiring responsible water management from business and industry.

Estimates of future demand have been derived based on population projections for the service areas. Figure 2 provides indicative consumption figures however, actual demand will be monitored due to industrial and commercial influences.

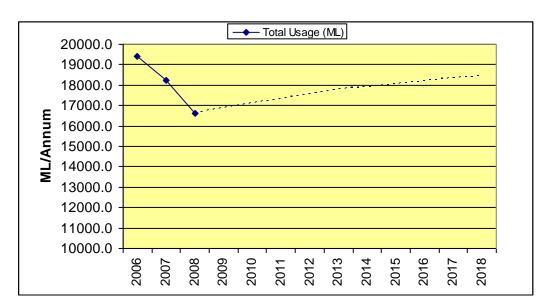


Figure 2: Projected Water Demand

4.5.2 Capricorn Coast

The future projected unrestricted demand for the Capricorn Coast is shown in Figure 3. These figures have been derived from the *Capricorn Coast Water Sources Study (Cardno, 2005)*.

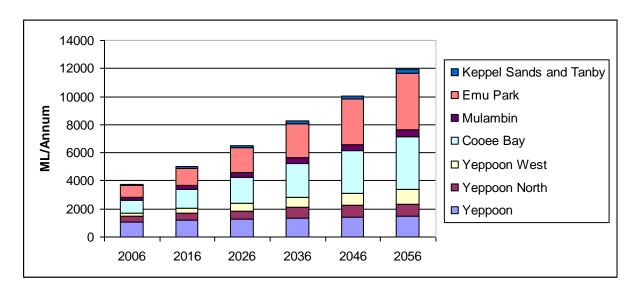


Figure 3: Capricorn Coast Projected Water Demand

Figure 4 shows the predicted source of water for the Capricorn Coast until 2036 with the yield of Waterpark Creek limited to 4020ML/ annum. The balance of water will be drawn from the Fitzroy River.

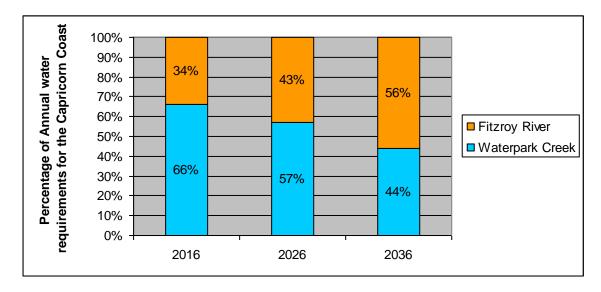


Figure 4: Capricorn Coast Projected Water Sources

With the creation of the new Regional Council the actual supply arrangements between the Waterpark Creek and Fitzroy River water sources will be thoroughly evaluated and the optimum social, economic and environmental option identified.

4.5.3 Mt Morgan

Water consumption has been steadily declining since 2004. This can be attributed to education and water restrictions. Whilst growth in the number of connections has been minimal for many years, it is now possible that it will increase slightly with the availability of additional blocks for housing.

The viability of this growth will be influenced by the outcomes of long term water supply planning for the area. Investment in upgrading failing infrastructure is also expected to reduce losses. The magnitude of these gains is uncertain at the current time.

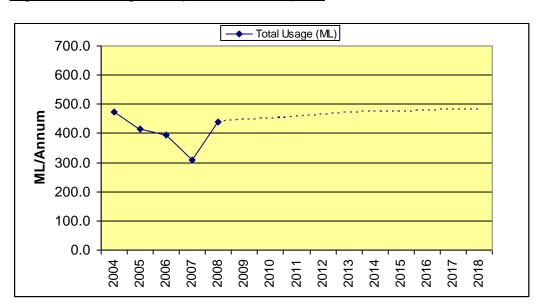


Figure 5: Mt Morgan Projected Consumption

4.6 Water Rebate Scheme

As part of Rockhampton Regional Council's promotion of sustainable water initiatives, a Rebate Scheme for water efficient products is open to eligible residents of the Rockhampton Region.

The rebate applies to the purchase and installation of eligible washing machines, rainwater tanks, showerheads and dual flush toilets.

5.0 SYSTEM OPERATING AND MANAGEMENT STRATEGY

5.1 General

The measures identified in this section have been developed as a response to drought or other temporary water shortage event and will only be implemented to various levels during the drought or event and will be lifted when conditions become more favourable.

Drought management strategies complement continuing demand management and water supply planning initiatives and are specifically intended to minimise the social and economic hardship associated with periods of reduced water availability.

As the Barrage storage also stores water released from the Eden Bann Weir for the Stanwell Power Station, Critical Water Supply Management Arrangements (CWSMA), as required under the ROP, have also been considered in compiling this plan.

Due to the current ROP not having carryover arrangements, detailed CWSMA have not been developed and specific restriction regimes are not specified.

However, Council is requesting the State Government to amend the ROP to allow the carryover of water from year to year in relation to drought management planning. In the interim Fitzroy River Water will continue to monitor the regional situation and look to develop more stringent CWSMA as required if the risk to supply requires such.

The quickest and most efficient way to reduce water consumption in the short term is to introduce water restrictions.

Under the Water Supply (Safety and Reliability) Act 2008, Section 41, Fitzroy River Water has the legal power to determine, implement and enforce water restrictions.

5.2 Restriction Trigger Levels – Rockhampton, Gracemere and The Caves

Water restriction policies and implementation schedules used to regulate water consumption and to extend supplies.

These strategies are usually derived with many stages due to the large raw water storages that fill intermittently and have long draw down timeframes. The Barrage requires annual refilling to maintain allocations and the storage depletes to minimum levels in nine months under full allocation utilisation. There is no time available to implement large enough augmentations that would provide the required volume to deal with very low inflow for two years.

Table 10 details the demand reduction targets for each level of restriction. Restriction levels have been developed with consideration of similar approaches across the state and local area in an attempt to provide consistency.

<u>Table 10: Rockhampton, Gracemere and The Caves Trigger Levels & Consumption Targets</u>

Restriction Level	Trigger Guide (Barrage Storage Level)	Target Reduction (%)	Target Consumption (ML/d) (average)
0 (no restrictions)	N/A	N/A	N/A
2	0.75m AHD (44% Commandable Volume)	15%	42.5
4	0.00m AHD (32% Commandable Volume)	30%	35
6	-0.5m AHD (25% Commandable Volume)	46%	27
Emergency Supply (15% Commandable Volume)		TBA	TBA

5.3 Restriction Trigger Levels – Capricorn Coast

For the purposes of this DMP, the water source for the Capricorn Coast is Waterpark and Sandy Creek. These trigger levels become operational when Waterpark Creek can no longer meet demand and Kellys storage is being depleted.

Table 11: Capricorn Coast Trigger Levels & Consumption Targets

Restriction Level	Trigger Guide Kellys Offstream Storage	Target Reduction (%)	Target Consumption (ML/d) (summer average)
0 (no restrictions)	N/A	N/A	N/A
1	>80%		12.7
2	80%	8.7%	11.3
3	75%	20.0%	9.7

4	70%	26.0%	9.0
5	50%	31.3%	7.8
6	35%	49.6%	6.3

5.4 Restriction Trigger Levels - Marlborough and Ogmore

Table 12: Marlborough Trigger Levels

Restriction Level	Trigger Guide
3	Failure of bores to operate for more than 24 hours
6	Failure of bores to operate for more than 48 hours

Table 13: Ogmore Trigger Levels

Restriction Level	Trigger Guide	Council Response
3	Water level falls to the top of the original weir	Pumping to private tanks is reduced from 2 days per week to 1 day per week
6	Water level falls to less than 12 weeks estimated storage (around 10 % capacity)	Pumping is reduced to a total volume of 70,000L per week

5.5 Restriction Trigger Levels – Mt Morgan

Table 14: Mt Morgan Trigger Levels & Consumption Targets

Restriction Level	Trigger Guide (Capacity)	Target Consumption (ML/d) (average)
0 – no restrictions	>50%	N/A
1	<50%	1.4
2	40%	1.3
3	30%	1.2
4	25%	1.1
5	15%	1.0

6	10%	0.8

5.6 Restriction Levels Definition

Table 15 sets out details of restrictions on the use of water.

The success of these restrictions will require ongoing monitoring which is covered in Section 6.

The restrictions to be implemented in the event that the emergency supply is accessed will require determination at the time to balance the level of community hardship and the seriousness of the situation.



Table 15: Restriction Levels

Purpose	Restrictions on Use of Water					
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
PRIVATE GARDENS (Single Dwellings, Duplexes and Multi-Unit Developments)	No watering permitted during the hours of 9.00am to 4.00pm. No restrictions for recycled water or bores.	No watering permitted during the hours of 9.00am to 4.00pm. Hand held watering on any day of the week between 4.00pm and 9.00am. Irrigation systems and sprinklers can only be used as follows: Odd numbered properties – Tuesday, Thursday & Saturday; Even numbered properties – Wednesday, Friday & Sunday; No watering permitted on Mondays. No restrictions for recycled water or bores.	Irrigation systems and sprinklers banned. No watering of existing turf/lawns permitted. New turf by limited exemption. Hand held watering permitted only during the hours of 6.00am-9.00am and 5.00pm-8.00pm. No restrictions for recycled water or bores.	Irrigation systems and sprinklers banned. No watering of existing turf/lawns permitted. New turf by limited exemption. Hand held watering permitted only permitted only permitted only during the hours of 6.00am-9.00am and 5.00pm-8.00pm as follows: Odd numbered properties — Tuesday, Thursday & Saturday; Even numbered properties — Wednesday, Friday & Sunday; No watering permitted on Mondays. No restrictions for recycled water or bores	Irrigation systems and sprinklers banned. No watering of existing turf/lawns permitted. No watering of new turf. Bucket watering only permitted during the hours of 7.00am-8.00am and 5.00pm-6.00pm as follows: Odd numbered properties – Tuesday, Thursday & Saturday; Even numbered properties – Wednesday, Friday & Sunday; No watering permitted on Mondays. No hoses to be connected to taps No restrictions for recycled water or bores	No outside use of potable water permitted. No restrictions for recycled water or bores.
CAR & BOAT WASHING	Hose fitted with a trigger or twist nozzle or bucket anytime	Hose fitted with a trigger or twist nozzle or bucket anytime	Hose fitted with a trigger or twist nozzle or bucket during the times permitted for hand watering Exemption required otherwise	By bucket during the times permitted for hand watering Exemption required otherwise	Not permitted except at commercial car washing facilities	Not permitted except at commercial car washing facilities

Date Issued: February 2009 Page 19



Purpose			Restrictions on Use of	Water		
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
SWIMMING POOLS – EXISTING	No restrictions apply	No restrictions apply	Top-up permitted during hand watering times	Top-up permitted during hand watering times	No top-up permitted	No filling permitted
SWIMMING POOLS – NEW	No restrictions apply	No restrictions apply	No filling permitted	No filling permitted	No filling permitted	No filling permitted
DRIVEWAYS/FOOTPATHS/HOUSES	Allowable	Only with high pressure equipment	No wash down permitted			
COMMERCIAL BUSINESSES	No restrictions apply for businesses that use potable water outside as part of their core business (eg builders, dog washers, bricklayers, concrete cutters, pressure cleaners, landscapers, car and boat detailers)	No restrictions apply for businesses that use potable water outside as part of their core business (eg builders, dog washers, bricklayers, concrete cutters, pressure cleaners, landscapers, car and boat detailers)	No restrictions apply for businesses that use potable water outside as part of their core business (eg builders, dog washers, bricklayers, concrete cutters, pressure cleaners, landscapers, car and boat detailers)	No restrictions apply for businesses that use potable water outside as part of their core business (eg builders, dog washers, bricklayers, concrete cutters, pressure cleaners, landscapers, car and boat detailers)	No restrictions apply for businesses that use potable water outside as part of their core business (eg builders, dog washers, bricklayers, concrete cutters, pressure cleaners, landscapers, car and boat detailers)	No restrictions apply for businesses that use potable water outside as part of their core business (eg builders, dog washers, bricklayers, concrete cutters, pressure cleaners, landscapers, car and boat detailers)
BOWLING GREENS, GOLF GREENS ONLY, TURF CRICKET PITCHES	Restrictions as for private gardens No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores
COMMERCIAL NURSERIES	No restrictions apply No restrictions for recycled water or bores	No restrictions apply No restrictions for recycled water or bores	Restrictions as per private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as per private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as per private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as per private gardens Exemption required otherwise No restrictions for recycled water or

Date Issued: February 2009



Purpose	Restrictions on Use of Water					
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
						bores
COUNCIL PARKS & GARDENS & SPORTS GROUNDS	Restrictions as for private gardens for potable water No restrictions for recycled water or bores	Restrictions as for private gardens for potable water No restrictions for recycled water or bores	Restrictions as for private gardens for potable water No restrictions for recycled water or bores	Restrictions as for private gardens for potable water No restrictions for recycled water or bores	Restrictions as for private gardens for potable water No restrictions for recycled water or bores	Restrictions as for private gardens for potable water No restrictions for recycled water or bores
SCHOOLS	Restrictions as for private gardens for potable water No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores	Restrictions as for private gardens Exemption required otherwise No restrictions for recycled water or bores
PUBLIC HEALTH PURPOSES	No restrictions apply	No restrictions apply	No restrictions apply	No restrictions apply	No restrictions apply	No restrictions apply
DEVELOPMENT SITES	No restrictions apply, however, use of non-potable water is preferred	No restrictions apply, however, use of non- potable water is preferred	No restrictions apply, however, use of non- potable water is preferred	No use of non-potable water permitted No restrictions for recycled water or bores	No use of non-potable water permitted No restrictions for recycled water or bores	No use of non- potable water permitted No restrictions for recycled water or bores
STOCK WATERING	No restrictions apply	No restrictions apply	No restrictions apply	No restrictions apply	No restrictions apply	No restrictions apply
BEACH SHOWERS	Beach showers connected	Beach showers connected	Beach showers connected but on timed discharge	Beach showers connected but on timed discharge	Beach showers connected but on timed discharge	Beach showers connected but on timed discharge

Date Issued: February 2009 Page 21

6.0 IMPLEMENTATION

6.1 Drought Management Response Team

Fitzroy River Water has established the following Drought Management Response Team to be convened by the Mayor on an "as needs" basis to oversee the implementation of restrictions, review performance, conduct post event reviews and recommend any changes to the Drought Management Plan.

Chairperson: Rockhampton Regional Council Mayor or representative

Team Members: Chief Executive Officer or representative

General Manager Fitzroy River Water or representative

Two persons as nominated by Council

The Drought Management Response Team will be an advisory committee under the Rockhampton Regional Council.

6.2 Authorising Provisions

Water restrictions will only be modified or removed by Council when there has been sufficient inflow into the system to reduce the level of restrictions to the previous category.

6.3 Enforcement

Council officers with approved delegation will carry out enforcement of the strategies in line with Council policy on infringements.

6.4 Exemptions

Council may grant exemptions to restrictions at each restriction level if it considers that reasonable grounds for such exemptions have been presented to it in writing on the application form in Appendix 1 to this plan.

Any exemptions granted under this authority may be granted unconditionally; or with specific conditions and exemptions may be granted either totally or in part to the extent specified in Fitzroy River Water's approval notification letter. In most if not all cases, exemptions granted will be for a specified period of time not exceeding the term of the particular level of restrictions for which the exemption is granted.

Unless otherwise specifically stated in the letter of approval, all approved exemptions will automatically be withdrawn when the level of restriction change and customers seeking further exemptions must re-apply.

6.5 Communications Plan

It is proposed that notification of water restrictions will be published in the local newspapers as public notices and distributed as media releases to local newspapers, radio stations, television networks and the Council website. Notices will also be displayed at appropriate Council offices. The release will state the restriction level along with a brief explanation and examples of what activities are restricted and which are permitted. Similarly the same avenues will be used to notify the lifting or easing of restrictions. All information regarding water restrictions including current restriction levels will also be available on Council's website. Proformas detailing the requirements or each restriction level will also be developed and distributed as appropriate.

For the Marlborough and Ogmore Schemes there are no specific communication strategies. Given the very small numbers of connections, communication is made by way of letter box drop or individual mailouts.

6.6 Monitoring Plan

Each water supply will be monitored on a regular basis. The Drought Management Response Team will be notified when demand and or supply levels near trigger points. Consumption and storage levels will be closely monitored as will the effectiveness of restrictions. As storage levels drop, water quality monitoring will assess potential water quality issues at lower levels.

7.0 APPENDIX 1

7.1 Exemption Request Form

Office Use Only
PN#
Ref# Registration Number:
registration ratificer.

All correspondence to:

Rockhampton Regional Council PO Box 1860 Rockhampton QLD 4700

Telephone: 1300 225577 Facsimilie: 1300 225579

Email: enquiries@rrc.com.au

EXEMPTION REQUEST FORMFITZROY RIVER WATER

Applicant's Name:	
Business Trading Name:	
Property Details: Lot Number: Street Number: Suburb: Postcode: UBD Reference:	Category of Water Restriction to which the exemption is requested: (Please tick) Residential or Commercial Garden Public Gardens Sportsgrounds Ponds and lakes
Customer Details Name: Address:	Fountains and Water Features Private Pools and Spas Public Pools and Spas Mobile Spas
Suburb: Postcode: Contact Numbers: Home: Business: Mobile:	Water Toys Dams and Tanks Mobile Water Tankers Commercial Market Garden / Nursery
After hours: Facsimile:	Motor Vehicle Cleaning Commercial Car Washes Motor Dealer Vehicle Cleaning
For use if applicant is a Company	Food Transport Vehicle Cleaning Boat Motor Cleaning
Registered Company Name: Company Trading Name:	Hard Surface Cleaning Windows/Building Facades/Walls etc.
Registered Head Office Address:	Dust suppression Construction Industry
A <mark>BN:</mark>	Animal Husbandry Commercial Poultry Farms

Exemption Information

The following additional information is required in order to determine whether an exemption may be granted:

Is the exemption sought (Please tick):

Temporarily
For the term of the current level of restrictions

Reason for seeking an exemption:

Please note that the principle reasons for seeking an exemption are:

To avoid an inequitable impact upon the livelihood of the applicant.

An adverse effect on public health and safety.

Please provide details and attach any specific documents to support your request.

Conditions for Granting an Exemption

If this exemption is granted, I agree to:

- Authorise the water business to publicly disclose any relevant details of the exemption;
- Adhere to all the specific requirements contained within the exemption;
- Provide appropriate access (as required) to enable the water business to assess the initial application and monitor the ongoing adherence to any exemption conditions; and
- Any other specified conditions as determined by the Water business.

Signature of Applica	nt:
Name (Print):	
Company Title: (if applicable)	_
Date [.]	

Exemptions

In certain circumstances, a water business may consider granting an exemption to water restrictions upon an application being made by a customer.

The overriding objective is to maximise water conservation during times of restriction, while at the same time, endeavouring to ensure that no customer segment or individual is disproportionately impacted by water restrictions.

Applications for an exemption must be made either on this form or in writing.

All approved exemptions may be logged on a register, where the public may seek clarification over the status of an exemption. The only information which will be made public is:

- The site address for which the exemption is granted;
- Details of the terms of exemption;
- Date approved and sunset date, if appropriate.

Approval of exemption terms is conditional to the applicant agreeing to:

- The exemption will be granted to a specific site address, or a particular person or organisation, or in special circumstances, both a particular person or organisation AND a particular site;
- Where applicable, signage will be provided by the water business to be prominantly displayed;
- Co-operating with any random audit of site compliance for granted exemptions, to ensure alternative arrangements are being adhered to;
- Re-applying should the restriction level change.

Office Use Only						
On receipt, this form shall be forwarded to Fitzroy River Water for processing.						
Please ensure the following actions are completed: • Ensure the application is entered into the Restrictions Exemptions Data Base and registration number noted.						
□ •	Approval:	Yes / No	Manager Special Conditions			
_			Signature:	_Date:/		
			If Yes, specify:			
_ •	Advise the application by means of a standard letter if application is successful or advise by standard letter of non-approval.					
•	Ensure a file is	created in Restriction	on Exemption Database	completed.		