CHARTERS TOWERS
REGIONAL COUNCIL

DROUGHT MANAGEMENT PLAN

November 2009
Revised December 2014
Revised June 2015

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Preamble

This Drought Management Plan is a review of the initial Drought Management Plan produced in November 2009 for the Charters Towers Regional Council, which was prepared in accordance with the Water Act 2000 and the Water Supply (Safety and Reliability) Act 2008.

The Drought Management Plan is written so that it can be included in the Total Management Plan for Water and Sewer Services.

The Charters Towers regional water supply systems, reliant on the Burdekin river flow, have been affected by drought conditions and low flow in the Burdekin River. Raising the height of the Burdekin Weir in 1995/1996 has provided sufficient storage to cover the worst historical dry period and is considered to meet the supply needs for the city of Charters Towers. However, the impact of climate change on the river flows is yet to be seen, and therefore strategies to extend the time of available storage to ensure supply during dry periods is required. Pentland has been the exception having a small community reliant on ground water, which tends not to be affected by short term drought conditions.

Charters Towers City and the regional area are located on an eastern plateau of the Great Dividing Range in tropical North Queensland. As such, the area receives regular tropical monsoon rainfall. The Burdekin River is located in a major catchment and is the water source for three of the communities in the Charters Towers region.

The document was originally prepared by Consultants Good Earth Matters Consulting Pty Ltd.

1. Introduction

In accordance with the Water Act 2000 and Water Supply (Safety and Reliability) Act 2008, Councils were previously required to prepare a Drought Management Plan for each service area in which the service provider supplies water. Councils are no longer required to prepare a Drought Management Plan, however this document provides the basis upon which Council is committed to sustainable water management.

The DMP constitutes Appendix O of the Total Management Plan for Water Supply and Sewerage Services (TMP). It is also intended to stand alone as a separate document for registration. In order to stand alone it includes some system description information which is a summary of more detailed information included in the TMP.

The Charters Towers Regional Drought Management plan covers water supplies to Charters Towers and for the communities at Greenvale, Pentland, and Ravenswood. Communities at Homestead and Balfes Creek are very small and use private water supplies; that is, they are not supplied by the Service Provider (Council).

The Drought Management Plan is intended to cover a reduction in source water such as low flow in rivers, low dam levels or failure of an aquifer which are the results of natural and climatic events. Failures in the water supply network assets (eg: pipe breakage, electrical failure) are covered in the TMP and should be referenced by the Disaster Management Plan for Charters Towers Region.

2. Policy Statement

CTRC is committed to providing a sustainable supply of safe clean drinking water to the residents of Charters Towers, Greenvale, Pentland, and Ravenswood for the present and future.

CTRC recognises the challenges of the people in living in our remote communities and is committed to encouraging sustainable and wise use of the water resource to ensure that the community can continue to maintain suitable plant growth within the residential parts of the city and rural communities. In doing so, CTRC encourages the selection of appropriate plant species and garden watering patterns.

3. Purpose

The purpose of the DMP is:

- To encourage CTRC customers and the wider community to conserve water and use it wisely;
- To outline an approved plan for regulating the use of water from the Charters Towers, Greenvale, Pentland, and Ravenswood supplies during times of water shortage (regardless of the reason for that shortage)
- To identify other water sources and actions that CTRC will consider during periods of extreme drought to maintain essential water services sufficient to ensure minimum health requirements

4. Services and Systems Overview

4.1 Registered Services

CTRC is the registered Water Service Provider to an estimated population of 9100 people. This includes both the populations of Charters Towers (8500) and the townships of Greenvale (200), Pentland (200), and Ravenswood (200).

Table 2 below summarises the types of services provided by CTRC to which this DMP applies.

Table 4-1: Types of Services

Type	✓ If Applicable	Scheme Name
Bulk Water	Not applicable	
Retail Water	Applicable	Charters Towers, Greenvale, Pentland and Ravenswood.
Irrigation	Not applicable	
Farm - Stock & Domestic	Not applicable	
Other - State	Not applicable	

4.2 Nature and Extent of Water Services

The nature and extent of services provided by CTRC are summarised in Table 4-3 and Table 4-4.

Ten (10) year projections of demands/flows are summarised in Table 4-5. The 10 year predictions are considered to be conservative with a small amount of growth predicted. The Charters Towers Population growth is considered to be reasonable with a small population change having little impact on supplies. For small towns a small population change would have a much larger impact on service. The populations identified for Greenvale, Ravenswood and Pentland are estimates as there is no statistical data collected for these townships.

Table 4-2: Overview of Schemes Communities

Scheme Name	Communities Served	No. of Connections
Charters Towers Water Supply Scheme	Charters Towers (8500)	4123
Greenvale Water Supply Scheme	Greenvale (200 pop)	173
Ravenswood Water Supply Scheme	Ravenswood (200 pop)	152
Pentland Water supply Scheme	Pentland (200 pop)	168

Table 4-3: Overview of Schemes Nature of Service

Water Supply	Nature of Service (tick as appropriate)				
Scheme Name	Potable	Non-Potable	Pressurised On Demand	Constant Flow	Dual Reticulation
Charters Towers	✓		✓		
Greenvale	✓		✓		
Ravenswood	✓		✓		
Pentland	✓		✓		

Table 4-4: Projected Demand

Water Supply Services			
Scheme Name	Water Demand (ML / annum)		
	Current	5 years	10 years
Charters Towers	3994	4153	4033
Greenvale	97	116	164
Ravenswood	83	100	140
Pentland	111	133	188

4.3 Infrastructure Details

Table 4-5: Summary of Water Supply Infrastructure for Charters Towers Water Supply Scheme

Scheme Name		Charters Towers Water Supply Scheme	
Source Facility		Name: Burdekin Weir (5227 ML storage) 0.12% Av. Annual flow Allocation: 7500 ML	
Treatment Plant		FEJ Butcher Treatment Plant 18ML of treated water	
Reservoir	Name	Old City	New City
	Capacity	7.7 ML	8.5 ML
Pump Stations		Intake and Booster	
Length of Pipelines		210 km	
Length of Channels		Nil	

Table 4-6: Summary of Water Supply Infrastructure for Greenvale Water Supply Scheme

Scheme Name		Greenvale Water Supply Scheme
Source Facility		Name: River Intake Burdekin River at Greenvale Allocation: 493.6 ML P/A Peak 1.8 ML/day
Treatment Plant		Treatment Plant (Reservoir Plant) Filtration & Disinfection
Reservoir	Name	No.1
	Capacity	2.27 ML
Pump Stations		Intake and Booster Pumps
Length of Pipelines		32.5 km
Length of Channels		Nil

Table 4-7: Summary of Water Supply Infrastructure for Ravenswood Water Supply Scheme

Scheme Name		Ravenswood Water Supply Scheme
Source Facility		Name: River Intake Burdekin River at Ravenswood Allocation: 3370ML CTRC 2500 ML Carpentaria Gold Supply
Treatment Plant		Carpentaria Gold Supply
Reservoir	Name	None
	Capacity	
Pump Stations		Reticulation Booster
Length of Pipelines		10.3 km
Length of Channels		Nil

Table 4-8: Summary of Water Supply Infrastructure for Pentland Water Supply Scheme

Scheme Name		Pentland Water Supply Scheme	
Allocations		Bore : Not Known, Surface water: 59 ML from Betts Ck	
Source Facility		Name: Glen Houghton Bore field Bore 1 Capacity: 650KL/day	Name: Glen Houghton Bore field Bore 2 Capacity: 650KL/day
Treatment Plant		Process: Chlorination disinfection(inline injection system)	
Reservoir	Name	Pentland Town	
	Capacity	2.27ML	
Pump Stations		High Lift Pump Station and Treatment Plant	
Length of Pipelines		30 km	
Length of Channels		Nil	

4.4 Water Sources Assessment

A water sources assessment is provided for each water supply. Information in this section has been collated from the Charters Towers Total Management Plan for Water and Sewerage services, and the Dalrymple Shire Strategic Asset Management Plan, along with river flow and rainfall information readily available. The information in the two management plans has been collated by other consultants and while a quality check of the information has not been completed, the data is consistent with current rainfall and flow patterns in the Burdekin River. While a source assessment from the QWD template has been completed below, there has been little work completed on the water sources since 1995 when the Burdekin Weir was raised 2.2 metres. Since that time the major town has not had critical shortages of water although the flow in the Burdekin does reduce during the dry winter months (refer Section 4.4.5). Additional work will be required as part of the development of a Total Management Plan for Water and Sewer.

A Source Assessment Table from the QWD Template has been completed below.

Table 4.9: Source Assessment

Source	Rainfall Dependent Y/N	Date of last yield review	Date of next planned yield review	Environmental Flow Requirements Considered Y/N	Preliminary Cost Estimates prepared?	Performance Modelling of Current Source Y/N
Current Sources:						
Burdekin River	Y	1995	2015	Y	N	N
Glen Houghton Bore Field	N	Not Known	Not Known	N/A		
Future Sources:						
None considered						
Emergency Sources:						
None Considered						

4.4.1 Greenvale

Water is sourced from the Burdekin River. NRM records for sites in close proximity to Greenvale indicate that the average minimum flow in the last 30 years is approximately 49 ML/day. This figure takes into account some times when there is no flow recorded. Local residents report that there has been not time in the remembered past when the river has not had sufficient flow to meet the community water supply needs at Greenvale, however it is noted that the river has had periods of no flow downstream at the Charters Towers intake point. Because of the small size of Greenvale, water can be readily trucked in for drinking and health purposes.

Greenvale water has a problem with turbidity at high flows which occur for approximately 3 months of the year. This is of greater concern as the cost of developing a treatment plant to filter out the turbidity is significantly more than the community can afford. Treatment options are being investigated by CTRC to ensure suitable water during periods of high turbidity.

4.4.2 Charters Towers

The City draws its water supply from a weir on the Burdekin River approximately 14 km north of the City. The catchment area of the Burdekin to this point is some 34,980 km2, all to the north of Charters Towers. The original weir was constructed in 1902 and was 265 m long and approximately 3.5 m high. The capacity of the weir was 1,950 ML. In 1995/96 the weir was raised 2.2 m with the crest level being RL 231.0 and a total length of 360 m. The capacity of the present weir is 5,227 ML which represents only 0.12% of the average annual flow of the Burdekin River. The weir now provides 7 months secure supply. Calculations on river flow in 1995 indicated that the longest recorded period of no flow at the Burdekin Weir was 7 months and the volume of the weir was calculated for the worst case.

Water restrictions across the Council area will be imposed by CTRC depending on the level of the Burdekin Weir as the trigger point. This should extend the available secure supply for Charters Towers. Because three of the four supply areas will be affected by the flow of the river the use of a single trigger point for the Charters Towers Council area is considered to be a pragmatic approach to setting restrictions. Consideration will also be given to the effect of climate change on the river flows.

4.4.3 Ravenswood

Ravenswood supply was installed to connect to the Carpentaria Gold reservoir. The town supply requirements are a small percentage of that required for the gold mining operation. As the original source of the water is the Burdekin River downstream of the Charters Towers intake, the flow is expected to be the same as for Charters Towers, but the community needs are small and restrictions would allow for times of no river flow.

4.4.4 Pentland

Pentland is serviced by a bore field located approximate 10 km from the town. Two bores within the field are used to service the town. The aquifer appears to be permanent for a small community with low total demand.

4.4.5 Past Performance

The water supplies have performed well over the history of the towns. The river has ceased to flow for at least some period of time in 29 out of the last 72 years. In the past, this has caused chronic, often severe and occasionally desperate water restrictions in Charters Towers. The longest no flow period on record is 7 months.

Generally, the recorded flows in the Burdekin River are significant with a number of studies having been undertaken to construct dams on the river because of the high average flow of the river. Flows required for the three towns upstream of the Burdekin Falls dam are not significant when compared to the average annual flow of the river. It is noted that a proposed dam to be constructed for the “Bradfield” scheme to supply water to southern Queensland was to be constructed upstream of the Charters Towers intake. It is also noted that the water take from the river for community purposes is less than 0.12% of the average flow of the river at the Charters Towers extraction point.

Ground water supplies for Pentland, like a number of ground water supply sources in the region have been consistent; likely failure of these supplies is more likely to be as a result of bore casing or pump failure than a loss of water within the aquifer.

4.5 Water Consumption

The data available on water consumption for Charters Towers and the other towns provides conflicting results. There has been very little analysis of the consumption patterns over the past few years although it appears that most of the towns have similar water consumption patterns to other similar towns in Western Queensland.

4.5.1 Current Consumption

Records for last year (2013/14) indicate the per-capita consumption for Charters Towers City is 1293L per person per day. These figures include all water uses such as irrigation, industrial use and personal domestic use.

5. Drought Management Plan

5.1 General

This DMP addresses Charters Towers Regional Council's drought response plan in specific terms. The Drought response plan also considers the Council's ongoing water conservation strategy only in general terms.

It is important that the community understands the difference between the two. Restrictions which are part of the water conservation strategy are ongoing and intended to ensure that we adopt sustainable water use practices as part of our normal way of life. (These are referenced in the plan as the Level 0 restrictions) Charters Towers Regional Council as part of the amalgamation process is developing separate policies on water conservation and an overall reduction in water use.

Restrictions which are introduced in response to a drought or other temporary water shortage events (Level 1 – 4 restrictions) will only be implemented to various levels during the drought or event and will be lifted when conditions return to normal.

5.2 Restrictions Trigger Levels

The most effective way to reduce overall water consumption is to introduce water restrictions. Water restrictions theoretically allow the water source to last longer under a variety of usage and drought scenarios taking into account future population growth. In accordance with Section 41 of the Water Supply (Safety and Reliability) Act 2008, CTRC has the legal power to determine, implement and enforce water restrictions.

The Council may decide to have a consistent restriction level in place across the region, in which case the trigger levels for restrictions would need to be set by the level of the Burdekin Weir (14 km from Charters Towers). The water level of the Burdekin Weir is a clear, easily monitored indicator of flow in the river which is the source for most of the supply areas. Table 5-1 sets out the trigger level and restriction levels.

Alternatively Tables 5-2 to 5-4 would allow the Drought Management Team to set various restriction levels depending on more local trigger guides. Because Pentland is not reliant on the same source as the other three water supply areas, it could be left to stand alone with little or no drought restrictions. The trigger levels in tables 5-2 to 5-4 may need to be adjusted as better information becomes available.

Ravenswood is dependent on the supply from the Carpentaria Gold storage, which in turn is fed from the Burdekin River. Level 1 Restrictions are triggered at about the flow where Carpentaria Gold is required to seek permission to continue taking water from the river to maintain the level of the storage. If permission to continue a water take is declined then the Drought Management Response Team may determine to impose greater restrictions at an earlier time. However, in the normal course of events, it is expected that low levels of pumping would extend the life of the supply for both the mining operation and the town. If conditions meant that the river flow was reduced to a point where there was no pumping to storage available then the mine would have a period of time to arrange a managed close down of operations. The town usage is so insignificant that further restrictions would not be required until the dam storage is at a much lower level than that normally imposed and while mining operations may be curtailed, the town would have access to water for a significant period of months. Again it is noted that the longest reported period without water is seven months and 10% supply for the town only is likely to exceed that period.

In the tables below, the domestic use target includes domestic water for hygiene cooking and cleaning, and excludes irrigation and outdoor cleaning.

The Trigger levels are a guide. The Drought Management Response Team may determine different restriction levels for each of the supply areas under the control of the service provider if the conditions vary from the predicted rainfall or other patterns.

Table 5-1: Trigger Levels & Consumption Targets Charters Towers Supply

Restriction Level	Trigger Guide	Target Consumption
0	Base Level (Weir Full – water flowing in Burdekin River) Weir wall AHD231.0	16.5 ML/day (all uses) 310 L/p/day (Domestic use)
1	Weir Level AHD230.9 10.0cm below weir wall	14 ML/day (all uses) 290 L/p/day (Domestic use) Target 15% reduction on level 0
2	Weir Level AHD230.4 0.60m below weir wall	12 ML/day (all uses) 270 L/p/day (Domestic use) Target 27% reduction on level 0
3	Weir Level AHD229.9 1.10m below weir wall	10 ML/day (all uses) 270 L/p/day (Domestic use) Target 39% reduction on level 0
4	Weir Level AHD228.9 2.10m below weir wall	9 ML/day (all uses) 250 L/p/day (Domestic use) Target 45% reduction on level 0

AHD = Australian Height Datum, height above sea level in metres

Table 5-2: Trigger Levels & Consumption Targets Greenvale Supply

Restriction Level	Trigger Guide	Target Consumption
0	Base Level (Weir Full – water flowing in Burdekin River) Weir wall AHD231	0.5 ML/day (all uses) 310 L/p/day (Domestic use)
1	Weir Level AHD230.9 10.0cm below weir wall	0.3 ML/day (all uses) 290 L/p/day (Domestic use) Target 40% reduction on level 0
2	Weir Level AHD230.4 0.60m below weir wall	0.2 ML/day (all uses) 270 L/p/day (Domestic use) Target 60% reduction on level 0
3	Weir Level AHD229.9 1.10m below weir wall	0.12 ML/day (all uses) 270 L/p/day (Domestic use) Target 76% reduction on level 0
4	Weir Level AHD228.9 2.10m below weir wall	0.075ML/day (all uses) 250 L/p/day (Domestic use) Target 85% reduction on level 0

AHD = Australian Height Datum, height above sea level in metres

Table 5-3: Trigger Levels & Consumption Targets Ravenswood Supply

Restriction Level	Trigger Guide	Target Consumption
0	Base Level water flowing in Burdekin River Full capacity pumping from river	0.5 ML/day (all uses) 310 L/p/day (Domestic use)
1	Carpentaria Gold (CG) Reduced pumping capacity from river (100% storage with inflow)	0.3 ML/day (all uses) 290 L/p/day (Domestic use) Target 40% reduction on level 0
2	CG Storage Suhrs Creek Dam and Turkeys Nest Dam Available volume 2650ML (100% storage no inflow)	0.2 ML/day (all uses) 270 L/p/day (Domestic use) Target 60% reduction on level 0
3	CG Storage Suhrs Creek Dam and Turkeys Nest Dam Available volume 1200 ML (46% storage)	0.1 ML/day (all uses) 270 L/p/day (Domestic use) Target 80% reduction on level 0
4	CG Storage Suhrs Creek Dam and Turkeys Nest Dam Available volume 50ML (3.6% storage)	0.075 ML/day (all uses) 250 L/p/day (Domestic use) Target 85% reduction on level 0

AHD = Australian Height Datum, height above sea level in metres

Table 5-4: Trigger Levels & Consumption Targets Pentland Supply

Restriction Level	Trigger Guide	Target Consumption
0	Base Level (Normal recovery level of Aquifer at rest with no pumping)	0.5 ML/day (all uses) 310 L/p/day (Domestic use)
1	10% loss of aquifer pump recovery level or loss of production	0.4 ML/day (all uses) 290 L/p/day (Domestic use) Target 20% reduction on level 0
2	20% loss of aquifer pump recovery level or loss of production	0.3 ML/day (all uses) 270 L/p/day (Domestic use) Target 40% reduction on level 0
3	30% loss of aquifer pump recovery level or loss of production	0.2 ML/day (all uses) 270 L/p/day (Domestic use) Target 60% reduction on level 0
4	40% loss of aquifer pump recovery level or loss of production	0.1 ML/day (all uses) 250 L/p/day (Domestic use) Target 80% reduction on level 0

Table 5-5: Level 0 Restrictions

Purpose		Restriction
1	Private Gardens Watering	Watering – Water free day restriction on Mondays. No sprinklers/automatic drip systems on Mondays. No sprinklers/automatic drip systems are to be used between the hours of 8am and 4pm Sprinkler/automatic drip system hours – Lawns and Gardens may be watered between the hours of 4pm to 8am only on days as set below Odd numbered residences – Tuesday, Thursday, Saturday Even numbered residences – Wednesday, Friday, Sunday Attended hand held hoses permitted at any time
2	Public Gardens	Applies to Council owned gardens with planned watering regimes - Sprinklers and automatic systems allowed every second day - any time Attended hand held hoses (including water truck spray bar) permitted at any time
3	Private gardens and public garden and public areas – filling and topping up of ponds	No restrictions
4	Fountains	No restrictions
5	Paved areas - cleaning	No restrictions
6	Private swimming pools or spas – filling or topping up	Filling new pools – no restrictions Existing pools may be topped up as per garden watering times
7	Farm dams and tanks – topping up	Water must not be used without the written permission of the Authority
8	Sports grounds / Schools – watering	Sprinklers allowed every second day between the hours of 4pm and 8am. For Schools only a variation to Morning Watering 6am to 10am and Afternoon Watering 2pm to 6pm Attended hand held hoses (including water truck spray bar) permitted at any time
9	Commercial market garden or plant nursery – watering of plants	No restrictions

Table 5-5: Level 0 Restrictions Continued

Purpose		Restriction
10	Mobile water tankers – filling	Water must not be used without the written permission of the Authority
11	Motor vehicle dealers' vehicles - cleaning	Hose must be fitted with a trigger control nozzle for cleaning vehicles by hand
12	Food transport vehicles – cleaning	No restrictions
13	Other vehicles - cleaning	Hoses must be fitted with a trigger control nozzle for cleaning vehicles by hand. No limitations apply to automatic car washing system with recirculation systems
14	Construction industry - use of water in construction	No restrictions
15	Any purpose (eg State Government Authorities) not included in any other items of this column other than for use inside domestic premises and for domestic farm and animals	Water must not be used outside those restrictions granted for "Private Gardens Watering" (defined above) without the submission of a Water Management Plan and written approval of the Authority

Table 5-6: Level 1 Restrictions

Purpose		Restriction
1	Private Gardens Watering	Micro spray and drip systems fitted with timers can be used between 7.00 pm to 8.00 am on alternate days (odds and evens as defined in level 0 restrictions above) - Lawns and Gardens Sprinklers can be used between 6am to 8am and 7pm to 9pm on alternate days (odds and evens as defined in level 0 restrictions above) - Lawns and Gardens Hand held hoses, watering cans or buckets can be used at any time
2	Public Gardens	Applies to Council owned gardens with designed watering programs Sprinklers allowed every second day Automatic systems set for 7pm to 7am Attended hand held hoses (including water truck spray bar) permitted at any time
3	Private gardens and public garden and public areas – filling and topping up of ponds	Existing ponds can only be topped up to their normal level and only by means of hand held hoses or by means of watering cans or buckets filled directly from taps
4	Fountains	Fountains must not operate unless they recycle water Water lost from fountains must not be replaced except by means of hand held hoses or by means of watering cans or buckets filled directly from taps
5	Paved areas - cleaning	High Pressure water (low volume) high pressure
6	Private swimming pools or spas – filling or topping up	Filling new pools – no restrictions Existing pools may be topped up as per garden watering times
7	Farm dams and tanks – topping up	Water must not be used without the written permission of the Authority- charges apply
8	Sports grounds / Schools – watering	Water must not be used outside those restrictions granted for “Private Gardens Watering” (defined above) without the submission of a Water Management Plan and written approval of the Authority
9	Commercial market garden or plant nursery - watering of plants	No restrictions
10	Window Cleaning	No restrictions

Table 5-6: Level 1 Restrictions Continued

Purpose		Restriction
11	Mobile water tankers – filling	Water must not be used without the written permission of the authority
12	Motor vehicle dealers' vehicles - cleaning	Hose must be fitted with a trigger control nozzle for cleaning vehicles by hand
13	Food transport vehicles – cleaning	No restrictions
14	Other vehicles -cleaning	Hoses must be fitted with a trigger control nozzle for cleaning vehicles by hand No limitations apply to automatic car washing system with recirculation systems
15	Construction industry - use of water in construction	No restrictions
16	Any purpose (eg State Government Authorities) not included in any other items of this column other than for use inside domestic premises and for domestic farm and animals	Water must not be used outside those restrictions granted for "Private Gardens Watering" (defined above) without the submission of a Water Management Plan and written approval of the Authority

Table 5-7: Level 2 Restrictions

Purpose		Restriction
1	Private Gardens Watering	Micro spray and drip systems fitted with timers can be used between 7pm to 8am on alternate days (odds and evens as defined in level 0 restrictions above) Sprinklers must not be used at any time Hand held hoses, watering cans or buckets can be used between 3pm and 4.30pm and between 9pm and 6am
2	Public Gardens	Applies to Council owned gardens with designed watering programs Sprinklers allowed every second day Automatic systems set for 7pm to 7am Attended hand held hoses (including water truck spray bar) permitted at any time
3	Private gardens and public garden and public areas – filling and topping up of ponds	Existing ponds can only be topped up to their normal level and only by means of hand held hoses or by means of watering cans or buckets filled directly from taps
4	Fountains	Fountains must not operate unless they recycle water Water lost from fountains must not be replaced except by means of hand held hoses or by means of watering cans or buckets filled directly from taps
5	Paved areas - cleaning	High Pressure water (low volume) high pressure, permitted as a result of accident or OHS requirement otherwise not permitted
6	Private swimming pools or spas – filling or topping up	Filling new pools – by permit Existing pools may be topped up as per garden watering times
7	Farm dams and tanks – topping up	Water must not be used without the written permission of the authority – charges apply
8	Sports grounds / Schools – watering	Water must not be used outside those restrictions granted for “Private Gardens Watering” (defined above) without the submission of a Water Management Plan and written approval of the Authority

Table 5-7: Level 2 Restrictions Continued

Purpose		Restriction
9	Commercial market garden or plant nursery – watering of plants	No restrictions
10	Window Cleaning	No restrictions
11	Mobile water tankers – filling	Water must not be used without the written permission of the authority
12	Motor vehicle dealers' vehicles - cleaning	Hose must be fitted with a trigger control nozzle for cleaning vehicles by hand
13	Food transport vehicles – cleaning	No restrictions
14	Other vehicles -cleaning	Hoses must be fitted with a trigger control nozzle for cleaning vehicles by hand No limitations apply to automatic car washing system with recirculation systems
15	Construction industry - use of water in construction	No restrictions
16	Any purpose (eg State Government Authorities) not included in any other items of this column other than for use inside domestic premises and for domestic farm and animals	Water must not be used outside those restrictions granted for "Private Gardens Watering" (defined above) without the submission of a Water Management Plan and written approval of the Authority

Table 5-8: Level 3 Restrictions

Purpose		Restriction
1	Private Gardens Watering	Garden Beds/Shrubbery Areas - Micro spray and drip systems fitted not permitted Sprinklers not permitted Hand held hoses, watering cans or buckets can be used between 5am and 7am and between 7pm and 9pm Lawn Areas - Watering not permitted
2	Public Gardens	Applies to Council owned gardens Sprinklers including automated systems allowed every second day, between the hours of 6.00 am and 8.00 am only. Attended hand held hoses (including water truck spray bar) permitted at any time
3	Private gardens and public garden and public areas – filling and topping up of ponds	Not permitted
4	Fountains	Fountains must not operate unless they recycle water Water lost from fountains must not be replaced
5	Paved areas - cleaning	Permit required based on OHS or emergency requirements
6	Private swimming pools or spas – filling or topping up	Filling new pools – written permission of authority Existing pools may be topped up or filled with permission of authority
7	Farm dams and tanks – topping up	Not permitted refer to Sunwater for water supply
8	Sports grounds / Schools – watering	Water must not be used outside those restrictions granted for "Private Gardens Watering" (defined above) without the submission of a Water Management Plan and written approval of the Authority. Permission may be granted for active playing surfaces only
9	Commercial market garden or plant nursery – watering of plants	Hand held hoses or bucket and watering cans only
10	Window Cleaning	Water may only be used from a bucket
11	Any purpose (eg State Government Authorities) not included in any other items of this column other than for use inside domestic premises and for domestic farm and animals	Water must not be used outside those restrictions granted for "Private Gardens Watering" (defined above) without the submission of a Water Management Plan and written approval of the Authority

Table 5-9: Level 4 Restrictions

Purpose		Restriction
1	Private Gardens Watering	Garden Beds/Shrubbery Areas - No watering of any kind permitted Lawn Areas - No watering of any kind permitted
2	Public Gardens	Applies to Council owned gardens Minimal watering of garden beds using attended hand held hoses (including water truck spray bar) permitted early morning only
3	Private gardens and public garden and public areas – filling and topping up of ponds	Not permitted
4	Fountains	Fountains must not operate unless they recycle water Water lost from fountains must not be replaced
5	Paved areas - cleaning	Permit required based on OHS or emergency requirements
6	Private swimming pools or spas – filling or topping up	Filling new pools – not permitted Existing pools must not be topped up or filled
7	Farm dams and tanks – topping up	Not permitted refer to supply authority in case of fire requirements
8	Sports grounds / Schools – watering	Not permitted
9	Commercial market garden or plant nursery – watering of plants	Hand held hoses or buckets only
10	Window Cleaning	Window cleaning product only, no water use
11	Mobile water tankers – filling	Water must not be used without the written permission of the authority
12	Motor vehicle dealers' vehicles - cleaning	Hose must be fitted with a trigger control nozzle for cleaning vehicles by hand
13	Food transport vehicles – cleaning	No restrictions
14	Any purpose (eg State Government Authorities) not included in any other items of this column other than for use inside domestic premises and for domestic farm and animals	Water must not be used outside those restrictions granted for "Private Gardens Watering" (defined above) without the submission of a Water Management Plan and written approval of the Authority

6. Implementation

6.1 Drought Management Response Team

CTRC has established the following DMP team to be convened by the Chairman on an "as needs" basis to oversee the implementation of restrictions, review performance, conduct post event reviews and recommend any changes to the DMP.

Chairperson: CEO

Team Members:

Mayor

Director Utilities and Facilities

Director Planning and Sustainable Development

Director Corporate Services (Deputy Chair)

Manager Utilities

Portfolio Councillor – Water Resources

Authorising Provision:

The Chief Executive Officer of Charters Towers Regional Council is authorised to impose, amend levels and withdraw restrictions, grant exemptions and initiate prosecutions. The Chief Executive Officer may delegate this authority under the provisions of the Local Government Act.

6.2 Process

The Manager Utilities will monitor the level of storage at the Burdekin Weir. As the level decreases toward the first trigger level the Drought Management Response Team will be notified. The Drought Management Response Team will also be notified if other events not specifically mentioned in the document would place a water supply to any of the supply areas at risk.

The Drought Management Response Team will then make a recommendations as to what level of restriction will be applied to each of the supply areas and at what point those levels will apply. The Director Utilities and Facilities and Manager Utilities may make recommendations as to the level of restriction on each supply area and estimates of remaining water.

6.3 Enforcement

The CTRC enforces drought regulations through authorised regulatory officers who have the power to issue enforcement notices.

6.4 Exemptions

Exemptions to restrictions at each level may be granted in writing by CTRC if it considers that reasonable grounds for such exemptions have been presented to it in writing, setting out the reasons for the exemptions.

Any exemptions may be granted either totally or in part to the extent specified in CTRC'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 restriction for which the exemption is granted.

All approved exemptions should be provided with a letter of approval specifying details of the exemption, the reason for the exemptions and the duration of the exemption. This ensures customers have documentation to produce if challenged by a regulatory officer.

6.5 Communications Plan

Water and normal level restrictions will be communicated to the community through the regular posted information with the rates notices. As restriction levels increase or in an emergency, the water restrictions and levels will be communicated through the media, using radio and social media in particular.

The following table sets out the communications plan.

Table 6-1: Communications Plan

Restriction Level	Communications Plan
0	Normal Council mail outs with rates notice, Council website – Education on water use, newspaper, social media
1	Normal Council mail outs with rates notice, Council website, newspaper, social media
2	Radio announcement during initial stages of level 2 restrictions, then normal Council mail outs, Council website, social media
3	Radio and television announcements daily during initial stages, with follow up reminders on radio and television each month. Council website, social media.
4	Radio and television announcements, daily during initial stages, with weekly follow up reminders on radio and television. Council website, social media.

6.6 Monitoring Plan

The Drought Management Response Team will monitor and report on the effectiveness of restrictions and the ongoing status of water supplies by regular reports from the Director Utilities, along with water meter readings for domestic supplies.

Table 6-2: Monitoring Plan

Restriction Level	Monitoring Plan
0	Meter reading and reporting to Council as per normal procedures, Weekly monitoring of weir capacity
1	Meter reading and reporting to Council as per normal procedures, Twice weekly monitoring of weir capacity Monthly Reporting to DMRT
2	Daily monitoring of Weir capacity Report on enforcement, Additional targeted meter readings as required. Monthly reporting to DMRT
3	Daily Monitoring on Weir capacity Bi-Monthly reporting to DMRT including report on enforcement Other reports if situations change
4	Twice Daily monitoring of weir capacity Weekly reporting to DMRT including report on enforcement Other reports as required

6.7 External Assistance

Relevant agencies, private companies etc who may be able to assist in maintaining supply or who may be able to provide access to alternative / emergency supplies are listed in Table 17. This may include the use of privately owned water tankers to transport water to the area or the purchase and distribution of bottled water.

Table 6-3 External Assistance

Agency	Address	Contact	Service
Sunwater	126 Giddy Road Ayr Phone 47830555	Regional Manager	Supplier and operated Burdekin Falls Dam
Carpentaria Gold	Carpentaria Gold Ravenswood Phone 47523100	Operations Manager Ravenswood	Bulk Supply - Ravenswood

CHARTERS TOWERS
REGIONAL COUNCIL

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