INVERELL
SHIRE COUNCIL

2019 Drought Management Plan

Adopted - 27 November 2019



Contents

Report Details 1
1. Reason for a Drought Management Plan 2
2. Legal Framework for Water Utilities – Water Restrictions 3
2.1 Local Government (General) Regulation 2005 3
3. Summary of Council Water Supplies 4
3.1 Copeton Treated Town Water Supply Scheme (Copeton Scheme) 5
3.2 Ashford Treated Town Water Supply 6
3.3 Yetman Treated Town Water Supply 7
3.4 Bonshaw Raw Water Supply 7
3.5 Graman Raw Water Supply 7
4. Operating Environment 9
4.1 Local Climate Data 9
4.2 Water Resources & Availability 10
4.3 Changing Demand for Water During Drought Sequences 10
4.4 Other Impacts 10
5. Preparing for Drought 11
5.1 Demand Management – Precursor to Implementing a DMP 11
5.2 Water Supply System Operating Rules 12
5.3 System Monitoring 12
5.4 Long Term Supply Strategies 13
5.5 Resource & Funding Strategy 13
6. Drought Management Action Plans 15
6.1 Overview 15
6.2 Drought Response Levels 15
6.3 Triggers & Water Consumption Targets 16
6.4 Drought Management Team 17
6.5 Communications 17
6.6 Monitoring 18
6.7 Action Plans 19
6.8 Water Restrictions 24
6.9 Emergency Response measures 25
7. Post Drought Actions 27
7.1 Post – Drought Evaluation & Revision 27

7.2 Regular Review & Update of the Plan 27
Appendix A 28
Water Restrictions Guide 28
Appendix B 31
Schedule of ISC Parks, Gardens & Recreational Facilities Watering Requirements During Restrictions 31

Figures

Figure 1 - Locality Plan - Water Supply Systems 4
Figure 2 - Mean Daily Evaporation Figures Inverell Research Centre 9

Tables

Table 1 - Summary of ISC Water Supply Systems 5
Table 2 - Gwydir Valley Regulated Water Sharing 2016 5
Table 3 – Long Term Climate Statistics - Inverell - Bureau of Meteorology 9
Table 4 - Permanent Water Conservation Measures to Apply During Daylight Saving 12
Table 5 - Water Consumption Targets 16
Table 6 - Drought Management Action Plan (All Treated Water Supplies) 19
Table 7 - Drought Management Action Plan - Copeton Scheme 20
Table 8 - Drought Management Action Plan - Ashford Water Supply 22
Table 9 - Drought Management Action Plan - Yetman Water Supply 23
Table 10 - Summary of Water Restrictions (Residential) 24

Appendices

Appendix A – Council Water Restriction Policy
Appendix B – Schedule of ISC Parks, Gardens & Recreational Facilities Watering Requirements During Restrictions

Report Details

Report Title	Inverell Shire Council: Drought Management Plan 2019
Status	Draft for Council Consideration
File Location	Trim Container – S32.18.1
Enquiries	Civil & Environmental Services P: (02) 6728 8200 E: Council@inverell.nsw.gov.au

Document History

Revision	Prepared/Updated by	Date	Nature of Changes
First Draft	Michael Bryant	9 October 2019	
Second Draft	Michael Bryant	4 November 2019	Post Councillor Workshop 23 October 2019
Final	Michael Bryant	27 November 2019	Post 13 November 2019 Civil & Environmental Committee Meeting

Acknowledgement – Namoi Water Alliance

Water restrictions corresponding to each Drought Response Level in this Drought Management Plan are generally based on a common set of measures adopted by the Councils associated with the Namoi Water Alliance. The adoption of a common set of water restrictions across the New England North West Region allows for a consistent and simplified communication process and reduces confusion in the various communities. Regional television and radio broadcasting is based out of Tamworth extending throughout the Inverell Shire Council local government area.

Council will use Inverell local media outlets plus social media and Council's website to promote water conservation and posting of any water restrictions.

1. Reason for a Drought Management Plan

A Drought Management Plan (DMP) is a very useful tool for Council to research, plan for and implement a drought response ensuring the community has access to potable water during periods of extended drought. The DMP informs the community of what plans Council has in place to manage the drought including water conservation, levels of water restrictions, trigger levels, back up supplies and any other emergency responses such as carting water to reduce the risk of the community running out of water.

The DMP will become a living document, updated as necessary to accommodate the changing environment, changes in water supply infrastructure and access to alternate reliable water sources to ensure the community has access to water.

The implementation of a DMP is also recommended by the NSW Government in the Best Practice Management of Water and Sewerage Guidelines for Local Water Utilities (Department of Water & Energy 2017).

2. Legal Framework for Water Utilities – Water Restrictions

Council as a water utility operates local town water supplies under the NSW Local Government Act 1993 (and companion legislation), the NSW Water Management Act 2000 and Water Act 1912.

The relevant section of the Local Government (General) Regulations 2005 below relates to how Council may apply water restrictions.

2.1 Local Government (General) Regulation 2005

Current version for 1 July 2019 to date (accessed 17 September 2019 at 21:06)
Part 6 Division 1 Clause 137

137 Water supply may be restricted if there is a shortage of supply

(1) A council that considers the available stored water in a water supply system supplying its area, or the available capacity of supply from that system, to be insufficient to allow the unrestricted consumption of water for purposes other than domestic purposes may, by notice published in accordance with this clause, restrict:
(a) the purposes for which the water can be used, or
(b) the times when the water can be used, or
(c) the methods by which the water can be used, or
(d) the quantities of the water that can be used.
(2) The council may, by notice published in accordance with this clause, place the same sort of restrictions as are referred to in subclause (1) on the use of water from such a water supply system for any purposes (including domestic purposes):
(a) if there is a drought, or
(b) if the available stored water, or the available capacity of supply, is so limited as to make extraordinary measures necessary in the general interest of water consumers.
(3) Restrictions under this clause can be imposed in respect of all of the council area supplied by the water supply system, but can apply to a part of that area if and only if:
(a) the shortage of water or shortage in capacity of supply is limited to that part, or
(b) the council orders the supply to be restricted to different parts of the area in rotation.
(4) Restrictions under this clause can be imposed only by a notice of the council published in a newspaper circulating within the council's area.
(5) All agreements made by the council relating to the supply of water are subject to this clause.
(6) This clause does not authorise the council to make orders restricting persons' rights under the *Water Act 1912* or the *Water Management Act 2000*.

Under the Local Government Act 1993 the maximum penalty that may be applied for a breach of imposed water restrictions is $2,200 for corporations and $220 for individuals.

3. Summary of Council Water Supplies

Council has three treated town water supplies and two raw water supplies as summarized in Table 1. Figure 1 shows the location of towns and villages supplied with water plus the location of Copeton Dam and Pindari Dam.

Figure 1 - Locality Plan - Water Supply Systems

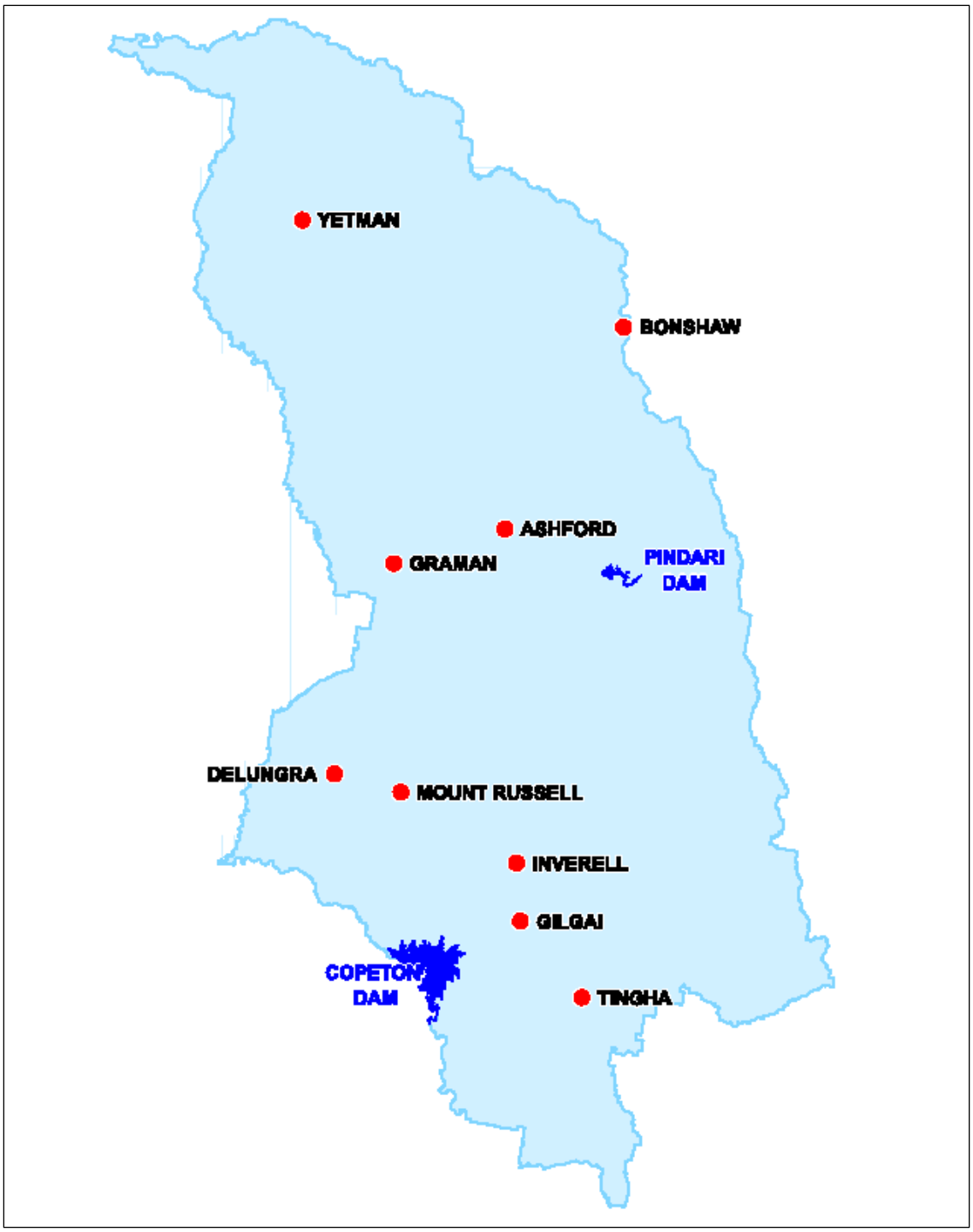


Table 1 - Summary of ISC Water Supply Systems

Scheme	Population served approximate	Number of connections	Average daily consumption (ML/d)	Average annual consumption (ML)	Source & Annual Allocation
Copeton (treated)	12,400	5,925	7.2	2,430	Copeton Dam 3,054 ML
Ashford (treated)	570	285	0.3	112	Pindari Dam 120 ML
Yetman (treated)	140	71	0.09	30	Groundwater 35 ML
Bonshaw (raw)	60	20			
Graman (raw)	30	7			

3.1 Copeton Treated Town Water Supply Scheme (Copeton Scheme)

Table 2 lists the total volume of annual shares specified in the share components of access licences in the Gwydir Valley Regulated Water Sharing plan 2016. The actual volume of water available at any time will depend on climate, access licence priority and rules of the Water Sharing Plan. Inverell Shire Council as a Water Utility has a High Security Town Water licence of 3,045ML per year. The total volume of annual shares in Copteon Dam is 536,874 ML per year of which 3,836 ML per year is Water Utility and 19,293 High Security for permanent horticulture plantings and other commercial undertakings. During severe drought conditions significant river transmissions losses may occur delivering water to downstream town water supplies and other High Security users.

Table 2 - Gwydir Valley Regulated Water Sharing 2016

Title Holders	Volume ML/Year
Native Title	0
Domestic & Stock	4,245
Water Utility	3,836
High Security	19,293
General Security	509,500
Total	**536,874**

The Copeton Scheme was commissioned in the early 1980s and supplies treated water to Inverell, Mount Russell, Delungra, Gilgai and Tingha. The scheme also supplies restricted flow services to rural residential areas around Inverell and villages plus properties along the 70km long pipeline corridor from Tingha to Delungra. Restricted flow services are limited to approximately 2,500L/day.

Due to the high level of security, water restrictions have never been applied to the Copeton scheme.

Copeton Dam is located approximately 25km south west of Inverell. Raw water is sourced from the dam outlet pipework. Copeton Pump Station (PS) No 1 located at the foot of the dam wall lifts water to a reservoir at PS No 2 located above the dam where water is aerated and pumped to the Copeton Water Treatment Plant (WTP) located at Minamurra Road on the outskirts of Inverell. Treated water gravitates from

the WTP to the reservoir complex at Inverell West for distribution via a series of mains, pump stations and reservoirs.

The Copeton Scheme accounts for approximately 94% of all treated water supplied by Council.

The Copeton Scheme has a current capacity to pump, treat and deliver up to around 12ML/day and during periods of very high demand associated with severe drought conditions, or a major interruption to supply, water restrictions may have to be applied to maintain security of the town water supply.

Council has access to the Copeton Dam outlet and therefore not prone to significant transmission losses which apply to many town water supplies relying on run of river water releases from an upstream dam.

The Copeton WTP is also very efficient in that settled backwash water is recycled by redirection to the head of the plant for processing.

An added level of security applies to the Copeton Scheme in that when Copeton Dam drops to zero level there is 19,000ML of dead storage accessible by Council during an extreme drought sequence. At the time of preparing this DMP in early October 2019 during the worst drought on record Copeton Dam with a capacity of 1,364,000ML was at 8.4% or 114ML. The forecast by the dam operator WaterNSW was that without any runoff into Copeton Dam storage would reduce to 0% capacity by March 2021 (18 months), after which Council would be reliant on the dead storage which would provide a backup for a number of years with the Copeton Scheme consuming up to 3,000ML per year.

It should be noted that as the dam recedes to low levels approaching the dead storage, the water quality may vary with depth and therefore will require assessing to ascertain the extent of treatment required for water remaining in the dam. This will also provide an estimate of the volume of water available for use.

3.2 Ashford Treated Town Water Supply

Council has a 120ML High Security Town Water supply licence supplied from Pindari Dam.

Pindari Dam with a storage capacity of 312,000ML was constructed in 1969 and since then water restrictions have not been applied at Ashford. A PS on the Severn River pumps raw water up to the Ashford WTP located on Beaumont Road where water is treated and stored for distribution around Ashford. The water supply has a current design capacity of 1.2ML/day.

Ashford is located approximately 20km downstream of Pindari Dam with the river supply subject to transmission losses. Transmission loses are losses that occur within the river once water has been released from the dam, which varies according to seasonal conditions, the state of the river, evaporation and losses into interconnected groundwater systems. Depending on the distance to the extraction point downstream of the dam losses can be as high as 50% or more.

Under normal operating procedure WaterNSW endeavor to maintain a flow of 10ML/ day in the Severn River. During an extreme drought as the dam level recedes and

transmission losses become too high WaterNSW revert to delivering pulsed flows to maintain sufficient water at the Ashford Water Supply PS intake.

At the time of preparing this draft DMP during the worst drought on record Pindari Dam was at 4.9% or 15,290ML. The forecast by WaterNSW was that without any runoff into Pindari Dam and no further bulk water releases to fill Boggabilla Weir and Goondiwindi Weir the dam would reduce to 0% capacity by September 2021 (23 months). A better estimate would be available around the end of February 2020, once it was known whether any releases had to be made for Boggabilla and Goondiwindi town water supplies.

3.3 Yetman Treated Town Water Supply

The Yetman Town Water supply was installed in the late 1960's. Water is sourced from two nearby bores in the Macintyre River valley alluvium located in the Councils Yetman Works Depot. The bores pump chlorinated water into an adjacent standpipe reservoir for distribution. The bores are equipped to pump around 6L/s, however being in close proximity to each other only one bore pumps at a time. The bore production is governed by the groundwater level and pump draw down rates.

Water restrictions have never been applied at Yetman, however during an extended severe drought sequence the system will require close monitoring and demand management applied as necessary.

3.4 Bonshaw Raw Water Supply

The Bonshaw raw water (non-potable) supply is a very basic restricted flow service for internal non potable use only. Raw water is sourced from a low capacity bore located along Sawmill Road in the Dumaresq River valley alluvium. Water is pumped to an overhead tank west of Bruxner Way. The water supply consists of 50mm diameter polyethylene pipework with very low water pressure. The raw water supply was taken over by Council when the old Department of Main Roads depot associated with the Bruxner Highway was closed.

The bore cannot keep up with uncontrolled demand during drought conditions. During drought periods residents top up their tanks with potable water hauled from Ashford or Yetman.

The operating rules and responses under this DMP do not apply to raw water supplies.

3.5 Graman Raw Water Supply

The Graman raw water (non-potable) supply is a very basic restricted flow service for internal non potable use only. Raw water is sourced from a low capacity bore located west of Yetman Road in fractured rock adjacent Graman Creek, and pumped to an overhead tank behind the old public school site. The water supply consists of 50mm diameter polyethylene pipework with very low water pressure. The raw water supply was taken over by Council some years after the Graman school closed.

The bore cannot keep up with uncontrolled demand during drought conditions. During drought periods residents top up their rainwater tanks with potable water sourced from Ashford or Inverell.

The operating rules and responses under this DMP do not apply to raw water supplies.

4. Operating Environment

The DMP needs to take into consideration the following;

- Local climate
- Available water resources
- Changing demand for water during drought sequences
- Other impacts

4.1 Local Climate Data

Inverell Shire serves a population of approximately 17,500 people located in the New England area of Northern NSW comprising an area of approximately 9,400 km², extending from the Queensland Border south to the northern outskirts of Bundarra.

Inverell experiences summer dominant rainfall, cold winters, and moderate summer temperatures.

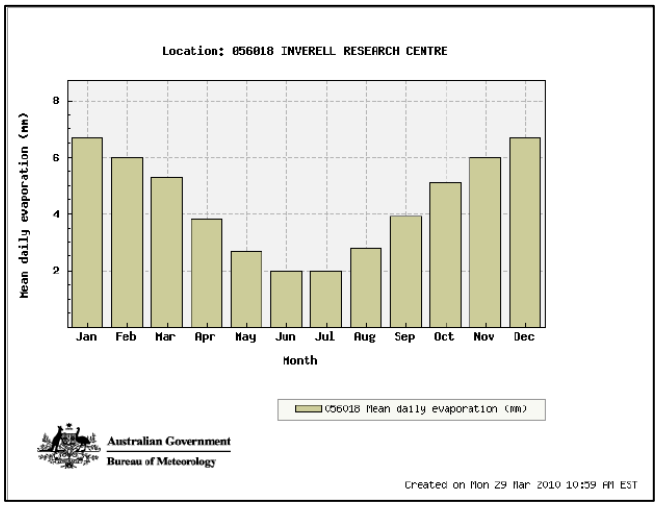
The long term mean rainfall and mean maximum temperature for Inverell are listed in Table 3.

Table 3 – Long Term Climate Statistics - Inverell - Bureau of Meteorology

Climate Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
Mean Rainfall (mm)	98.7	83.4	65.1	43.3	47.9	49.7	50.8	44.4	48.5	67.7	73.9	90.6	765.8
Mean Max Temp (°C)	30.6	29.8	27.8	24.1	19.7	16.2	15.3	17.2	20.5	24.0	27.4	29.7	23.5

Mean monthly daily evaporation figures are summarized in Figure 2. During hot dry drought conditions the evaporation would be elevated above the daily averages displayed in Figure 2.

Figure 2 - Mean Daily Evaporation Figures Inverell Research Centre



4.2 Water Resources & Availability

The Copeton and Ashford Town Water supply schemes are reliant upon access to High Security Town Water from Copeton Dam and Pindari Dam respectively. The regulated water sharing plans for both catchments make provision for high security town water.

Modeling for the annual water allocation for regulated surface water users, riparian users and the environment are based on the worst drought sequence inflows on records. Should a drought sequence exceed the known worst case scenario town water supplies may be impacted, and therefore provision is made for such an event in this DMP.

Groundwater sources are also monitored by the NSW Government agencies and restrictions placed on volumes extracted to ensure an adequate supply of water is available for town water supply.

4.3 Changing Demand for Water During Drought Sequences

With the onset of drought conditions the demand for water increases significantly, particularly for watering of lawns, gardens, other landscaped areas, sport and recreation facilities. Demand for water from public standpipes around the shire also increases as residents without access to the town water supply source drinking water for topping up rainwater tanks that have become depleted due to lack of rainfall

Town water supplies are not designed to cater for large scale watering of livestock and therefore usage of standpipes needs to be closely monitored and if demand becomes too high stock watering will need to cease.

During normal seasons the Inverell Sporting Complex is irrigated with raw water sourced from a pump station located on the MacIntyre River. Once the river ceases to flow below Lake Inverell Dam the Sporting Complex has to be irrigated with town water placing increased demand on the Copeton Scheme.

4.4 Other Impacts

With the Copeton Scheme one of the challenges during a severe drought is to maintain the peak daily demand for water below 12ML/day so the capacity of the supply is not exceeded placing the community at risk.

The Ashford town water supply with a peak capacity of 1.2ML/day also has to be closely monitored to ensure the system copes.

Yetman town water supply also needs to be closely monitored to ensure the system copes with increased demand.

Promotion of water wise and permanent water conservation measures, along with water restrictions as required, will be used to manage demand within the capacity of the systems and available water.

5. Preparing for Drought

Drought can have a significant impact on a community including commercial and industrial activities, employment, plus social and sporting activities, and the environment. The DMP needs to take these factors into consideration when developing rules for managing town water supplies through drought.

In summary the key activities that need to be in place at the beginning of a drought include;

- Implementation of demand management measures to ensure efficient management of town water supplies
- The adoption of appropriate system operating rules to ensure efficient operation of the system
- Regular data collection and system monitoring so that sufficient evidence is available in assessing the impacts of a drought
- The adoption of long term supply strategies to ensure that systems are capable of supplying future demands
- A funding strategy to assist in management of the costs associated with drought periods.

Each of these pre-drought planning activities is discussed further in the following sections.

5.1 Demand Management – Precursor to Implementing a DMP

There are many ways of managing demand including ongoing community awareness of water conservation.

Permanent Water Conservation Measures as outlined in Table 4 encourage common sense water use practices to always be adopted and reinforce other demand management measures by developing a culture of water efficiency. The rules are easy to understand and act as the default water conservation measures when drought response levels are not in action.

Some water authorities apply permanent water conservation all year around, adjusting for daylight saving. Due to the cold winters and lower evaporation over the cooler months in the New England the permanent water conservation measures for Inverell Shire Council only apply during daylight saving.

Table 4 - Permanent Water Conservation Measures to Apply During Daylight Saving

Activity	Conservation Measure
Residential Gardens & Lawn Watering	• Use of sprinklers, sprays, micro sprays and fixed hoses is not allowed during the heat of the day (not between 8am and 6pm during daylight savings) • Water efficient nozzles must be used on all hoses to help conserve water & avoid waste
Washing Down	• No washing down of hard surfaces unless using a high pressure cleaner or water efficient nozzle

5.2 Water Supply System Operating Rules

Efficient operation of water supply systems is an important pre-emptive strategy for managing droughts. Due to the difficulty in predicting future drought conditions, it is important that surface water storages and groundwater levels are not drawn down excessively during non-drought periods as a result of inefficient operation of the system, as this would reduce the security of a supply system in the event of a drought and consequently worsen the impacts of drought.

Copeton Dam and Pindari Dam are both large scale irrigation dams with provision made for high security town water supplies. The Copeton and Ashford town water supplies are totally dependant upon these water sources and it is paramount that allocations by the NSW Government for both supplies are determined on exceeding the worst drought on record.

During extended droughts when rain water tanks run dry the entire community becomes dependent on the town water supplies, with water carting from public standpipes ramping up placing additional demand on the water supplies.

System operating rules that are in place to ensure that surface and groundwater levels are not drawn down excessively and remain accessible include:

- Regular communication with WaterNSW on the operation of Copeton Dam storage to ensure availability of town water and the continued operation of Council PS No1 sourcing water from the dam outlet pipework.
- Regular communication with WaterNSW on the operation of Pindari Dam to ensure releases of water reaches the Ashford town water supply PS intake.
- Regular monitoring of bore levels (with and without pumping)
- Regular draw down tests on bores to check performance and identify any operational issues

5.3 System Monitoring

Regular monitoring of water supply sources, extractions, production, consumption and climate is critical to understanding how well a water supply system is operating and whether there are any problems or potential future problems. Regular data collection becomes even more critical during drought periods as supply sources are stressed and the water supply at risk.

5.4 Long Term Supply Strategies

All water supply systems should be designed to cope with at least a repeat of the worst drought on record. Larger systems (>1,000 people) should be designed to cope with more severe drought conditions than the worst on record, on the basis that it is reasonably expected that the community could face more severe drought than the worst on record.

All treated (potable) water supply systems operated by Council are considered secure, with all systems operating normally during the severe drought conditions that have been experienced across the Council area over the past 30 years.

While all potable supplies are generally considered secure based on historical performance, modelling of water supply system security under various combinations of future demands and future climate change scenarios has not been undertaken by Council, therefore there is some uncertainty with future water supply security.

It must be noted that the Copeton and Ashford water supplies source water from WaterNSW dams and the security of the town water supplies are very much dependent upon the respective water sharing plans and annual water allocations arrived at by the NSW Government agencies.

The restricted flow raw water supply systems at Graman and Bonshaw were taken on by Council on the basis of not providing drought security. Water users are provided access to the available water from a bore which is rationed (self-regulated).

5.5 Resource & Funding Strategy

The costs associated with managing drought can have a significant impact on Council's finances, due to a variety of factors, including:

- Reduced revenue due to water consumption reductions associated with enforcing restrictions, particularly in the mid to late stages of the drought. This would be partly offset by revenue from higher than average water consumption levels in the lead-up to the drought and in the early stages of the drought.
- Additional costs associated with Council activities, including running an ongoing community awareness campaign, increased frequency of supply and demand monitoring, liaison with government agencies and other stakeholders and policing of restrictions.
- Increased capital and operating expenditure associated with investigation, implementation and running of backup and emergency supply options.

Historically, budgeting for drought periods has not been a concern for Council as treated water supply systems are very secure and generally continue to operate normally during these periods. However, in the future, Council may need to consider budgeting for drought conditions if it is considered likely that water restrictions will need to be implemented and/or backup water supply options will need to be investigated and possibly implemented.

Any costs associated with managing droughts should be tracked and be available to report to Council, government regulators, DPI Water and the community (if required). These costs can then be used as a justification for further investment in long-term supply strategies and other drought management planning initiatives. If required, drought emergency funding may also be available through DPI Water to manage depleted supplies, investigate and implement emergency capital works or to cart water.

6. Drought Management Action Plans

Drought Management Actions Plans (DMAP) set out the actions to be taken during each drought response level. There are five drought response levels (Levels 1 to 5), with each level having a set of suggested actions to be undertaken during that phase of the drought, including an associated set of water restrictions.

6.1 Overview

The "All Systems" DMAP (see Table 6) outlines the common actions that should be undertaken by Council at various drought response levels, including:

- The application of water restrictions and associated enforcement (including issuing of fines)
- Community awareness campaign and liaison with non-residential large water users
- Monitoring of water supply sources and town water demands
- Liaison with authorities and local irrigators (as necessary)
- Development and/or review of backup / emergency supply options

Specific DMAPs (see Table 7 to Table 9) have also been prepared for each of the individual water supply systems, outlining additional specific actions to be undertaken in that system, generally related to the investigation and implementation of backup and emergency supply options. The DMAPs also nominate primary and secondary (or supplementary) supply sources for each of the drought response levels and triggers for moving between drought response levels.

6.2 Drought Response Levels

A general description of the five drought response levels is provided below. More details on the various actions and water restrictions that are relevant to each level are included in Sections 6.3 and 6.8 below.

Level 1 (Low) – This is the first level of water restrictions and is more focused on general awareness, rather than trying to achieve significant reductions in usage. The key measure is to limit the hours that sprinklers can be used and generally, the impact on residences and their gardens would be relatively minor. Actions are mainly preparatory measures that activate the Drought Management Plan and its various components.

Level 2 (Moderate) – This level includes a ban on sprinklers and a time limit for drippers and hoses. The focus is on reducing usage back below typical levels for that time of year and the measures are likely to cause a moderate level of inconvenience to the community, without necessarily having significant impacts on most lawns and gardens. Key actions include setting up more regular liaison with key government stakeholders and preparing backup supply sources.

Level 3 (High) – This level includes banning all forms of outdoor watering other than buckets and cans and will have a more significant impact on lawns and gardens and cause a fairly major inconvenience to most residences. The aim is to reduce usage well below typical levels while still allowing lawns and gardens to be maintained, albeit at a base level. Key actions include more focus on issuing warning and fines for violation of restrictions, stepping up the awareness campaign and notifying DPI Water of the intention to investigate and if necessary implement backup supply and/or emergency supply options.

Level 4 (Very High) – This severe level of water restrictions includes banning all outdoor watering (residential) in order to reduce usage to at or below winter levels and would have a major impact on lawns and gardens, including loss of lawns and gardens in many cases. The reestablishment of lawns and gardens after an extended period of severe restrictions would impose a relatively high cost on residences and therefore, the application of Level 4 restrictions or higher would only occur in very rare circumstances. Key actions include activating backup supply options, investigation / design emergency supply options, stepping up issuing of fines for violation of restrictions and recalling any site Water Management Plans already approved by Council in the lead up to higher levels of water restrictions.

Level 5 (Emergency) – This extreme level of restrictions would involve an all-out campaign to reduce usage to absolute minimum levels by eliminating all non-essential usage and would have a major impact on nearly all residences and businesses. Residences may be asked to reduce shower times, limit washing machine loads and limit the use of evaporative coolers. Businesses may be asked to restrict water usage to only essential services, with the possible shutting down of non-essential, water dependent services. Key actions include implementing emergency response / supply options and an all-out community water reduction appeal.

6.3 Triggers & Water Consumption Targets

The DMAPs for each of the water supply systems include primary triggers for initiating each drought response level, as well as total system water consumption targets for those levels. Secondary triggers such as water quality incidents and failure to achieve water consumption targets are also suggested. Water consumption targets are average annual consumptions and should be adjusted for seasonal patterns (where appropriate). Note that once outdoor usage is banned (Levels 4 & 5), consumption targets become fixed daily targets due to the lack of influence from seasonal factors.

The basis for water consumption targets is shown in Table 5 below. Residential consumption is approximately 60% and Commercial/Industrial approximately 40% of total consumption.

Table 5 - Water Consumption Targets

Drought Response Level		Residential Consumption Target	Non – Residential Target	Total Consumption Target (60/40 split)
1	Low	95%	95%	95%
2	Moderate	85%	90%	87%
3	High	75%	85%	79%
4	Very High	65%	80%	71%
5	Emergency	50%	75%	60%

In considering the easing of water restrictions, Council will take into consideration water supply demand, projected demand, level and security of bulk water sources, catchment parameters, seasonal conditions, and seasonal outlook. The easing of water restrictions will generally not be implemented where it is likely that the revised restrictions will not be sustained for more than four weeks before tighter restrictions have to be re-imposed. Suggested triggers for easing restrictions are included in the DMAPs.

6.4 Drought Management Team

To assist in the undertaking of actions included in the DMAPs and to ensure the successful implementation of the greater Drought Management Plan, Council should assemble a Drought Management Team at the commencement of drought response level 1. The team should include representatives from key Council departments.

6.5 Communications

A key aspect in ensuring the successful implementation of the Drought Management Plan is the communication strategy. A community awareness campaign is vital for ensuring the community is made aware of actions that directly impact them, such as water restrictions and any associated fines and exemptions, and the activation of backup or emergency supply sources and any associated changes in water quality.
The community also needs to be given advice on how to minimise the impact of various water restrictions (including options for household recycling of water) and advice on saving water around the home in general. It is important that the community is kept up-to-date with the status of water supply sources (including river flows and dam storage volumes) and are given some idea of the consequences of not achieving target reductions in water consumption.

Liaison with key government agencies is another important component of the communication strategy. Key agencies include NSW Department of Primary Industries - Water (DPI Water), WaterNSW, NSW Office of Environment and Heritage (OEH), NSW EPA, NSW Health, NSW Fisheries and Northern Tablelands Local Land Services. It is particularly important that the relevant agencies be informed when significant impacts on the community, the environment or other stakeholders are expected as a result of actions arising from implementation of the plan.

In some systems involving groundwater sources, liaison with local irrigators is also important, to ensure they are aware of any impacts they may be having on the town water supplies and conversely, to make sure they are aware of the potential impacts that Council's actions, arising from the implementation of the plan, may have on them.

6.6 Monitoring

Regular monitoring of dam levels and groundwater bore levels (static and draw-down), water extractions and monitoring of actual water consumption compared to target are critical during drought periods. The data obtained from this monitoring provides important feedback on the effectiveness of the various drought response levels and will generally be the basis for moving between drought response levels. More frequent monitoring will generally be required as the drought progresses and the water supply situation deteriorates.

6.7 Action Plans

The Drought Management Action Plans (DMAPs) for "All Systems" is included in Table 6, followed by more specific DMAPs for each individual water supply system.

Table 6 - Drought Management Action Plan (All Treated Water Supplies)

Drought Response Level	Actions
1 Low	• Activation of Drought Management Plan • Implement Level 1 Water Restrictions • Establish a drought budget to track ongoing drought management costs • Establish a Drought Management Team to oversee the implementation of the Drought Management Plan • Review DMAP to ensure it is up-to-date, including a review of backup / emergency supply options • Prepare community awareness campaign (media advertising, internet) • Review any major existing Water Restriction Exemptions and update where necessary • Initiate regular (2 monthly) liaison with key government agencies (DPI Water, WaterNSW) and local irrigators (where appropriate) • Weekly review of dam, surface and groundwater bore levels, water extractions and monitoring of actual water consumption compared to target (monitor where applicable)
2 Moderate	• Implement Level 2 Water Restrictions • Implement community awareness campaign • Consider issuing warnings and fines for violation of restrictions • Continue regular (2 monthly) liaison with key government agencies (DPI Water, WaterNSW) and local irrigators (where appropriate) • Weekly review of dam, surface and groundwater bore levels, water extractions and monitoring of actual water consumption compared to target (monitor where applicable) • Review all existing Water Restriction Exemptions and update where necessary
3 High	• Implement Level 3 Water Restrictions • More focus on the issuing of warnings and fines for violation of restrictions • Step-up community awareness campaign & meet with large non-residential users to discuss options for water reduction • Twice-weekly review of, dam, surface and groundwater bore levels, water extractions and monitoring of actual water consumption compared to target (monitor where applicable) • Regular (monthly) liaison with key government agencies and local irrigators (where appropriate) • Notify DPI Water of intention to investigate backup / emergency supply options and seek drought assistance • Assess appropriateness of exemptions allowed under existing Water Restriction Exemptions
4 Very High	• Implement Level 4 Water Restrictions • Step-up the issuing of warnings and fines for violation of restrictions • Step-up community awareness campaign, including non-residential water reduction appeal • Daily review of dam, surface and groundwater bore levels, water extractions and monitoring of actual water consumption compared to target (monitor where applicable) • Regular (weekly) liaison with key government agencies and local irrigators (where appropriate) • Recall all Water Restriction Exemptions
5 Emergency	• Implement Level 5 Water Restrictions • Strict issuing of warnings and fines for violation of restrictions • All-out community water reduction appeal – minimum essential usage only • Regular (fortnightly) meetings with large water users to discuss ongoing water reduction options • Consider temporary closure of non-essential, high water dependant services • Daily review of dam, surface and groundwater bore levels, water extractions and monitoring of actual water consumption compared to target (monitor where applicable) • Regular (twice-weekly) liaison with key government agencies and local irrigators (where appropriate), including liaising with DPI Water re: emergency response options • Implementation of emergency response / supply options

Table 7 - Drought Management Action Plan - Copeton Scheme

Applies to Inverell, Mt Russell, Delungra, Gilgai, Tingha & Rural / Rural Residential Areas.

Drought Response Level	Primary Triggers*	Water Usage Target** (ML)	Additional Actions
1 Low	Demand exceeding 12ML/day, OR Copeton Dam below 1% capacity,	Max 9.0 / day Av 7.2 / day	• Ensure peak daily capacity of system of 12ML / day is not exceeded placing water supply at risk, AND Annual water licence allocation not exceeded. • Should potable water supplies at Yetman and Ashford require supplementing from Copeton Scheme need to discuss with DPI Water and Water NSW to seek approval, and accommodate within water balances, licence and restrictions. • When Copeton Dam drops to 3% capacity liaise with WaterNSW on quality of remaining water in Copeton Dam
2 Moderate	Demand exceeding 10ML/day, OR Copeton Dam below 0% capacity AND drawing on 19,000ML dead storage	Max 8.0 / day Av 6.8 / day	• Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Should potable water supplies at Yetman and Ashford require supplementing from Copeton Scheme need to discuss with DPI Water and Water NSW to seek approval, and accommodate within water balances and restrictions. • Further liaise with WaterNSW on quality of remaining water in Copeton Dam
3 High	Copeton Dam Dead Storage below 15,000ML	Max 7.0 / day Av 5.76 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Should potable water supplies at Yetman and Ashford require supplementing from Copeton Scheme need to discuss with DPI Water and Water NSW to seek approval, and accommodate within water balances and restrictions. • Continue liaising with WaterNSW on quality and quantity of remaining water in Copeton Dam • Investigate emergency supply options
4 Very High	Copeton Dam Dead Storage below 11,000ML	Max 6.0 / day Av 5.04 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours. • Should potable water supplies at Yetman and Ashford require supplementing from Copeton Scheme need to discuss with DPI Water and Water NSW to seek approval, and accommodate within water balances and restrictions • Continue liaising with WaterNSW on quality and quantity of remaining water in Copeton Dam • Undertake design and seek approval to implement emergency supply options, when deemed necessary
5 Emergency	Copeton Dam Dead Storage below 6,000ML Drawing on Remaining Dead Storage	Max 5.0 / day Av 4.3 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Should potable water supplies at Yetman and Ashford require supplementing from Copeton Scheme need to discuss with DPI Water and Water NSW to seek approval, and accommodate within water balances and restrictions. • Continue liaising with WaterNSW on quality and quantity of remaining water in Copeton Dam • Implement other emergency supply options available if required.
Emergency Supply Options; *The Copeton Scheme has in the order of 2 to 3 years back up supply in the Copeton Dam 19,000ML dead storage, which should accommodate a very severe drought sequence. Water quality in dead storage to be closely monitored. An emergency supply option in a very extreme drought sequence would be to investigate emergency bores in close proximity to the raw water pipeline from Copeton Dam or the Copeton Water Treatment Plant*.			

Easing of Restrictions – Copeton Water Supply

The Council decision for easing water restrictions for the Copeton Scheme will be based on water demands, Copeton Dam level (improving), catchment parameters, seasonal conditions, seasonal outlook and annual Town Water Supply allocation from Copeton Dam.

Table 8 - Drought Management Action Plan - Ashford Water Supply

Drought Response Level	Primary Triggers	Water Usage Target** (ML)	Additional Actions
1 Low	Demand exceeding 1.2ML/day, OR Pindari Dam below 2% capacity	Max 1.0 / day Av 0.30 / day	• Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Liaise closely with WaterNSW to ensure sufficient water released from Pindari Dam to reach Ashford PS on the Severn River.
2 Moderate	Demand exceeding 1ML/day, OR Pindari Dam below 1% capacity	Max 0.8 / day Av 0.29 / day	• Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Liaise closely with WaterNSW to ensure sufficient water released from Pindari Dam to reach Ashford PS on the Severn River.
3 High	Demand exceeding 0.8ML/day, Or Pindari Dam below 0.5% capacity	Max 0.6 / day Av 0.26 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Liaise closely with WaterNSW to ensure sufficient water released from Pindari Dam to reach Ashford PS on the Severn River. • Investigate emergency supply options
4 Very High	Demand exceeding 0.8ML/day, AND Pindari Dam below 0.25% capacity	Max 0.5 / day Av 0.22 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Liaise closely with WaterNSW to regarding water levels in Pindari Dam and the Severn River • Continue liaising with WaterNSW on quality and quantity of remaining water in Pindari Dam • Undertake design and seek approval to implement emergency supply options, when deemed necessary
5 Emergency	Pindari Dam below 0% capacity, AND Drawing on remaining water in PS water hole on Severn River	Max 0.3 / day Av 0.19 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Liaise closely with WaterNSW to ensure sufficient water released from Pindari Dam to reach Ashford PS on the Severn River • Should Ashford water supply require supplementing from Copeton Scheme or Yetman water supply need to discuss with DPI Water, NSW Health and Water NSW to seek approval, and accommodate within water balances and restrictions. • Implement other emergency supply options available as required.
Emergency Supply Options; *Augment PS suction pipe to allow deeper draw off from river. Excavation to deepen pump hole subject to application to NSW DPI Fisheries* *Pump water from upstream pools in the Severn River to Ashford PS inlet pool. Subject to application to NSW DPI Fisheries* *New emergency bore/s* *Cart water from Inverell or Yetman to supplement the supply*			

Easing of Restrictions – Ashford Water Supply

The Council decision for easing water restrictions for Ashford water supply will be based on water demands, Pindari Dam level (improving), catchment parameters, seasonal conditions, seasonal outlook and annual Town Water Supply allocation from Pindari Dam.

Table 9 - Drought Management Action Plan - Yetman Water Supply

Drought Response Level	Primary Triggers	Water Usage Target** (ML)	Additional Actions
1 Low	Bore pumps and reservoir unable to meet demand, OR Declining bore level and slow recovery	Max 0.150 / day Av 0.086 / day	• Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Closely monitor bore levels and recovery
2 Moderate	Bore pumps and reservoir unable to meet demand, OR Declining bore level and slow recovery	Max 0.130 / day Av 0.080 / day	• Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Closely monitor bore levels and recovery
3 High	Bore pumps and reservoir unable to meet demand, OR Declining bore level and slow recovery	Max 0.100 / day Av 0.072 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded. • Closely monitor bore levels and recovery • Investigate other sources of groundwater.
4 Very High	Bore pumps and reservoir unable to meet demand, OR Declining bore level and slow recovery	Max 0.070 / day Av 0.063 /day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded • Closely monitor bore levels and recovery • Undertake design and seek approval to implement emergency supply options, when deemed necessary
5 Emergency	Bore pumps and reservoir unable to meet demand, OR Declining bore level and slow recovery	Max 0.060/ day Av 0.054/day	• Water carting from standpipes limited to internal domestic use only during daylight hours • Ensure peak daily capacity of system is not exceeded placing water supply at risk, AND Annual water allocation not exceeded • Closely monitor bore levels and recovery • Should Yetman water supply require supplementing from Ashford Water Supply, or Copeton Scheme need to discuss with DPI Water, NSW Health and Water NSW to seek approval, and accommodate within water balances and restrictions. • Implement other emergency supply options available if required.
Emergency Supply Options; *New emergency bore/s in close proximity to the existing water supply reservoir and chlorination system at the Council Yetman Works Depot* *Cart water from Inverell or Ashford town water supplies to supplement the supply*			

Easing of Restrictions – Yetman Water Supply

The Council decision for easing water restrictions for Yetman will be based on water demands, bore water levels (improving), catchment parameters, seasonal conditions, seasonal outlook and annual Town Water Supply groundwater allocation.

6.8 Water Restrictions

Water restrictions corresponding to each Drought Response Level are summarised in Table 10, with the full list of measures included in Appendix A.

Water restrictions are generally based on a common set of measures adopted by the Councils associated with the Namoi Water Alliance. The adoption of a common set of water restrictions across the New England North West Region allows for a consistent and simplified communication process and reduces confusion in the community. Regional television and radio broadcasting based out of Tamworth extends throughout the Inverell Shire Council local government area. Council will use Inverell local media outlets plus social media and Councils website to promote water conservation and posting of any water restrictions.

Table 10 - Summary of Water Restrictions (Residential)

Category	1	2	3	4	5
	Low	**Moderate**	**High**	**Very High**	**Emergency**
Residential Gardens & Lawns Watering	Sprinklers restricted to 2hrs per day	No sprinklers. Drippers & hoses restricted to 2 hrs per day	No sprinklers or drippers. Buckets and cans restricted to 2hrs per day (in an identified 2hr window)	No watering at any time	No watering at any time
Washing Down (including vehicles)	Wash down hard / paved surfaces with high pressure hose only	Hoses restricted to 2hrs per day	No hoses Buckets restricted to 2hrs per day	No washing down at any time	No washing down at any time
Swimming Pools & Spas	Permit required for filling pools over 2,000L	Permit required for filling pools over 2,000L Top up via hoses only 2hrs per day	Permit required for filling pools over 2,000L Top up via hoses only 2hrs per day	No filing of topping up pools.	No filing of topping up pools.
Residential Consumption Target (% reduction)	5%	15%	25%	35%	50 %

Refer to Appendix A for a detailed list of water restrictions including adjustment of restriction times for daylight saving.

Watering of Parks, Gardens and Recreational Facilities

Parks, gardens and recreational facilities have a high demand for water, particularly during extended drought conditions. It is important that these facilities are maintained in the best possible condition with the available water for the health and wellbeing of the community, and to also avoid the excessive cost of re- establishment once the drought breaks.

Appendix B lists out all the facilities under the control of Council and the hierarchy of importance of watering, ranging from Category 1 being High Priority through to Category 5 the Low Priority.

6.9 Emergency Response measures

In the event of a severe water shortage which has resulted in primary and backup supply sources failing or approaching failure, emergency response measures will need to be implemented. These measures may include supply side measures (emergency supplies) and/or demand side measures (emergency demand management) and they would be implemented in association with Level 5 Emergency water restrictions. Both supply side and demand side emergency response measures are outlined further below.

Key emergency supply options have been identified for each system and are listed in the Drought Management Action Plans in Section 6.7.

Emergency supply options generally need to be implemented very quickly and any pre-construction planning and design work should generally be undertaken prior to reaching the Level 5 drought response level to ensure the emergency supply source can be activated expeditiously.

For all towns / village systems, water carting would be the last resort emergency supply option and due to the high costs involved, would only be implemented if all other emergency response measures failed (see below).

Water Carting

Carting of water to towns and villages may be necessary to provide basic town water needs during an emergency – in the event that all other emergency supply measures have failed. It is anticipated that such arrangements would only be required for a short period in conjunction with water rationing to allow the local water source to recover. For the Copeton Scheme (>11,200 people), it would be impractical to rely indefinitely upon carted water as an emergency water supply source due to the enormous costs associated with water carting. Water cartage is generally not considered to be a viable emergency supply options for very large towns / cities (>10,000 people) and therefore is not a viable option for the Copeton Scheme.

Government assistance towards the cost of water cartage has historically been available from the NSW Government via DPI Water, but is subject to quantities and cartage arrangements being agreed with DPI Water. If the security of a town supply appears to be threatened, the regional staff of DPI Water can assist Council with undertaking an initial assessment of the system and advise on the best cartage arrangements; however, Council will be required to seek quotations from contractors for the carting. An application to the DPI Water should contain the following:

- A copy of a technical report prepared by Council/DPI Water following the initial assessment
- Details of any consideration given to, or steps taken towards, establishing an emergency supply from another source
- The location of the new source of water to be used, the method of cartage proposed, the number of loads and frequency
- The cost of purchase and transportation of water
- Copies of all correspondence with transport contractors on the subject of cartage

Guidelines for determining minimum supply requirements are contained in the DPI Water document *Drought Relief for Country Towns* (NOW, 2009).

Emergency Demand Management

In the event of severe water shortage, external residential water use would be stopped altogether by way of restrictions and indoor water use would need to be reduced through persuasive advertising and community education campaigns. Emergency response strategies should only be considered when all other options have been exhausted, and should be applied in conjunction with Level 5 water restrictions.

Once Level 5 water restrictions are introduced, Council will consider a range of actions for implementation, including the following emergency response measures:

- More frequent water meter reading to facilitate the imposition and monitoring of targets /allowances for residential water use. It is envisaged that a residential usage target of around 150 L/person/day would initially be implemented and this could be reduced to as low as100 L/person/day in the event of a severe water shortage.

- The above measures would be implemented in conjunction with a major publicity campaign urging reductions in residential internal water use, with a focus on shorter showers, washing machines only being used for full loads and reduced operation of evaporative air conditioners. The campaign could also include mailing out shower timers to all residential properties in the affected area to encourage residents to reduce the period of time spent showering.

- Investigation of properties that are consistently exceeding usage targets and not showing a significant reduction in water usage over time.

- Introduce investigation of properties claiming the use of recycled or alternate sources of supply and, if the claims are valid, provide a Council approved sign at no cost to the property owner verifying the inspection and alternate use.

- Non-essential business asked to reduce consumption initially by 30% and then by 50% in the event of a severe water shortage. This would be discussed with the businesses concerned in the lead up to applying emergency demand management measures.

Rationing

In the event that Level 5 Water Restrictions do not sufficiently reduce system demands to sustainable levels (based on the prevailing drought conditions), water rationing may need to be considered. The key objective of rationing would be to reduce water consumption to minimum essential supply requirements only. For residential properties, a minimum essential supply requirement of 100 L/p/day or less may be achievable. For non-residential properties, most businesses and industries would be required to reduce water consumption to minimum essential usage only and in some cases, non- essential businesses may be asked to temporarily cease operations until drought conditions improve.

7. Post Drought Actions

7.1 Post – Drought Evaluation & Revision

Once the drought has broken and water supply systems return to normal operating conditions, a review needs to be undertaken of the effectiveness of the Drought Management Plan. The post-drought evaluation should include:

- A review of both supply side and demand side actions, including their effectiveness and timing, should be undertaken for each system and documented
- An assessment should be made of the impact of drought management actions (including water restrictions) on various stakeholders, including the community
- An assessment of the impact of drought management actions on Council should also be undertaken
- Community response to the imposition of various restrictions should be sought, including feedback on the effectiveness of the Community Awareness Campaign, how they managed the impacts of drought and any suggested changes / modifications to water restrictions
- Feedback should also be sought from various government agencies and other stakeholders.

Based on this review of the previous drought and any feedback received, the Drought Management Plan will need to be revised to include issues that were not previously considered and potentially modified to improve the future management of droughts.

7.2 Regular Review & Update of the Plan

In addition to evaluation and revision after each period of drought, regular reviews of the Drought Management Plan should be undertaken at least every 5 years. Plans should be updated with the latest information on water supply systems, including any augmentations that have occurred, changes to operating rules and up-to-date water consumption data and flow / level monitoring data for water sources. Plans should also be updated after any major changes / augmentations to water supply systems.

Appendix A

Water Restrictions Guide

Inverell Shire Council Drought Management Plans – Water Restrictions Guide – Adopted 27 November 2019											
Category	**Activity**	**Permanent During Daylight Saving**	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
			Low	**Moderate**	**High**	**Very High**	**Emergency**
General Watering of Lawns & Gardens	Hand Held Hoses (with water efficient nozzle)	✓	🕘 Not during the heat of the day	🕘 2 hours	🕘 15 mjnutes of hand held hose watering per property within a 2 hour window	✗	✗
	Sprinkle/micro sprays/fixed Hoses	🕘 Not during the heat of the day (see definition below)	🕘 2 Hours	✗	✗	✗	✗
	Water Efficient Drip Irrigation	🕘 Not during the heat of the day (see definition below)	🕘 Not during the heat of the day (see definition below)	🕘 2 hours	✗	✗	✗
	Watering of New Turf	🕘 Not during the heat of the day or with an approved 6 Week New Turf Watering Plan	🕘 Not during the heat of the day or with an approved 6 Week New Turf Watering Plan	🕘 Sprinklers for 2 hours with approved 6 Week New Turf Watering Plan	✗	✗	✗
	Buckets/Cans	✓	✓	✓	🕘 2 hours	✗ Grey water only	✗ Grey water only
Watering of Public Parks, Gardens & Facilities		🕘 Watering permitted for Cat 1,2,3,4 & 5- see Appendix B	🕘 Watering permitted for Cat 1,2,3,4 & 5- see Appendix B	🕘 Watering permitted for Cat1 & 2 and garden beds only in Cat 3 – see Appendix B	🕘 Watering permitted for Cat 1 & 2 only – see Appendix B	✗ All irrigation ceases unless access to groundwater or surface water	✗ All irrigation ceases unless access groundwater or surface water
Vehicle Washing	Buckets	✓	✓	✓	🕘 Not during the heat of the day	✗ Clean windows only	✗ Clean windows only
	Hand Held Hoses	✓	🕘 Not during the heat of the day Pressure cleaner any time	🕘 2 Hours Pressure cleaner any time	✗	✗	✗
Washing Down of Hard Surfaces	High Pressure Cleaner (limited to 9L/min)	✓ Includes vehicles	✓ Includes vehicles	✓ Includes vehicles	✗	✗	✗
	Hand Held Hose – water efficient nozzle	✓	✗	✗	✗	✗	✗
Private Swimming Pools	Filling	✓	✓	✓			
	Topping Up	✓	✓	✓	✓	✗	✗
Motel & Guest House Swimming Pool	Filling	✓	✓	✓	✓	✗	✗
	Topping Up	✓	✓	✓	✓	✗	✗
Council Swimming Pools		✓ No restrictions	🕘 Grass area watered in accordance with Level 1 Restrictions No other restrictions	🕘 Grass area watered in accordance with Level 2 Restrictions No other restrictions	🕘 Grass area watered in accordance with Level 3 Restrictions No other restrictions	🕘 See notes below	✗ See notes below
Hydrotherapy Pool & Day Spa		✓ No restrictions to health and day spa facilities	✓ No restrictions to health and day spa facilities	✓ No restrictions to health and day spa facilities	✓ No restrictions to health and day spa facilities	✓ No restrictions to health and day spa facilities	✓ No restrictions to health and day spa facilities
Evaporative Coolers	Use of Water Cooling	✓	✓	✓	✓	✓	✓ Summer Community Education Campaign to limit use through optimized efficiency
Water Cartage	Treated water for stock and domestic consumption	✓ Stock water banned if usage too high	✓ Stock water banned if usage too high	✓ Stock water banned if usage too high	🕘 Internal domestic use only with Council Permit. Access during daylight hours only.	🕘 Internal domestic use only with Council Permit. Access during daylight hours only.	🕘 Internal domestic use only with Council Permit. Access during daylight hours only.
	Treated water for all other uses	✓	✓	✓	✗	✗	✗
Commercial and Industrial Use	General Use (excluding lawns and gardens)	✓	✓	✓	🕘 Target 15% reduction in water use	🕘 Target 20% reduction in water use	🕘 Target 25% reduction in water use
	Landscaping including Lawns & Gardens	🕘 Not during the heat of the day or with an Approved Special Watering Hours Plan	🕘 Not during the heat of the day or with an Approved Special Watering Hours Plan	🕘 Hand Held hoses only for 2 hours including within Approved Special Watering Hours Plan	✗ All Approved Special Watering Hours Plans inactive	✗	✗
	Irrigation of Sports Areas	🕘 Water for 2 hours with Approved Special Watering Hours Plan during heat of the day	🕘 Water for 2 hours with Approved Special Watering Hours Plan during heat of the day	🕘 Water for 2 hours with Approved Special Watering Hours Plan during heat of the day	🕘 Review Approved Special Watering Hours Plan and allow if 50% reduction can be demonstrated for use in heat of day	✗	✗

✓ Allowed at all times	**NOTES:**
🕘 Restricted use only	1.Restrictions apply to the use of treated water only including bulk raw water supplied from the Copeton Dam Pipeline.
× Banned at all times	2.Grey water can continue to be used anytime and rainwater can be used anytime (providing rainwater outlets are not topped up or cross-connected to the treated supply). NB: Certain health regulations apply to the use of grey water – please contact Council or NSW Health for further details.
	3.An Approved Special Watering Hours Plan or 6 Week New Turf Watering Plan may be issued to allow the use of hoses or fixed sprinklers outside the nominated hours or conditions during Permanent, Level 1 and Level 2 in particular circumstances.
	4.Vehicles and hard surfaces may be washed down at any time for health and safety reasons using a high pressure, low- volume cleaner.
	5.Any reference to **2 hours** of restricted watering means between the hours of **6pm – 8-pm** during daylight saving and **5pm – 7pm** at other times.
	6.During Level 4 restrictions the surrounds of Council Swimming Pools that remain open may be watered by handheld hoses only once per week between 6pm and 9pm. Council will make decision at the time on Ashford and Inverell pool closures prior to applying Level 5 Emergency Restrictions.
	7.Periods of water restrictions will be policed by Council Officers. The maximum penalty under the Local Government Act 1993, to apply for a breach of imposed restrictions is $2,200 for corporations and $220 for individuals.
	8.**Not during the heat of the day** means not between **8am and 6pm** during daylight saving and **9am and 4pm** at other times.

Definitions

Alternate Water Source: water from a bore, dam, stream, rainwater tank that is not connected to the Council reticulated water supply, or recycled water.

Approved Alternate Water Source: an approved alternate water source approved by Council.

Domestic Purposes: for internal household use.

Hand held hose: a hose fitted with a trigger nozzle that is only held by hand.

Fixed sprinkler: sprinklers, micro sprays, or misters fitted to a hose or pipe.

Drip Irrigation System: An irrigation system that complies with the following requirements-

- Drippers must have a manufacturer's discharge rating of not greater than 8l/hour at a water pressure of 100kPa
- The maximum rate of the complete irrigation system per property is 5L/minute
- The following devices must be those approved by Council and fitted at the appropriate locations in a drip irrigation system:
    1. Backflow prevention device
    2. Automatic timer, and
    3. 100kPa pressure reduction value

Use of Bucket or Can (when permitted under water restrictions): a bucket or can is to be of no more than 10L capacity, is to be filled directly from a tap (or a length of hose of not exceeding one meter in length connected directly tap) during the allocated watering time. The bucket or can must only be decanted by way of tipping directly onto the garden, lawn, pool or motor vehicle, and must not be decanted into another vessel or storage vessel prior to use. A limit of only one bucket or can may be used during the allocated hours of watering at each property or tenement(unit, villa or strata unit).

Water Restrictions: regulates introduction by Council to enforce restrictions of water consumption to ensure that water supply can be maintained at levels consistent with good management practices, considering volume.

Water Management Plan: includes 6 Week New Turf Watering plans, Approved Special Watering Hours Plans, or approved Site Specific Water Management Plans

Council Approved Sign: a sign approved and supplied by Council.

Appendix B

Schedule of ISC Parks, Gardens & Recreational Facilities Watering Requirements During Restrictions

Appendix B - Schedule of ISC Parks, Gardens & Recreational Facilities Watering Requirements During Restrictions

Category	Park/Facility Name	Address/Location	Town	Method of Operation					Water Sources			Watered by		Water freq. p/w
				Auto	Manual	Taps & Monsoon	Pop-up Sprays	Drip Irrigation	Town Water	Bore Water	River Water	Council Staff	Resident Assist	
	PARKS													
	INVERELL													
1	Cameron Park	Cameron Street,	Inverell	X			X		X			X		1
1	Campbell Park	Campbell Street,	Inverell	X	X		X		X			X		1
1	Sinclair Park	Vivian Street,	Inverell	X			X		X			X		1
1	Varley Oval	Lawrence Street,	Inverell	X			X		X			X		1
1	Sporting Complex and Inverell Park	Eucalypt Drive,	Inverell	X			X		X		X	X		1
1	Victoria Park	Evans Street,	Inverell	X			X		X			X		1
1	Library	Campbell Street,	Inverell	X			X	X	X			X		1
1	Information Centre	Campbell Street,	Inverell	X			X		X			X		1
1	Inverell Rugby Ground (Crown Land)	Ross Street,	Inverell	X			X			X			X	1
1	Inverell Tennis Courts (part Crown Land	Evans Street,	Inverell		X	Taps	X			X			X	Fortnightly
1	Hockey Complex	Eucalypt Drive,	Inverell	X			X		X		X	X		1
2	Brooks Park / Oval	Lawrence Street,	Inverell		X		X		X			X		Monthly
2	Gordon Street Park	Gordon Street,	Inverell		X	Taps			X				X	Fortnightly
2	Northey Park	Glen Innes Road,	Inverell	X			X		X			X	X	1
2	May Street Park	May Street,	Inverell	X			X		X				X	1
5	Aurthur Street Park	Arthur Street,	Inverell											Nil
5	Bellevue Park	Wade Street,	Inverell											Nil
5	Cunningham Place Park	Cunningham Place,	Inverell											Nil
5	Inverell Apex Park	Froude Street,	Inverell											Nil
5	Lake Inverell	Lake , Drive,	Inverell											Nil
5	Mawson Street Inverell	Mawson Street,	Inverell											Nil
5	Pat Naughton Memorial Park	Hopper Street,	Inverell		X	X			X				X	Nil
5	Rosslyn Gardens Park	Sapphire Street,	Inverell											Nil
5	Waratah Park	Waratah Avenue,	Inverell		X		X		X			X	X	Nil

Category	Park/Facility Name	Address/Location	Town	Method of Operation					Water Sources			Watered by		Water freq. p/w
				Auto	Manual	Taps & Monsoon	Pop-up Sprays	Drip Irrigation	Town Water	Bore Water	River Water	Council Staff	Resident Assist	
5	Lions Park and Recreation Reserve	Macintyre Street ,	Inverell											Nil
5	Macintyre River Public Reserve (Captain Cook Drive)	Captain Cook Drive ,	Inverell											Nil
5	McIlveen Park	McIlveen Park Road	Inverell											Nil
5	Softball Diamond	Old Bundarra Road	Inverell	X			X		X			X		Nil
	Community Garden (Crown Land)	Swanbrook Road ,	Inverell											
	Crown Land	Ashford Road ,	Inverell											
	Crown Land	Borthwick Street ,	Inverell											
	Crown Land	Cameron Street ,	Inverell											
	Macintyre River Public Reserve (Crown Land)	Campbell Street ,	Inverell											
	Open Space River Bank	May Street ,	Inverell											
	Open Space (Ross Street) (Crown Land)	Ross Street ,	Inverell											
	Pioneer Village	Tinga Road ,	Inverell											
	Public Reserve (Harland Street)	Harland Street ,	Inverell											
	Public Reserve (Macintyre Street)	Macintyre Street ,	Inverell											
	Public Garden and Recreation Space	Butler Street ,	Inverell											

Category	Park/Facility Name	Address/Location	Town	Method of Operation					Water Sources			Watered by		Water freq. p/w
				Auto	Manual	Taps & Monsoon	Pop-up Sprays	Drip Irrigation	Town Water	Bore Water	River Water	Council Staff	Resident Assist	
	TINGHA													
1	Aged Care Units	Guyra Road	Tingha		X	X			X			X		2
1	Ruby Street Park	Ruby Street	Tingha		X	X			X			X		3
5	Skate Park	New Vallet Road	Tingha											Nil
5	Graham Park		Tingha											Nil
5	Symes Park		Tingha											Nil
	GILGAI													
2	Road Median	Bundarra Road	Gilgai		X	X	X	X	X			X		1
	DELUNGRA													
1	Anzac Park	Railway & Macintyre Sts	Delungra		X	X			X				X	1
2	Road Median	Gwydir Highway	Delungra		X	X		X	X				X	As needed
	ASHFORD													
1	Ashford Oval	Albury Street	Ashford	X			X		X			X		2
1	McCrae Park	Ashford Road	Ashford		X		X		X			X		1
	YETMAN													
1	Yetman Oval	McIntyre Street	Yetman	X			X			X		X		1
1	Apex Park	Bruxner Way	Yetman		X		X			X		X		1

Category	Park/Facility Name	Address/Location	Town	Method of Operation					Water Sources			Watered by		Water freq. p/w
				Auto	Manual	Taps & Monsoon	Pop-up Sprays	Drip Irrigation	Town Water	Bore Water	River Water	Council Staff	Resident Assist	
	ROUNDABOUTS													
1	Roundabout	Byron and Otho Street Intersection	Inverell	X			X	X	X			X		2
1	Roundabout	Byron and Vivian Street Intersection	Inverell	X			X	X	X			X		2
1	Roundabout	Byron and Campbell Street Intersection	Inverell	X			X	X	X			X		2
1	Roundabout	Byron and Wood Street Intersection	Inverell		X	X		X	X			X		1
1	Roundabout	Evans and Vivian Street Intersection	Inverell	X			X	X	X			X		2
2	Roundabout	Captain Cook Drive and Mansfield Street Intersection	Inverell		X	X			X			X		As req'd
2	Roundabout	Ashford Road and Killean St	Inverell		X	X		X	X			X		Monthly
4	Roundabout	Ring Street and Yetman Roa	Inverell		X	X			X			X		Annually
5	Roundabout	Gwydir Hwy & Campbell Street	Inverell											Nil
5	Roundabout	Byron And Mansfield Street Intersection (no garden)	Inverell											Nil
5	Roundabout	Otho and Henderson Street Intersection (no garden)	Inverell											Nil
	ROAD MEDIANS													
1	Road Median - Coles	Byron Street	Inverell	X				X	X			X		2
1	Road Median - Subway	Byron Street	Inverell	X				X	X			X		2
1	Road Median - Regional Bank	Byron Street	Inverell	X				X	X			X		2
1	Road Median - Inverell Motel	Otho Street	Inverell		X			X	X			X		2
1	Evans and Otho	Evans and Otho St intersectio	Inverell		X			X	X			X		1
1	Otho and Rivers	Otho and River St intersectio	Inverell		X			X	X			X		1
1	Otho Median	Otho Street CBD	Inverell		X	X			X			X		1