

TO: ISCOM

FROM: Network Manager, Water and Waste Services

MEETING DATE: 6 September 2010

SUBJECT: **POLICY ON TEMPORARY WATER RESTRICTIONS**

SUMMARY

The policy on temporary water restrictions outlines the circumstances under which the Council may impose temporary water restrictions and the levels of restrictions that may be applied. The levels of restriction are designed to target non-essential water uses on an increasing scale depending on the severity of the situation.

POLICY IMPLICATIONS: Yes - This is a new policy

OTHER IMPLICATIONS:

- (i) **Approved Annual Budget:** No
- (ii) **LTCCP/ Funding Policy:** No
- (iii) **Activity Management Plans:** No
- (iv) **Community Boards:** Yes – Introduction of temporary water restrictions may be localised

RECOMMENDATIONS

- 1 That the report on "Policy on Temporary Water Restrictions" be received.
- 2 That the Council adopt the policy on temporary water restrictions set out in Attachment 1 as a new Council Policy.

INTRODUCTION

The aim of this report is to review the current system of water restrictions. Currently in the water industry in New Zealand and Australia, there are different models of restrictions, however, there are similarities within all of them. A review of these has been carried out and this report recommends adoption of a model which has been tailored to meet the system constraints within the Dunedin supply area.

Dunedin's bulk water supply is essentially fed by a "run of the river" system with only 10 to 20 days raw water storage depending on demand. This storage capacity will not meet the city's demand through a period of prolonged drought. This means that during a drought, demand has to be delicately balanced against the water available in the various sources which supply our water network. In addition, operational emergencies may also create a situation

where there is a need to restrict water to balance the demand against the available water supply.

Whilst there are long term strategies to maintain the strategic balance between demand and supply, the above scenarios require a short term approach to manage the situation. In these circumstances, it is necessary to impose water use restrictions to ensure that the communities' essential water needs are met.

BACKGROUND

The Water Bylaw 2008 provides the Council with the power to impose restriction as follows:

- Clause 7.6.3 refers to Demand Management and states that, *"The Customer shall comply with any restrictions which may be approved by the Council to manage high seasonal or other demands (which may also be related to Otago Regional Council resource consent compliance requirements or any variation to a resource consent). Such restrictions will be publicly notified."*

Even when such restrictions apply the Council will take all practicable steps to ensure that an adequate supply for domestic purposes is provided to each Point of Supply."

- Clause 7.6.4 refers to Emergency Restriction and states that, *"During an emergency the Council may restrict or prohibit the use of water for any specified purpose, for any specified period, and for any or all of its customers. Such restrictions shall be publicly notified. The Council may enact penalties over and above those contained in these conditions to enforce these restrictions. The decision to make and lift restrictions and to enact additional penalties shall be made by the Council, or where immediate action is required, by the Manager of the WWSBU, subject to Council ratification."*

The existing provisions relating to water restrictions are not in the form of a policy but in the form of an internal memorandum which dates back to December 1997. Whilst the memorandum provides the details of the restrictions, it lacks the clarity and does not specifically relate to a targeted level of demand reduction. It is open to interpretation by both staff and customers.

It is now appropriate to review the system of water restrictions in order to align with the Water Bylaw 2008 and to provide better clarity for consumers about what each restriction level means to them. To this end, a review of the water restriction criteria has been undertaken. The review has considered Australian and New Zealand practices but has been adapted for local conditions. This has then been developed into a policy, which is part of this report as Attachment 1.

DISCUSSION

A multi-criteria water restriction calculator has been developed which is designed to take into account the factors influencing both water supply and demand. These factors include catchment yield, raw water storage, consent conditions, ORC irrigation restrictions, National Fire Authority fire risk, MetService weather forecast, NIWA climate model and rainfall intensity. Data from these sources is input into the calculator to determine the level of demand reduction that is required, which is translated into one of four levels of water restriction, depending on the severity of the situation. The level of demand reduction that can be achieved at each level of restrictions has been estimated based on actual consumption data for a three year period and the activities that are restricted under that level.

Depending on the operational requirements, restrictions may be imposed on a city-wide or more localised basis. Wherever possible, restrictions will be localised to minimise the inconvenience and disruption to the community.

The Restrictions

The restrictions focus on non-essential uses, initially impacting areas such as domestic irrigation but increasingly impacting on commercial irrigation. Should there be a serious event that requires demand reductions in excess of 20% (being the target of a level 3 reduction) the policy provides for a situation specific demand management plan to be produced which incorporates more stringent water restrictions such as pressure management or water rationing.

In order to minimise the number of compulsory restrictions that have to be imposed, the policy allows for an advisory level. Once these trigger levels have been reached, the public would be advised of the deteriorating water supply situation and asked to reduce their non-essential water use on a voluntary basis. The following table provides an overview of the demand management approach, whilst Appendix 1 presents the details of the restrictions:

PRECAUTIONARY LEVEL	
Consumers are required to be prudent in their water usage due to high demand/low supply	
RESTRICTION LEVEL	BRIEF DESCRIPTION OF THE RESTRICTION (Refer Appendix 1 for details on the restrictions)
LEVEL 1	Domestic and non-domestic users are prohibited to use water for non-essential activities within a stipulated time period in a day. However, specific watering methods are prohibited for the entire restriction period for domestic consumers.
LEVEL 2	Specific watering methods are prohibited throughout the restriction period for both domestic and non-domestic consumers. Other watering methods are allowed within a stipulated time period in a day.
LEVEL 3	Almost all types of watering methods (except bucket use) are prohibited throughout the restriction for domestic consumers. Specific watering methods are prohibited throughout the restriction period, while other watering methods are allowed within a stipulated time period in a day for non-domestic consumers
LEVEL 4	
The extent of the restriction will be determined in accordance to the severity of the situation.	

Enforcement

The advisory notice or the restriction will be publicly notified via newspaper and other suitable media.

While the publication of the restriction itself will create awareness among the consumers, it has been established that a physical enforcement of the restrictions is required to ensure maximum effectiveness. By having this policy in place, it provides a formal platform for the enforcement to be implemented efficiently.

As such, during the period of the restriction, a designated person/team with suitable experience will be assigned to check on the adherence of the public to the restriction. Appropriate action will be taken against any person caught violating the restriction, which is allowed for under Clause 8.4 and 8.5 of Water By-Law 2008.

Impact of the Policy

There have been 12 occasions in the past 13 years where restrictions were imposed, and most of them were targeted restrictions. The history also indicates that only one level of

restriction was ever used, which prohibits domestic and metered consumers from using water for non-essential activities for certain periods in a day.

The new policy is not anticipated to change the frequency of water restrictions, or to change the degree to which they are localised versus city wide. However, it does make some changes to the activities that are allowed during water restrictions.

In the past, exemptions from water restrictions have been granted to individuals or organisations. The exemptions have been for a specific restriction period only. The policy provides for exemptions to be granted if a compelling case of hardship can be made. It is not anticipated that the new policy would change the ability of individual or organisations to be granted exemptions.

Delegation of Authority

A further question that needs to be considered is delegated authority. Due to the city's system being essentially run of river it is often necessary to bring in restrictions at short notice. It is therefore recommended that the Water and Waste Services Manager should have delegated authority for level 1, 2 and 3 restrictions. It is further recommended that the General Manager City Environment should have delegated authority to approve level 4 water restrictions on the basis of a situation specific demand management plan.

Public Consultation

The adoption of this policy does not represent a 'significant decision' and does not therefore require consultation under the Local Government Act.

There are no anticipated changes in the frequency of water restrictions or the ability for individuals or organisations to apply for exemptions. Whilst there are some changes to the activities allowed at each restriction level, they are considered to be relatively minor. Consequently, it is not considered that the policy will attract public controversy, and public consultation is not required,

CONCLUSION

With the recent development of the Water Conservation and Management Plan Stage 1, the adoption of the new Water Bylaw and the roll out of the 3 Waters Strategic Direction Statement, the time is right to review the water restriction criteria and formalise the arrangements under a policy that will provide the Council with a much better platform to enforce the restrictions.

The attached policy outlines the first three levels of water restrictions targeted to reduce water demand by up to 20%. It also provides for an early advisory stage of voluntary reductions in water consumption. Furthermore, it allows for more severe restrictions to be imposed as part of the situation specific demand management plan under the level 4 water restriction where there is an extreme situation requiring demand reductions in excess of 20%.

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Date report prepared: 25 August 2010

Policy Manual details that will apply if adopted:	
Title of the position, which is the key contact for the administration and review of this Policy or Policy Statement	<i>Water and Waste Services, Network Manager</i>
Outcome(s) to which this Policy or Policy Statement contributes	<i>Safe and Healthy People</i>
Sub-outcomes to which this Policy or Policy Statement contributes	<i>Our services, infrastructure, and environment, enhance quality of life</i>
KRA(s) to which this Policy or Policy Statement contributes	<i>Demand Management</i>
Review date	<i>Three years from the date of adoption</i>
Office Use Only: New Policy Number, if applicable. Committee Code /mm/yyyy/Agenda Item No. (Codes: PE, CDC, ISCOM, EDC,FS, CL)	____/____/____/____

Attachments

Attachment 1 – Policy on Temporary Water Restriction

ATTACHMENT 1

POLICY ON TEMPORARY WATER RESTRICTIONS

1.0 INTRODUCTION: POLICY CONTEXT AND PURPOSE

The purpose of the water restriction policy is to allow for effective and efficient management of short term issues with the supply and demand balance of reticulated water supplies. This is in line with the following clauses of the Water By-Law 2008:

- Clause 7.6.3 refers to Demand Management and states that, *"The Customer shall comply with any restrictions which may be approved by the Council to manage high seasonal or other demands (which may also be related to Otago Regional Council resource consent compliance requirements or any variation to a resource consent). Such restrictions will be publicly notified."*

Even when such restrictions apply the Council will take all practicable steps to ensure that an adequate supply for domestic purposes is provided to each Point of Supply."

- Clause 7.6.4 refers to Emergency Restriction and states that, *"During an emergency the Council may restrict or prohibit the use of water for any specified purpose, for any specified period, and for any or all of its customers. Such restrictions shall be publicly notified. The Council may enact penalties over and above those contained in these conditions to enforce these restrictions. The decision to make and lift restrictions and to enact additional penalties shall be made by the Council, or where immediate action is required, by the Manager of the WWSBU, subject to Council ratification."*

The Council has ongoing programmes to ensure that the strategic balance between water resource availability and community water requirements is maintained. However, there may be occasions when, either through exceptional weather events or operational emergencies, it is necessary to impose water use restrictions to ensure that the community's essential water needs can still be met.

This policy has been developed based on the best Australasian practice taking into consideration Dunedin's specific context in terms of overall water resource availability, consent requirements, operational constraints and patterns of community water use.

2.0 IMPOSING AND LIFTING RESTRICTION

Water restrictions may be required under the following circumstances:

- Prolonged drought condition
- Exceptional peaks in water demand that cannot be met without breaching resource consent levels and/or exceeding supply capacity)
- Operational emergency (eg unplanned water treatment plant shutdown, and other treatment plants unable to provide sufficient supply)

The Water and Waste Services Business Unit routinely monitors a number of parameters relating to the water supply and demand balance. A number of key parameters have been defined, which are used to determine the enforcement of water restrictions. These parameters include:

- river water levels;
- raw water storage levels;
- the time of the year and likely future consumption of water;
- daily consumption/demand levels in the immediately preceding period;
- currently available weather forecasts and other meteorological advice;
- resource consent on water intake levels;
- actions by other relevant organisations, eg National Fire Authority fire risk, ORC irrigation restrictions;
- failure of key facilities
- the desirability of reducing water usage on an ongoing basis;
- the desirability of avoiding excessive reliance on only one water catchment;

- the possibility that if restrictions do not sufficiently reduce current water consumption, water available for later supply may be of a quality that may cause damage to property.

The trigger levels for the respective levels will depend on the Multi-Criteria Decision Making Matrix, which consists of the parameters stated above.

The restriction shall remain in force for as long as is necessary to allow supply and demand patterns to return to normal operating levels and shall only be lifted once the operating parameters return to below the trigger levels.

In accordance to the level of restrictions presented in the proceeding section, the Water and Waste Services Manager will have the delegated authority to implement or remove level 1, 2 and 3 water restrictions. Level 4 water restrictions will require the General Manager's approval.

3.0 LEVELS OF RESTRICTION

The restrictions consist of Level 1, 2, 3 and 4, which bring in increasingly stringent restrictions. Appendix 1 provides the details of the restrictions, the targeted activities and the expected reduction.

Prior to enforcing the restrictions, a precautionary approach will be undertaken. This approach is to pre-empt the consumers of possible forthcoming restrictions and urge them to be prudent in their water use. This is to be achieved via media notification and other appropriate methods.

There may be extreme situations where more rigorous measure are required, including but not limited to rationing or pressure management. In these situations, a water event management plan would be drafted for EMT's approval.

4.0 ENFORCEMENT

The restriction will be publicly notified via newspapers and other suitable media.

During the period of the restriction, adherence of the public to the restriction will be checked. Failure to comply to the restriction is deemed a breach of the Terms and Conditions to supply as stated in Clause 8.1(e)(v). Appropriate action will be taken against any person caught violating the restriction, which is allowed for under Clauses 8.4 and 8.5 of the Water By-Law 2008:

- Clause 8.4 refers to entitlement of the Council and states that, *"The Council is entitled to take any steps it is legally authorised to take to enforce breaches of the Bylaw and/or the Act.*
- Clause 8.5 refers to the consequence of offences, which states, *"Every person who:*
 - a) Fails to comply with or acts in contravention of any provision of this Bylaw; or*
 - b) Breaches the conditions of supply granted pursuant to this Bylaw; or*
 - c) Fails to comply with a notice served under this Bylaw,*

commits an offence under section 239 of the Act and is liable to be prosecuted in the District Court under section 244 of the Act and is liable to a fine as specified in section 242 of the Act, or is liable to the issue of an infringement notice under section 245 of the Act.

5.0 EXEMPTIONS

Full or partial exemptions may be granted, without limiting the grounds on which it might be granted, based on compelling reasons only. The reasons include health or public hygiene or where compliance with temporary restrictions would be likely to cause disproportionate or unintended financial damage to the party. The exemptions or the partial exemptions will only be granted in writing by the Council.

The Water and Waste Services Manager will have the delegated authority to grant the exemptions for the period of Restriction Level 1, 2 and 3. During the extreme situations, where level 4 water restriction is to be enforced, EMT/GM will determine any exemptions.

APPENDIX 1: WATER RESTRICTION LEVELS

The Table provides details of the water restriction stages

	Level 1	Level 2	Level 3
Target Annual Reduction (% of Average Daily Consumption)	10%	17%	20%
Type of Usage	Restrictions on Use	Restrictions on Use	Restrictions on Use
1. Watering of private gardens and lawns	No sprinkler or other irrigation system between 8.00am and 8.00pm. Hand-held hosing only at any time.	No hand-held hosing, sprinkler or other irrigation system allowed between 8.00am and 8.00pm.	Watering of outside lawns and plants only permitted using buckets/watering cans.
2. Watering of lawns and plants at parks, sports amenities, golf courses and public gardens	No sprinklers between 8.00am and 8.00pm. Hand-held hose fitted with a trigger nozzle may be used to water lawns and plants at any time.	No sprinkler or other irrigation system between 8.00am and 8.00pm. Hand-held hosing at any time.	No sprinkler or other irrigation system. Hand-held hosing only at any time.
3. Watering of commercial nurseries/garden	No sprinkler between 8.00am and 8.00pm. Hand-held hose fitted with a trigger nozzle may be used to water lawns and plants at any time.	No sprinkler or other irrigation system between 8.00am and 8.00pm. Hand-held hosing at any time.	No sprinkler or other irrigation system. Hand-held hosing only at any time.
4. Filling of private ponds and fountains	Fountains must be switched off. Ponds may only be topped up using a hand-held hose fitted with a trigger nozzle or by bucket between 8.00pm and 8.00am.	Fountains must be switched off. Only ponds that support fish may be topped up and then only using a hand- held hose fitted with a trigger nozzle or by bucket between 8.00pm and 8.00am.	Fountains must be switched off. Only ponds that support fish may be topped up, and then only using a bucket between 8.00pm and 8.00am.
5. Public ponds and fountains	Only fountains that recirculate water may be operated. Ponds may only be topped up using a hand-held hose fitted with a trigger nozzle or by bucket between 8.00pm and 8.00am.	Only fountains that recirculate water may be operated. Ponds may only be topped up using a hand-held hose fitted with a trigger nozzle or by bucket between 8.00pm and 8.00am.	No fountains may be operated, filled or topped up with water at any time. Only ponds that support fish may be topped up using a bucket only between 8.00pm and 8.00am.
6. Private swimming pools	Topping up or filling is undertaken with a hand-held hose only between 8.00pm and 8.00am.	Topping up or filling is undertaken with a hand-held hose only between 8.00pm and 8.00am.	No filling or top-up at any time.
7. Public/commercial swimming pools (eg Moana Pool)	No restrictions.	No restrictions	Topping up only between 8.00pm and 8.00am.
9. Vehicles	If not washed at a commercial car wash, any vehicle should be washed on a lawn or other porous surface wherever practicable only be between 8.00pm and 8.00am.	If not washed at a commercial car wash, any vehicle should be washed on a lawn or other porous surface wherever practicable only between 8.00pm and 8.00am.	Bucket cleaning only.
10. Water blasting/washing of assets, eg windows, roof, boats	No washing between 8.00am and 8.00pm unless necessary as a result of major activities that cannot be done during winter (eg roof painting), accident, fire, health hazard or other emergency. Building gutters may be cleaned at any time.	No washing between 8.00am and 8.00pm unless necessary as a result of major activities that cannot be done during winter (eg roof painting), accident, fire, health hazard or other emergency. Building gutters may be cleaned at any time.	Bucket cleaning only unless necessary as a result of accident, fire, health hazard or other emergency. Building gutters may be cleaned at any time.

Notes:

- Any other water uses that are not indicated in the policy or do not fall under similar categories are allowed during the restrictions unless instructed by Dunedin City Council through the Water and Waster Services Business Unit.

2. "Private" means domestic properties only.
3. "Public" means Government places and private places operated for public use.
4. "Sprinkler" and "Irrigation System" means a device or system designed to distribute water, whether by sprinkling, spraying, dripping, weeping or otherwise.
5. "Trigger nozzle" means a nozzle, attached to a hand-held hose, which is controlled by (a) a trigger which must be depressed continuously or locked open by hand to allow water to flow; or (b) a discrete switch or button which can be turned on or off by hand with a single or limited movement.
6. Times specified may be changed depending on the seasonal change.