Drought Response Plan: Part A

A Water Sharing Plan for all Licensed Water Users 2016

To be read in conjunction with the catchment appropriate
Part B: Specific Water Sharing Plan

VICTORIA State Government

Melbourne Water

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Document Versions

Revision	Date Issued	Issued To	Issued By
Version 1	2007	Melbourne Water Diversion Customers	Melbourne Water Diversion Team
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1. Introduction

Under the Water Act 1989 licences are required to take and use water from waterways, private farm dams and works of an Authority (e.g. main drains and channels).

The Minister for Water has delegated Melbourne Water with the responsibility for managing surface water licensing within the waterways and major drainage systems of the Yarra River, the lower Maribyrnong River, Stony, Kororoit, Laverton and Skeleton Creek catchments. This includes licensing the harvesting of stormwater from urban drainage systems.

Within these catchments we currently manage approximately 1300 licenses from waterways and administer approximately 500 farm dam registrations and licences relating to catchment dams. The total allocation issued under these licences is approximately 44,000 Megalitres (ML). Water use is primarily for agricultural, industrial, commercial, sporting grounds and domestic and stock purposes.

Licenses are administered in accordance with the Water Act 1989, State government policy and state-wide diversion management practices.

A key objective of licensing is to manage the available water resource equitably and sustainably amongst all users including licence holders and the environment. The amount of water available each year is variable and dependent heavily on weather and rainfall conditions. In times of water shortage and low flow conditions there can be a need to limit further the amount of water that may be taken from a waterway in order to prevent long term environmental damage to the river or stream environment and to try and share the available water appropriately between all users.

This Drought Response Plan provides Melbourne Water with an effective, systematic and integrated framework for planning and responding to the impacts of drought or low-flow conditions on licensed water users within our licensing area. The plan is designed to enable the identification and implementation of appropriate actions in response to existing or expected low-flow conditions. It also aims to provide a means of sharing water at times when flows are insufficient to meet user needs.

The plan which consists of two parts - Part A this document and Part B: the catchment specific water sharing plan is intended to complement the ongoing development and implementation of Stream-flow Management Plans and Local Management Rules on sub-catchments throughout the greater Yarra and lower Maribyrnong catchments.

The actions and directions provided in this plan are to be complied with by licence holders as part of the Rosters and Restrictions conditions contained on their licence.

2. About Melbourne Water

Melbourne Water is owned by the Victorian Government. We manage water supply catchments, treat and supply drinking and recycled water, remove and treat most of Melbourne's sewage, and manage waterways and major drainage systems in the Port Phillip and Westernport region. Our vision is to Enhance Life and Liveability.

2.1 Waterways Business

Melbourne Water manages the health of Melbourne's rivers and creeks. Our river health works help protect and improve the condition of our waterways and enhance the habitats of the plants and animals that live there. More than a third of Victoria's plant and animal species are found in the Yarra catchment, including platypus, a range of fish, frogs and bird species

Across the Port Phillip and Westernport region we look after:

- 8,400 kilometres of rivers and creeks
- 475 waterways wetlands
- 217monitoring stations on waterways and drains
- 161 urban lakes

2.1.1 Healthy Waterways

We work with councils, land owners and community groups to improve waterways, including the Yarra and Maribyrnong Rivers, as well as smaller creeks and streams.

We have identified a number of key values that are strong indicators of healthy waterways and guide the focus of our work.

These values were developed with our stakeholders and the community, and reflect the importance they place on waterways to support a healthy environment and make Melbourne an enjoyable place to live.

Our key values are:

- **vegetation (plants)** – the type of plants within and alongside waterways are vital to their health, providing animals with food and shelter, improving soil and water quality, stabilising river beds and banks and providing shade and temperature control
- **fish** – usually near the top of the aquatic food chain, fish provide food for birds and a source of recreation for people who go fishing
- **frogs** – an essential part of the ecosystem, frogs are sensitive to pollutants in water and air and are therefore an excellent indicator of water quality
- **platypus** – an animal unique to Australia, which relies on insects for food
- **birds** – the most visible, studied and monitored animal, birds positively influence how people feel about the health of our waterways – many wetlands and waterways are popular spots for bird watching
- **macroinvertebrates (waterbugs)** – a food source for platypus, fish and frogs, they are very sensitive to changes in the environment and are a good indicator of waterway health
- **amenity (pleasantness to visitors)** – affects people's wellbeing and draws them to waterways where they can relax, replenish and connect with others and nature

You can read more about our targets around these values in the Healthy Waterways Strategy.

2.1.2 Threats to Waterway Health

The Port Phillip and Westernport region has different types of land, from the mountainous, forested areas upstream to the farmland and urban areas downstream. The condition of rivers and creeks deteriorate further downstream as land is used more intensively towards the city centre, changing them greatly from their natural state.

River health downstream is mostly affected by humans, especially changes caused by land being altered and built on.

The main threats to river health are:

- changes to natural water flows – unnaturally high or low flows caused by drought or human intervention (like taking water for agriculture, industry and homes) create difficult living conditions for fish and other wildlife
- more land being used for farming or building on – less rainfall filters into the ground, but runs instead into drains and rivers, carrying pollutants with it
- loss of plant life – removing plants from a riverbank makes it more likely to erode, reduces habitats for other wildlife, affects the river's natural temperature and reduces the soil's ability to filter polluted water entering the rivers
- climate change – predictions suggest there will be longer intervals between rainfall but more intense storms, altering a river's natural state and creating poor living conditions for wildlife
- pollutants and litter – these can enter rivers from farmland and urban areas, causing poor water quality which threatens wildlife and affects everyone's enjoyment of a river
- changes to the shape or structure of the river, creating barriers that prevent fish and other creatures migrating naturally

2.1.3 Measuring and Improving River Health

We measure and monitor the health of our region's rivers, wetlands and estuaries to understand how they respond to our work and threats like climate change. We measure a wide range of features so we can build a summary of a river's health, including:

- water quality
- habitat for plants and animals
- river flow patterns
- how connected the river is to other rivers and creeks, allowing animals to migrate easily
- physical shape of the river
- diversity and abundance of plants and animals

We invest around $65 million each year to protect and improve the health of our rivers, estuaries and wetlands so they can support the values Victorians care about.

- We carry out a variety of activities to protect waterways, from delivering on-ground works to participating in state and regional planning. We also encourage others to care for our waterways through support and education programs.

3.Background

The Water Act 1989 requires Melbourne Water, as the Minister's delegate, to protect the environment and consider the needs of water users. This is achieved through a number of different mechanisms that include this Drought Response Plan (DRP), Stream Flow Management Plans (SFMPs) and Local Management Rule (LMRs).

We have an obligation to protect waterway health and maintain minimum environmental flow rates. During drought and low flow conditions, licence holder's access to water will be rostered, restricted or banned depending on the flow levels within nominated waterways to avoid adverse environmental impacts and preserve minimum flows.

Minimum flows are those that minimise risks to instream health. This includes the need to ensure protection of remnant pool habitat in many of our ephemeral rivers and streams from water extraction when instream living organisms are under stress. Above the minimum flows, water may be available in insufficient quantities to meet the demands of all users. Under these flow conditions roster or restriction triggers may be defined to try and ensure all users maintain equitable access to a share of the available water during periods of water shortage.

Flow triggers in the various sub-catchments have been determined following flow studies and assessment. Consultation with community and water users has also occurred in catchments where a Stream Flow Management Plan has been put in place.

One of the most important roles of flow study and Stream Flow Management Plans is to identify an appropriate environmental flow regime. The environmental flow regime may consist of minimum seasonal flows (high flow/winter and low flow/summer seasons), and flushing flows, as well as any other flow components considered necessary for instream and streamside flora and fauna. Flow triggers in place will therefore be catchment specific based on the values identified and may vary at different times of the year to accommodate the flow objectives.

Streamflow Management Plans are currently in place for the following catchments:

- Hoddles Creek,
- Little Yarra and Don Rivers,
- Olinda Creek,
- Plenty River,
- Steels, Pauls and Dixons Creeks,
- Stringybark Creek and
- Woori Yallock Creek.

Diamond Creek's Streamflow Management Plan has now been revoked in favour of Local Management Rules.

Woori Yallock Creek Gauge Site at Yellingbo

This Drought Response Plan sets out the management actions and triggers to be put in place during drought and periods of low flows to define access to water under licences. The flow triggers and restriction provisions defined in Stream Flow Management Plans and Local Management Rules have been reproduced as part of this Drought Response Plan.

4. Purpose

The Drought Response Plan (DRP) is used by Melbourne Water to qualify rights to water in conjunction with licence conditions. The DRP provides a mechanism to:

- Manage access to water by all users and the environment.
- Define the conditions under which rosters, restrictions or bans on use will be required during low flow conditions and the process by which these will be implemented.
- Outline obligations of both Melbourne Water and water users.
- Enable Melbourne Water to meet statutory obligations.

The DRP is used by Melbourne Water to make informed decisions as to when the volume of water available to satisfy rights to water is, or is likely to be, inadequate.

The DRP is active at all times in conjunction with licence conditions and requires licence holders to proactively seek and monitor information about waterway status prior to taking any water.

McCrae Creek at Yellingbo

5. Objectives and Obligations

Melbourne Water

- Comply with relevant statutory and legislatory obligations, including the need to protect the environment.
- Manage drought and low flow conditions in accordance with relevant Stream Flow Management Plan and Local Management Rules objectives where applicable.
- Maintain and implement this Drought Response Plan as required.
- Communicate openly with licensed water users, industry groups and stakeholders.
- Install, monitor and maintain flow-recording meters as necessary on licensed water users' properties
- Plan, implement, monitor and maintain the stream gauging network that provides accurate and timely Stream-flow data.

Water Users

- Comply with licensed volume and conditions.
- Understand and comply with this Drought Response Plan.
- Comply with applicable Stream Flow Management Plans or Local Management Plan rules where they exist.
- If metered, keep a record of daily diversions during ban and restriction periods.
- Observe minimum Stream-flows.

- Proactively seek and monitor information about flow status before accessing water under the licence.

- Prepare individual drought contingencies and manage own water use during times of drought and low flow conditions.

- Contact Melbourne Water for clarification and/or advice if uncertain about any aspect of water resource management or access requirements.

Working Together

6. Application

The Drought Response Plan (Part A and B) are active at all times in conjunction with licence conditions and requires licence holders to proactively seek and monitor information about waterway status prior to taking any water.

The Plan provides information on the application of bans and rosters or restrictions on individual catchments as detailed in specific water sharing plans for each catchment. It is used by Melbourne Water to make informed decisions when Melbourne Water is of the opinion that the volume or quality of water available to satisfy any rights to water is, or is likely to be, inadequate for any reason.

Melbourne Water may choose to vary the application of this plan or qualify rights to water in a manner different to that outlined in this plan at its discretion and in accordance with the Water Act.

The plan applies to all Melbourne Water licensed water users within the Yarra River catchment, the lower Maribyrnong River, Stony, Kororoit, Laverton and Skeleton Creek catchments.

Nursery business in the Yarra Valley

7. Warnings

There are no predictive warning levels provided for in this Plan around the likelihood or timing of bans and restrictions being applied to any catchment or waterway.

Streamflow information including historic data will be available on the Melbourne Water website and can be used by licence holders to understand current and recent flow conditions in order to make decisions around potential water availability.

Licence Holders may also check the rainfall patterns and predictions from the Bureau of Metrology's Land and water webpage, see http://www.bom.gov.au/watl/about/about-water-and-the-land.shtml

The Bureau of Metrology's Water and the Land web site aims to provide an integrated suite of information for people involved in primary production, natural resource management, industry, trade and commerce.

The website brings together a range of services from rainfall forecasts for the week ahead to climate change and trend maps in an easily accessible and intuitive way.

This supplementary information however does not replace the need for licence holders to check the status of their particular waterway in order to determine their right to access water under their licence.

8.Restrictions and Rostering

Restrictions and rostering are intended to help share water amongst licensed users by attempting to prolong streamflows, and water availability, before the introduction of bans. They are an important tool aimed also at ensuring that all licence holders can access a share of the available water during water shortage periods.

In developing restrictions or rosters Melbourne Water has had regard to the need to maintain flows above the minimum levels of protection whilst trying to limit the impact on water users and the number of days on which bans or restrictions apply.

Consideration has been given to:

- the relative watering requirements of different crop types and other use of land for water;
- differences between types of licence, maximum daily volumes and pumping capacities; and
- the need for all licensees to have fair and equitable access to available water.

Restrictions will generally be applied in nominated catchments where larger numbers of users exist and it is considered that the application of restrictions can have an impact on prolonging streamflows. In other catchments that are more responsive to changes in weather conditions, Melbourne Water may put into place a determined roster or restriction regime on a season by season basis and in consultation with licence holders within the particular catchment.

Restrictions have been defined for and will apply to the following catchments:

- Yarra River (Lower)
- Yarra River (Upper).
- Little Yarra River
- Woori Yallock Creek (excluding Wandin Yallock Creek catchment)
- Olinda Creek

All other catchments will be placed directly onto bans once specified ban trigger levels are reached.

Restrictions are deemed beneficial for the particular catchments listed above, as they are perennial in nature. Historical flow data indicates that flows in these catchments normally decline over a more prolonged period than the other more ephemeral waterways, and therefore provide opportunity for a staged level of restriction to be implemented.

Restrictions will be introduced when catchment specific triggers have been met based upon the determined flow conditions in each catchment (refer Part Bs) and may apply both before the introduction of, and after, the lifting of bans.

Restrictions will generally take the form of being either:

- volumetric based, limiting the amount of water permitted to be taken as a nominated volume or percentage of the maximum daily volume permitted under the licence, or
- time based, allowing for extraction only during nominated days and times.

The method applied and times may vary between different catchments. Variations may also occur around licence type and / or crop type. For specific details refer to the relative catchment specific water sharing plan.

For metered used where volumetric based restrictions apply, licenced users are required to keep a record of daily metered usage and to make such record available to MWC upon request.

Within particular catchments or sub-catchments Melbourne Water may develop and introduce rosters and restrictions for specific user groups or active licence holders. Such arrangements will be developed in consultation with affected licence holders and be implemented by notification to them within the seasons that they apply.

Yarra River at Yarra Glen

9. Cease to Divert Rules

All waterway catchments and licence types are subject to the implementation of Cease to Divert Rules (bans) once specified trigger levels are reached, this including on-stream dams (see next section). The implementation of Cease to Divert Rules will occur when the applicable ban trigger levels are met which may be based upon rolling average or instantaneous stream-flows. Also note that Cease to Divert Rules will apply when the daily flow of any waterway equals 0 ML. Details on the trigger levels for the implementation of Cease to Divert rules are tabled in each catchment specific water share plan, provided as Part B to this document.

The impact of cease to divert on licence holders is recognised as severe, however, the implementation of cease to divert within a catchment is necessary to protect base environmental flows and maintain where possible river health and associated flora and fauna.

Extraction during ban periods is considered to have significant risk of damage to the environment as well as further limiting the access to water by other compliant water users. Such actions are therefore considered seriously and may result in prosecution.

Woori Yallock Creek Yellingbo

10. On-stream Dams

On-stream dams can pose a significant obstruction to flows due to the nature of their construction on the waterway. Most on-stream dams are required to have a pipe and valve or other bypass mechanism to ensure the continued flow of water downstream of the dam whenever a natural flow occurs into the dam.

Cease to Divert Rules and catchment restrictions will apply to the take and use of water from on-stream dams unless the dam owner can demonstrate that all streamflow entering the dam during the Cease to Divert period is being passed downstream through appropriate bypass mechanisms. Licence holders who are unable to pass all inflows and would otherwise rely on drawing from the dam must abide by the bans or restrictions that are in place.

Licence holders who do pass the entire flow downstream may continue to draw water from their stored reserves. Under these conditions the level of the dam is expected to decrease by the volume of water extracted during the ban period. Dams operating at full supply level with their spillway in operation do not satisfy this requirement.

On-stream Dam Ferndale Creek

11. Exemptions

Cease To Divert Rules do not apply for genuine emergencies, such as water required for firefighting purposes and water taken for domestic and stock purposes where no alternative supply is available. For Domestic and Stock licences where no alternative supply exists, pumping is permitted at all times for essential household use and watering of stock only. Non-essential uses of water, such as watering of gardens is not permitted during ban periods.

Melbourne Water will consider exemptions or modification to restrictions upon written application by licence holders. Exemptions will only be granted where it can be demonstrated by the applicant that efficient watering practices are in place, a reduction in water demand will be achieved compared to normal usage and the proposal put forward is consistent with the level of restrictions being applied within the catchment to other similar licence types. Any exemption to restrictions will apply only for the financial year in which it is granted.

Exemptions from bans, other than those specified in this section, are not available.

Stock near waterway

12. Communication

Licensed water users will be provided a copy of the Drought Response Plan upon its implementation and after any significant changes or revision of the plan. A copy will be supplied to new licensees upon the transfer of any licence. In addition the plan will be available for download on the Melbourne Water website and copies will be provided to any licence holder upon request.

The Plan is active at all times in conjunction with licence conditions and requires licence holders to proactively seek and monitor information about flow status prior to taking any water.

The status of restrictions and bans for individual catchments will be posted on the Melbourne Water website at www.melbournewater.com.au/diverters and be available by calling Melbourne Water on 131 722 at any time. In addition the website will provide catchment specific stream-flow data including daily and 7-day average stream flow.

Catchments will be monitored on a continuous basis with the status of restriction and ban being updated daily at or around 5am. Any further change in flow condition will be reflected in the following days status.

Newsletters and other information will be forwarded to licence holders at periodic intervals to remind them to check the status of flows before taking water. Melbourne Water may also introduce an email and SMS service to advise customers of status changes in their catchment. These additional services will be provided as information only and does not replace the need for licence holders to check their catchment status each time before taking water.

Melbourne Water contact details are provided below for licensed water users affected by this plan who have any queries.

Postal address: PO Box 4342
Melbourne VIC 3001

Telephone: 131 722
E-mail: diversions@melbournewater.com.au

13. Compliance

Licensed water users must comply with any roster, ban or other arrangement prepared and implemented by Melbourne Water. Melbourne Water will undertake random audits of licence holders to check compliance.

The taking and use of water in years where restrictions or bans have applied is considered a serious breach that stands to impact negatively on both the environment and other water users.

Penalties for non-compliance with this Drought Response Plan will apply during times of water shortage. Failure to comply with restrictions or ban levels as detailed in this plan may lead to the enforcement of penalties such as licence cancellation and/or prosecution under the Water Act 1989.

If a water licence is cancelled due to non-compliance but still required, an application for a new licence will need to be submitted and payment of a reapplication fee will apply. Renewal of the licence will be at the discretion of Melbourne Water and may be subject to other assessment criteria. Depending on water availability, it may not be possible to renew a licence other than by trading of a water entitlement.

Pump on waterway

14. Glossary of Terms

All-year licence:	A licence that has a period of 1 July to 30 June in any licence year.
Authorised person:	A person authorised in writing appointed under the Act.
Average Stream Flow:	The mean daily average Stream-flow may be calculated over any consecutive 3-day or 7-day period, depending on the catchment.
Catchment:	The area of land above a particular point from which rainfall will contribute to runoff to that point.
Cease to Divert	Occur when the applicable ban trigger levels are met which may be based upon rolling average or instantaneous stream-flows.
Dam – Off-stream:	A dam, that is not constructed across a river, creek, stream, watercourse or waterway but is licensed to take water diverted, or pumped, from one of these sources.
Dam – On-stream:	A dam, constructed on, in or across a river, creek, stream, watercourse or waterway and licensed to take water from that source.
Domestic and stock use:	Water that can be used for household purposes including watering of pet animals, cattle or other stock and irrigation of a kitchen garden, but does not include use for dairies, piggeries, feed lots, poultry or any other intensive or commercial use.
Drought:	A period during which there is insufficient available water supply to meet expected demands for water.
Environmental flow:	A regime of designated flows in a stream or river needed to satisfy specified ecological requirements.
Ephemeral:	Seasonally flowing waterway where flows are usually intermittent.
Farm dam:	A dam filled from catchment runoff only and used for irrigation and / or commercial use.
Flow Rate:	The amount of water past a specific point at a particular time, usually measured in megalitres per day.

High-flow Period:	Historically, 1 May to 31 October or as defined in a Stream-flow management plan or under local management rules.
Instantaneous Flow:	The rate of flow at a given location at a given point in time.
Licensee:	A person who holds a Water Licence.
Low-flow Period:	Historically, 1 November to 30 April the following year or as defined in a Stream-flow management plan or under local management rules.
Megalitre (ML):	One million litres of water. An Olympic size swimming pool contains approximately one million litres.
Minimum flow:	A minimum flow to be maintained in a stream or river to minimise environmental risk. This flow also protects remnant pool habitat in ephemeral streams.
ML/d:	Water flow measured in megalitres per day.
Non-consumptive use:	Where 100% of water taken from a waterway is returned to the waterway e.g. cooling water, fish farms, and hydropower generation.
Perennial:	A waterway where flows are usually continuous throughout the year.
SFMP:	StreamFlow Management Plan.
The Act:	The *Water Act 1989*.
Water Licence:	A licence to take and use water in accordance with the *Water Act 1989*.
Winter-fill licence:	A licence to fill On-stream or Off-stream dams during the nominated winter-fill period. The licence is limited to the volume of the storage.

15. List of Part B: Specific Water Sharing Plans

The following catchments have a Specific Water Sharing Plan, which forms Part B of the Drought Response Plan:

- Arundel and Moonee Ponds Creeks
- Darebin Creek
- Diamond Creek
- Gardiners Creek
- Hoddles Creek
- Kororoit Creek
- Little Yarra River and Dons Creek
- Maribyrnong River
- Merri Creek
- Mullum Mullum Creek
- Olinda Creek
- Plenty River
- Steels, Pauls and Dixons Creeks
- Stringybark Creek
- Watsons Creeks
- Watts River
- Woori Yallock Creek
- Yarra River Upper and
- Yarra River Lower
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All components of the Drought Response Plan (Part A and B) are available on the Melbourne Water website under Stream flow management.