

# **Safe Drinking Water Act 2003**

## **Water Storage Manager Annual Report 2016/17**

September 2017

## Document Status



SRW  
 PO Box 153  
 MAFFRA VIC 3860  
 Tel: 1300 139 510  
 Fax: 03 5139 3150

Name of Document:	Safe Drinking Water Storage Manager Annual Report 2016/17
File Name:	<a href="#">Safe Drinking Water Annual Report 2016_17 Final.docx</a>
Document No:	1429044
Document Version:	Final
Date of issue:	9 October 2017
Approved by:	Clinton Rodda

## Document history

Draft 1		
Prepared by	Ben Howes	9 August 2017
Reviewed by	Jessica Cox	18 September 2017
Reviewed by	Ryan Wilson	18 September 2017
Reviewed by	Cameron Laidlaw, Senior Health Scientist, DHHS	21 September 2017

Draft 2		
Prepared by	Jessica Cox	3 October 2017
Reviewed by	Ryan Wilson	4 October 2017

Final		
Prepared by	Jessica Cox	4 October 2017
Reviewed by	Clinton Rodda	6 October 2017

# Contents

<b>Document history</b>	<b>ii</b>
<b>Foreword</b>	<b>2</b>
<b>1 Introduction</b>	<b>3</b>
1.1 Our business .....	3
1.2 Our water supply systems .....	4
1.3 Source water protection .....	5
<b>2 Water Treatment processes</b>	<b>6</b>
2.1 Issues.....	6
<b>3 Emergency / Incident Management</b>	<b>7</b>
3.1 Incidents under section 22 of the Act .....	7
3.2 Other incidents .....	7
3.3 Issues.....	9
<b>4 Risk Management Plan Audit Results</b>	<b>10</b>
<b>5 Undertakings under section 30 of the Act</b>	<b>11</b>
<b>6 Further Information</b>	<b>12</b>

## Foreword

Southern Rural Water (SRW), as a water storage manager, is required under Section 26 of the *Safe Drinking Water Act 2003* (the Act) to provide the Secretary to the Department of Health and Human Services (DHHS) with a report each financial year. This report covers issues relating to the quality of untreated water and its management by SRW.

This 2016/2017 annual report covers the period from 1 July 2016 to 30 June 2017 and was developed in accordance with the Safe Drinking Water Regulation Guidance Note released by the DHHS in July 2017, and with the following:

- Regulation 17 of the Safe Drinking Water Regulations 2015.

# 1 Introduction

## 1.1 Our business

SRW's Headworks business is responsible for the harvest, storage and delivery of water to customers in accordance with the provisions of the Bulk Entitlement Orders.

We are responsible for harvesting and storing water in seven major storages. These include:

- Lake Glenmaggie, Lake Narracan and Blue Rock Lake which are located in Gippsland; and,
- Melton, Merrimu, Pykes Creek and Rosslynne Reservoirs which are located to the west of Melbourne.

The Headworks business also manages the recreational facilities at most of these storages. There is however, no primary contact recreation permitted at Merrimu and Rosslynne Reservoirs.

SRW stores untreated water which is used for:

- Irrigation and rural purposes;
- Urban water supply to Gippsland Water and Western Water; and,
- Industry including power generation in the Latrobe Valley.

Under the Safe Drinking Water Act, SRW is a water storage manager that supplies water to a water supplier. This report therefore focuses on SRW's role in providing untreated water to Gippsland Water and Western Water.

Lake Glenmaggie and Blue Rock Lake provide raw drinking water to Gippsland Water while Merrimu, Pykes Creek and Rosslynne Reservoirs provide raw drinking water to Western Water.

For the purposes of this report, 'raw drinking water' means untreated water harvested in SRW's storages and released to urban water suppliers.

The Board of SRW approved in May 2005 a raw water policy that sets out what our reservoir based risk management plans are designed to implement. The policy was reviewed and updated in February 2016.

The policy states we shall:

- Maintain and review safe drinking water Risk Management Plans for each of SRW's storages that provide raw water to water suppliers, and implement actions to mitigate the risks identified within those plans
- Engage regularly with stakeholders from the catchment and water suppliers to promote a coordinated approach to managing risks to drinking water
- Report any identified or suspected issues with raw water quality to stakeholders in a timely manner
- Maintain effective contingency and incident response procedures
- Provide training and support for all SRW staff involved in the supply and management of raw water, including identification of water quality incidents, notification protocols and sampling regimes and requirements.

During 2016/17, we continued the implementation of our risk management plans for storages harvesting untreated water for drinking.

We maintained our Blue Green Algae (BGA) communication to the public, including detailed BGA web pages, with general information on BGA, an up-to-date alert and media releases web page, as well as a dedicated BGA information line.

SRW is committed to working in partnership with stakeholders and relevant agencies to ensure that its decision-making and actions effectively support the supply of safe drinking water by water suppliers, as defined in the *Safe Drinking Water Act 2003*.

## 1.2 Our water supply systems

SRW operates four water supply systems that involve the supply of raw water to water suppliers. Detail of these four systems is included in Table 1.

**Table 1: SRW water supply systems**

System	Catchments	Storage	Supply points/ Offtakes	Treatment	Urban Water Supplier
Werribee system	Lake Merrimu (Lerderderg River)	Merrimu Reservoir	Offtake @ tower (valve house)	No	Western Water
	Lake Merrimu (Goodmans Creek) Lake Merrimu Pykes Creek Reservoir and Werribee River	Pykes Creek Reservoir	Offtake @ tower (valve house)	No	
Rosslynne system	Rosslynne Reservoir (Jackson Creek)	Rosslynne Reservoir	Offtake @ tower (valve house)	No	Western Water
Thomson/ Macalister system	Lake Glenmaggie	Lake Glenmaggie	Offtake to: Glenmaggie/ Coongulla @ Coongulla (in storage variable depth offtake line) Maffra, Stratford & Boisdale @ 15 km downstream of storage on Macalister River	No	Gippsland Water
Blue Rock system	Tanjil River	Blue Rock Lake	Offtake to: Willow Grove @ tower Moondarra Reservoir @ tower Moe @ 15km downstream on Tanjil River	No	Gippsland Water

Each supply system, from catchment to the offtake to water supplier, is detailed in its related risk management plan. Maps of each SRW specific system have been reproduced in Appendices 1 to 4 of this annual report. All systems have associated proclaimed catchments as listed in Table 1 and detailed in the appendices.

No major changes have been made to the arrangements for water supply from SRW's 2015-16 Water Storage Manager Annual Report.

### 1.3 Source water protection

SRW recognises that actions within the greater catchment can have a direct impact on its storages. SRW works closely with local Councils, CMAs and other agencies to influence and facilitate appropriate management to protect the quantity and quality of water captured in our storages.

SRW has developed Eastern and Western Storages Sustainability Plans for all its drinking water storages. These plans include a Safe Drinking Water Risk Management Plan for each storage in accordance with the requirements of the *Safe Drinking Water Act 2003*. Each risk management plan contains a detailed description of the system of supply, identification and assessments of the risks to the quality of the water, and a description of the steps currently taken and those that could be taken to manage those risks. The risk management plans are as comprehensive as possible and regularly reviewed and updated.

SRW, Western Water (WW) and Gippsland Water (GW) have historically run routine water quality monitoring programs in parallel, however given that duplication was occurring, SRW agreed to an information sharing arrangement with both Water Authorities. A Memorandum of Understanding was struck between SRW and WW, and SRW and GW to support this arrangement. The information sharing involves, among other things, the sharing of Safe Drinking Water Annual reports and the results of water quality monitoring as requested by either party. Water quality monitoring undertaken by SRW, WW and GW at present now includes:

- Gippsland Water undertaking routine monitoring of:
  - the raw water that enters their Water Treatment Plants (WTP) which includes monitoring of analytes (i.e. Colilert (E. coli), Iron (Fe), Magnesium (Mn), Mercury (Hg), Total Organic Carbon, Dissolved Organic Carbon, UV Absorption (SUVA), Ammonia, Alkalinity, pH, Electrical Conductivity, Total Dissolved Solids, Total Phosphorus, Total Nitrogen, Total Kjeldahl Nitrogen, Nitrate, Nitrite, Ortho Phosphate, Arsenic, Selenium, Copper (Cu), Chromium (Cr), Cadmium (Cd), Lead (Pb), Nickel (Ni), Zinc (Zn), Cyanide, Alpha & Beta radioactivity, Herbicides/Pesticides, Cryptosporidium / Giardia)
- Western Water undertaking routine monitoring of:
  - Physical/chemical parameters and metals within the storage; and
  - Sub-surface water samples for BGA biovolume at their offtake
- SRW undertaking:
  - Visual inspections and surface water monitoring for BGA according to SRW's BGA Incident Management Plan; and
  - ad hoc monitoring of physical/chemical parameters and metals in the event of an incident within the storage or in the water supply catchment area.

## **2 Water Treatment processes**

**17(e) if the water storage manager operates or maintains a drinking water treatment process –**

- (i) A summary of the process by which the water supplied by the water storage manager is disinfected or treated and any other processes applied to the water, and any issues arising out of the application of those processes; and**
- (ii) A list of all the chemicals and other substance, and any processes, used to disinfect or treat the water supplied, or to be supplied, by it for drinking purposes**

SRW does not treat the water prior to its receipt by Western Water and Gippsland Water.

### **2.1 Issues**

Not applicable.

### 3 Emergency / Incident Management

**17(a) information about actions taken by the water storage manager in respect of each emergency, incident or event that has arisen that has affected –**

- (i) The quality of water supplied generally; and**
- (ii) The quality of water supplied where that supply posed a risk to human health; and**

**(b) any issues that may have arisen out of the actions referred to in paragraph (a)**

#### 3.1 Incidents under section 22 of the Act

SRW had no reportable incidents in 2016/17 under section 22 of the Act.

#### 3.2 Other incidents

##### 3.2.1 Blue-green Algae

Under Department of Environment, Land, Water and Planning's (DELWP) BGA Circular 2015/16, SRW is obliged to notify agencies such as urban water suppliers, the Environment Protection Authority (EPA) and DELWP of BGA blooms in storages and water bodies where we have Local Water Manager responsibilities. In addition, DHHS must be notified under section 22 of the Act if contamination, such as a BGA bloom or a high turbidity event, occurs in a water body providing drinking water supply, where that event or bloom is likely to pose a health risk or cause widespread complaint.

However the BGA Circular 2016/17 acknowledges that since water storage managers do not generally treat and supply drinking water to the public in Victoria, they may not be best placed to determine whether BGA levels pose a public health at risk to drinking water supplies. This means that the water supplier (as defined under the Act) may be the most appropriate entity to notify DHHS of BGA incidents under section 22.

SRW provides Gippsland Water, Western Water, DELWP and DHHS with the results of its BGA monitoring program.

There were no incidents in 2016/17 where BGA blooms exceeded level 2 for drinking water.

##### 3.2.2 Pykes Creek Reservoir – Septic Tank leakage

On 22 February 2017 a Water Storage Operator reported that the pump well on the overflow from the public toilet septic system was overflowing and effluent (no solids) was leaking over the top, across approx. 20m of land, down into the storage. The site had last been inspected on 20 February at approx. 7.30am. The pump had an alarm system in place, however the alarm had failed.

Actions taken:

- The duty officer at Western Water (drinking water supplier) was notified
- The storage, which is accessible to the public, was evacuated and closed
- A contractor was engaged to empty the pump well in order to allow access to the pumps
- One of the two pumps in the pit was identified as faulty and was isolated and removed for repair

- The remaining pump was activated and system deemed to be operating sufficiently while second pump was repaired
- Incident was reported to the EPA
- Western Water shut down the treatment plant and commenced alternative drinking water supply
- Western Water notified DHHS of the incident and actions taken
- SRW Comms liaised with Western Water Comms and issued Social Media and website messages
- Sampling initiated at leak location, 50m either side and at the reservoir outlet for E.coli, ammonia, nitrogen and nitrate
- Western Water commenced sampling at their raw water point
- Lab results received 25/2/17 indicated less than 100 faecal coliform organisms per 100ml
- Storage re-opened, stakeholders notified

Post-incident corrective actions:

- The pump well alarm did not activate during the leak. An electrician was engaged to look at the site to determine why the alarm did not activate
- The alarm system was repaired and upgraded, each pump is now on a separate breaker (if one pump trips the switch the other will still operate)
- There is now a two stage alarm/notification system:
  - First high level alarm calls the SRW Duty Officer
  - If level increases alarm activates a strobe light positioned on top of pole, as a visual alarm
- The risk of a septic spill was already captured within SRW's risk management plans and the mitigating action was the installation of pump alarms. In light of the incident, SRW reviewed it's risk management plan and added an action to undertake a risk assessment of similar systems across it's headworks operations and where necessary make alterations to prevent a similar incident occurring.



**Figure 1. Modified pump well at Pykes Creek Reservoir**

### **3.3 Issues**

There were no issues from any actions referred to above.

## **4 Risk Management Plan Audit Results**

***17(d) a summary of the findings of the most recent risk management plan audit and any issues that the approved auditor raised during the risk management plan audit.***

SRW was not required to undertake a regulatory audit during 2016-17.

## **5 Undertakings under section 30 of the Act**

***17 (c) a summary of every written undertaking by the water storage manager accepted by the Secretary under section 30 of the Act.***

SRW did not have any undertakings under Section 30 of the Act with DHHS during the reporting period.

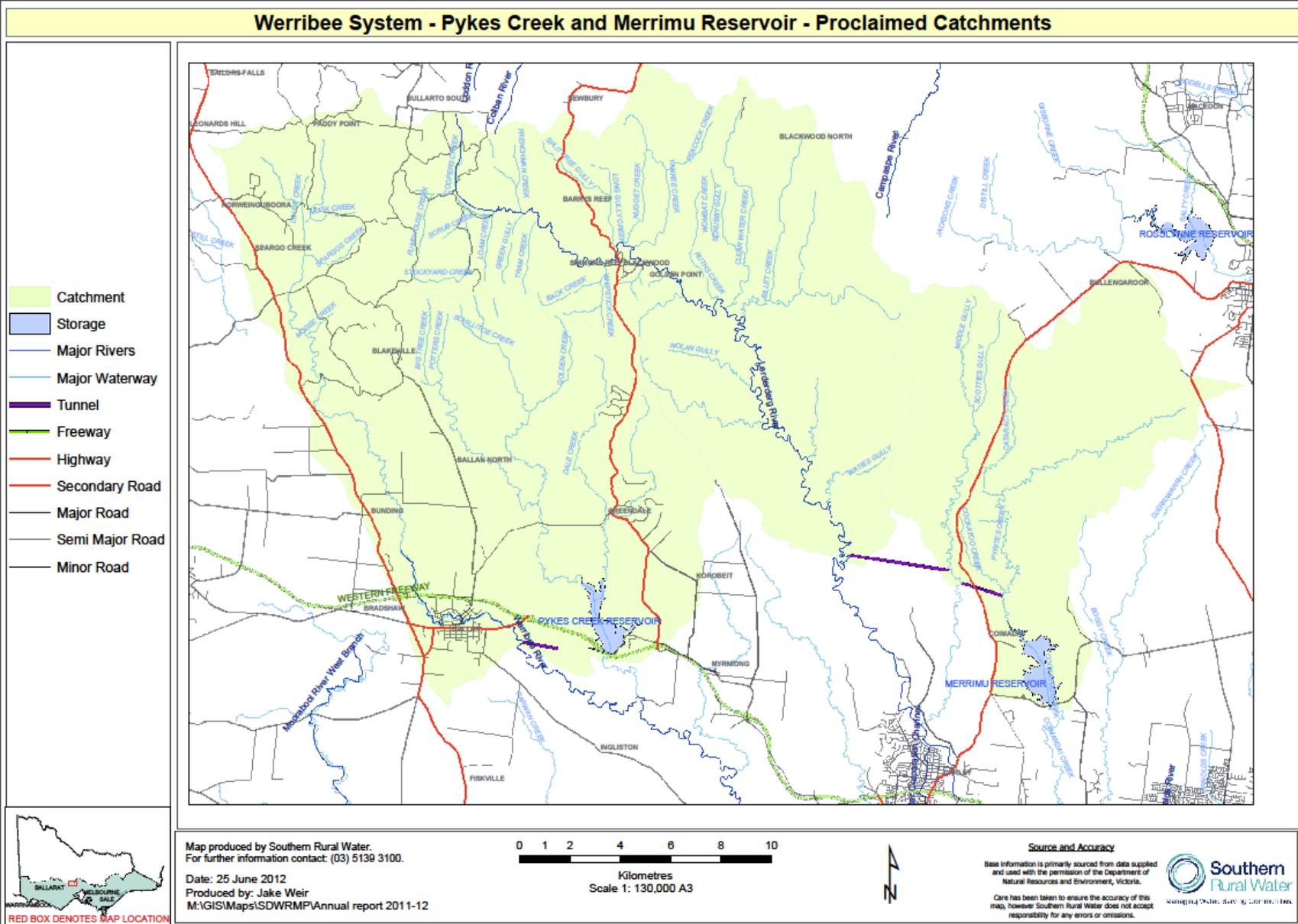
## 6 Further Information

Further information regarding SRW's responsibilities for BGA reporting, routine monitoring that is undertaken, current alerts and media releases, together with general information can all be found at SRW's website [www.srw.com.au](http://www.srw.com.au). This information is updated as required.

Members of the public can also access current bloom information by calling our dedicated BGA Information Line on 1300 781 806.

In addition, SRW can be contacted directly during business hours by email [srw@srw.com.au](mailto:srw@srw.com.au) or by telephone (03) 5139 3100.

# Appendix 1: Merrimu Reservoir, Pykes Creek Reservoir and associated Proclaimed Catchments







## Appendix 4: Blue Rock Lake and Tanjil River Proclaimed Catchment

