

Safe Drinking Water Act 2003

Water Storage Manager Annual Report 2017/18

2018

Document Status



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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 2017/2018 annual report covers the period from 1 July 2017 to 30 June 2018 and was developed in accordance with the Safe Drinking Water Regulation Guidance Note released by the DHHS in July 2018 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 that 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 2017/18, 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 2016-17 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 2017/18 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) Algal Bloom Response Plan 2017/18, 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.

Notwithstanding the above, the Algal Bloom Response Plan 2017/18 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.

In accordance with DELWP's Algal Response Plan there were no incidents in 2017/18 where BGA blooms exceeded Level 1 for drinking water.

3.2.2 Pykes Creek Reservoir – Detection of elevated *E.coli* levels

The presence of elevated *E.coli* levels in Pykes Creek Reservoir was detected in February and April of 2018 during routine monitoring by Western Water (WW). After significant on-site investigation by SRW, the cause of the elevated *E.coli* levels was not apparent. The issue was referred to external experts and agencies during the detection period to assist in locating and addressing the source of the issue.

During the incident;

- As per SRW's Memorandum of Understanding with Western Water, SRW continued to receive and share water quality data with Western Water over the course of the incidents

- Additional water quality sampling and testing was undertaken by SRW and Western Water to monitor the situation
- The storage was closed for public recreation during elevated *E.coli* levels, and re-opened when testing confirmed a return to safe levels
- Specialist testing was undertaken to better understand potential contamination sources
- Industry professionals/academics were engaged to provide advice on the issue
- The issue was reported to all relevant agencies i.e. Department of Health, and regular updates were provided to internal and external stakeholders
- Western Water's water treatment Plant continued to successfully treat and supply drinking water to the township of Myrniong for the duration of the event.

Evidence gathered during the event indicated a strong possibility the *E.coli* in Pykes Creek Reservoir was a 'natural' bloom. SRW is convening a learning session with industry, regulators and academic experts to discuss future management of 'natural' *E.coli* blooms.

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 audited in April 2018 and was deemed to be compliant in all areas. This is the fifth straight statutory audit in which SRW has been assessed as fully compliant with its Safe Drinking Water obligations.

The most recent risk management plan audit:

- (a) Identified one opportunity for improvement in which the auditor suggested that SRW provide a clearer and more direct plan and set of actions to consider movement of pathogens during flood events.
- (b) Did not identify any non-conformances (minor or major)
- (c) Reinforced that SRW's level of system and RMP implementation was comprehensive and effective. Concluding remarks from the auditor were:

“As I found in the two previous audits at Southern Rural Water, the organisation continues to make a strong corporate commitment to the further development and implementation of risk management systems including those directed at ensuring compliance with the Safe Drinking Water Act 2003 and the Safe Drinking Water Regulations 2015. The extent of quality management system documentation, staff awareness and support for the system is generally excellent and all staff interviewed by the auditor were sincere and knowledgeable in their areas of responsibility.”

A copy of the most recent risk management audit certificate is included in Appendix 5.

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.

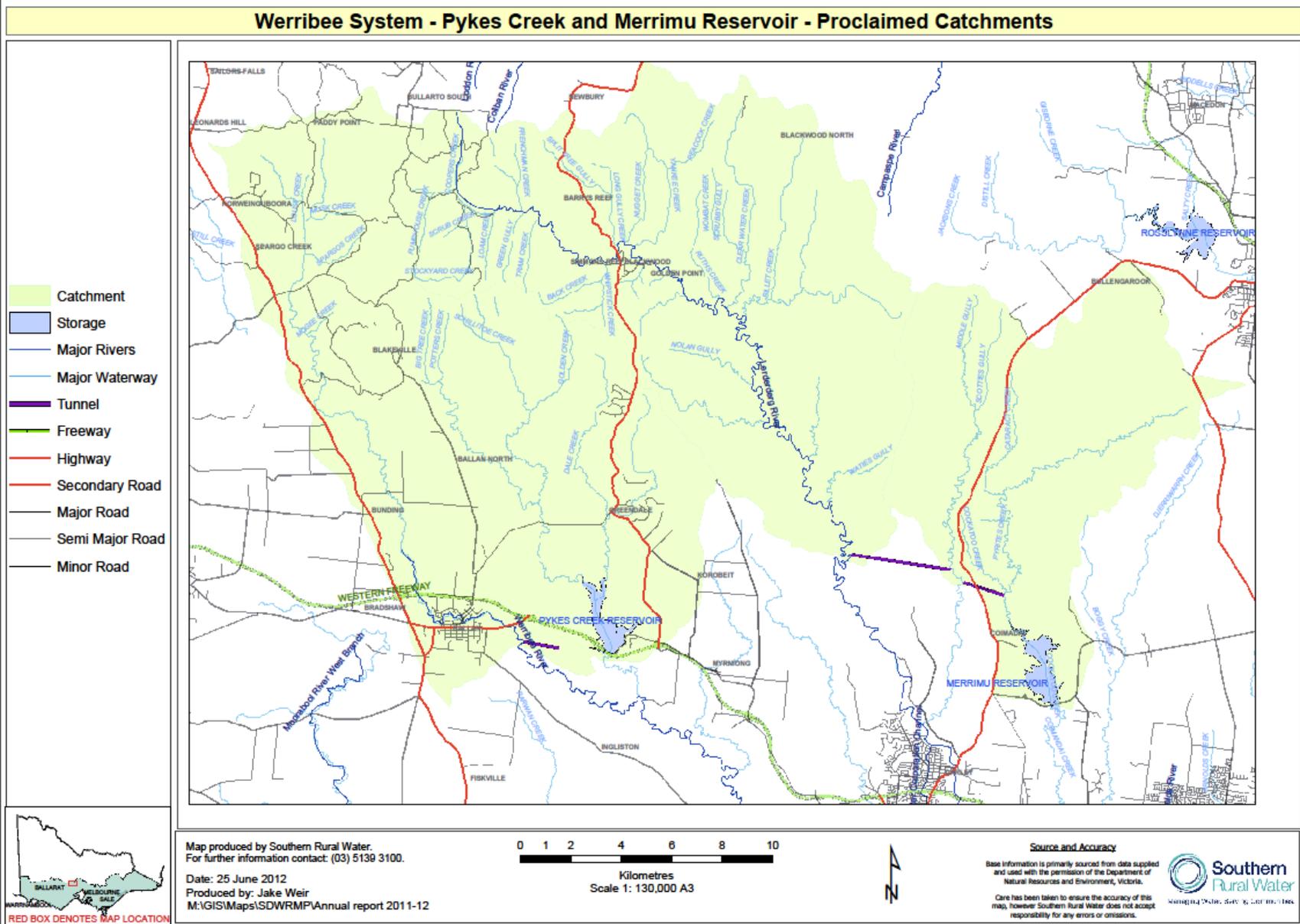
6 Further Information

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. This information is updated as required.

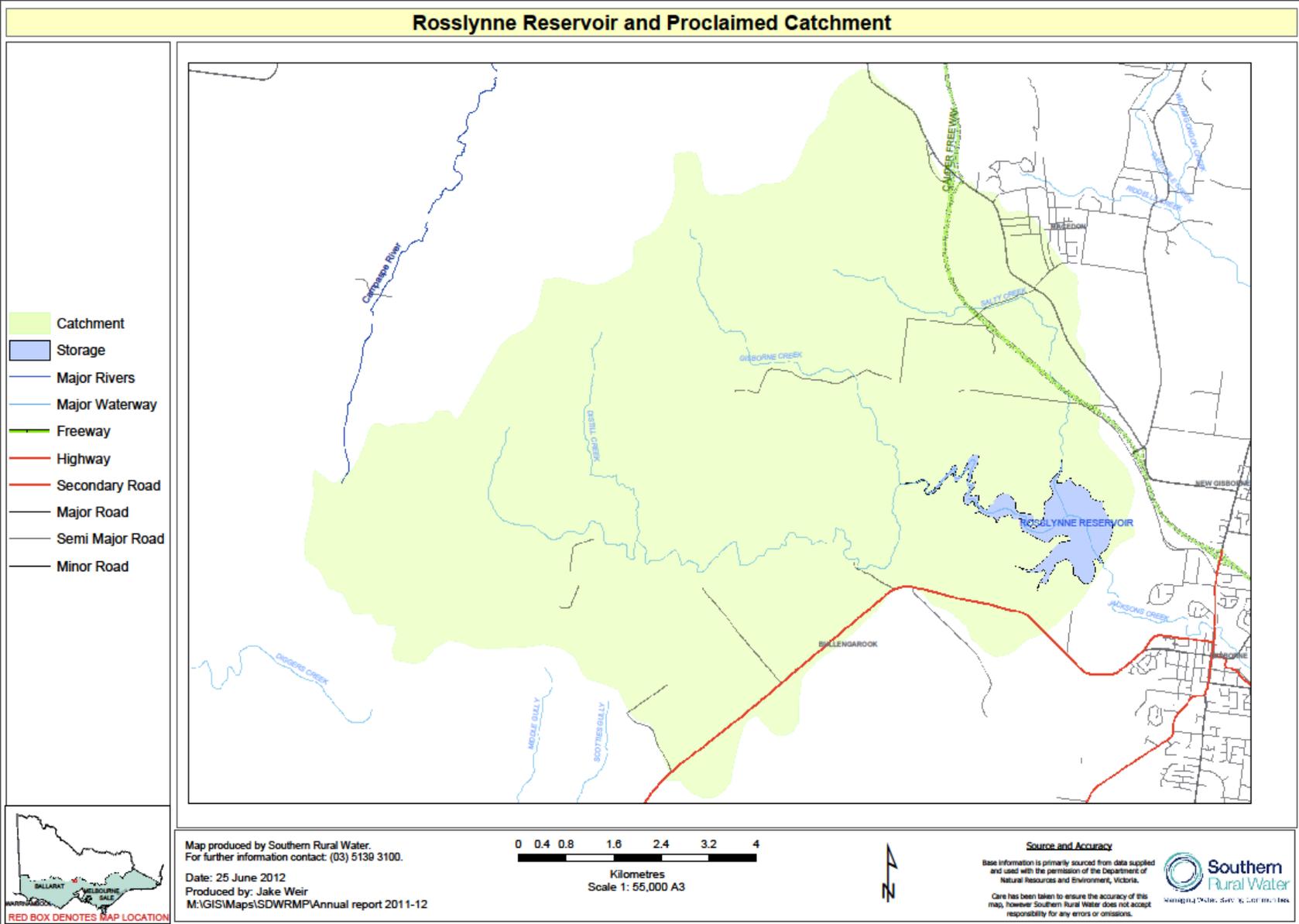
Members of the public can also access current bloom information by calling our dedicated BGA Information Line on 1300 781 806.

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

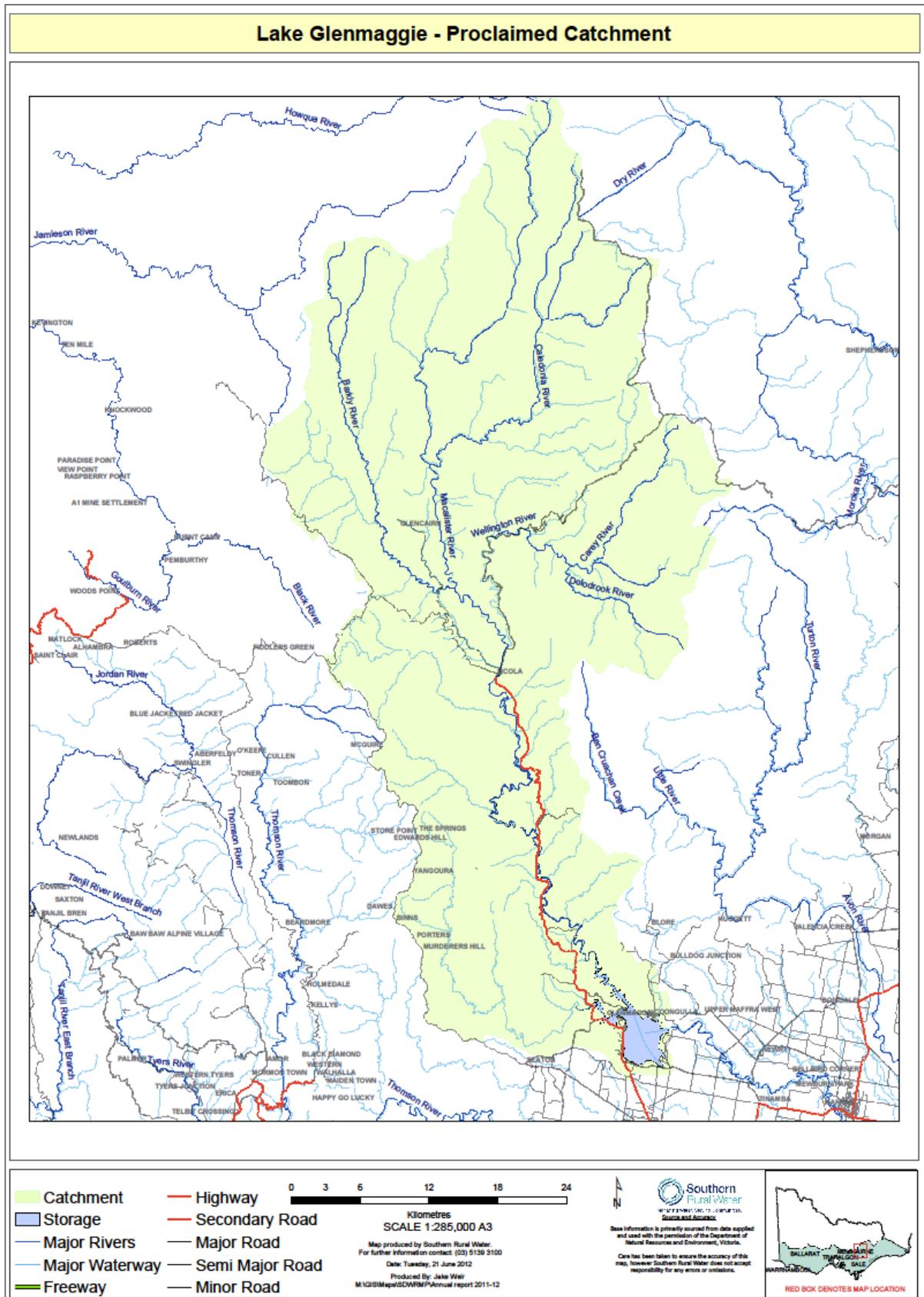
Appendix 1: Merrimu Reservoir, Pykes Creek Reservoir and associated Proclaimed Catchments



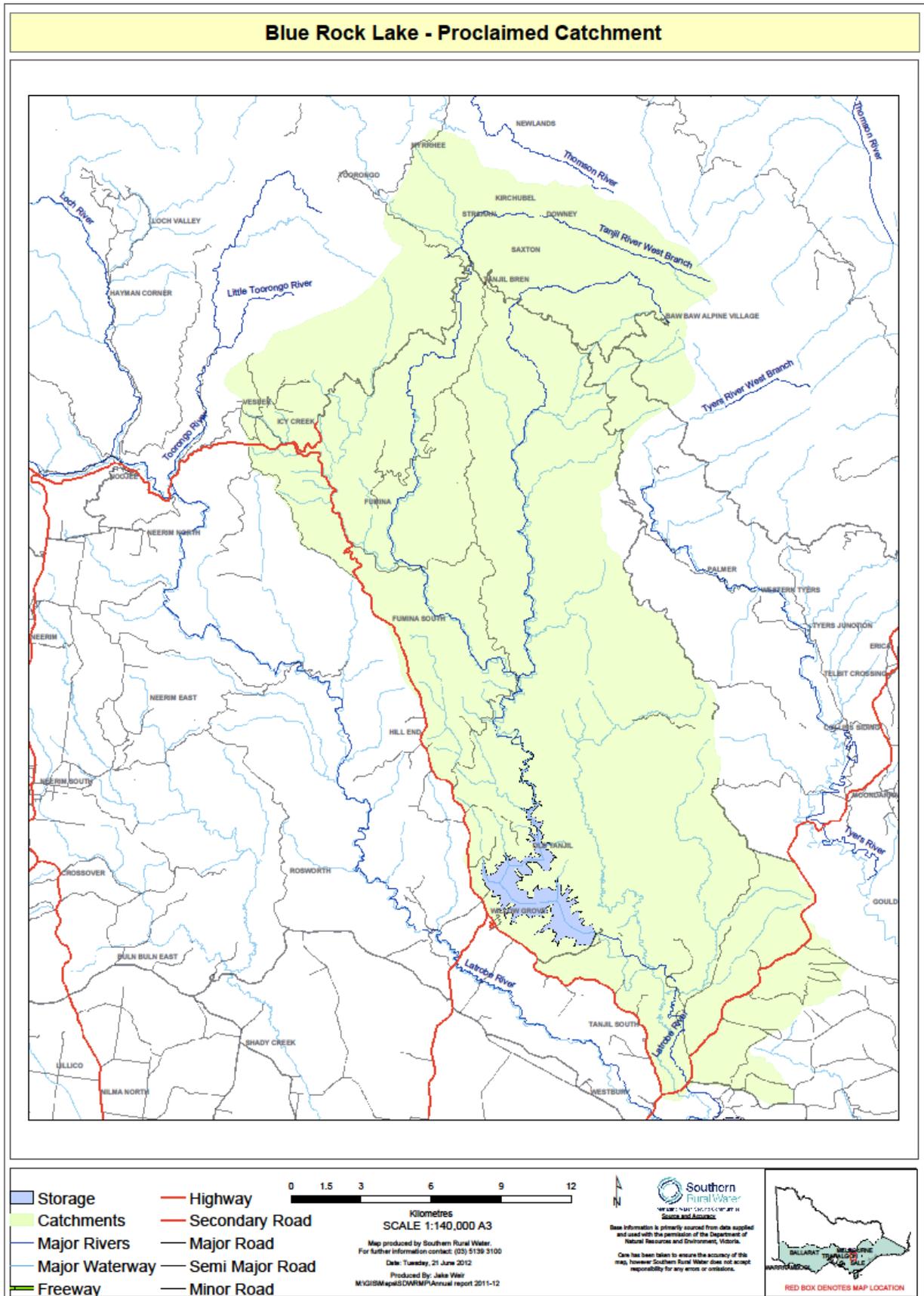
Appendix 2: Rosslynne Reservoir Proclaimed Catchment



Appendix 3: Lake Glenmaggie Proclaimed Catchment



Appendix 4: Blue Rock Lake and Tanjil River Proclaimed Catchment



Appendix 5: 2018 Risk Management Audit Certificate

Risk Management Plan Audit Certificate

SCHEDULE 1

Safe Drinking Water Regulations 2015
Risk Management Plan Audit Certificate

Regulation 10

Certificate Number: 1311-2018

Audit period: 1st of May 2016 to April 17th, 2018

To: Ryan Wilson, Manager Environment, Southern Rural Water

3/307 Maroondah Highway, Ringwood VIC

Australian Business Number (ABN): 70 801 473 421

I, Nicholas Alan O'Connor, after conducting a risk management plan audit of the
(print full name of approved auditor)

water supplied by Southern Rural Water, am of the opinion that—

Southern Rural Water has complied with the obligations

imposed by section 7(1) of the *Safe Drinking Water Act 2003* during the audit period.

Audit finding: **COMPLIANT**

Signature of approved auditor:



Date:

3 / May / 2018