

Safe Drinking Water Act 2003

Water Storage Manager Water Quality Annual Report 2019/20

Southern Rural Water

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 SRW's commitment to the safe drinking water framework, any issues in the current year relating to the quality of untreated water which is managed by SRW and details that are required by the regulations.

This 2019/2020 annual report covers the period from 1 July 2019 to 30 June 2020 and was developed in accordance with the *Safe Drinking Water Regulation Guidance Note* released by the DHHS in June 2019, and with Regulations 16 and 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 or secondary contact water-based 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 and is scheduled for review late 2020.

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.

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	Catchme nt Manage ment Authorit y
Werribee system	Lake Merrimu (Lerderderg River)	Merrimu Reservoir	Offtake @ tower (valve house)	No	Western Water	Melbourne Water / Port Phillip Westport CMA
	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 2018/19 Water Storage Manager Annual Report.

2 Source water protection

SRW has developed Eastern and Western Storages Sustainability Plans that cover its drinking water storages. These plans include SRW's Safe Drinking Water Risk Management Plans for each storage in accordance with the requirements of the *Safe Drinking Water Act 2003* and *Regulations 2015*. 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 regularly reviewed and updated. During 2019/20, SRW undertook a comprehensive review that included investigating historic water quality data, emerging risks identified within industry, and incidents experienced and managed by SRW. The review, conducted in partnership with key stakeholders including Western Water and Gippsland Water, ensures that SRW's risk management plans identify new or emerging risks to water quality, re-assess existing risks, and identify ways to control those risks.

The risk posed by environmental *E.coli* and shifting BGA frequencies were identified as risks requiring specific action. The risk posed by environmental *E.coli* has been addressed by developing water quality monitoring that assists SRW and its urban water partners in distinguishing between an *E.coli* bloom and a potential contamination event, and developing specific incident management procedures that include on-ground catchment checks to support water quality data results. With regards to BGA, SRW has adjusted the frequency of its BGA testing (biovolume and species) for Lake Glenmaggie, with scope for further changes to the program in future, including use of real-time water quality sensors.

SRW, Western Water (WW) and Gippsland Water (GW) maintain and adhere to a Memorandum of Understanding for the collection and sharing of water quality data, and other information pertinent to the protection of drinking water. 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 & Western Water undertaking routine monitoring of:
 - Physical/chemical parameters and metals within the storages; and
 - Sub-surface water samples for BGA biovolume at their offtake
- SRW undertaking:
 - Visual inspections and surface water quality monitoring for BGA biovolume and species 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 (details of sampling undertaken for these incidents contained in Section 4)

SRW recognises that actions within the greater catchment can have a direct impact on its storages. SRW works closely with local Councils, Catchment Management Authorities (CMA's) and other agencies to influence and facilitate appropriate management to protect the quantity and quality of water captured in our storages. Examples of the works undertaken in 2019/20 include;

- Ongoing support for and implementation of Domestic Wastewater Management Plan's in relevant municipalities (Moorabool, Macedon Ranges, Baw Baw and Wellington)
- Fulfilling SRWs role as a referral authority under the *Planning and Environment Act 1987*, including assessment of applications against the *Ministerial Guidelines for Planning Permits in Open Potable Water Supply Catchment Areas 2012*
- Working with Melbourne Water on stream frontage improvement projects and weed and pest control works to improve catchment condition and water quality
- Working with the West Gippsland CMA and Gippsland Water on stormwater management from the Willow Grove township area to Blue Rock Lake

3 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.

3.1 Issues

Not applicable.

4 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)

4.1 Incidents under Section 22 of the Act

SRW had no reportable incidents in 2019/20 under Section 22 of the Act.

4.2 Other incidents

4.2.1 Blue-green Algae

Under the Department of Environment, Land, Water and Planning's (DELWP) Algal Bloom Response Plan (2017) and Victorian Blue-Green Algae Circular (2018), SRW is obliged to notify agencies such as urban water suppliers, DHHS, the Environment Protection Authority (EPA) and DELWP of BGA blooms in storages and water bodies where SRW are defined as the Local Waterway Manager. 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.

Southern Rural Water do not treat and supply drinking water to the public in Victoria. Therefore, SRW are not best placed to determine whether BGA levels pose a public health risk to drinking water supplies. Additionally, surface water sampling for BGA may return different results to the water quality sampling at depth taken by urban water suppliers. 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, and communicates the presence of a bloom in its drinking water storages.

In accordance with DELWP's Algal Response Plan (2017) and Victorian Blue-Green Algae Circular (2018) there were three reportable blooms in drinking water storages over 2019/20 as follows;

- Two blooms at Pykes Creek Reservoir, December to January 2019-20 and March 2020
- One bloom at Rosslynne Reservoir in November 2019

In both instances, Western Water were able to manage the BGA effectively through treatment processes.

4.2.2 Merrimu Reservoir – suspected septic leak in catchment

A suspected septic leak was detected by Melbourne Water (MW) during routine maintenance on the Pyrites Creek in the Merrimu catchment in May 2020. The detection was reported by

Melbourne Water to Southern Rural Water (SRW) and the local Council, and Western Water (WW) was notified by Southern Rural Water.

Inspections and sampling for *E.coli* was performed by SRW on the day of the suspected sewerage leak in the creek and at the entry to the reservoir. WW referred to their sampling records from the same week with no issues identified. As the offtake tower was 6km from the leak location, additional sampling was performed the following day to allow for the time delay in low flows from the catchment and tributary reaching the reservoir itself.

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 event (and vice versa)
- Additional water quality sampling for *E.coli* and nutrients was undertaken by SRW and Western Water to monitor the situation. Catchment inspections, including drone investigation of the suspected leak site, were conducted.
- SRW and WW continued to work with Melbourne Water and local council officers to investigate the suspected leak which was in an area that was difficult to access. Council undertook inspection of septic systems on a nearby property.
- The issue was reported to all relevant agencies such as DHHS, EPA & DELWP, and regular updates were provided to internal and external stakeholders
- No water quality changes were identified at Western Water's water treatment plant located at Merrimu which continued to successfully treat and supply drinking water to the township of Bacchus Marsh, Merrimu and Toolern Vale for the duration of the event.

The conclusion of the investigation was that there was no septic leak. Notwithstanding this, there were opportunities for improvement identified during the event including;

- Online monitoring in reservoir to detect changes in water quality in real-time
- Incident management discussion across agencies (including council and Melbourne Water) including identifying response options for future issues arising in the catchment, and
- Continued review and assessment of risk in the Merrimu catchment

Western Water are currently progressing plans for online monitoring within the reservoir. Initial discussions have been held between SRW, WW, Melbourne Water and Council which has progressed understanding of catchment roles, though further discussion is planned following easing of COVID restrictions. It is expected that the outcomes of these discussions will be incorporated in to SRW's risk management plan and emergency management procedures.

4.3 Issues

No issues other than those outlined in Section 4.2 above.

5 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.

In 2019/20, SRW began its statutory audit of its risk management plans as per the *Act* and on request from DHHS. However, due to the impacts and restrictions on movement imposed because of the COVID-19 pandemic, the audit was not finalized during the 2019/20 financial year. The outcomes of the audit will be reported in SRWs 2020/21 Annual Report.

Notwithstanding the above, SRW were last 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.

Since the 2018 audit, SRW has undertaken works to address the opportunity for improvement identified in the audit. Actions undertaken include;

- Analysis of historic water quality data for all storages under varying conditions including during events, different reservoir levels and incidents to improve understanding of the risks to water quality under these circumstances. This included analysis of pathogens under various conditions.
- Review of the current risk management plan and associated controls for event-based contamination as described in the OFI.

The outcomes of this review informed the most recent update of SRWs risk management plans. As a result of the review, SRW will provide notifications to urban water authorities during periods of high inflows, continue to liaise on changes to offtake levels to access the highest-quality water, and continue to focus on preventative measures in the catchment. These measures include responding to planning referrals involving onsite wastewater management systems and supporting CMA works for waterway improvement and buffering. Depending on the storage and the situation at hand, SRW can also discuss with urban water authorities the possibility of temporary cessation of water diversions from river systems with known or suspected contamination. Further controls with respect to treatment of raw water are implemented by SRWs urban water partners and take into consideration catchment risks, classification, and water quality monitoring.

6 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.

7 Further Information

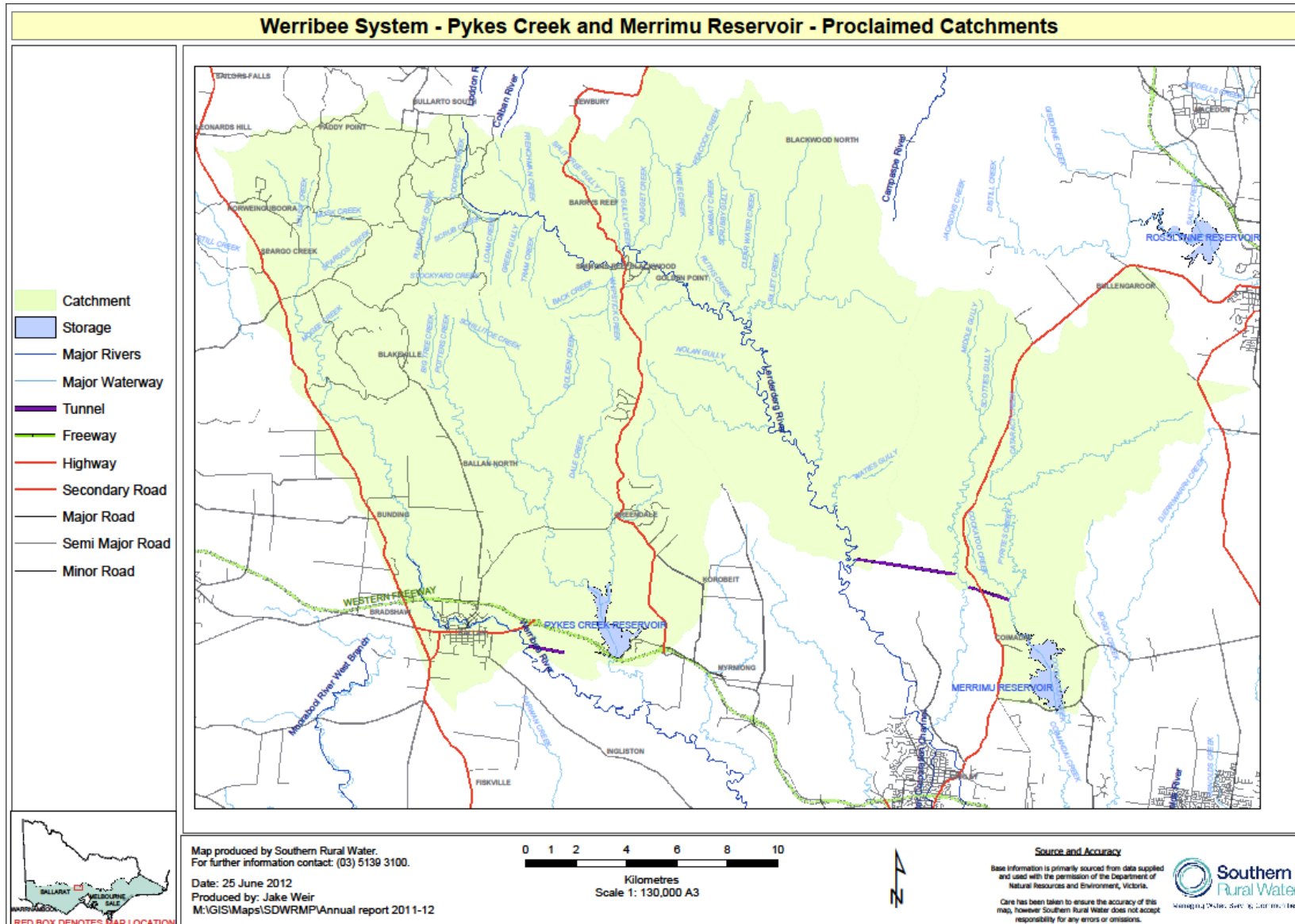
Further information regarding SRW's responsibilities for BGA reporting, routine monitoring that is undertaken, current alerts and media releases, together with general information can all be found at SRW's website www.srw.com.au. This information is updated as required.

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

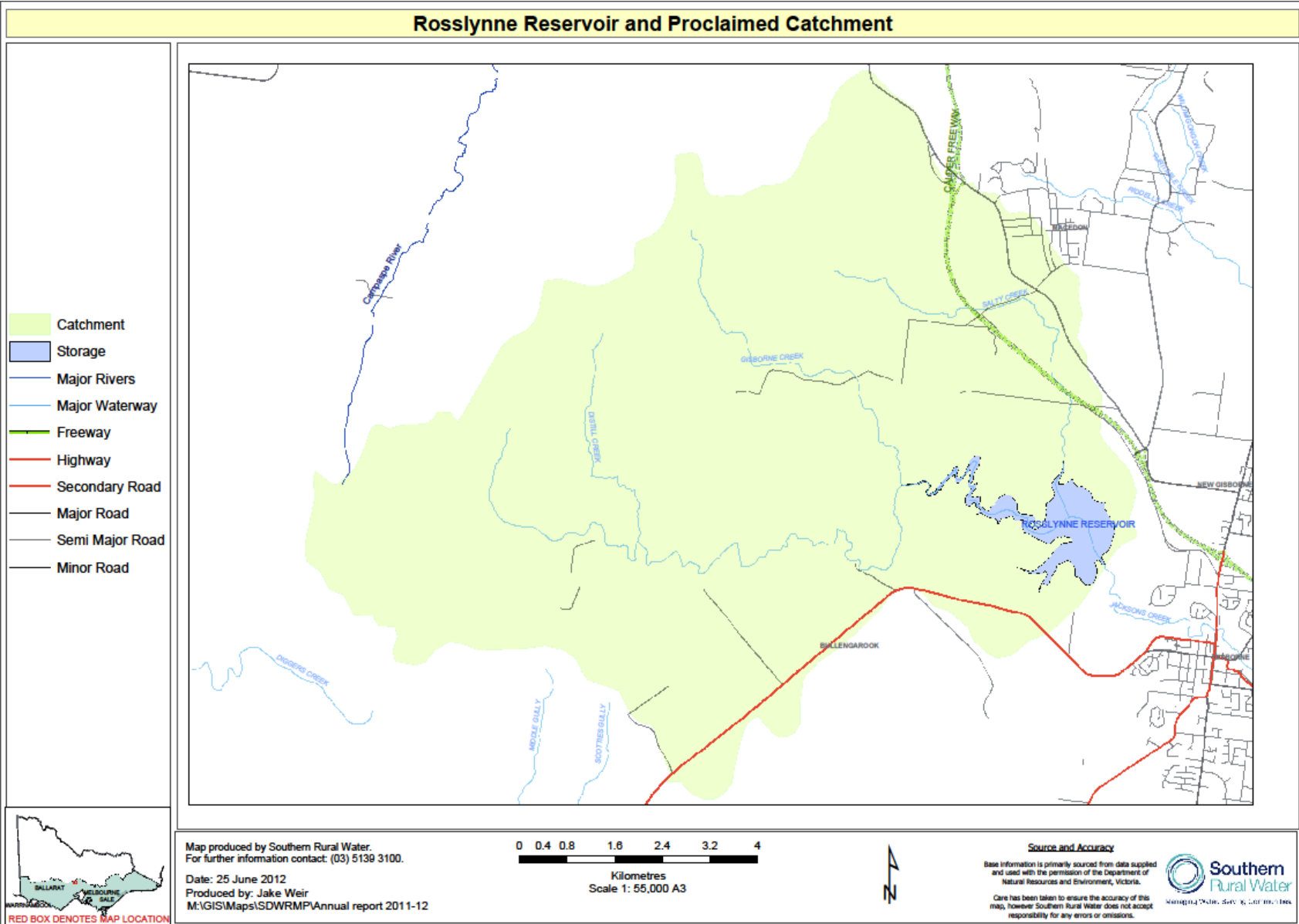
In addition, SRW can be contacted directly during business hours by email srw@srw.com.au or by telephone (03) 5139 3100.

8 Appendix

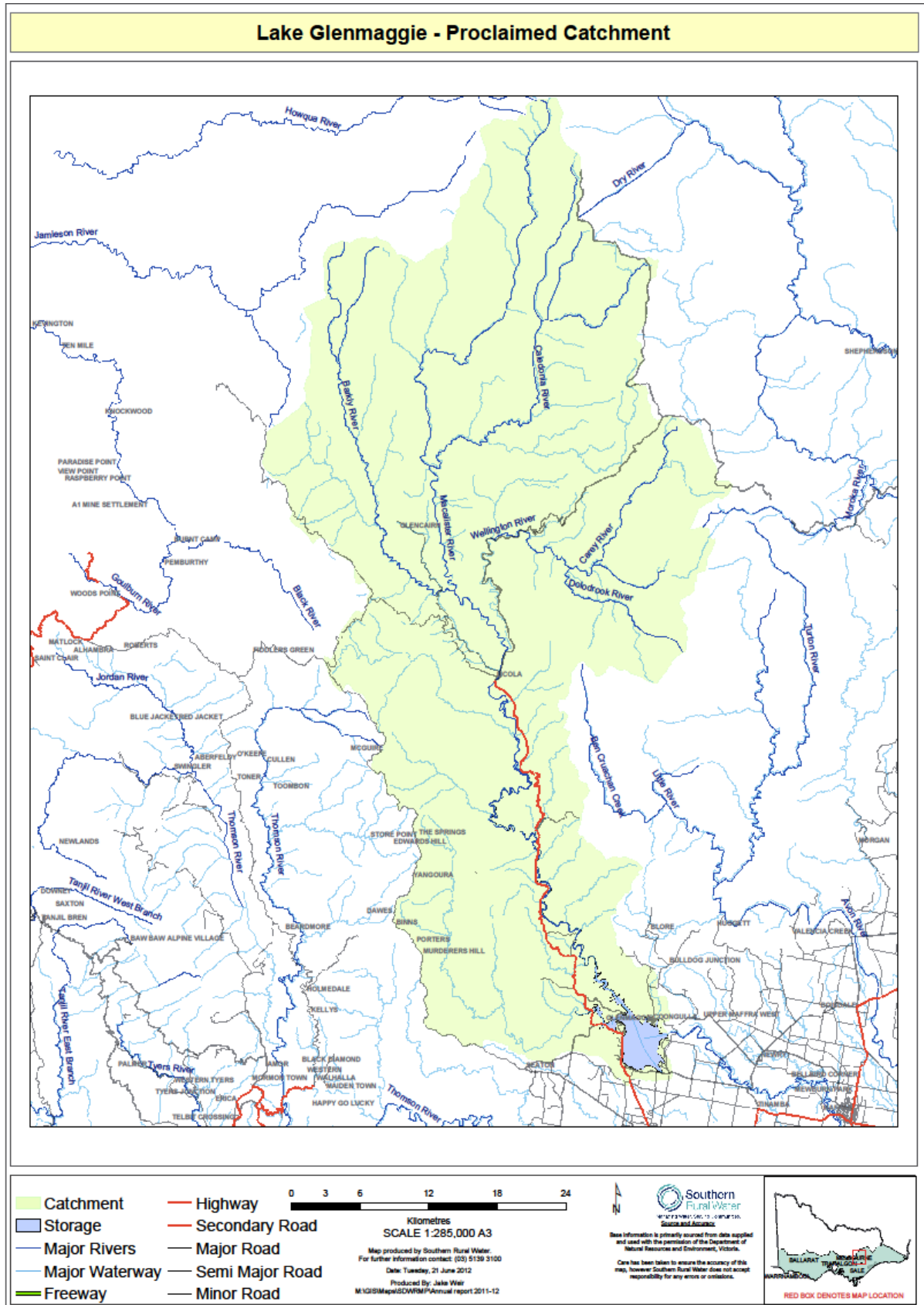
8.1 Appendix 1: Merrimu Reservoir, Pykes Creek Reservoir and Proclaimed Catchments



8.2 Appendix 2: Rosslynne Reservoir Proclaimed Catchment



8.3 Appendix 3: Lake Glenmaggie Proclaimed Catchment



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

