



Safe Drinking Water Act 2003

Water Storage Manager

2014/2015 Annual Report

Document History and Distribution

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Distribution

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1. Introduction

Goulburn-Murray Water Rural Water Corporation (GMW) is defined as a Water Storage Manager under the *Safe Drinking Water Act 2003*. This 2014/15 Annual Report to the Secretary of the Department of Health and Human Services (DHHS) has been prepared to satisfy the annual reporting requirements of the *Safe Drinking Water Act 2003* (the Act) and *Safe Drinking Water Regulations 2005* (Regulations). The *Safe Drinking Water Regulations 2015* did not commence operation until 18 July 2015.

This report also demonstrates GMW's ongoing commitment to managing risks to the quality of the water the corporation delivers to water suppliers.

The report contains the following sections:

- Section 2 Roles and responsibilities of GMW under the Act and Regulations
- Section 3 Regulations component report
- Section 4 Other relevant information and activities

Further information regarding this report can be obtained by contacting Mark Bailey, Manager Water Resources, or Greg Smith, Manager Water Quality during business hours on (03) 5826 3516 or (03) 5826 3732 respectively or by email mark.bailey@gmwater.com.au, greg.smith@gmwater.com.au.

Water quality data collected by GMW is available to the public via the Victorian Water Measurement Information System at <http://data.water.vic.gov.au/monitoring.htm> or by contacting Greg Smith on the above email.

2. Goulburn-Murray Water systems & role

GMW manages the bulk water delivery and transfer for around 30% of Victoria's land area, or approximately 68,000 km² (Figure 1). GMW operates 22 storages in its region including Murray-Darling Basin Authority storages managed by Victoria. GMW's area of operation includes the Upper Murray, Ovens, King, Broken, Goulburn, Campaspe and Loddon river basins as well as the Murray River. GMW also operates an extensive network of water distribution channels, pipelines and natural carriers to deliver raw water to its customers. Customers take water from these supply systems via a pump or a gravity irrigation outlet.

Water supplied by GMW is not chlorinated or treated to improve its suitability for any particular use and should never be considered fit for human consumption without first being properly treated.

GMW provides bulk water in accordance with Bulk Entitlement Orders to seven urban water corporations (water suppliers) Coliban Water, Central Highlands Water, North East Water, Goulburn Valley Water, Grampians Wimmera Mallee Water, Lower Murray Water and (potentially) Melbourne (see Section 4.4). The Bulk Entitlements provide for quantity of supply, but make no guarantee of quality. GMW does not operate the reticulated supply systems. The raw (untreated) water supplied by GMW to water suppliers for treatment and supply to their customers in 117 towns via 83 offtake points across northern Victoria (see Appendix 1 for a list of towns supplied including water sources). GMW provides raw (untreated) water to water suppliers in four different ways:

1. From storages directly (via water supplier infrastructure) e.g. Nagambie from Goulburn Weir.
2. Via the outlet works of storages (GMW infrastructure) e.g. Bendigo from Lake Eppalock.
3. Indirectly from rivers supplied by storages e.g. Seymour from Goulburn River, supplied by Lake Eildon.
4. Via GMW's channel system e.g. towns in the Goulburn Murray Irrigation District.

There were no changes to supply sources of water supply offtakes where GMW is the Water Storage Manager in 2014-15.

GMW recognises that water is supplied to urban water corporations for treatment and distribution for drinking water purposes. Our commitment to drinking water quality management is reflected in the corporate drinking water quality policy. This Policy requires GMW to *address threats to safe drinking water by preparing and implementing a Risk Management Plan to meet its obligations as a Water Storage Manager under the Safe Drinking Water Act 2003*.

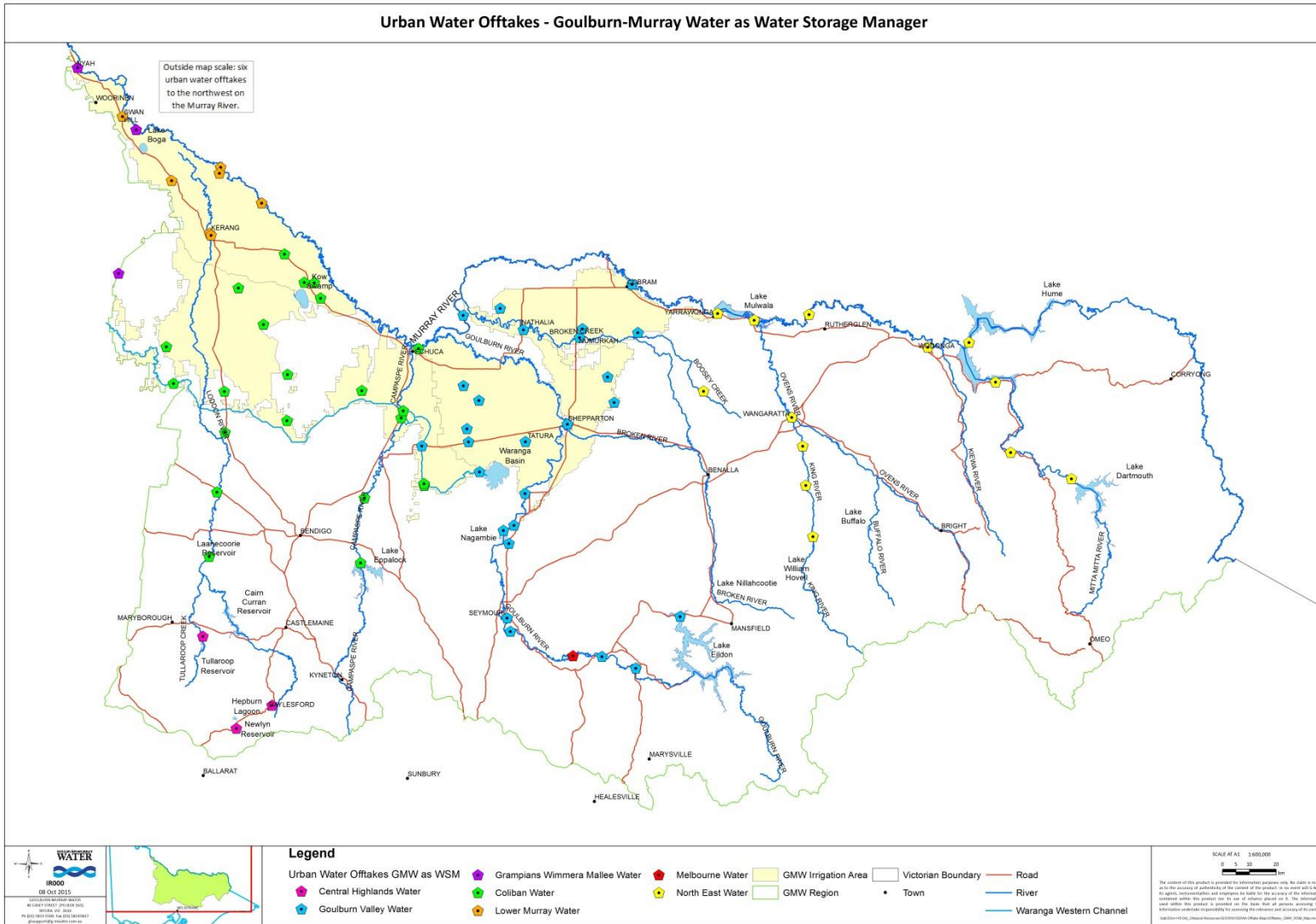
GMW is required to consider risk management for all of the water supply mechanisms it uses to provide water to water suppliers. This includes risks associated:

- with the catchment leading to the storage;
- within the storage itself;
- with the supply of water downstream of storages using natural carriers such as rivers and creeks; and
- With the supply of water via channel systems to each drinking water off take point.

A *Safe Drinking Water Act* Water Storage Manager Risk Management Plan (RMP) has been prepared and implemented in accordance with the Act and Regulations and is regularly reviewed by GMW. Copies of the RMP are available to the public upon request to GMW. The plan includes general requirements and considers GMW activities to manage the risk to water quality. There is also a section that specifically focuses on risks in and around GMW's storages and within GMW's irrigation districts.

GMW meets regularly with water suppliers to discuss any issues arising from the RMP or operations including incident response, blue green algae warnings, risk identification, sharing of information and water resource management.

Figure 1: GMW's area of operation



3. Regulation Components Report

3.1 Emergency and incident management

Regulation 15(2)(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 the water supplied for drinking purposes generally; and
- (ii) the quality of the water supplied where that supply posed a risk to human health;

In order to understand incident information below it should be noted that the catchments in northern Victorian where water is harvested are open to a wide variety of land and water based activities and are not closed to access and/or use, such as Melbourne's water supply catchments. These land use activities include agriculture, aquaculture, forestry, industry, regional urban centres, townships, major transport infrastructure and recreation.

Within the 2014/15 year GMW recorded 26 incidents that were regarded as having the potential to affect the quality of water supplied to a water supplier or potentially posed a risk to human health. None of these incidents were classed as emergencies. Each incident was handled using GMW's incident response procedure which includes formal processes for communicating about, responding to and reviewing the incidents. Details of these incidents are listed in Appendix 2 including notification to water suppliers where required. There were no notifications made to DHHS under section 22 of the Act during 2014/15.

Blue Green Algae Management

Management of Blue Green Algae (BGA) by GMW is a key program/process that manages a key risk to the safe supply of water to water suppliers.

High levels of BGA (cyanobacteria) regularly occur across GMW's region and have the potential to affect drinking water supplies. GMW is the Local Water Manager (LWM) for BGA risk management in its storages, channels and drains; and the Regional Coordinator (RC) for regional BGA incidents. BGA in the River Murray is managed by New South Wales authorities with input from GMW and other Victorian agencies.

GMW prepared BGA Response Plans for all GMW managed water bodies and river basins in accordance with the protocols set out in the former Department of Environment and Primary Industries (DEPI) Blue-Green Algae Circular for 2014/15 (the Circular). These plans provided guidance on the preparation for and response to BGA incidents, including notification of relevant stakeholders. GMW continued to engage with relevant stakeholders, including via a pre-season meeting held in November 2014 which was also a requirement of the Circular.

A BGA Status Report is circulated on a minimum monthly bases to a broad range of stakeholders including the DHHS, DEPI (now Department of Environment, Land, Water and Planning (DELWP)), water suppliers, catchment management authorities (CMAs) and local government. The report contains the latest BGA laboratory results for GMW's storages and key water supply assets.

BGA Warnings

In accordance with the 2014/15 BGA response plans, GMW advised DEPI/DELWP and DHHS of any BGA levels that had the potential to affect public health through drinking water or recreational contact via the BGA status report. Three BGA warnings (based on recreational

guidelines) were issued and DHHS and DEPI/DELWP were notified via telephone and email when the total biovolume of known toxic BGA species exceeded 4mm³/L and/or widespread BGA scums were observed.

Warnings in GMW's Storages

There were two BGA warnings issued for GMW's storages during 2014/15 (based on recreational guidelines). The warnings were issued for Hepburns Lagoon from March to May 2015 (62 days) and Lake Boga from February to May 2015 (84 days). Lower Murray Water was notified of the Lake Boga warning, in addition to receiving the routine status reports. No water suppliers were impacted by the Hepburns Lagoon incident.

Warnings in Irrigation Areas

The only BGA warning issued (based on recreational guidelines) in 2014/15 was in the Torrumbarry Irrigation Area within the Gunbower Creek system at Gum Lagoon from January to February 2015 and again from late March to mid-April 2015. No water suppliers were impacted by either of these incidents.

Further information regarding GMW's responsibilities for BGA monitoring and reporting can be found on GMW's website www.g-mwater.com.au. BGA factsheets and information on the current status of GMW's storages and irrigation areas can be found on the BGA webpage <http://www.g-mwater.com.au/bluegreenalgae-alert/>. In addition, the public can access warning information by calling GMW's BGA Hotline on (03) 5826 3785, by contacting GMW directly during business hours on 1800 013 357 or emailing reception@g-mwater.com.au.

3.2 Issues arising from emergencies, incidents or events

15(2)(b) any issues that may have arisen out of the taking of the actions referred to in paragraph (a);

No additional issues were identified in the management of the incidents that occurred in 2014/15, including BGA incidents. GMW continues to work with water suppliers and other catchment partners to minimise the impact to water quality from incidents and events that occur within GMW's area of operation.

3.3 Summary of exemptions and undertakings

Regulation 15(2)(c) a summary of every—

(i) exemption under section 8 of the Act and any condition imposed in relation to every exemption; and

(ii) written undertaking by the water storage manager accepted by the Secretary under section 30 of the Act;

There were no exemptions or undertakings in place with DHHS during 2014/15.

3.4 Summary of processes to disinfect or treat water

Regulation 15(2) (d) 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 by the water storage manager, and any issues arising out of the application of those processes; and

GMW does not disinfect, treat or process any water supplied to its customers. All water supplied by GMW is not suitable for direct human consumption and GMW customers are advised of this (see also Section 4.3).

3.5 List of chemicals or substances

Regulation 15(2) (e) a list of all the chemicals and other substances, and any processes, used by a water storage manager to disinfect or treat the water supplied, or to be supplied, by it for drinking purposes; and

While GMW does not treat or process any water for drinking water purposes, please note the following:

- GMW sometimes applies herbicides to vegetation adjacent to channels used to supply water suppliers. When spraying is planned, GMW notifies the relevant drinking water supplier before this occurs.
- When necessary (locust plagues, for example), GMW only uses pesticides that are suitable for use adjacent to waterways and in a manner consistent with current best management practices and regulations.

3.6 Risk Management Plan audit findings and issues raised

Regulation 15(2) (f) 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.

A regulatory audit was not required to be undertaken during this reporting period.

4. Other Relevant Activities/Information

4.1 Statutory Planning

GMW assesses planning applications to meet a range of objectives, including the requirements of the Act and Regulations to minimize risks to water quality within our catchments. Under Section 55 of the *Planning and Environment Act 1987*, GMW is a statutory referral authority for developments and subdivisions within any declared Special Water Supply Catchments. A list of the declared Special Water Supply Catchments can be found in Schedule 5 of the *Catchment and Land Protection Act 1994* and there are several of these catchments in each of the system specific risk management plans. For all other areas, GMW is only notified of any development applications as an interested or affected party under Section 52 of the *Planning and Environment Act 1987*.

GMW's role in statutory planning is a key activity to manage the risks to water quality associated with various land uses and development within GMW's area of operation. This is achieved by ensuring that GMW receives appropriate applications, provides conditions to minimize the risk to water quality or in some instances objecting to applications where it is determined that the application poses an unacceptable risk to water quality. GMW receives planning applications from 26 local government authorities and DELWP (including on behalf of Alpine Resorts) (Table 1). In 2014/15 GMW received a total of 1,371 applications. GMW also provided responses for 7 Work Plans from the Department of Economic Development, Jobs, Transport and Resources for developments such as mines and quarries.

Table 1: Planning Permit Applications received from Municipalities from 2005/06 to 2014/15

Municipality	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Alpine Shire	23	105	85	69	57	70	66	29	46	35
Ballarat	10	13	11	4	9	10	10	7	10	9
Benalla	4	6	11	20	8	15	3	5	8	8
Bendigo	33	58	58	51	36	64	73	47	52	70
Campaspe	27	131	106	108	99	91	52	93	69	78
Central Goldfields	11	10	11	7	14	12	13	6	13	14
DELWP (including Alpine Resorts)	0	2	0	2	1	3	2	1	0	6
East Gippsland	-	-	-	-	-	-	-	-	5	1
Gannawarra	14	34	47	34	19	25	23	31	46	59
Hepburn	291	250	136	101	122	128	109	113	106	117
Indigo	30	18	8	5	8	5	19	22	23	48
Loddon	13	10	11	7	4	6	4	12	6	7
Macedon Ranges	95	87	101	124	114	120	216	155	128	131
Mansfield	18	30	46	74	49	105	99	87	120	135
Mildura	1	2	4	1	0	2	3	4	2	4
Mitchell	60	63	47	14	14	22	18	9	15	15
Moira	49	211	186	77	199	142	150	153	128	172
Moorabool	-	3	1	-	2	2	2	4	1	1
Mount Alexander	78	80	72	85	89	163	118	90	48	72
Murrundindi	34	49	52	24	35	52	37	21	19	27
Pyrenees	3	11	5	10	6	14	7	12	7	13
Shepparton	98	197	169	174	108	139	153	109	95	148
Strathbogie	64	42	62	62	59	92	77	86	70	25
Swan Hill	12	19	26	18	13	23	21	28	30	24
Towong	33	48	65	69	61	72	117	71	74	80
Wangaratta	4	4	3	9	3	7	32	27	51	38
Wodonga	9	8	10	12	13	26	23	13	19	34
Total	1,014	1,491	1,333	1,161	1,142	1,410	1,447	1,235	1,191	1,371

4.2 Land and On Water Management Plans

Land and On Water management is about managing community, recreational and environmental aspects of water storages and surrounding lands. The aim is to protect and enhance water quality, improve the ecological health of waterways and provide safe, sustainable public access. GMW storages are easily accessible by the general public and provide highly valued recreational opportunities for tourists and local communities.

GMW has completed the development of 12 Land and On Water Management Plans (LoWMPs) and is working on plans for an additional four water storages (including the Victorian Mid-Murray Storages which consist of a series of storages). These plans, which include input from storage communities, stakeholders and recreational users, will guide how GMW and other agencies manage public access and recreational activities, facilities and development on and around water storages over a five year period. The plans focus on cultural, recreational, environmental and water quality management issues at storages. However, they are not designed to make recommendations on storage operations such as water levels and releases.

Technical assessments of the risks to water quality have been undertaken for most GMW storages in accordance with GMW's obligations as a water storage manager under the Act. These assessments help to identify and prioritise actions required to maintain and/or improve water quality and assist with decision-making processes regarding actions and priorities in and around various storages. This risk assessment process links with the LoWMP process. Although some risk assessments have been completed since the finalisation of LoWMPs outcomes from the risk assessments will be incorporated into future updates of the plans.

4.3 Advising People about Non-potable Water Supplies

All water supplied by GMW is not suitable for human consumption or related uses without first being properly treated. Following consultation with DHHS and water suppliers in 2007, GMW developed a Customer Information Statement to advise customers of the non-potable nature of the water supplied. This statement was reviewed in 2014/15, and is provided to all GMW customers and is located on the GMW website (<http://www.g-mwater.com.au>). Customer invoices include a statement regarding the non-potable nature of the water supplied by GMW.

4.4 Melbourne Water

The Sugarloaf (or North-South) Pipeline was constructed to supply water from the Goulburn catchment downstream of Lake Eildon to Melbourne Water's Sugarloaf Reservoir (and subsequently to Yarra Valley Water, City West Water, and South East Water). The pipeline has not been in operation since November 2010. GMW's agreement with Melbourne Water and associated Bulk Entitlement is still in place. GMW has therefore continued to provide the opportunity for Melbourne Water to be involved in GMW's management of risks to water quality within the Goulburn catchment.

4.5 Other activities

GMW continues to be involved in various activities to manage risks to water quality. This includes ensuring that there are appropriate procedures, monitoring, communication and associated agreements in place with relevant stakeholders in the event of an environmental incident.

In addition to the individual risk assessments completed for GMW storages, hazards to water quality in irrigation areas are now being assessed and any high to very high risks identified are being listed in GMW's RMP.

During 2014/15 there were no major emergencies, such as drought, fire or flood.

Appendix 1. Towns supplied where GMW is the water storage manager

Water Supplier Offtakes - GMW as Water Storage Manager	
Town Supplied	Supply Source
Central Highlands Water	
BALLARAT	Newlyn Reservoir
DAYLESFORD	Hepburns Reservoir (backup supply)
MARYBOROUGH	Tullaroop Reservoir
Coliban Water	
AXEDALE	Lake Eppalock
AXEDALE	Waranga Western Channel
BENDIGO	Lake Eppalock
BENDIGO	Waranga Western Channel
BOORT	Pyramid Hill Channel No.3
BRIDGEWATER	Loddon River (Bridgewater offtake)
COHUNA	Gunbower Creek (Cohuna offtake)
DINGEE	Pyramid Hill Channel No.1
ECHUCA	River Murray (Echuca offtake)
GOORNONG	Campaspe River (Goornong offtake)
GUNBOWER	Taylor's Creek
HEATHCOTE	Lake Eppalock
JARKLIN	East Loddon Pipeline
LAANECORIE	Loddon River (Laanecorie offtake)
LEITCHVILLE	Torrumbarry 5/1 Channel
LEITCHVILLE	Gunbower Creek (Leitchville offtake)
LOCKINGTON	Supply Channel off the Waranga Western Channel (No 24 Channel)
MACORNA	Pyramid Hill 10/1 Channel
MITIAMO	Mitiamo spur off the Pyramid Hill Channel No. 1
MYSIA	Waranga Western Channel - Mysia
PYRAMID HILL	Pyramid Hill Channel No. 1 (12/5/1)
RAYWOOD	Lake Eppalock
RAYWOOD	Waranga Western Channel
ROCHESTER	Campaspe River (Rochester offtake)
ROCHESTER	Waranga Western Channel (Rochester offtake)
SEBASTIAN	Lake Eppalock
SEBASTIAN	Waranga Western Channel
SERPENTINE	East Loddon Pipeline
Goulburn Valley Water	
ALEXANDRA	Goulburn River at Alexandra
AVENEL	Goulburn River at Seymour
BARMAH	River Murray (Barmah offtake)
BONNIE DOON	Lake Eildon

Water Supplier Offtakes - GMW as Water Storage Manager	
Town Supplied	Supply Source
BROADFORD	Goulburn River at Tallarook
COBRAM	River Murray at Cobram
COLBINABBIN	Waranga Western Channel at Colbinabbin
CONGUPNA	Goulburn River at Shepparton
COROP	Waranga Western Channel (Corop offtake)
DOOKIE	East Goulburn Main Channel
EILDON	Goulburn River at Alexandra
GIRGARRE	Central Goulburn 12/9 Channel
GOULBURN WEIR (BAXTERS ROAD)	Lake Nagambie (Baxter's Rd offtake)
KATAMATITE	Murray Valley 7/3 Channel
KATANDRA WEST	Shepparton 2/24 Channel
KIRWANS BRIDGE	Lake Nagambie (Kirwan's Bridge offtake)
KYABRAM	Central Goulburn 9 Channel
MERRIGUM	Central Goulburn 9 Channel
MOLESWORTH	Goulburn River (Molesworth offtake)
MOOROOPNA	Goulburn River at Shepparton
MURCHISON	Goulburn River (Murchison offtake)
NAGAMBIE	Lake Nagambie (Nagambie offtake)
NATHALIA	Broken Creek
NUMURKAH	Murray Valley 6/6 Channel
NUMURKAH	Broken Creek
PICOLA	Murray Valley 9/9/6 Channel
RUSHWORTH	Waranga Basin
SEYMOUR	Goulburn River at Seymour
SHEPPARTON	Goulburn River at Shepparton
STANHOPE	Central Goulburn 1/12/9 Channel
STRATHMERTON	River Murray at Cobram
TALLAROOK	Goulburn River at Seymour
TALLYGARoopNA	Goulburn River at Shepparton
TATURA	Central Goulburn 3/5A Channel
THORNTON	Goulburn River at Alexandra
TONGALA	Central Goulburn 28/9 Channel
TOOLAMBA	Goulburn River at Shepparton
WATERFORD PARK	Goulburn River at Tallarook
WUNGHNU	Murray Valley 6/6 Channel
WUNGHNU	Broken Creek
Grampians Wimmera Mallee Water	
BERRIWILLOCK	River Murray - Nyah
CHILINGOLLAH	River Murray - Nyah
CHINKAPOOK	River Murray - Nyah
CULGOA	River Murray - Swan Hill (Pental Island)
LALBERT	River Murray - Swan Hill (Pental Island)

Water Supplier Offtakes - GMW as Water Storage Manager	
Town Supplied	Supply Source
MANANGATANG	River Murray - Nyah
NANDALY	River Murray - Nyah
NULLAWIL	River Murray - Swan Hill (Pental Island)
NYAH	River Murray - Nyah
OUYEN	River Murray - Wemen
PATCHEWOLLOCK	River Murray - Wemen
QUAMBATOOK	4/1 Channel (Normanville Pipeline)
SEA LAKE	River Murray - Swan Hill (Pental Island)
SPEED	River Murray - Wemen
TEMPY	River Murray - Wemen
ULTIMA	River Murray - Swan Hill (Pental Island)
UNDERBOOL	River Murray - Wemen
WAICHIE	River Murray - Nyah
WALPEUP	River Murray - Wemen
WEMEN	River Murray - Wemen
Lower Murray Water	
KERANG	Loddon River (Kerang Alt. offtake)
KERANG	Torrumbarry 14/2 Channel (Kerang Alt. Offtake)
KERANG	River Murray at Koondrook (Kerang Alt. Offtake)
KOONDROOK	River Murray at Koondrook (Koondrook offtake)
MILDURA	River Murray (Mildura Alt. offtake)
MILDURA WEST	River Murray (Mildura West Alt. offtake)
MURRABIT	Torrumbarry 2/11/4 Channel (Murrabit Alt. offtake)
MURRABIT	River Murray (Murrabit Alt. offtake)
MYSTIC PARK	Kangaroo Lake (Mystic Park Non Potable offtake)
PIANGIL	River Murray (Piangil town offtake)
RED CLIFFS	River Murray (Red Cliffs offtake)
ROBINVALE	River Murray (Robinvale offtake)
SWAN HILL	Murray River (Swan Hill offtake)
Melbourne Water	
MELBOURNE	Goulburn River (via Sugarloaf Pipeline at Killingworth)
North East Water	
BARNAWARTHA	Wodonga Creek (an anabranch of the Murray River)
BELLBRIDGE	Lake Hume
BONEGILLA	Wodonga Creek (an anabranch of the Murray)
BUNDALONG	Lake Mulwala Back Water
CHILTERN	Wodonga Creek (an anabranch of the Murray)
DARTMOUTH	Mitta Mitta River (Dartmouth offtake)
DEVENISH	Boosey Creek
EBDEN	Wodonga Creek (an anabranch of the Murray)
ESKDALE	Mitta Mitta River (Eskdale offtake)
GLENROWAN	Ovens River (confluence with King River)
KIEWA	Wodonga Creek (an anabranch of the Murray)

Water Supplier Offtakes - GMW as Water Storage Manager	
Town Supplied	Supply Source
MOYHU	King River (Moyhu offtake)
OXLEY	King River (Oxley offtake)
RUTHERGLEN	River Murray at Wahgunyah
ST JAMES	Lake Mulwala
TALLANGATTA	Lake Hume / Mitta Mitta River
TANGAMBALANGA	Wodonga Creek (an anabranch of the Murray River)
TUNGAMAH	Lake Mulwala
WAHGUNYAH	River Murray at Wahgunyah
WANGARATTA	Ovens River (confluence with King River)
WHITFIELD	King River (Whitfield offtake)
WODONGA	Murray Lagoon
YARRAWONGA	Lake Mulwala

Appendix 2. Environmental incidents reported during 2014/15 related to water quality

Risk #	Date	Level	Incident Description	Location	Action undertaken (by GMW)
1559	7/07/14	1	Non-routine wastewater discharge at Wahgunyah to Murray River by North East Water	Murray River at Wahgunyah	Advised Diversions and considered need for customer letter. Requested updates from North East Water.
1558	17/07/14	1	Non-routine wastewater discharge at Chiltern by North East Water	Black Dog Creek at Chiltern	Diversions notified who advised affected GMW customers. Requested updates from North East Water.
1561	18/07/14	1	Non-routine wastewater discharge from Kyneton WRP by Coliban Water (not approved by EPA)	Campaspe River at Kyneton	Diversions notified who advised affected GMW customers. Dams staff also notified. Requested updates and water quality data from Coliban.
1574	5/08/14	1	Non-routine wastewater discharge from Heathcote WRP by Coliban Water (not approved by EPA)	Mclvor Creek at Heathcote	Diversions notified who advised affected GMW customers. Dams staff also notified. Requested updates and water quality data from Coliban.
1573	13/08/14	2	Motor vehicle accident - oil was found in the water following the removal of a motor vehicle.	Central Goulburn - intersection of the Wyuna Main Drain and No 3 Drain	Emergency services coordinated clean-up. GMW notified EPA and removed oil and general clean-up. Water Supplier (WS) notification not required as no urban offtakes downstream.
1584	18/08/14	1	Illegal firewood collection on GMW controlled land	Laanecoorie Reservoir - red gum forest at confluence of Bet Bet Creek & Loddon River	Discussed options for controlling access with Crown Reserve manager at DEPI. Provide report of incident to local Police and request support to monitor access. No WS impacted

Risk #	Date	Level	Incident Description	Location	Action undertaken (by GMW)
1586	30/08/14	1	Poor Water Quality at Lake Eppalock Derinal Pool. Reports of green tinge and an odour observed from the launch ramp, past the end of Lakeside Boulevard (where Mt Ida Inlet meets Derrinal Pool). Potential consequence of the EPA approved releases of effluent into Mt Ida Inlet by Coliban Water.	Lake Eppalock - Derinal Pool	Report potential water quality impact to Coliban Water. Diversions notified to consider notifying GMW customers. Conducted site inspection.
1620	25/09/14	1	Sewerage Spill - Approximately 200kL sewage flowed into Eaglehawk Creek via a stormwater retention basin overnight. The source of the sewage was a Coliban Water broken sub-surface main.	Eaglehawk Creek (which flows into Bendigo Creek)	GMW notified relevant customers. Coliban Water is also the downstream WS, no further action required by GMW.
1626	3/10/14	2	Vehicle accident - car rolled into GMW channel	Murray Valley - Channel 2/5, North East of Katunga	Reduced flow and assessed channel for pollution. Consultation with impacted GMW customers. WS notification not required as no urban offtakes downstream.
1629	4/10/14	2	Burnt out car found on the foreshore at Lake Eppalock.	Moorabbee Foreshore road on Lake Eppalock's foreshore.	Notified Police. Removed vehicle from foreshore. No WS impacted
1663	1/11/14	1	Foreshore/lakebed camping, grading and tree removal. Waterway patrol noted campsites located outside lease camping area on lakebed. While investigating noted large amount of lakebed tree clearance and grading.	Lake Eppalock Holiday Park (GMW lessee operates park), Lake Eppalock	Advised leasee that works had been done without GMW approval and would be reported to GMW Leasing & Licensing. Consider lease conditions and determine breach clauses. Breach notice sent to leasee and follow-up regarding remediation.
1657	3/11/14	1	Vehicle accident - car found in channel (GMW not notified by any authorities).	Central Goulburn - Channel 1/12/9 McColl Road, Stanhope	Contacted Police. Engaged local tow truck to remove the vehicle from the channel. The channel was inspected for any environmental deposits (oil, fuel), nothing was visible. Goulburn Valley Water notified.
1693	13/12/14	1	Sewage Spill - Discharge of 15,000 litres of untreated wastewater into Bendigo Creek. According to Coliban Water, due to the flow in Bendigo Creek on Saturday Coliban Water was unable to contain the spill and remove it via	Bendigo Creek South of Bendigo - Specimen Hill,	Diversions notified and conducted inspection. No GMW customers impacted by discharge.

Risk #	Date	Level	Incident Description	Location	Action undertaken (by GMW)
			vacuum truck.		
1696	21/12/14	2	Oil spill - The hydraulic system which moves the Cylinder Gate suffered some form of failure which has released approximately 200 Litres of oil into the Tower (system holds about 600 Litres) The cylinder gate closed (as it should). AGL Power generators were not running at the time but leakage through the power station has allowed oil to escape into the Pondage. A thin oil film is visible below in the Pondage. No oil was visible outside the tower in the Lake.	Lake Eildon Tower, Conduit, Pondage	Contact made with power company. Multiple booms deployed, bulk heads installed. Leak repaired. Inspections made and no further loss of oil. Service resumed. Goulburn Valley Water notified.
1709	5/01/15	1	Public toilet failure - Attended site to inspect faulty toilet cistern and noted green grass and wet area on land adjacent to the northern end of the toilet. Upon closer inspection noted the water was effluent seeping from the inspection outlet prior to release into a dispersion line. This septic had been pumped out mid 2014 and the dispersion line noted that there was some blockage however with the current high use of the toilet block there is now seepage from the IO	Moorabbee Foreshore Public Toilet Block - Lake Eppalock	Seepage area fenced to prevent public access to the area. Septic tank pumped, ongoing pumping as required. Effluent not observed to be reaching water body. Site inspection Project to repair/replace onsite wastewater management system in progress. No WS impacted
1710	8/01/15	1	Minor sewer spill 30 Lts approx- Sanitation pump connection failure while house boat pumping out black water tank- issue resolved within one hour.	Jerusalem Creek sanitation barge - Lake Eildon	Review barge pump maintenance procedures to ensure that pumps are completely isolated prior to maintenance being undertaken. Review risk assessments for staff undertaking effluent system maintenance. Review Jerusalem Creek pump configuration to improve capacity to isolate individual pumps for maintenance. Provide details of failure to determine if actions can be implemented to eliminate this risk. No WS impacted

Risk #	Date	Level	Incident Description	Location	Action undertaken (by GMW)
1712	9/01/15	1	High level of Blue-green Algae in Gum Lagoon	Torrumbarry Irrigation Area - Gum Lagoon	Implemented actions in accordance with Torrumbarry Irrigation Area BGA Incident Response Plan including stakeholder notification. No WS impacted.
1727	29/01/15	1	Bendigo Creek blackwater event. Evidence of poor water quality - low dissolved oxygen and discolouration - was detected in Bendigo Creek.	Bendigo Creek - various locations	Site inspection and water quality monitoring undertaken. Determined that the most likely cause was low dissolved oxygen as a result of runoff from heavy rainfall in the district. Regular inspections of Kow swamp at Normans Bridge over 7 days to ensure no impacts of event, none observed. No WS impacted
1726	29/01/15	1	Fish stranding at Lake Cooper. The falling level of Lake Cooper has left approximately 1,000 fish (species not advised) stranded in shallow water.	Lake Cooper, south of Corop.	Contacted EPA, no further action required by GMW as Lake Cooper is outside its area of responsibility. No WS impacted.
1733	10/02/15	1	High levels of Blue Green Algae in Lake Boga.	Lake Boga	Implemented actions in accordance with Torrumbarry Irrigation Area BGA Incident Response Plan including stakeholder notification. Lower Murray Water notified.
1734	13/02/15	2	Illegal earthworks - Site inspection found extensive earthworks occurring immediately upstream of Chinamans Bridge within 100 metres of the Goulburn River including GMW land without approval or planning permit. Works include construction of a golf course and scraping with heavy machinery to obtain soil within 20 metres of the Goulburn River and removal of native vegetation.	Goulburn River upstream Chinamans Bridge adjacent Nagambie Heathcote Road	Referred to Council to follow up non-compliance with planning process. GMW Compliance conducted formal interview and to consider potential prosecution. Review existing grazing license, breaches of license conditions and potential cancellation of license. Sent letter to Nagambie Riparian Landowners regarding GMW concerns regarding failure to observe license conditions by a member of the Riparian Group. Goulburn Valley Water notified.
1736	18/02/15	1	Fish death - Customer reported numerous dead fish floating in the 2/20/10/1 Channel.	Pyramid Boort Irrigation District CH000851 - Channel 2/20/10/1	Removed fish and took water quality samples (nothing identified). Visual inspections of channel for further impacts. EPA notified, no WS impacted.

Risk #	Date	Level	Incident Description	Location	Action undertaken (by GMW)
1755	4/03/15	1	High levels of blue-green algae at Hepburns Lagoon	Hepburns Lagoon	Implemented actions in accordance with Tullaroop Reservoir, Newlyn Reservoir and Hepburns Lagoon BGA Incident Response Plan including stakeholder notification. No WS impacted.
1763	20/03/15	1	High Levels of Blue-Green Algae in Gum Lagoon	Torrumbarry Irrigation Area - Gum Lagoon	Implemented actions in accordance with Torrumbarry Irrigation Area BGA Incident Response Plan including stakeholder notification. No WS impacted.
1775	27/03/15	2	Lack of water in creek has trapped fish (carp) in mud	Lake Hume, First Bay Creek, near Tallangatta	EPA notified, EPA indicated no further action required. Incident a result of releases from Lake Hume and insufficient levels in the higher regions at Lake Hume. No WS impacted.
1817	18/06/15	1	EPA advised of potential water contamination in the Mclvor Creek at Heathcote that may have been caused by leakage of hydrocarbons from an underground storage tank at an adjoining disused fuel station. Further EPA inspection on 19 June 2015 downgraded concerns, although EPA are still following up with fuel station owners about leak. EPA also notified Coliban Water and North Central CMA.	Mclvor Creek, Heathcote	Kept in contact with EPA for updates. Diversions notified to consider notifying GMW customers on Mclvor Creek.
-	Various	1	45 incidents where less than 5 animals have been found in GMW managed water bodies.	Various (channel/waterway/storage)	All carcasses removed from waterway and buried in designated location. Weekly inspections. No further notification was required. <i>Note these incidents were not included in summary in Section 3.1</i>