



Glenelg Groundwater Catchment Statement

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Purpose of this document

Victoria has introduced Groundwater Catchments to capture the full extent of connected groundwater resources.

The catchment statement is the first step toward ensuring users and the community have a complete picture of the current management of groundwater in the Glenelg Groundwater Catchment. The objective is, over time, to simplify management of groundwater throughout the catchment and enable users to get access to water for future development. The Glenelg Groundwater Catchment boundary is available at the state government's Central Plan Office (document reference LEGL./12-066).

This document brings together all the plans affecting the licensed use of groundwater in the Glenelg Groundwater Catchment. Water Supply Protection Areas and Groundwater Management Areas exist within the catchment. Statutory management plans apply in some water supply protection areas and local management plans apply in all other areas.

Management plans included in this statement will be reviewed at least every five years, but reviews may occur earlier if required. Reviews will improve existing management and potentially reduce the number of management areas within the catchments. This will make management less complex, while ensuring equitable sharing and long term sustainability of the resource.

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4 May 2017

Definitions

Aquifer

An aquifer is a layer of fractured rock, gravel, sand or limestone below the ground surface with enough space between the particles to hold groundwater and allow it to flow through.

Aquitard

An aquitard is a layer of rock or clay below the ground surface that is tightly compacted and so water cannot easily be held within it or flow through it.

Carryover

Allows entitlement holders to retain ownership of unused water allocated or purchased from the current season into the following season in accordance with rules specified in a Ministerial Order made under section 62A of the *Water Act 1989*.

Designated Area

The area comprising part of the State of South Australia and part of the State of Victoria as specified in the First Schedule of the Act. This is an area 40 km wide and centred on the South Australia—Victoria Border and is the area to which the *Groundwater (Border Agreement) Act 1985* applies.

Entitlements

Water entitlements referred to in this report refer to entitlements issued under section 51 of the *Water Act 1989.*

Geological Units (GU)

A geological unit (Victorian Aquifer Framework) is a layer of soil or rock (sand, gravel, clay, limestone, basalt etc) that has been identified and named in geological assessments across Victoria and is in the Australian Stratigraphic Units Database. Each GU is assigned a unique 5 digit number starting from 10000.

Groundwater basins

One or more groundwater catchments within a geological basin. The basin may extend off-shore or across State boundaries. In some cases a basin may be broken into one or more sub-basins to reflect administrative management boundaries.

Groundwater catchments

An area containing a connected groundwater resource(s), bringing together the input (recharge) areas, use (demand) areas and discharge areas.

Groundwater Management Area (GMA)

A Groundwater Management Area (GMA) is a discrete area where groundwater of a suitable quality for irrigation, commercial or domestic and stock use is available or expected to be available.

Groundwater Management Plan (GMP)

The object of a management plan is to make sure that the water resources of the relevant Water Supply Protection Area are managed in an equitable manner and so as to ensure the long-term sustainability of those resources (section 32(A)(1), *Water Act 1989*).

Groundwater Management Unit (GMU)

Either a Groundwater Management Area or a Water Supply Protection Area.

Hydrogeological Unit (HGU)

A hydrogeological unit (Victorian Aquifer Framework) consists of one or more geological units (GU) of similar soil or rock types which were formed in a similar geological time period ie Quaternary, and

where saturated acts as an aquifer or aquitard. Each HGU is assigned a unique 4 digit number starting from 1000.

Local Management Plans

Local Management Plans describe the resource, management objectives and specific rules such as restrictions, carryover (if applicable) and trade within a specified area. Local Management Plans cannot amend licence conditions.

Permissible Annual Volume (PAV)

The total volume of water that can be taken annually from a particular zone or aquifer in a particular zone in the Designated Area.

Permissible Consumptive Volume (PCV)

The total volume of water that can be taken in an area or water system and a period of time (section 22(A)(1), *Water Act 1989*).

Victorian Aquifer Framework (VAF)

The Victorian Aquifer Framework (v10 DSE, 2012) defines the geological units and hydrogeological units that make up the aquifers and aquitards in each of the groundwater basins across Victoria by using common terminology.

Victorian Water Accounts

The Victorian Water Accounts document main water resource management issues and provides an overview of water availability and use across Victoria.

Water Supply Protection Area (WSPA)

A Water Supply Protection Area (WSPA) is an area declared under section 27 of the *Water Act 1989* to protect the groundwater or surface water resources through the development of a management plan which aims for equitable management and long-term sustainability.

Glenelg Groundwater Catchment

The Glenelg Groundwater Catchment is located in the Otway Basin in western Victoria (Figure 1). The onshore Otway Basin borders the Goulburn Murray Basin to the north and Central Coasts Basin to the east. The basin extends offshore beneath Bass Strait. The Glenelg Groundwater Catchment map is lodged with the Central Plan Office, reference number: LEGL./12-066 GLENELG GROUNDWATER CATCHMENT. Local management plans for sub-areas of the catchment form the basis for groundwater management.

The Local Management Plans do not replace permissible consumptive volumes or approved groundwater management plans. Nor do the local management plans place any additional requirements on the use of groundwater for stock and domestic purposes. The local management plan details can be found in the appendices.

Local Management Plan Area

Plan Details

Glenelg Water Supply Protection Area

Appendix 1

South West Limestone Groundwater Management Plan

Appendix 2

Portland Groundwater Management Area (partial)
 Statement

see Portland Groundwater Catchment

All remaining areas

Appendix 3

The South Australia – Victoria Border Groundwater Agreement (given effect under the *Groundwater Border Agreement Act 1985*) applies to the Glenelg groundwater catchment. The agreement applies to the Designated Area and area that extends 20km either side of the SA/VIC border. The Designated Area comprises 11 zones on each side of the border. For the Glenelg catchment, this includes Zones 1B, 2B, 3B (partial) and 4B (partial) of the Designated Area. Additional information on this agreement is included in Appendix 4.

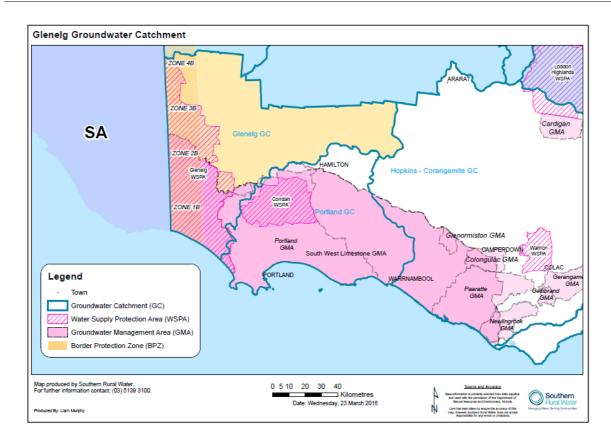


Figure 1: Location of the Glenelg groundwater catchment and GMA/WSPAs in neighbouring catchments.

Local Management Plans may (from Policy 3.3, Western Regional Sustainable Water Strategy, p43):

- document management objectives for the system;
- explain to licence holders (and the broader community) the specific management objectives and arrangements for their water resource and the rules that apply to them as users of that resource;
- be based on existing operational rules, recognising the rights of existing licence holders;
- be consistent with the Policies for Managing Section 51 Take and Use Licences;
- document any limits, including water use caps, Permissible Consumptive Volumes
 (PCVs) or extraction limits that apply to the Groundwater Management Units (GMUs);
- include trading zones and rules;
- clarify water sharing arrangements for all users and the environment, including environmental flow requirements;
- document monitoring and reporting requirements; and
- be periodically reviewed to incorporate new knowledge.

Aquifers in the Glenelg Groundwater Catchment

Groundwater is found in aquifers. An aquifer is a layer of fractured rock, gravel, sand or limestone below the ground that is porous enough to hold groundwater and allow it to flow. An aquitard is a layer of rock or clay that may hold some groundwater but is not porous enough to allow it to flow significantly.

The South West Victoria Groundwater Atlas (SRW 2011) identifies and clearly describes the resources across the catchment. The catchments can be broadly subdivided into three layers; the upper, middle and lower aquifers. The aquifer layers are generally separated from one another by aquitards. A cross section showing the relative position of the aquifer layers is provided in Figure 2.

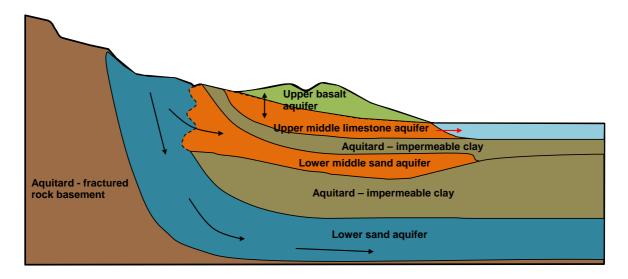


Figure 2 – Cross-section showing the relative position of the aquifer layers (taken from the "South West Victoria Groundwater Atlas", SRW, 2011).

The Local Management Plans describe the rules for management of all or part of an aquifer (upper, middle or lower). The aquifers comprise layers that have both hydrogeological names (HGU) and primary geological names (GU) as described in the Victorian Aquifer Framework, DSE, 2012. The principal aquifer/s managed by each Local Management Plan area and the associated hydrogeological and geological names are summarised in Table 1.

Table 1 – Principal aquifer managed by the Local Management Plan Area¹

Principal Local Management Plan for the layer (or part layer) and Groundwater catchment ²	Aquifer layer	Hydrogeological layers (HGU - Victorian Aquifer Framework, DSE, 2012)	Geological Layers (GU - Victorian Aquifer Framework, DSE, 2012)
Glenelg WSPA		QA Quaternary	Various aeolian deposits, various fluvial, lacustrine, alluvial and colluvial sediments, Bridgewater Formation, Molineaux Sand
		UTB Upper Tertiary/Quaternary Basalt	Quaternary stoney rises, tuff, undifferentiated. Quaternary basalt (inc Newer Volcanics)
Glenelg WSPA	Upper	UTAM Upper Tertiary Aquifer (Marine)	Whalers Bluff Formation, Moorabool Viaduct Formation, Hanson Plain Sand, Dorodong Sand, Grange Burn Formation, Loxton-Parilla Sand
		UTAF Upper Tertiary Aquifer (Fluvial)	Unnamed duricrust, undifferentiated UTAF
Glenelg WSPA South West Limestone		UMTA Upper Mid Tertiary Aquifer	Port Campbell Limestone, Portland Limestone, Gambier Limestone, Bochara Limestone, Heywood Marl, Heytesbury Group, Duddo Limestone.
	Middle	UMTD Upper Mid Tertiary	Gellibrand Marl
	ivilidale	LMTA Lower Mid- Tertiary Aquifer	Clifton Formation
		LMTD Lower Mid Tertiary Aquitard	Wangoom Sand, Narrawaturk Marl, Upper Mepunga Formation, Sturgess Point Member, Nirranda Group, Demons Bluff Group
		LTB Lower Tertiary Basalts	Phase 2 Basalts
Glenelg WSPA, Portland	Lower	LTA Lower Tertiary Aquifer	Eastern View Formation, Lower Mepunga Formation, Dilwyn Formation, Yaugher Volcanics, Pembler Mudstone, Pebble Point Formation, Timboon Sand, Rivernook Member, Burrungule Member, Moomowroong Sand Member, Wiridjil Gravel Member, Brucknell Member, Wangerrip Group, Dartmoor Formation, Knight Group
		LTB Lower Tertiary Basalts	Older Volcanic Group (Phase 1)
	Basement	CPS Cretaceous and Permian Sediments	Paarate Formation, Belfast Mudstone, Flaxman Formation, Nullawarre Greensand, Waarre Formation
		BSE Mesozoic and Palaeozoic Bedrock	Permian Glacial Sediments, all Palaeozoic basement rock

Descriptions from: Groundwater Resources Online (DELWP 2014) Victorian Aquifer Framework, (DSE 2012) and South West Victoria Groundwater Atlas (SRW, 2011).

Note 1: The principal aquifer/s (as described by the Victorian Aquifer Framework) is the primary target for management of groundwater extraction.

Note 2: All other aquifer layers not covered by the local management plans above are covered in the "All remaining areas" Local Management Plan (Appendix 3).

Water management arrangements

Overarching responsibilities

Groundwater management falls within both the jurisdiction of Southern Rural Water (SRW) and the Department of Environment, Land, Water and Planning (DELWP) in ensuring the delivery of government policy on water and the environment. They are jointly responsible for implementing the Western Region Sustainable Water Strategy. The groundwater catchment statements (GCS), of which the Glenelg GCS is one, are part of the implementation of this strategy.

The licensing authority for groundwater within the Glenelg Groundwater Catchment is SRW. SRW is responsible for issuing bore construction licences (section 67, *Water Act 1989*) and licensing groundwater extractions under "take and use" licences, section 51 of the Act. See the SRW website (www.srw.gov.au) or the Victorian Water Register (waterregister.vic.gov.au) for more information about these.

DELWP is the department responsible for administration of the *Water Act 1989*, and oversees the management of water resources in Victoria.

Sustainable Water Strategies (SWS) and groundwater (or local) management plans are one way that DELWP and SRW ensure the long term sustainability of those resources, and that they are managed equitably.

Monitoring of the groundwater resources (quality and levels) forms a substantive component of this by providing the information to assess the health and availability of the resource. SRW and DELWP undertake extensive monitoring of groundwater in the Glenelg catchment.

Additionally, part of this catchment falls within the Border Designated Area (SA/VIC Border Zones 1B, 2B, 3B and 4B) which is jointly managed by the South Australian and Victorian governments. Management arrangements for these zones are documented at: http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-resources/border-groundwaters-agreement. More information is provided in Appendix 4.

Water accounting

Information on the management and use of groundwater within this groundwater catchment is included in the Victorian Water Accounts which are published annually by the DELWP.

Annual reports on WSPAs with groundwater management plans are produced each year by SRW tabulating usage, allocations and entitlements for those areas.

Groundwater entitlements are listed on the Victorian Water Register and are publicly available on the web (http://waterregister.vic.gov.au/).

Review

DELWP may review and evaluate progress on management of groundwater at any time, in collaboration with SRW.

SRW may independently review local management plans. Administrative changes or clarifications may be made without consultation. SRW will consult licence holders and stakeholders on any change that affect their rights.

Access to information

More information on groundwater can be obtained from the websites listed below. This includes information on groundwater levels, the South West Victoria Groundwater Atlas and groundwater resource reports.

Border Groundwaters Agreement – http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-resources/border-groundwaters-agreement

Department of Environment, Land, Water and Planning - http://delwp.vic.gov.au/

Groundwater Resource Reports (DELWP, 2014): http://www.depi.vic.gov.au/water/groundwater-groundwater-resource-reports

Southern Rural Water – http://srw.com.au

South West Victoria Groundwater Atlas (SRW, 2012), available online at: http://gwhub.srw.com.au/links-resources

Victorian Aquifer Framework (DSE, 2012) – http://data.water.vic.gov.au/monitoring.htm or http://data.water.vic.gov.au/monitoring.htm or http://data.water.vic.gov.au/monitoring.htm or http://www.vvg.org.au/cb_pages/vaf.php

Victorian Water Register – http://waterregister.vic.gov.au/

Appendix 1 Glenelg WSPA Local Management Plan

Statutory Management Plan

There is no statutory management plan for groundwater resources in this area. However, it should be noted that part of the Glenelg Water Supply Protection Area (WSPA) falls within the Border Designated Area.

Areas located within the Border Designated Zone (Zones 1B, 2B, 3B (partial) and 4B (partial)) fall under the joint management arrangements of the South Australian / Victorian Border Zone Agreement. Details of this agreement and the management arrangements are documented at:

http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-resources/border-groundwaters-agreement

In the event that any conflict arises from the implementation of this plan over areas bounded by the Border Zone Agreement (BZA) between South Australia and Victoria, the BZA shall be the determining document.

Objective of the Local Management Plan

The objective of the local management plan is to make sure that the groundwater resources in the Glenelg WSPA are managed in an equitable and sustainable manner.

All aquifers are managed in accordance with the rules outlined in Glenelg WSPA local management plan (this plan).

The UMTA aquifer excluded from the Glenelg WSPA is managed consistently with the South West Limestone GMA local management plan (see also the Portland and Hopkins-Corangamite Groundwater Catchment Statements).

Area description

Glenelg WSPA is shown below. The plan is lodged with the Central Plan Office, reference number LEGL./04-124. Excluded from the Glenelg WSPA is the middle aquifer of the UMTA known as the South West Limestone (SWL) GMA (see Appendix 2).

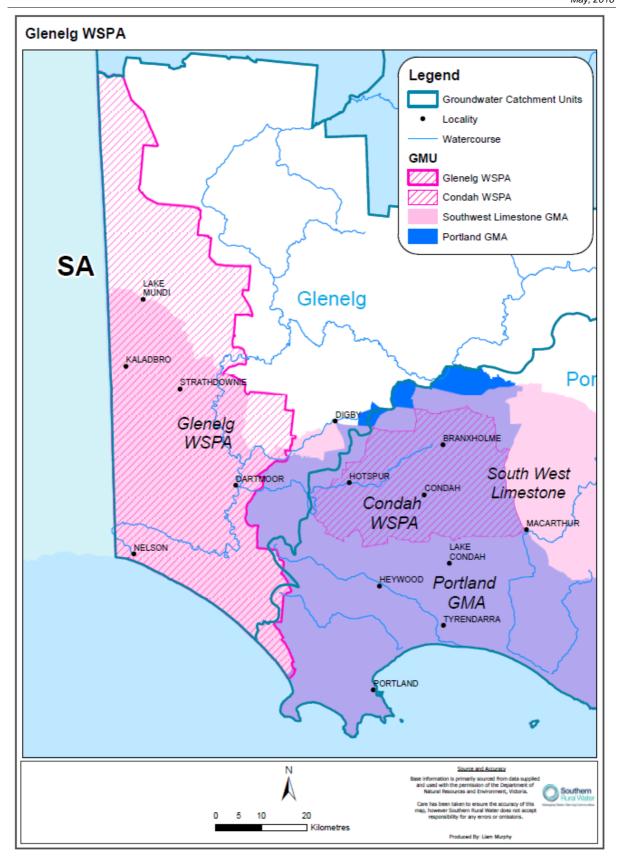


Figure A1-1: Map of Glenelg Water Supply Protection Area.

Permissible Consumptive Volume

A Permissible Consumptive Volume (PCV) currently applies to the Glenelg WSPA. The PCV is a cap on the amount of groundwater allocated in this management unit. The PCV for Glenelg WSPA is 15,607 ML/yr.

The PCV applies to the area covered in Figure A1-1, for the Upper, Middle and Lower aquifers being:

All Quaternary Aquifer (QA), Upper Tertiary Aquifer Marine (UTAM), middle aquifer of Upper Mid Tertiary Aquifer (UMTA) specifically the Duddo Limestone, and the lower aquifers of Lower Tertiary Aquifer (LTA) from the surface to 50m below the base of the Tertiary aged formations or 200m from the surface, whichever is the deeper; and excludes the middle aquifer of UMTA where managed as the SWL GMA (see Appendix 2).

Water entitlements

The extraction of groundwater for purposes other than domestic and stock use is authorised under a groundwater licence. There are 26 groundwater licences in the Glenelg WSPA, within the Glenelg GC, that authorise a total of 12,079.2 ML. This includes licences within the Designated Zones of 1B, 2B, 3B and 4B that are within the Glenelg WSPA. People have rights to take groundwater for domestic and stock use without a groundwater licence.

The majority of groundwater used in the Glenelg WSPA is for irrigation purposes. Groundwater is also licensed for use in dairies for cooling and wash-down, and for urban water supply. Metered groundwater use is less than the total groundwater entitlements, and varies each year according to the seasonal conditions.

Licence holders must not take more than their annual licence volumes.

Restrictions

The PCV determines the maximum volume of water that can be extracted from the Glenelg WSPA; however, the local management plan does not place specific restrictions on taking groundwater.

If necessary, SRW is able to temporarily qualify rights to groundwater under section 33AAA of the *Water Act 1989* if a water shortage occurs - for example, if regional drawdown is affecting access to groundwater by users.

Groundwater licences also allow SRW to restrict extraction if required - for example, to minimise the effect of extraction from specific sites if there is a significant impact on nearby users or the aquifer. If restrictions are necessary, SRW will notify licence holders in advance.

Trading

In considering an application to transfer a licence temporarily or permanently, SRW must thoroughly assess the application. An application to transfer a licence is not automatically approved. In deciding whether or not to approve an application, SRW must consider section 40 of the Act, including:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality in the WSPA.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set transfer conditions to minimise interference, or it may refuse the application. Approval of an application to transfer may be subject to technical assessments to determine bore interference and impact on surface water bodies.

In the Glenelg WSPA:

- No permanent transfers are permitted within the WSPA as there is no statutory management plan in place.
- Permanent transfers are permitted from within the WSPA to other connected groundwater aquifers subject to the rules for that particular groundwater management unit.
- Temporary transfers are permitted for a period of up to five years.

Temporary transfers are permitted within and between zones in the Border Zone Designated Area located in the Glenelg WSPA providing that the Permissible Annual Volume (PAV) is not exceeded in any zone.

New licences

New licences can be issued up to the PCV in accordance with the *Water Act 1989*, policies on managing take and use licences and the SA-Vic Border Groundwaters Agreement, unless there is a WSPA in place, which is the case for the Glenelg WSPA.

Groundwater licences may be renewed by SRW, upon application, in accordance with the Water Act. If groundwater licences are surrendered, SRW may make that water available for re-allocation.

Metering

Southern Rural Water meters new and existing licensed water users. This allows SRW to keep track of how much water is being used and enables licence holders to keep within their allocated volume. This means:

- 1. All new licences for irrigation or commercial purposes require a meter
- 2. Existing licences of 10ML or greater require a meter

The meters are supplied by SRW, and the licence holder will be responsible for paying the full cost of the meter and initial installation. The meter remains the property of SRW. SRW is responsible for maintenance and replacement.

Meters are read at least twice per year.

Consultation

SRW will consult with licence holders and relevant stakeholders before making changes to the Local Management Plan, other than administrative changes or clarifications.

The Local Management Plan will be reviewed every 5 years, unless an update is required sooner.

In accordance with the Western Region Sustainable Water Strategy, SRW will undertake further investigations before undeclaring the Glenelg WSPA.

Appendix 2 South West Limestone Local Management Plan

Please refer to the South West Limestone Local Management Plan published separately at SRW's website at srw.com.au \ Publications \ Management rules and plans \ South West Limestone Local Management Plan, or through the web link:

http://www.srw.com.au/Page/Page.asp?Page_Id=1113

Appendix 3 Glenelg Groundwater Catchment (Areas outside of GMUs) Local Management Plan

Objective of the Local Management Plan

The objective of the Local Management Plan is to make sure that the groundwater resources in Glenelg Groundwater Catchment are managed in an equitable and sustainable manner.

Area description

The remaining region of the Glenelg Groundwater Catchment comprises all areas excluding:

Glenelg Water Supply Protection Area

Appendix 1

South West Limestone Groundwater Management Plan

Appendix 2

Portland Groundwater Management Area (see Portland Groundwater Catchment Statement)

An area of about 7% of Portland Groundwater Management Area is located within the Glenelg Groundwater Catchment following introduction of the catchment boundaries (Figure 1). The Portland GMA covers the Lower Tertiary aquifer (LTA) of the Dilwyn Formation (HGU1093). There are no licenced bores located in the Portland GMA within the Glenelg GC.

The remaining area of the Glenelg Groundwater Catchment is managed by SRW between the surface to 200m below the natural surface or 50 metres below the base of the Tertiary formations (whichever is the greater, refer Figure A3-1).

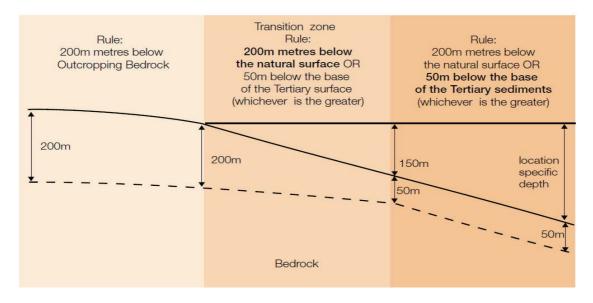


Figure A3-1: Depth defined management Rules

Permissible Consumptive Volume (PCV)

There are no PCVs that currently apply to this area or its zones.

Water use and entitlements

The extraction of groundwater for purposes other than domestic and stock use is authorised under a groundwater licence. People have the right to take groundwater for domestic and stock use without a groundwater licence. This applies for the entire area and all zones.

Guidelines on the rights to take and use groundwater under section 51 of the Act are available on the water register site (www.waterregister.vic.gov.au).

Restrictions

This Local Management Plan does not place any restrictions on taking groundwater.

If necessary, SRW is able to temporarily qualify rights to groundwater under section 33AAA of the *Water Act 1989* if a water shortage occurs - for example, if regional drawdown is affecting access to groundwater by users.

Groundwater licences also allow SRW to restrict extraction if required - for example, to minimise the effect of extraction from specific sites if there is a significant impact on nearby users or the aquifer. If restrictions are necessary, SRW will notify licence holders in advance.

New licences

Unconfined or semi-confined aquifers in the areas outside of GMUs will be managed to protect the rights of existing users, Domestic & Stock supply, and the environment, including recharge areas for the confined aquifers.

New allocation in unconfined and semi-confined aquifers shall only be considered where there is no practical alternative to secure water <u>AND</u> hydrogeological assessment shows that there is negligible impact to surrounding users and the environment.

SRW will encourage groundwater access through trade for new or expanded licensed use from the same aquifer when unconfined or semi-confined aquifers are targeted.

For deep confined aquifers outside of GMUs (eg LTA), SRW's standard management and assessment procedures will apply (i.e. new allocation may be available).

In considering an application for a groundwater licence, SRW must undertake a thorough assessment. An application is not automatically approved. In deciding whether or not to approve an application SRW must consider:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set conditions to minimise interference, or it may refuse the

application. Approval of an application may be subject to technical assessments to determine water availability, bore interference and impact on surface water bodies.

These rules do not take precedence over Permissible Consumptive Volumes (PCVs) and Water Supply Protection Areas (WSPAs).

Groundwater Trade

There are no trading rules in this Local Management Plan area.

In considering an application to transfer a licence temporarily or permanently, SRW must thoroughly assess the application. An application to transfer a licence is not automatically approved. In deciding whether or not to approve an application, SRW must consider section 40 of the Act, including:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality in the area.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set transfer conditions to minimise interference, or it may refuse the application. Approval of an application to transfer may be subject to technical assessments to determine bore interference and impact on surface water bodies.

Metering

Southern Rural Water meters new and existing licensed water users. This allows SRW to keep track of how much water is being used and enables licence holders to keep within their allocated volume. This means:

- 1. All new licences for irrigation or commercial purposes require a meter
- 2. Existing licences of 10ML or greater require a meter

The meters are supplied by SRW, and the licence holder will be responsible for paying the full cost of the meter and initial installation. The meter remains the property of SRW. SRW is responsible for maintenance and replacement.

Meters are read at least twice per year.

Consultation

SRW will consult with licence holders and relevant stakeholders before making changes to the Local Management Plan, other than administrative changes or clarifications.

The Local Management Plan will be reviewed every 5 years, unless an update is required sooner.

Appendix 4 South Australian / Victorian Border Groundwater Agreement

The Agreement

The South Australian – Victorian Border Groundwater Agreement was enacted in 1985 under the Victorian *Groundwater (Border Agreement) Act 1985*. The agreement established a Designated Area, extending 20 km either side of the border, and from the coast to the River Murray. The agreement applies specifically to this Designated Area. The Designated Area is divided into 22 management zones with 11 zones in each State.

The agreement is managed jointly by the Border Groundwater Agreement Review Committee (BGARC) which has membership from both of the states and relevant authorities.

Activities undertaken by the Review Committee are reported on annually. This report details all activities undertaken during that year, and is available to download at:

http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-resources/border-groundwaters-agreement/annual-reports

More information on the Border Designated Area is available to download from: http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-resources/border-groundwaters-agreement

Area description

Four of the designated zones lie within the Glenelg Groundwater Catchment (see Figure 1).

The Designated Zone includes all aquifers within these zones. Extraction from groundwater is principally from two aquifers: the Tertiary Limestone Aquifer (TLA) (the UMTA) and the Tertiary Confined Sands Aquifer (TCSA) (LTA). Information on these aquifers for the Border Zone Designated Area is available to download from:

http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-resources/border-groundwaters-agreement

This includes:

- Information Sheet 1 The Border Groundwaters Agreement
- Information Sheet 2 The Tertiary Limestone Aquifer
- Information Sheet 3 The Tertiary Confined Sand Aquifer
- Information Sheet 4 Licensing and Administrative Arrangements

Limits applied to the zones

Within the Border Zone limits apply to each aquifer and each zone.

Limits on extractions are referred to as "Permissible Annual Volumes" and these limit the volume of water that can be licensed for extraction in each zone. These limits are documented in the 30th Annual Report (BGARC, 2015), which is available to download at:

http://www.environment.sa.gov.au/managing-natural-resources/water-use/water-resources/border-groundwaters-agreement/annual-reports

There are also limits on rates of decline of groundwater levels and groundwater salinity set in some of the zones. The permissible rates of decline are documented in Table 10 of the 30th Annual Report (BGARC, 2015). There are currently no permissible salinity levels set for the zones.

In addition to these limits there are "permissible distances from the border" in which all applications for a permit or licence must be forwarded to the Review Committee for approval. These are documented in Table 9 in the 30th Annual Report (BGARC, 2015).

Water use and entitlements

The agreement applies to all water use other than domestic and stock purposes.

New licences

New licences may be issued in accordance with the management prescription under the agreement (cl. 26 of the Agreement).

Trading

Transfers and trades of licences may be issued in accordance with the management prescription under the agreement (cl. 26 of the Agreement).

Consultation

The Border Groundwater Agreement is administered by the South Australian and Victorian state departments.