

Water entitlements and groundwater in Victoria



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Department of
Environment, Land,
Water & Planning



Summary

- Overview state's water entitlement and market framework
- Groundwater management arrangements
- Information about Victoria's groundwater extent and use

Water entitlements and trade

- Under the [Water Act 1989](#), the Victorian Government retains the overall right to the use, flow and control of all surface water and groundwater on behalf of all Victorians.
- The Government manages the allocation of water resources across the state in accordance with the *Act*.
- Victoria's water entitlement and planning framework:
 - clearly defines how water is shared, held, used and traded;
 - considers all surface water and groundwater resources at all phases of the water cycle;
 - balances demands for water for consumption, the environment and other non-consumptive uses;
 - allocates water to cities and towns, irrigation, agriculture and industry, while making sure that rivers and aquifers remain healthy.

Water entitlement framework tiers

Tier 1 - Rights held by Crown



Tier 2 - Rights to authorities

Environmental water reserve

- Environmental entitlements
- Obligations on consumptive entitlements
- 'Above cap' water

Bulk entitlements

- Source bulk entitlements
- Delivery bulk entitlements

Tier 3 - Rights granted to individuals

Rights to water

Water shares

Section 51 licences

Section 8 rights

Supplies to urban customers

Supplies by agreement

Associated entitlements

Delivery shares

Water-use licences

Section 67 licences

Responsibilities – who does what

State Government

- *The Water Act 1989* - legislation describing the management framework
- Issues entitlements
- Policy development
 - Sustainable Water Strategies, Victorian River Health Strategies
- Inter-jurisdictional liaison/negotiation
 - Murray Darling Basin Plan, Snowy River, Border Groundwater Agreement
- Oversight of states groundwater resources
 - Monitoring and reporting of key groundwater resources

Responsibilities – who does what

Urban water authorities

- Urban supply
- Water supply demand strategies
- Community consultation

Rural water authorities

- Rural supply - headworks, delivery
- Streamflow management
- Groundwater management – planning, licensing, monitoring
- Water services and customer committees

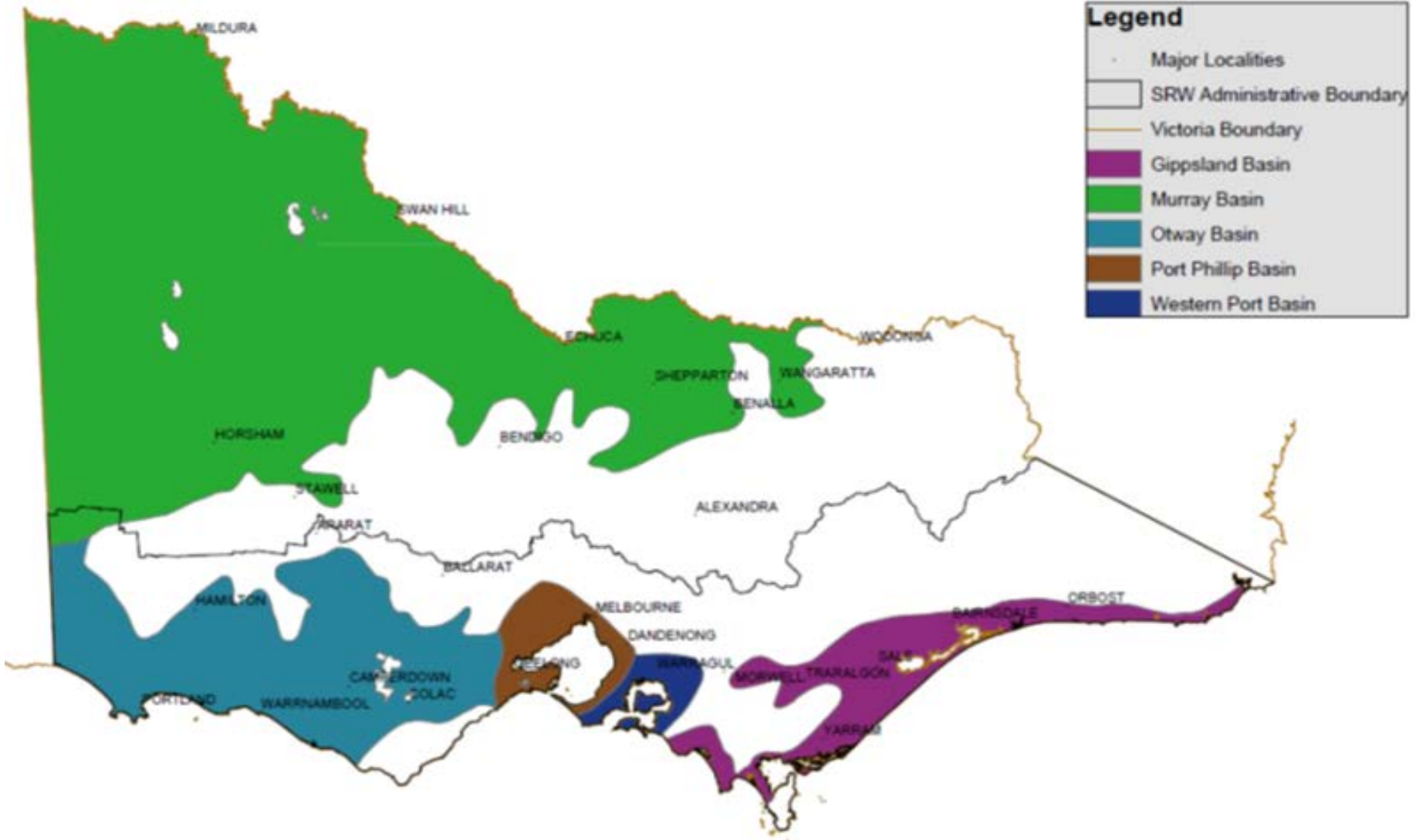
Catchment management authorities

- Regional river health strategies
- Drought and flood response
- Implementation committees

Groundwater resources in Victoria

- Groundwater - water beneath earth's surface in pores and crevices of rocks and soil
- Approx. 15 % state's total water use
- Aquifers:
 - layers of soil and rock that contain useable quantities of groundwater
 - lie beneath all parts of Victoria
- Quality varies from drinking quality to saltier than the sea

Geological basins in Victoria



Groundwater management framework

Water Supply Protection Areas

Area of intense use, caps set by Minister, plan approved by Minister, licensing of water extraction, metering of water use, monitoring conducted quarterly by state and often monthly by rural water corporation

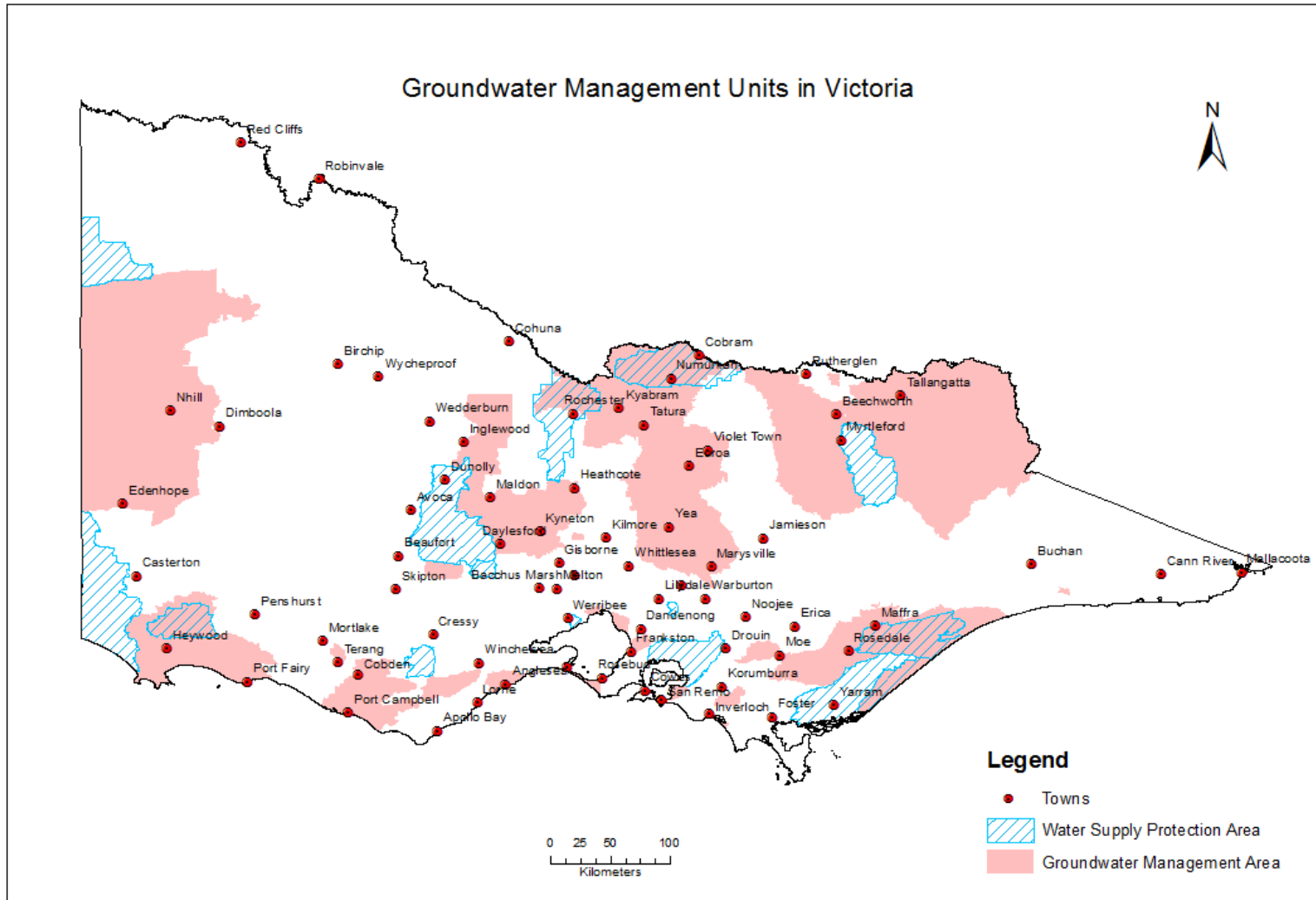
Groundwater Management Area

Area of use, caps set by Minister, local plan approved by water corporation, licensing of water extraction, metering of water use, quarterly monitoring by state

Unincorporated area

Limited use – groundwater often of poor quality or yield, licensing of water extraction, metering of use, limited monitoring, no caps

Groundwater management units



Groundwater

Standard Groundwater management tools

Licensing of

- Bore construction s.67 Water Act 1989
- Take and use of water s.51
- Injection down a bore s.76

Development of plans

- Statutory plan, local plan

Setting caps – Permissible Consumptive Volumes

Murray-Darling Basin Plan – groundwater in northern Victoria is subject to the sustainable diversion limits under the Murray-Darling Basin Plan

Metering of use

Observation of water levels

Reporting: use, against plans, issues

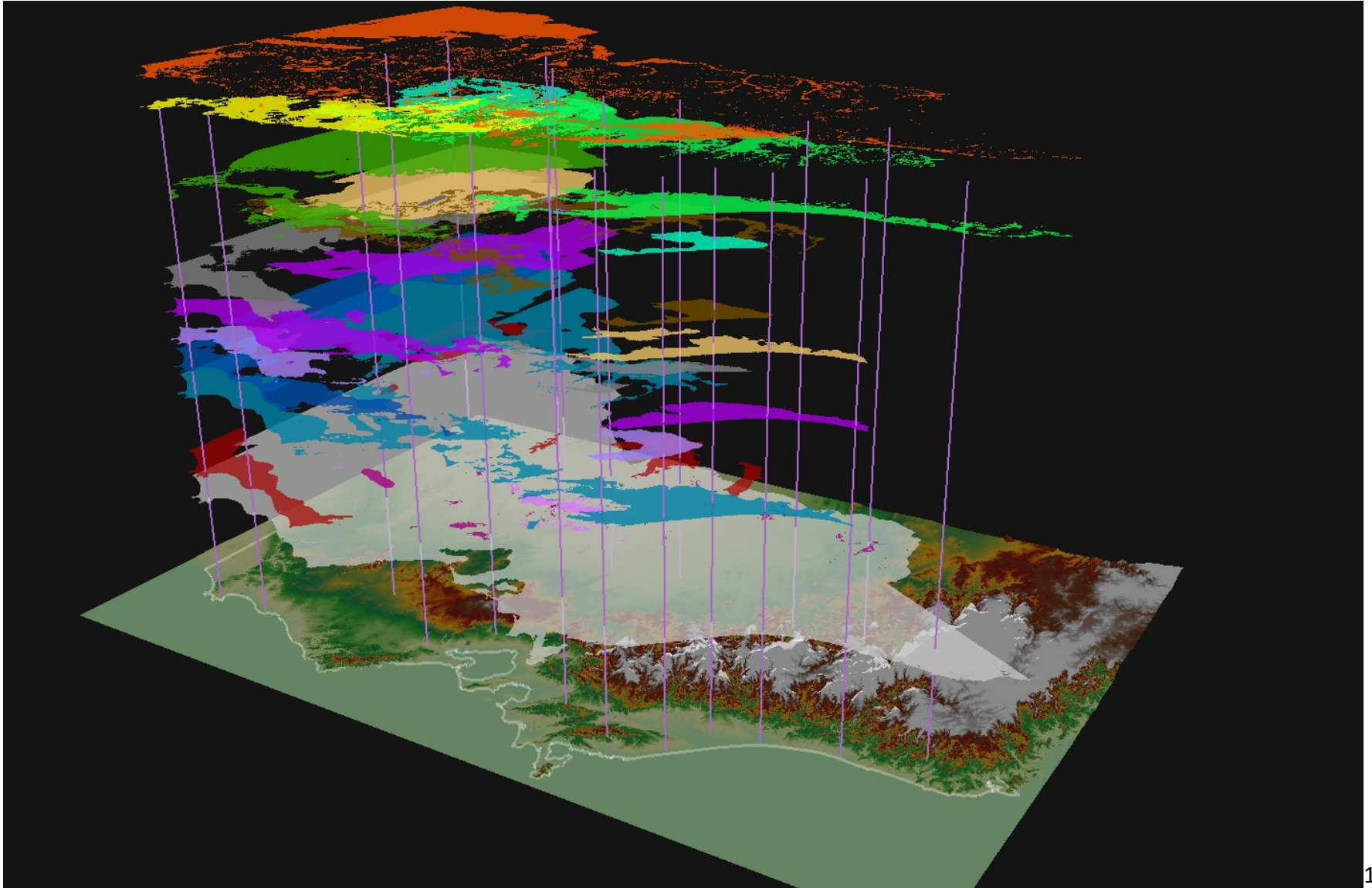
Unregulated rivers and groundwater

Name	Description/ location	Limitations/ rules
Take and Use Licences (section 51)	A fixed term entitlement to take and use water from a waterway, catchment dam, spring, soak or aquifer for any purpose	<ul style="list-style-type: none">• Limited tenure (max 15 years)• For commercial or irrigation or other uses• Outside declared/ regulated systems• Subject to rules/ conditions – including rosters and restrictions• Connected to land• Specific rules on trading
Works licence (section 67)	a licence to construct, operate, alter, decommission or remove works associated with the extraction of water.	<ul style="list-style-type: none">• subject to conditions set by the Minister. For example bore, pump, pipes, dams• Can include limits on extractions/ diversion such as pumping rates

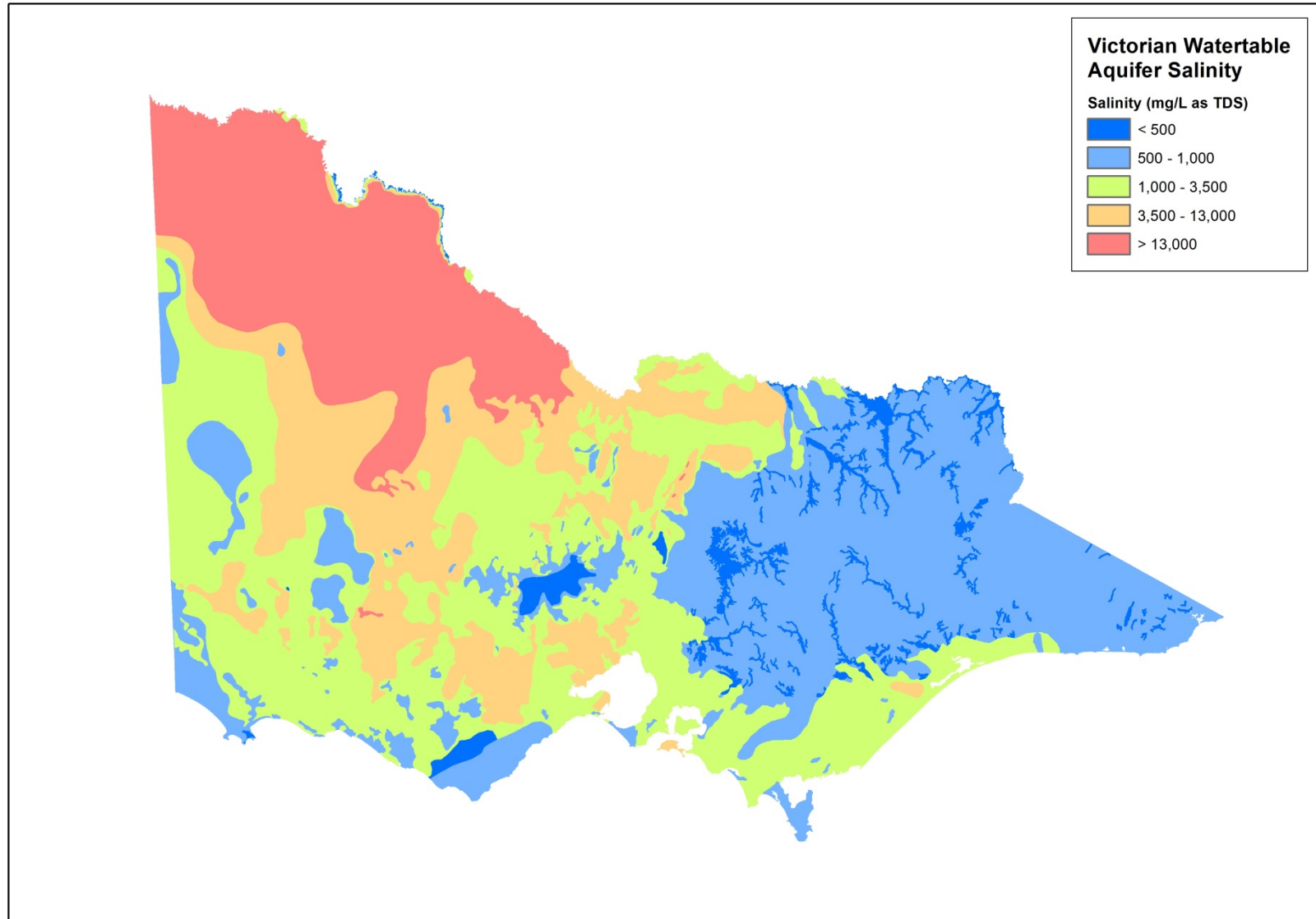
Information on Victoria's groundwater resource

- All aquifers mapped in 3D across the state
- Salinity of each groundwater aquifer is mapped
- Comprehensive monitoring network – State observation bore network
- Management plans informed by technical information and models
- On-line groundwater resource reports across the state
www.depi.vic.gov.au/water/groundwater/groundwater-resource-reports
- Comprehensive water accounts published annually
- Water management information system for sharing surface and groundwater data <http://data.water.vic.gov.au/monitoring.htm>

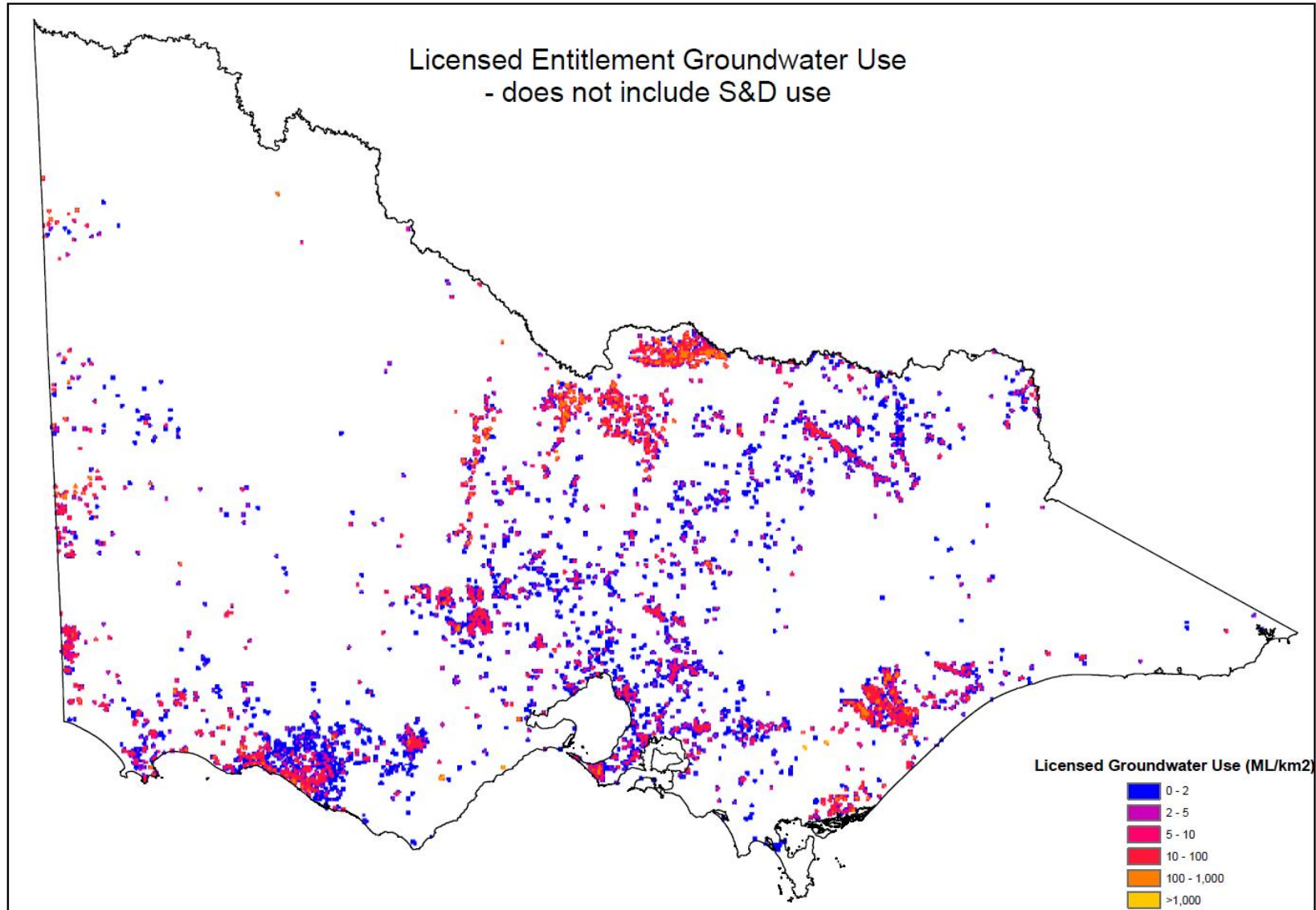
Mapping of aquifer extents



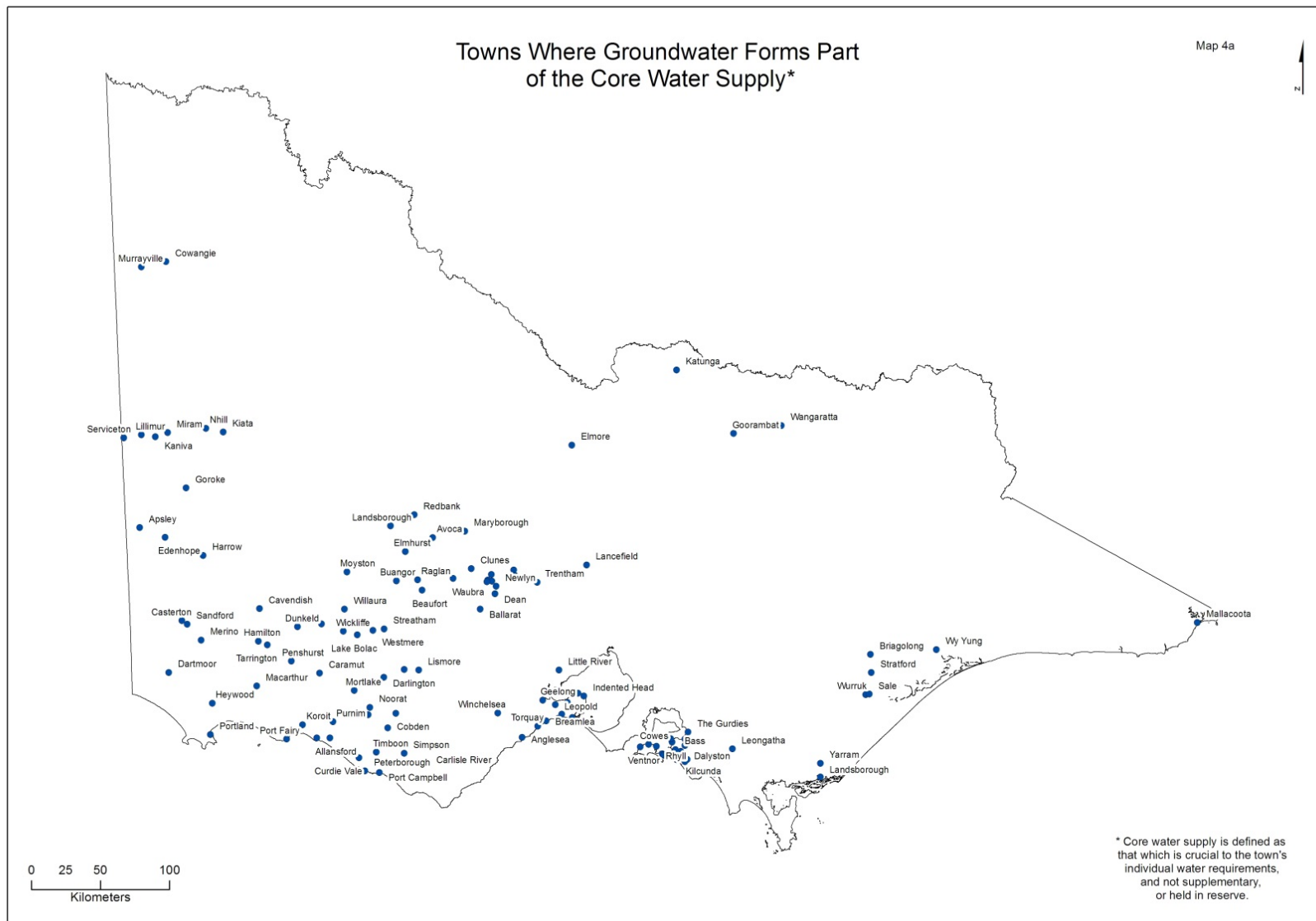
Groundwater salinity for each layer



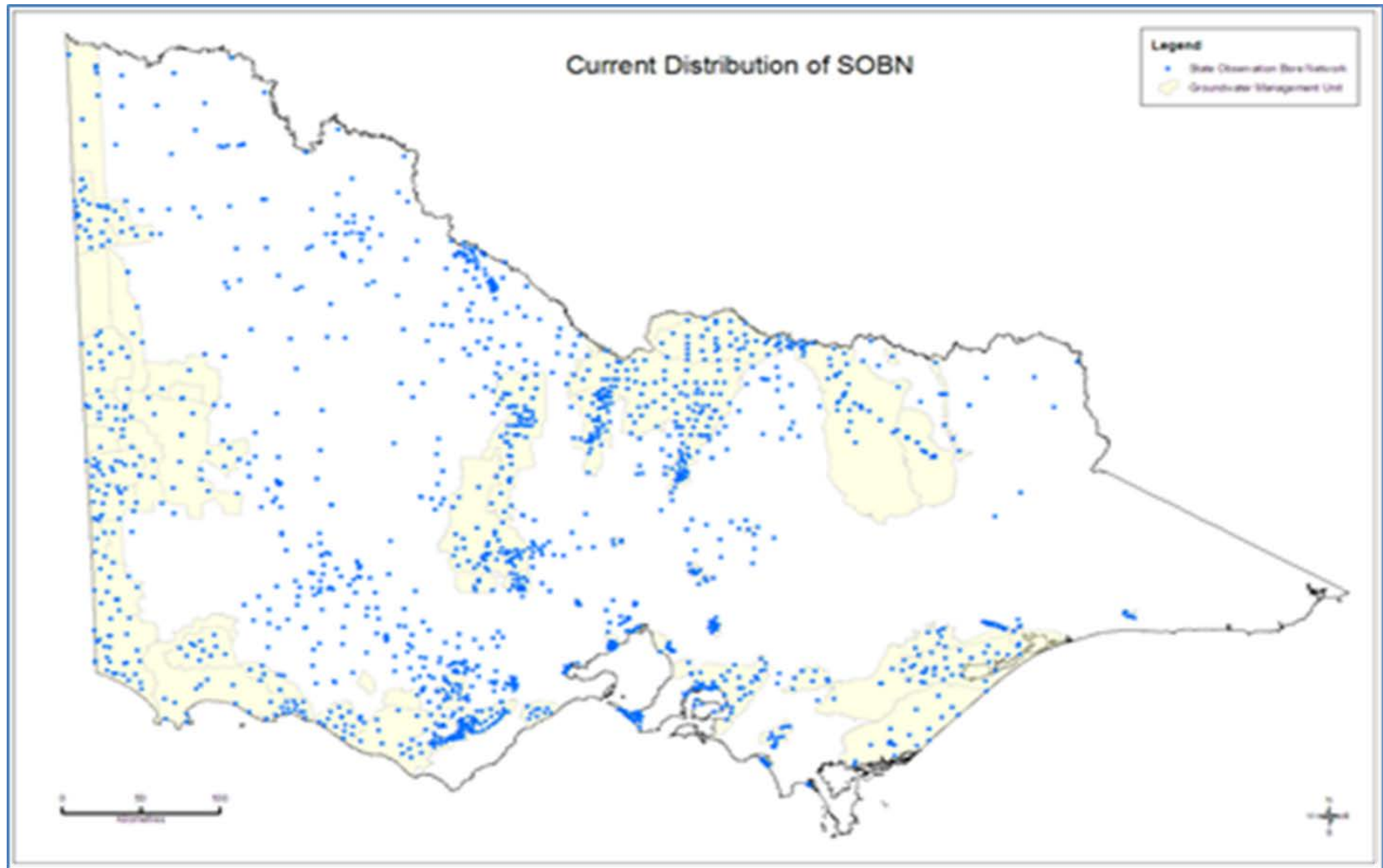
Groundwater use – licenced bores only



Groundwater supply for towns



State observational bore network



Concluding remarks

- Victoria's water entitlement and planning framework defines how water is shared, held, used and traded
- Groundwater management framework applies to all activities that involve groundwater take
- Victoria has a significant and information base to support groundwater management

Aquifer types

