

# Groundwater Management and Water Licensing

Quarterly Newsletter

February 2010

## Northern Region Sustainable Water Strategy Released

A clear plan for managing all water resources in northern Victoria was released by the Minister for Water, Tim Holding in December 2009.

The Strategy outlines the Government's actions to secure the Northern Region's water future over the next 50 years. It includes implementation details such as timing and responsibility for key actions. The Strategy is the second of four regional sustainable water strategies as outlined in *Our Water Our Future*, which committed to actions promoting long-term water security across Victoria.

The Northern Region Sustainable Water Strategy (NRSWS) is the result of an 18 month collaborative process involving Government, independent experts, key water industry stakeholders, urban, rural and environmental water users and the broader regional community.

DSE Director, Groundwater and Licensing, Jennifer Fraser said it includes actions to deal with the changing landscape and reduced water availability across Northern Victoria.

"Some groundwater and licensing work will begin immediately, while other elements will require a longer term approach."

Broad actions under the strategy will protect existing entitlements, promote sustainable irrigation and identify target volumes for water recovery to protect high value rivers, wetlands and floodplains.

The NRSWS will guide the future groundwater work program in the north of the state.

### Key actions of interest in the Strategy include:

- Commencing registration of domestic and stock dams within rural residential areas. This will be coupled with the development of reasonable domestic and stock guidelines to cover all sources of water including groundwater.



The Northern Region Sustainable Water Strategy is now available

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## Northern Region Sustainable Water Strategy Released *Continued from page 1*

- Ensuring the rules that manage licences are clearly documented within either management plans or local management rules. In particular, how water will be shared in times of water shortages (including the setting of groundwater trigger levels) and how carryover or trade rules apply to local circumstances.
- Ensuring all groundwater areas (including all currently unincorporated areas) are covered within new management boundaries. These boundaries will be set based on improved hydro-geological information with draft boundaries available for consultation by mid 2010. Permissible consumptive volumes will be progressively set till 2012, capping entitlements volumes within these systems.
- New carryover rules for groundwater will be introduced allowing water to be carried over by licence-holders within appropriate groundwater systems (those with high storage capacity). Up to 50 percent of licensed volumes may be carried over between seasons. Details will be determined through the development of management plans or local management rules by the end of 2010.
- Engagement in the Commonwealth Government's process to develop a Murray-Darling Basin Plan to ensure Victoria's approach to groundwater management is recognised. A draft Basin Plan is expected to be released for public comment in mid 2010.
- Commitment to the completion of existing programs including the Dairy Shed Water Licence Transition Program. Associated licensing issues will be finalised by the end of 2011.

Jennifer Fraser said the increased number of people turning to groundwater has put more pressure on that resource.

"Groundwater makes up only a small proportion of total water used in the Northern Region, but as surface water has dwindled after 13 years of below average rainfall, more people have turned to groundwater.

"This has included farmers whose farm dams have dried up and townships such as Wangaratta which have put in bores to secure supplies.

"Unregulated rivers have also been less reliable for irrigation licence-holders, and more rostering and bans have been in place," she said.

DSE's Director of Water Resource Planning, Will Guthrie said the NRSWS will provide greater certainty for water users.

"The Northern Region Sustainable Water Strategy ensures a transparent approach to licensing arrangements, particularly during times of water shortages. Licence-holders need to know how water will be shared at these times".

The Strategy will be implemented by the Department of Sustainability and Environment, rural and urban water corporations, and catchment management authorities. It will be reviewed on a regular basis to allow Government to adapt its management approach in line with community needs, water forecasts and environmental monitoring, with the first review scheduled for 2019.

Copies of the Strategy are available from the DSE Customer service Centre on 136 186 or [customer.service@dse.vic.gov.au](mailto:customer.service@dse.vic.gov.au). The Strategy and its fact sheets are also accessible at [www.ourwater.vic.gov.au/programs/sws/northern/final](http://www.ourwater.vic.gov.au/programs/sws/northern/final).

Other sustainable water strategies are under development, with the Western Region draft strategy due for release for public comment in early 2010, and the Gippsland Region draft strategy in the first half of 2010.

### From Jennifer's desk

This first 2010 edition of the Groundwater Management and Water Licensing Newsletter highlights the official release of the Northern Region Sustainable Water Strategy.



The strategy will guide the planning and implementation of the future groundwater work program in Victoria's north, as well as creating more certainty around licensing arrangements and access to water.

In past editions of the newsletter we have recorded the progress of the State Observation Bore Network Refurbishment Project, as drilling works have rolled-out across the state. This quarter, in "More bores not necessarily the answer", we look at the other side of the project and explain the importance of building a smarter, and in some cases leaner network, to maximize the return from our monitoring dollar.

The newsletter also provides an outline of four projects that will receive a commonwealth funding boost under the National Water Initiative's National Groundwater Action Plan. The funding provides recognition of the importance of the Victorian government's approach to enhancing our understanding of the groundwater resource to underpin sound management.

In December 2009 COAG endorsed the National Framework for Non Urban Water Metering. This is something we have been working on with water corporations over the last eighteen months and will continue to do so as we finalise Victoria's Implementation Plan and as the authorities develop their action plans.

I hope you find this edition informative. Should you wish to contact one of the team or find out more about any of the projects discussed, please contact us on [groundwater@ourwater.vic.gov.au](mailto:groundwater@ourwater.vic.gov.au).

Jennifer

## COAG endorses National Framework for Non-urban Water Metering

On 7 December 2009, the Council of Australian Governments (COAG) endorsed a National Framework for Non-Urban Water Metering.

The endorsement affirms the extensive work that has already been undertaken in Victoria to improve water metering across the state, and highlights the importance of metering in refining water resource management practices.

The Department of Sustainability and Environment (DSE) has been actively engaged with all water corporations over past 18 months about the National Framework and the development of Victoria's own work plan to support the initiative.

DSE Metering Officer, Daniel Leaver welcomed the COAG endorsement of the Framework and said work was well underway to formalise the work plan.

"Victoria is now in the process of finalising its Non-Urban Water Metering Implementation Plan to minimise cost impacts and allow time for industry adjustment.

"Water corporations have already provided valuable input to the Implementation Plan and DSE would like to thank them for their contribution," he said.

In Victoria, the roll-out of meters across the state to improve water accounting capabilities has resulted in a metering fleet of 49,700 extraction sites.

Of these, under current modernisation programs, an estimated 19,000 meters are being upgraded and a further 7,500 new meters will be installed.

Inaccuracies in metered information associated with aged equipment, reactive maintenance regimes and varying installation methods, coupled with recognition of the need to monitor both urban and non-urban water use to improve water accounting have influenced the development of the National Framework.

Finalising the Implementation Plan will mean that water corporations will be required to identify meters that are already compliant with the National Framework and prepare action plans which describe how work programs to upgrade existing or install new meters will occur at an operational level.

The National Framework establishes accuracy standards for non-urban water meters when the meter is tested in the laboratory (+/- 2.5%) or installed in the field (+/- 5%). A quality

assurance framework for installation, operation, maintenance and reporting will also need to be adhered to in order to support ongoing meter accuracy.

By clearly and accurately understanding the various demands placed on the resource by non-urban users, it will be possible to finetune water management approaches, improve water trading system mechanisms and enhance efficiencies wherever possible.



*Under the National Framework for Non-Urban Water Metering, new meters such as this one, correctly installed, will improve water accounting nation-wide.*



*Rationalisation of the number of SOBN monitoring sites in the Koo Wee Rup WSPA helps to reduce the monitoring cost-share burden for Southern Rural Water and landholders.*

## More bores not necessarily the answer

### Getting optimum value from our groundwater monitoring network

At the Department of Sustainability and Environment (DSE), strong emphasis is placed on the value gained from monitoring groundwater. The creation of the State Observation Bore Network (SOBN) over the last 40 years has been based on this premise, and the SOBN Refurbishment Project is about maximising this value by ensuring that there is adequate coverage of functioning observation bores across the state.

In some cases this involves the construction of new bores, while in other areas it may mean ceasing monitoring, particularly where the number of bores exceeds baseline monitoring needs.

These 'excess' bores are a reflection of the age of the network where, in some cases, functioning bores drilled as part of historic projects still remain.

DSE is currently assessing the number, and distribution, of bores that are required to inform current and future groundwater management decisions. The assessments also determine which historic bores will be retained in the monitoring network. To February 2010, the Department has ceased monitoring of 195 state observation bores as part of the rationalisation of the network. Bores that are no longer required will be decommissioned.

The high value placed on monitoring information means the Department does not take the decision to cease monitoring lightly, and works with rural water corporations and catchment management authorities as part of the decision process.

An example is the rationalisation of the network in the Koo Wee Rup Water Supply Protection Area (WSPA). Over four months in 2009, DSE, in association with Southern Rural Water (SRW), reviewed the condition, siting and value of information gathered from more than 100 bores that were located in the Koo Wee Rup WSPA.

Many of the bores were installed in the 1960s and 1970s

to support the development of the first groundwater management area in Australia. The review and decisions about upgrading, replacing or ceasing monitoring of specific bores was part of the development of a new management plan for the area aimed at maximising the value of the information captured, while minimising operation and maintenance costs.

Now the Koo Wee Rup network is leaner but targeted with 53 bores at 35 sites producing the specific data needed by landholders and authorities to manage the resource and water use more effectively.

Senior Hydrogeologist, SRW, Elissa McNamara, said the rationalisation of the monitoring network enables the collection of high quality data in a cost-effective manner.

Smarter monitoring, helps to reduce the shared cost burden for SRW and landholders while keeping close watch over possible saline intrusion which continues to be a concern in the WSPA," she said.

DSE has developed guiding principles to be used when making decisions about the rationalisation of the SOBN. These principles recognise that the monitoring needs to vary across each groundwater management area, and that in establishing a baseline network there will be a need for more intensive monitoring in some areas (e.g. Water Supply Protection Areas).

The network needs to be sufficient to assist rural water corporations choose the best approaches to manage the resource. This includes supporting resource appraisals, licensing access to groundwater and placing conditions and restrictions on its extraction.

DSE Manager, Groundwater Monitoring and Reporting, Matthew Potter says "the ideal network evolves as knowledge is gained and as priorities change".

## Four Victorian projects receive National Groundwater Action Plan funding boost

Victoria has obtained over \$3M from the Commonwealth toward four key projects that will strengthen knowledge about Victorian groundwater and improve resource management.

Each of the projects DSE showcased at the National Water Commission inaugural national Groundwater Forum in Canberra in November 2009. Five of the DSE groundwater team, including Chris McAuley, Jill McNamara, Simon Baker, Randal Nott and Jenny Egan, travelled to Canberra to give presentations, present poster papers and be part of discussion sessions on future information and research needs. For more information about any of these projects please contact us on [groundwater@ourwater.vic.gov.au](mailto:groundwater@ourwater.vic.gov.au)

### Groundwater SAFE

DSE's commitment to changing the way it manages groundwater reserves by mapping the aquifer boundaries has already been prioritised as an important initiative for 2010 (see August 2009 newsletter).

The Groundwater SAFE (Secure Allocations, Future Entitlements) project aims to provide greater security and certainty for groundwater users and resource managers by more accurately mapping the resource to allow tying of allocations to specific aquifer locations.

Chris McAuley gave a key presentation at the Forum on the Victorian initiative to move to a groundwater systems management approach. The funding provided by the Commonwealth through the SAFE project will enable Victoria to develop the tools and gather the information required to enable the move to the new Statewide management approach.

The project is underway and will be completed in April 2012. The commonwealth has provided committed funding of \$2,200,000.

### Accounting for GDEs in Management Plans

Limited information about ecosystems that depend on groundwater for their survival and the need to develop appropriate mechanisms for conserving them will be addressed through the second project.

Accounting for Groundwater Dependent Ecosystems (GDEs) in Groundwater Management Plans is a project that will result in a new framework for dealing with GDEs, enabling appropriate measures and response-triggers to be adequately considered in the planning phase.

The framework will be used by resource managers who are dealing with areas containing GDEs, to ensure that the ecosystems that rely upon groundwater for their wellbeing are not overlooked as new management plans are developed.

The Commonwealth has committed funding of \$300,000 toward this project, due to be completed in April 2012.

## Groundwater Knowledge

### SA/Victorian Groundwater Interaction

In ongoing partnership with the SA Government, investigations will examine the groundwater interactions between the Tertiary Limestone Aquifer (upper aquifer) and the Tertiary Confined Sand Aquifer (lower aquifer) at a several points along the SA/Vic border around in the Lake Mundi area.

The project will help to determine whether extraction of groundwater from the lower aquifer threatens the integrity and availability of groundwater in the upper aquifer. This will inform decisions on future use of groundwater from the region.

The Commonwealth has committed total funding (to SA and Victoria) of \$1,024,294 toward this project due to be complete in March 2012.

### Lower Ovens Resource Assessment

The importance of the Ovens catchment to agriculture and industry in the Wangaratta region drives this project which will examine the extent of the relationship between surface water flow and groundwater.

The project will build on preliminary investigations and seek to establish clear management regimes for water use in the area which balance the demand for groundwater and surface water between all users including the environment.

Work will primarily concentrate on defining available groundwater resources in the Lower Ovens groundwater management area by quantifying the movement of groundwater between aquifers, and from aquifers and the Ovens and King Rivers.

The Commonwealth has committed funding of \$150,000 toward this project due to be complete in December 2010. The preliminary investigations totalling \$200,000 were jointly funded by Victoria and the Commonwealth.

## Who's who in groundwater?

Building a clearer picture of water use through metering is the key focus for Metering Officer, Daniel Leaver.



Daniel Leaver, Groundwater and Licensing's GIS and mapping leader

As part of the Monitoring and Reporting team within DSE's Groundwater and Licensing Branch (GLiB), Daniel will oversee the roll-out of the new National Metering Framework endorsed by COAG late last year.

Daniel has been part of the team for the last 12 months and is one of the few team members whose responsibilities span across both surface water and groundwater

He will already be known to a number of representatives in water corporations through the work he has done to date overseeing the development of the Victorian Non-Urban Water Metering Implementation Plan. The Implementation Plan will be pivotal in guiding the next generation of non-urban water meters and water accounting.

Daniel is also the GLiB's geographic information systems and mapping leader. These skills have been instrumental in helping the Branch to present data in a useful and easily understood format. He has played a key role in a number of DSE publications such as the *Victorian Water Accounts* and the *Sustainable Water Strategies*.

Before joining DSE, Daniel worked in surface water management for the Department of Natural Resources in Bundaberg.

Daniel says his move to Melbourne to work in GLiB has been interesting and a learning experience.

"I'm looking forward to continuing to build relationships with the water businesses as we progress the National Metering Framework Implementation Project", he said.

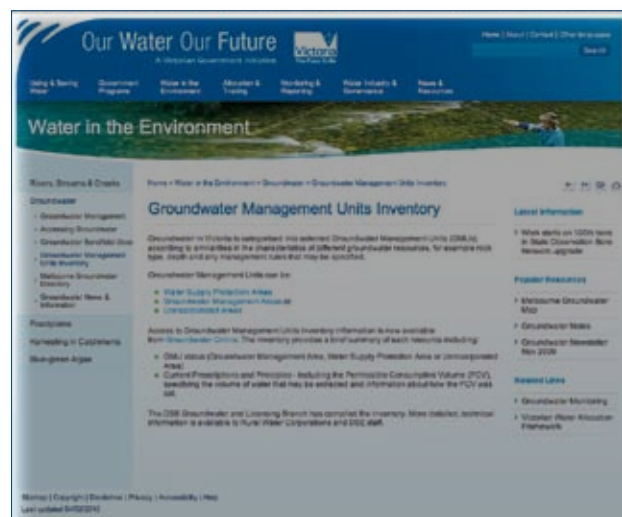
## What is Groundwater Online?

The need for better access to detailed groundwater data and reports has led to the creation of Groundwater Online – a new resource accessed from the Our Water website

Groundwater Online (<http://www.ourwater.vic.gov.au/environment/groundwater/gmu-inventory>) is based on the information held in the DSE Groundwater Management Unit Inventory but is intended for more technical data users who can download publicly available technical reports.

Presented in a map view format, GMUs and specific bore sites can be easily located. Online searches can be undertaken with reports on the core details of each groundwater management units.

Updates are being progressively rolled out onto the new site which also includes a Resource Library. Additional publicly-available groundwater reports will be uploaded into the library over the coming months. The site will also include hydrographs of key bore locations from the State Observation Bore Network.



Groundwater Online is a new resource on the Our Water website

## Further information

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