Investigating priority water resources

Collie

Water from the Collie region is used by major industry, irrigators, agriculture and for local public water supply and great southern towns, including part of the Wheatbelt. Water also supports an environment that is highly valued by local people for cultural and recreational use.

The Collie region is a priority water resource area, and the Department of Water is implementing a program of investigation that is part funded by the Australian Government’s $12.9 billion Water for the Future initiative.

Where are the projects occurring?

In the South West of the state, close to the town of Collie, there are two major water storage dams (Wellington and Harris); the Collie, Harris and Bingham rivers; and numerous tributaries. The Collie groundwater resources include the local coal basin.

What will the projects involve?

The projects being conducted by the department in this region will improve our understanding of the following topics:

- Post-mining groundwater recovery in mined basins (including surface and groundwater interaction)
  
  Water that collects in coal mine voids is often a combination of surface water runoff and groundwater, and there are a range of quality issues that need investigation to enable appropriate use of this resource in the future.

- Decision support tool and two reservoir model
  
  Computer modelling will be developed to simulate various water use scenarios, including downstream environmental water requirements. The model will assess reliability of supply and salinity levels to assist with clarifying allocation limits in a transparent and equitable manner.

- Optimisation of water use (study and inventory of industrial water requirements and potential to implement water efficient technologies)
  
  Various industries in the area require large and secure water supplies that are of a quality that matches the use requirements. Investigating options to apply technologies to support this, may result in some supplies being available for other purposes in future. Work will also be done to identify possible efficiencies that could be applied to irrigation in the district.

- Healthy rivers (stream and water quality management)
  
  By investigating and mapping the current state of ecosystems, targeted strategies will be implemented to improve the health of previously degraded stream channels and the overall river health. This will be done in consultation and partnership with the local community, including Indigenous representatives, other agencies and landowners.
**Why are we doing the projects?**

These projects will result in more information being available about the Collie area and this will directly support improvements to future management of the resources. This information will make a contribution to the next water management plan, due to be produced after these projects are completed. It will include a combination of robust science and information from stakeholders and the community about economic, environmental, social and cultural water issues. This will also support the South West regional water plan – strategic directions, acknowledge other previous research and work done to improve water efficiency. The water management plan will determine new abstraction limits and help secure water for the Collie area and the state, in line with the requirements of the National Water Initiative.