Our water sources

Otway Water Supply System

The Otway system is our largest and most complex supply system, providing two-thirds of all our water needs.

The water flows by gravity from the Otways streams, or is pumped from the Gellibrand River, before being treated and made available to customers in Allansford, Camperdown, Cobden, Derrinallum, Glenormiston, Koroit, Lismore, Mortlake, Noorat, Purnim, Simpson, Terang and Warrnambool. The system also supplies non-drinking water to nearly 900 rural customers and several major industries along the pipeline.

History

In the early 1900s, the absence of a reliable domestic water supply had been impeding the development of local towns including Camperdown, Terang, Cobden and Warrnambool.

Warrnambool was supplied from the Merri River, however farming activities along the river had reduced the quantity of water to an unacceptable level. In the smaller towns, most properties relied on rainwater tanks as the water from local streams was unsuitable due to its high mineral content.

The solution was found in the high rainfall and mountain streams of the Otways. Construction of the original water supply system - the 115-kilometre long North Otway pipeline - began in 1935 during the Great Depression with support from the government and the financial backing of ratepayers from the four towns.

Construction

Unemployment had risen to unprecedented levels and the government provided relief funds for both single and married men to work on the project for limited periods. Working conditions were appalling, but there was no shortage of recruits, as many thousands of Australians were desperate for work.

Tents were pitched at sites along the pipeline route. Men not only had to suffer perpetually wet conditions (and sometimes floods), but also the hazard of leeches and snakes.

Machinery was crude by today's standards with horse drawn scoops, ploughs and drays used together with tractors. Trenches were dug by hand where the terrain was too steep to use horses and scoops. A total of 300 men and 170 horses were used at the peak of the operation.

info@wannonwater.com.au | 1300 926 666
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A temporary factory was set up at Colac to manufacture the steel pipes for the project. At this time, the pipeline was the longest in Victoria (and possibly in Australia) to have welded joints - not the usual lead-caulked joints which wouldn't have withstood the water pressure.

The gravity-fed pipeline reached Camperdown, Cobden and Terang by 1938, and Warrnambool was linked to the system the following year. Several large storage basins or reservoirs were also constructed along the pipeline. These storages ensured further security of supply

The pipeline grows

Demand for water in the area continued to grow over the next two decades, exceeding the system's capacity during periods of peak demand.

To cater for this, several pumping stations were constructed along the route, some sections of pipe were duplicated, and several storages were enlarged.

In the 1960s, South Purrumbete, Devils Gully, Noorat, Glenormiston, Simpson, Chocolyn, Gnotuk and Boorcan were connected, followed by Lismore and Derrinallum in the 1970s,

A second pipeline, the 80-kilometre long South Otway pipeline, was constructed in 1975 to meet increasing consumption and additional urban and rural demands. Purnim and the Framlingham Aboriginal Community were connected to the Otway system in the 1980s, and the townships of Koroit in 1999 and Mortlake in 2001.

How the system works

Although only commanding a small headworks catchment area of 7.5 square kilometres, the high rainfall in the Otways generates significant run-off. Instead of using a dam, water is diverted directly into the North Otway pipeline using small concrete weirs at East Arkins, West Arkins and First Creeks. The North Otway Pump Station also pumps water from the Gellibrand River to provide a consistent supply.

Storages are strategically located along the pipeline at Cobden, Donalds Hill (Camperdown), Ewens Hill (Cobrico), Tank Hill (Panmure), and Dales Road and Brierly Basin (Warrnambool). The storages are drawn on in summer when supply from the headworks is insufficient to meet high demand, and to reduce pumping costs. The storages are then refilled during winter when the flow in the catchment is high.

The South Otway pipeline supplies water directly to Warrnambool, reducing reliance on the North Otway pipeline, and increasing the security of the whole system. Water is pumped from the Gellibrand River, just upstream of the junction with Kennedys Creek, to a storage basin at Plantation Road, east of Port Campbell. It's then delivered by gravity to Warrnambool.

Today, this system is supplemented by groundwater bores at Albert Park in Warrnambool and the Warrnambool Roof Water Harvesting System which captures excess rainfall from roofs in the city's north-eastern growth corridor, the Albert Park precinct and the Horne Road industrial estate. A contingency bore has also been installed at Curdievale to provide additional supply security.