

BENDIGO STORM-WATER RESOURCE

by Kevin Long

Originally designed and written 1-6-2005
Last modified 12-9-2006



Bendigo Creek during thunderstorm
21 December, 2007

A basic study of the yield from The Bendigo Creek will reveal there is **a large reliable resource of B grade water available.**

Due to the increased paved and roofed areas in the catchment of this creek **large flows are now yielded from even small rain events.** I estimate 12,000ML average per year, some years much more.

To make best use of this resource I recommend an **offstream turkey nest reservoir**, of 1,000 ML is built down stream of Epsom connected to Spring Gully Reservoir with a 600mm water main. Add branch lines to supply irrigation water to as many sports grounds as feasible.

New subdivisions should be encouraged to connect the B grade water supply for the watering of gardens and sports grounds. **The Bendigo creek downstream users will need to be supplied with piped water, saving approximately 11,000ML Per year.** A **1.5 meter** diameter transfer pump would be required to lift the stormwater flow from a small weir to the offstream turkey nest reservoir. The reservoir's capacity, together with the recycled waste water from the Epsom plant, could then be transferred to the Spring Gully Reservoir using a high pressure pump. This would take about 20 days pumping after each good rain event. When pumping up is not in progress, the line could be gravity feed from the Spring Gully Reservoir - thus suppling irrigation needs within the city boundaries and out-lying areas.

If the available water exceeds the capacity of the Spring Gully reservoir the over flow water could be gravitated back to Eppalock via the existing pipe line, subject to approved water quality tests, or further treated and pumped to the nearby Sandhurst reservoir for use in the Coliban system.

If a new pipeline from Waranga West Channel was to be installed it, it could deliver water directly to the offstream turkey nest reservoir at Epsom. This new pipeline may serve a triple purpose, by suppling the downstream users along the Bendigo Creek with a new stock and domestic allocation, and could also deliver sales water back to the Waranga channel if desirable. 'That is when all Coliban's reservoirs are full.'

This pipeline will need to deliver 5,000ML per year to replace some of the water that has been lost due to the reduced yield and increased demands on the Coliban System.

To regain future security we need to install a stock-and-domestic piped system to replace most of the old Coliban channel and dam systems. The new works (as outlined above) will - on average - make available for 'use' **an extra 40,000ML per year to the Coliban System.**

This new system will allow us to reduce the number of small dams in the Eppalock catchment. As a result we should also see the future yield to Eppalock rise by approximately 10,000ML per year.

The above system would operate with lower recurrent costs than the 'Super High-Cost Pipeline' coming from the Eildon system via Colbinabin ... that only "robs Peter to supply Paul". This system would deliver twice as much water to Bendigo. It would give a net gain of 5,000ML to the irrigators, instead of a loss of 20,000ML.

This system would be more politically acceptable, and make Bendigo almost self reliant for all its water needs for the next 50 years.

Bendigo water shortage solved ... just add money, labour, expertise and co-operation.

Look at the big picture, do not look just from Coliban Water's viewpoint.

These solutions will benefit the whole of the Community - that is irrigators, recreational, stock-and-domestic and urban users, through the most efficient use of local water.

Kevin Long. ph 5441 2394

www.TheLongView.com.au