

July 2009



Two years and counting

Bendigo Recycled Water Factory



The Bendigo Recycled Water Factory has now been operational for two years. The factory has produced approximately 3500 megalitres (ML) to date which is the equivalent to 1400 Olympic size swimming pools.

Overall, use has been:

Public Open Spaces	375 ML
Rural Customers	2667 ML
Standpipe	19 ML
Spring Gully Reservoir and within the recycled water system	439 ML

Total 3500 ML

This year has seen an increase in the number of recycled water customers.

Number of customers	07/08	08/09
Rural	211	349
Public Open Space	20	31
Standpipe	0	25
Industrial	1	1

There are currently another seven connections to the pipeline in process.

Water at last

For the past year, the Bendigo East Bowling Club has worked hard to connect to the Epsom to Spring Gully Recycled Water Pipeline. Their final inspection in June was approved - allowing access to recycled water for their three bowling greens.



Bowling green July 2009

Algae in farm dams

Farm dams are very susceptible to algae blooms. Warm weather, low water levels and an increase in nutrients provides ideal conditions to stimulate growth in algae species.

Algae are a normal part of any aquatic ecosystem. They occur in both fresh and sea water environments and grow in a wide range of temperatures. They require sunlight, water, carbon dioxide and nutrients to grow.

There are four main types of freshwater algae:

Flagellates:

Various shapes and sizes but all have a whip-like tail for independent movement. In a bloom they can cause taste and odour issues in drinking water.

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Water carter accessing Bendigo's Stanley Street recycled water standpipe

Green Algae:

Various shapes and sizes but are recognisable by their long green ribbons. Often seen in rivers, channels, side of troughs and tanks and in a thick tangled mass in swamps.

Diatoms:

Exist as a single cell and form colonies. They can be seen attached to other plants causing brown slime. Some can suspend themselves in water and generally do not cause any issues in farm dams.

Blue Green Algae:

Are a single filament and form clumps, They form sudden, explosive blooms that produce thick scums of a pale green to blue green to dark green in colour. Scums are found down wind on the surface during dusk and dawn. Blooms produce a foul septic like odour and can produce harmful toxins which will contaminate the water making stock/wildlife ill.

Conditions that favour algae blooms:

- Increase nutrient levels
 - Run off from rain events
 - Evaporation causing concentration of nutrients
 - Disturbance of soil sediment releasing stored nutrients (i.e. channel run)
 - Contamination from animal or organic matter
- Warm temperatures
- Shallow water or where no mixing occurs from wind movement
- High levels of organic matter (vegetation growth, defoliation of trees and uncleared delvers)
- Direct exposure to sunlight

Algae prevention tips:

- Clear delvers of leaves and grasses prior to channel run
- If your dam is almost empty prior to a channel run, clear any vegetation that may be growing such as grasses or weeds
- Plant appropriate vegetation around dam/waters edge to compete for nutrients

If an algal bloom does occur:

- Stop using the water and provide alternative water source for stock
- Contact a professional to identify the type of algae (such as Coliban Water, North Central Catchment Management Authority or Department of Primary Industries)
- A sample may be taken for further identification
- Analyse why the bloom occurred and develop an action plan

Examples of algae blooms:



Diatom algae in dam



Blue green algae bloom in Gunbower



Green algae in rural channel

If you wish to receive this newsletter electronically, please contact our Recycled Water Officer on 1300 363 200 or email coliban@coliban.com.au

Coliban Water reserves the right to alter or change information contained in this newsletter. Information was correct at the time of printing 28/7/2009.