

# Quiet Lakes at Patterson Lakes

## About blue-green algae

**June 2010**

### What are blue-green algae?

Blue-green algae (known scientifically as Cyanobacteria) are a natural type of organism present in aquatic systems, including streams, lakes, estuaries and the sea.

Individual cells are very small and are normally not visible in a water body. However, under certain environmental conditions, numbers can increase rapidly and blooms become easily visible across the water surface.

Many factors trigger blue-green algal blooms and they usually occur because of a combination of the following: high nutrient levels, low inflows, low storage volumes and warm weather conditions.

*Source: Department of Sustainability and Environment [www.dse.vic.gov.au](http://www.dse.vic.gov.au)*

### How are blue-green algae monitored in the Quiet Lakes?

Blue-green algae are monitored regularly by Melbourne Water. Testing is done by an independent commercial laboratory, which is accredited by the National Association of Testing Authorities (NATA).

Blue-green algae monitoring is an evolving science. Melbourne Water has recently trialled a more accurate way of calculating the total volume of blue-green algae in the lakes. This more precise reporting method has recently been endorsed by the Department of Sustainability and Environment (DSE).

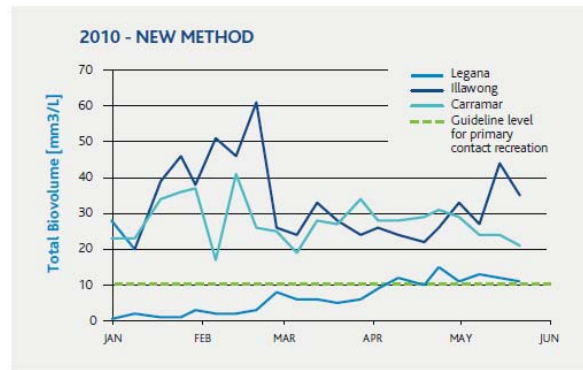
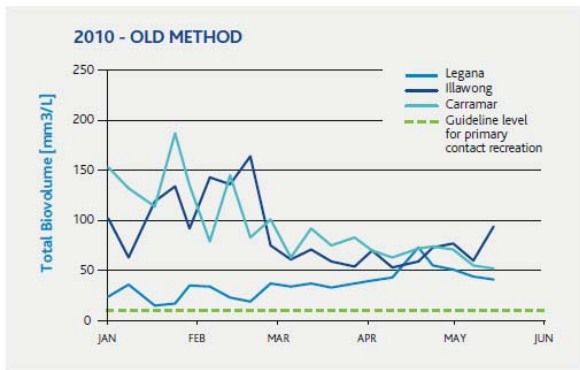
The charts above compare the 2010 results for the previous and new methods used to calculate the volume of algae in the lakes.

As you can see from these charts, the total volumes of blue-green algae using the new method are shown to be lower than the total volumes using the previous method. In some cases, the blue-green algae levels are below the guidelines for primary contact recreation.

The old method relied on estimates. It was more conservative, but less accurate.

The new method takes into account true measurement of individual cell volumes, which are determined in the laboratory for each species present in the lakes.

This is the most advanced way of calculating total algae volume and is the first time it has been used by Melbourne Water. This more precise monitoring method will be adopted as the reporting method from now onwards.



Please note that the scales on the left-hand axis (showing total algae volume levels) differ between the two charts.

### What types of algae are found in the Quiet Lakes?

Algae are a diverse group of organisms which range dramatically in size, shape and toxicity. The three families of blue-green algae most commonly identified in water quality tests of the lakes are:

- Aphanocapsa
- Merismopedia
- Planktolyngbya

### Are blue-green algae in the Quiet Lakes a risk to my health?

While the amount of blue-green algae in the Quiet Lakes has often been above the guidelines (set by the Victorian Government) for 'primary contact' activities such as swimming, it is important to note that the types of algae in the lakes are not toxic. They may, however, cause minor skin irritation.

Melbourne Water sends water samples to an independent laboratory for analysis.

Results show that, regardless of the amount of algae present in the Quiet Lakes, the water quality does not pose any serious risk to people's health.

The signs at the lakes are an important part of the Victorian Government's blue-green algae management system. They help people to make their own decision about whether to enter the water.

### How can I find out about blue-green algae levels in the lakes?

As above, there are signs at each lake to help people to make their own decision about whether to enter the water.

Melbourne Water puts information about the amount of blue-green algae in the Quiet Lakes on noticeboards at each lake.

We now also have a new section on Melbourne Water's website, which shows up-to-date results.