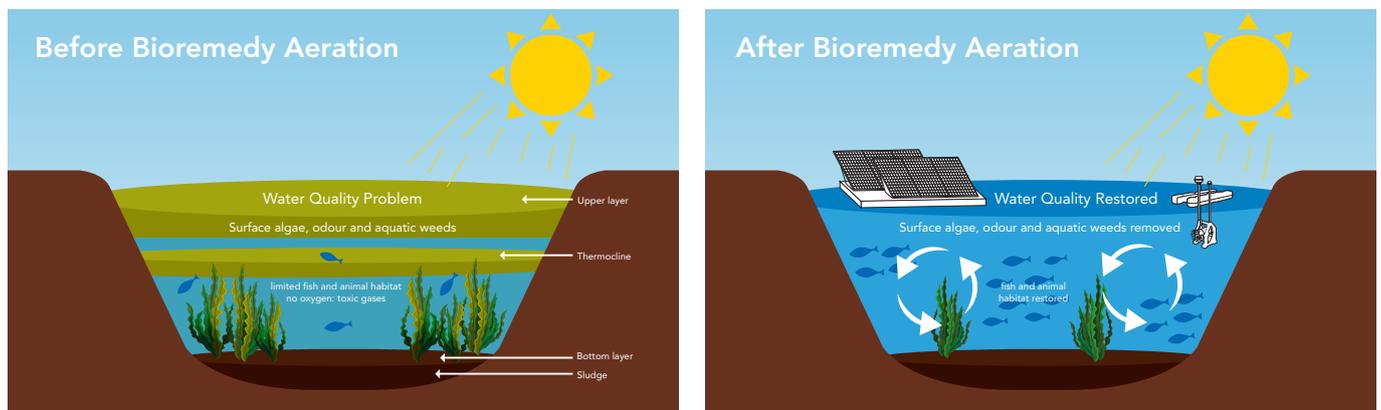


# Solar Aerator / Circulator Project

Over the past 12 months BioRemedy has worked toward developing the first solar powered aeration and circulation system fully designed and constructed within Australia.

BioRemedy has been successful in designing, commissioning and installing a solar powered aeration and circulation system that can be installed and commissioned within water bodies across Brisbane which is a major achievement in protecting the ongoing health of Brisbane's residential waterbodies



## Poor water quality

Poor water quality is responsible for infestations of algal and aquatic weed species. The limiting of fish and animal habitat and the generation of odour through the following mechanisms:

- Limited physical movement of water within the waterbody;
- Influence on pH of the water, through algal metabolic processes; and
- Low levels of oxygen concentration and distribution throughout the water body.

Waterbodies accumulate both settleable and dissolved organic loads and eventually exceed the natural 'carrying capacity' of the water.

These organic loads concentrating within a waterbody provide algal and aquatic weed species a sufficient food source to allow large-scale infestation.

Without the influence of an eternal aeration and circulation system, the infestation of algal and aquatic weed species in combination with the generation of high odour levels can severely limit the value of waterbody to the public, and to native plants and animals that use waterbody as habitat.

## Mechanical aeration & circulation

The introduction of mechanical aeration and circulation is a method commonly used to remove conditions favoured by a broad range of algal and aquatic weed species and also to mitigate the generation of odour.

Well circulated and aerated waterbodies:

- Breakdown and disperse algal blooms;
- Minimise the release of contaminants from sludge; and
- Promote further metabolic activity from local bacteria to facilitate degradation of sludge and reduce the generation of odour.

## Long-term management

With the introduction of solar powered aeration and circulation units to this water body, Brisbane City Council have introduced a long-term management plan that considers the environmental and biological factors affecting the lake.

Brisbane City Council has made finding and instituting lasting sustainable solutions to protect the future of this waterbody a priority.

Waterbody management is complicated and requires a coordinated effort of individuals, landowners, community groups and government.

Should you wish to gain further information on the solar powered aeration and circulation unit or report a problem with a unit, please call Brisbane City Council or BioRemedy.

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