

## Sludge Reduced an Average of 58% with BIO ENERGIZER<sup>®</sup>

### FIELD REPORT

Location: WWTP Western Districts, Victoria, Australia

### Project Summary

With sludge accumulation taking up valuable lagoon capacity at all sites, a target of 40% sludge reduction at each site was established. Wannon Water decided to de-sludge all these lagoons using BIO ENERGIZER<sup>®</sup> rather than mechanically dredging. BioEnergizer Australia's Melbourne based Commercial Distributor, Attero, won the contract for bioremediation of all sites. The contract also called for sludge surveys to verify before and after results. Sludge surveys on all sites revealed the following volumes (in m<sup>3</sup>).

Cobden	6,650 m <sup>3</sup>
Camperdown	16,352 m <sup>3</sup>
Terang	7,726 m <sup>3</sup>
Coleraine	7,333 m <sup>3</sup>
Casterton	8,481 m <sup>3</sup>
Total	46,542 m <sup>3</sup>

### Treatment

Each site had its own specific program. All sites were initially given multiple doses of concentrated bacterial product to the pond, which was then boosted with a Power Dose of BIO ENERGIZER<sup>®</sup> on the same day.

Cobden (1)	13 weeks
Camperdown (2)	9 weeks
Terang (3)	8 weeks
Coleraine (4)	16 weeks
Casterton (5)	11 weeks

Each pond was chain agitated on average every 3-4 weeks. This has the effect of releasing accumulated gas already generated by the bacteria, and gently stirring the sludge/water interface to bring the bacteria into better contact with a new sludge food source.

### Results

Within a matter of a few weeks, observations showed a significant increase in bacterial activity. At the end of each Project Period, a final sludge survey was conducted to confirm the results shown in Chart 1.

Chart 1

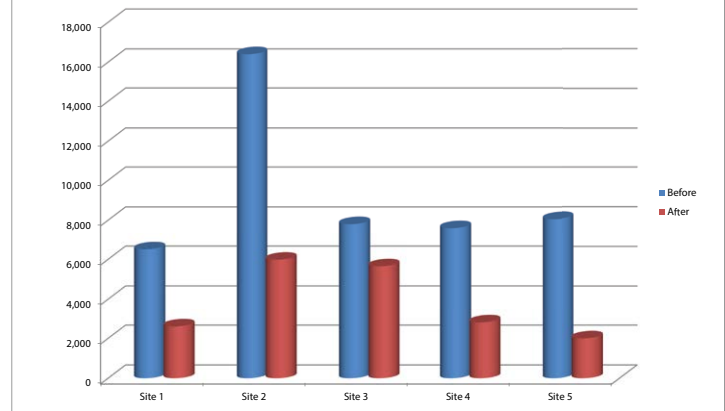
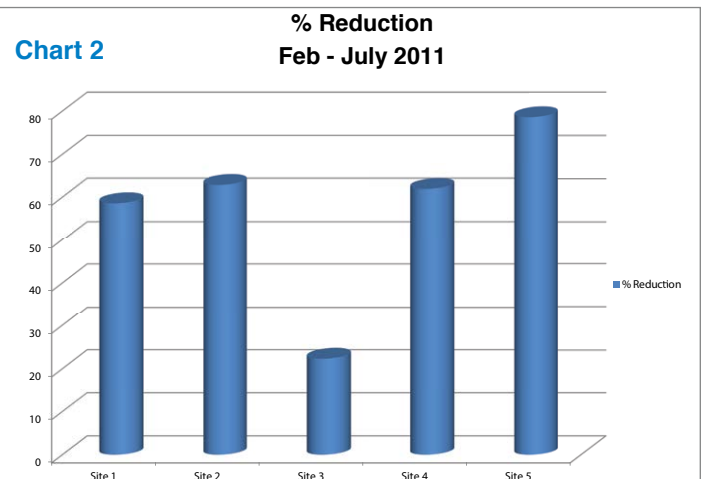


Chart 2 shows the percent reduction at each site (Terang - Site 3 was low due to intense flooding during the remediation period). Actual volumes reduced over the period were:

Cobden (1)	3,897m <sup>3</sup>	58.6%
Camperdown (2)	10,274 m <sup>3</sup>	62.8%
Terang (3)	1,723 m <sup>3</sup>	22.3%
Coleraine (4)	4,541 m <sup>3</sup>	61.9%
Casterton (5)	6,670 m <sup>3</sup>	78.6%

A total of 27,105m<sup>3</sup> (avg 58.2%) of accumulated sludge was removed.

All projects were completed without taking the ponds offline and without disruption to normal water flows or pond operations.



## Probiotic Solutions® Product Information

BIO ENERGIZER® is a broad-spectrum bio-activator containing over 30 essential microbial growth-promoting ingredients. By design, BIO ENERGIZER® is a balanced formulation of vitamins, trace nutrients, enzymes, organic acids, and biostimulants that motivate the existing microbial community to greater metabolic capacity and efficiency. BIO ENERGIZER® is not a bacterium nor an inoculum.

For many years, wastewater operators have continued to use BIO ENERGIZER® to cut their sludge hauling costs.

### Operators Using BIO ENERGIZER® Report:

- 1) Increases in BOD removal efficiency.** BIO ENERGIZER® improves treatment plant removal efficiency to increase plant treatment capacity and more easily meet effluent requirements.
- 2) The elimination of expensive dredging costs.** BIO ENERGIZER® converts sludge into gases and water, reducing sludge accumulations. No draining, drying, excavating, or inconvenient down time.
- 3) The reduction of odors and aeration costs.** BIO ENERGIZER® enhances aerobic and facultative biological eco-systems to reduce the production of objectionable and offensive odors. BIO ENERGIZER® also increases the dissolved oxygen levels which decreases the need for aeration.

BIO ENERGIZER® enhances endogenous respiration for faster and more complete oxidation of sludge into carbon dioxide and water.



**Our Probiotic Solutions® Products  
are Highly Efficient and Effective Due  
to Our Unique Delivery System**

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Quote and System Evaluation.*

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