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Does your septic tank smell or is there a wet area above your leach field?

We can solve your septic tank problems by reducing the hydraulic loading on it.

Reducing the Wastewater - Managing the Problem

Household water usage has increased dramatically with modern automated washing machines, dishwashers and waste disposal units. The result is an increase in the wastewater produced adding to the problem of wastewater disposal. The recycling of greywater back through the toilet cistern is a positive solution to the problem. The research carried out with our water recycling systems lead us to believe that we have made improvements to wastewater disposal problems and increased the efficiency of septic tanks systems. By decreasing the volume of greywater entering the septic tank, and reducing the outflow to the leach field gives recovery time, and the soil remains permeable and not blocked with bacterial growth.

Our test site was at Bay View Napier, New Zealand. The problem our client had was, a sewage smell coming from their property, the gully traps over flowing with sewage during high rainfall and the neighbours threatening to sue because of the smell. Although the house, septic tank and disposal area, were only four years old, they spent thousands of dollars increasing the size of their leach fields but to no avail. Whilst increasing the size of the leach fields, a soak pit was added with a pipe in the center, also a metre long dipstick for checking the ground water level was added. This dip stick allowed monitoring of ground water levels before and after installation of the ECOplus water recycling system.

Since installing the recycling system at Rogers Road the problems have been resolved. The ground water level has receded from 300 mm below ground level to a metre or more, as that was the length of the dipstick, all smells have gone as the bacteria are not polluting the soil and the client has remained satisfied since November 1997 when the system was installed.



Case history on ground water levels at Bay View, Napier, NZ.

Background:

The owners of 89 Rogers Road, Bay View, Napier, moved into their new house in December 1991. Bay View is a rural suburb of Napier with most of the houses connected to individual septic tanks and a reticulated town water supply.



At first the owners did not have any problems with their 3,300 litre septic tank. This changed as more houses were built on higher ground next to their property and the problem of ponding and sewage smell became worse. For a few years, they put up with a septic tank that overflowed during heavy use, as the effluent was unable to seep away through the ground due to a high water table. They tried contouring their ground to create a low bog area and had it planted with suitable vegetation to minimize the effect of the ponding

sewerage, but to no avail.

In October 1997 an extra soakage field and pit were dug, filled with pea metal and topped off with novaflow and larger sized stones. A metre long pipe was also installed vertically down into the pit so the water level could be monitored with a dipstick. The soakage pit, still did not rectify their problem of ponding and sewage smell.

During 1997 Council dug an open drain, along the fence line of a field on the western boundary of the property to try to overcome the problem. This meant that they no longer had to put up with effluent ponding on their property, as it was able to flow into the open drain.

The drain solved their immediate problem but caused the neighbours to complain about the effluent smell drifting past their houses. This led them to investigate other solutions to rectify their problem. Perhaps in desperation they then approached us to see if our system would overcome their problem.

On 22 November 1997 the ECOplus greywater recycling system was installed and since that day they have not had any further problems. The smells are no longer a problem and their water consumption reduced by over 30%. The financial benefit has been that last year, unlike previous years they did not have to pay any water rates, as they did not exceed their allowable water limit.

The Outcome:

By reducing the wastewater through the septic tank and reducing the water into the leach field's bacterial action has not blocked the soil thus maintaining permeable nature and allowing the water to take its dissipate away from the leachfield.

Figure 1 shows the reduction in ground water level from 330 mm below ground level on the 22nd November 1997, the day the system was installed. 1 metre or more on the 23rd April 1998 and the comments from the owners note book for that date were, " Dry sludge, appears to look more like silt. Septic tank outfall at correct level".

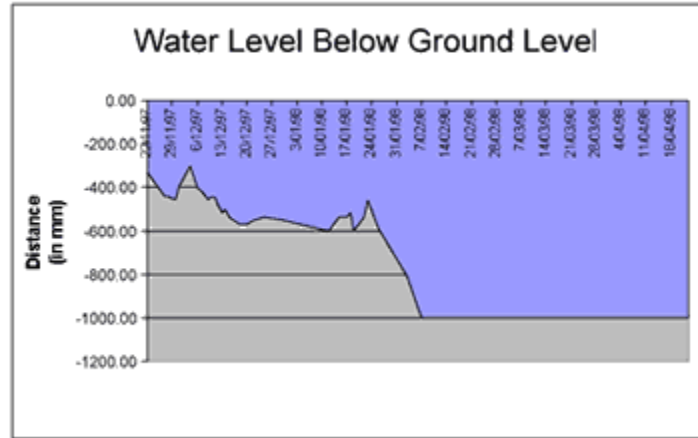


Figure 1. Reductions in groundwater levels after installation of ECOplus

All readings were recorded by the owner of 89 Rogers Road, Bay View and supplied to us for our documentation and reports. It should be noted that the maximum length below ground level that could be measured was one metre, as that was the length of the dipstick.

The graph shows the water level reduced to one metre below ground level between the 22-11-1997 and the 6-02-1998 and has remained at one metre or more since the testing finished on 8-04-1998.

Conclusion:

We have received hundreds of enquires from people who are planning their houses or who are having septic tank problems.

- New Zealand Patent No 286169
- Australian Patent No 708129