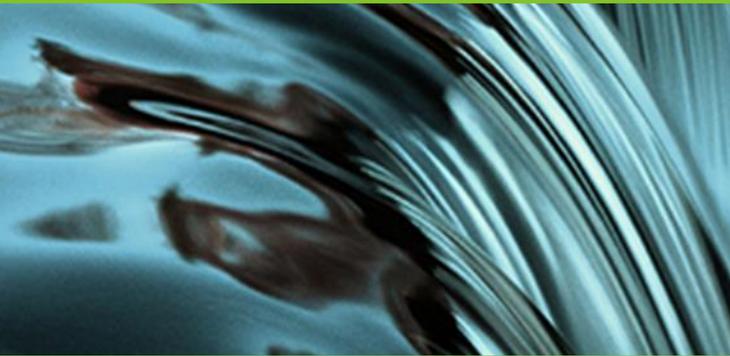




naturalflow

eco-wastewater & sewage systems

“ We do it simpler ”



Home Owner Care Guide

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HOME OWNERS CARE GUIDE

• *To The Home Owner*

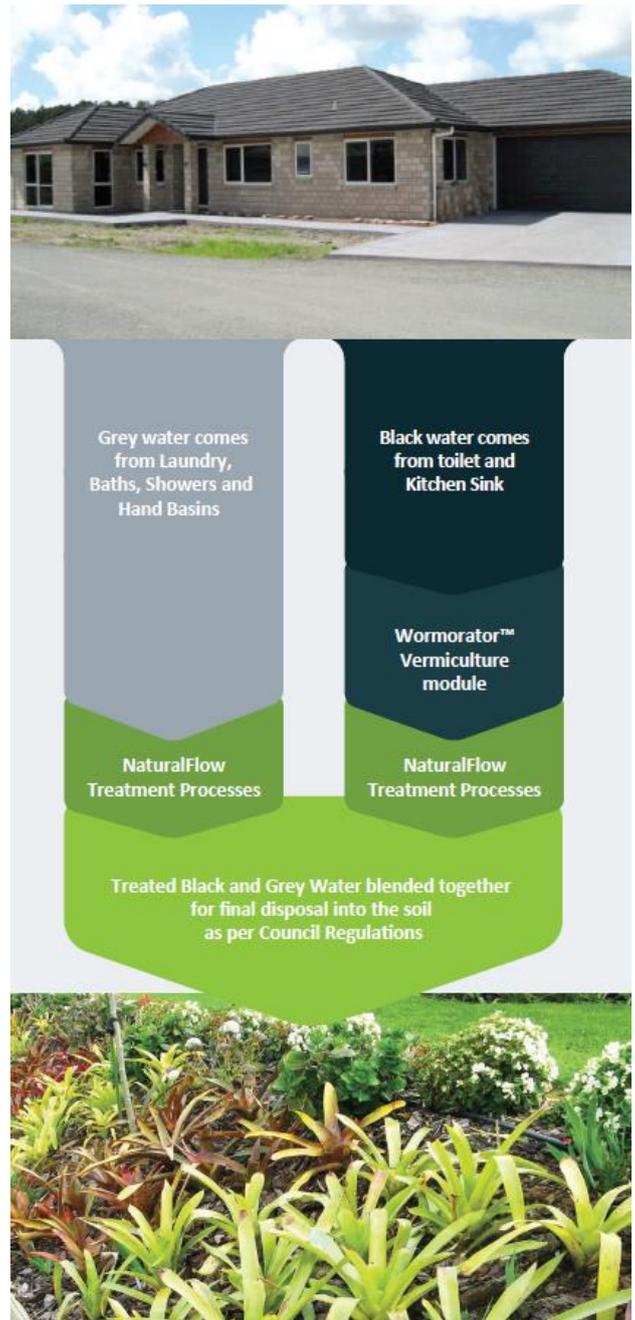
Thank you for choosing a NaturalFlow System to treat and care for your on-site sewage and wastewater.

NaturalFlow is a truly natural living system that uses well-established, sustainable processes to treat both solid and liquid waste. Nature is one huge recycling mechanism and NaturalFlow harnesses these forces that have been working together for thousands of years and continue to do so today, working with our environment, to treat your wastewater. The system does not draw on any other resources and does not use external power in any of the treatment processes.

We would encourage you to monitor and care for your NaturalFlow system yourself with our backing and support and by doing so you will learn how your system works and operates and how to keep it in top working order. As with all living organisms a little care and supervision will ensure that it will run at peak performance for many years.

The system accommodates and works with all of today's conveniences such as conventional toilets, 'waste master' units from the kitchen and more. All domestic wastewater can be taken care of and even on steep and difficult sites with poor soakage; NaturalFlow will deliver consistent results year after year.

Kind regards,
The NaturalFlow Team



HOME OWNERS CARE GUIDE

• *Waterflow NZ Ltd Warranty*

WATERFLOW NZ LTD warrants that the NaturalFlow System will be free from defects in material and workmanship for the following periods of time from the date of installation as set out in the following conditions:

1. Roto-Moulded tanks 15yrs
2. Filter media 15 yrs.
3. Dosing float and/or pumps 2yrs
4. WATERFLOW NZ LTD will at its discretion replace or repair such components that prove to be faulty with the same or equivalent part at no charge.
5. Warranty of Operation covers the performance of the NaturalFlow System as connected to the effluent inflow for which they are designed, and has been installed to the criteria as set out in the relative installation instructions and procedures, and has an assigned Service/Maintenance contract in place with Waterflow NZ Ltd or it's appointed agent/s.

Warranty excludes defects due to:

- A) Failure to use the system in accordance with owner's manual.
- B) A force majeure event outside the reasonable control of WATERFLOW NZ LTD such as (but not limited to) earthquake, fire, flood, soil subsidence, ground water table variations or plumbing fault.
- C) Modifications to surrounding landscape contour after installation
- D) The actions of a third party
- E) The system required to bear loads (either hydraulic or biological) greater than that for which it was designed
- F) Any modifications or repairs undertaken without the consent of WATERFLOW NZ LTD
- G) Failure, where applicable, to fence and plant disposal field.



Dean Hoyle

Managing Director.



HOME OWNERS CARE GUIDE

• *Caring For Your Wastewater And Sewage System*

Service Agent Role

It is recommended that all Naturalflow systems are serviced by a qualified professional once every twelve months, unless otherwise specified by the manufacturer.

Home Owner Care Role

The Home owner is greatly encouraged to maintain a monthly visual check of the operation of their system and to make sure their land application systems are maintained in good condition.

1. Industry recommendation is to have a maintenance contract in place at all times
2. Visual check of treatment system
3. Visual check of land application system
4. Notify Waterflow NZ of any issues

Inspection Checklist:

When checking the system operation, take particular note of;

1. Wormerator build-up. Six monthly level should be no higher than 200mm below inlet pipe (simple observation through lid adequate).
2. Field performance, particularly looking for any undue odours or effluent breakout (flush field lines 2–3 monthly).
3. All electrical parts (if applicable). Ensure all pump alarms are working.
4. Check Grey Water and Dose tank outlet filter for any build-up.
5. Clean disc filter 2–3 monthly (PCDI irrigation systems only)
6. Check Aerating Bio-Filter charge tank (1200 pump) for correct operation (simple observation through lid adequate) and that the plants themselves look healthy and lush (these can be trimmed if desired to keep looking tidy).

Did you know...

...that as a homeowner you're responsible to make sure your wastewater system gets the required maintenance needed to protect the investment in your home? This guide will help you care for your wastewater system. It will help you understand how your system works and what steps you can take as a homeowner to ensure your system will work efficiently.



HOME OWNERS CARE GUIDE

• *Caring For Your Wastewater And Sewage System*

Components of Your Complete Wastewater Septic System

A typical wastewater septic system has two main components: a Wastewater and Sewage Treatment System and a Land Application System (or disposal field)

The NaturalFlow System treats and reduces the solid content of the wastewater by up to 95%. The wastewater liquid then flows to the disposal field, where it percolates into the soil, and microbes provide final treatment by removing harmful bacteria, viruses, and nutrients before it eventually reaches the ground-water ecosystem, and the cycle begins again.

Efficient Water Use – 'it does make a difference'

Average indoor water use in the typical single-family home is approximately 180ltrs per person per day. The more water a household conserves, the less water enters the septic system. Efficient water use can improve the operation of the wastewater system and reduce any risk of disposal field overload.

High-efficiency toilets

Toilet use accounts for 25 to 30 percent of household water use.

Do you know how many litres of water your toilet uses to flush? Most older homes have toilets with 11+ litre reservoirs, while newer high-efficiency dual flush toilets use 6.3/5.5ltrs or down to 4.5/3ltrs of water per flush. **N.B.** Did you know leaky toilets can waste as much as 700ltrs each day.

Consider reducing the volume of water in the toilet tank with a volume displacer (fancy name for a brick, stone etc!) if you don't have a high-efficiency model, or replacing your existing toilets with high-efficiency models.

Check to make sure your toilet's reservoir isn't leaking into the bowl. Add five drops of liquid food colouring to the reservoir before bed. If the dye is in the bowl the next morning, the reservoir is leaking and repairs are needed.

Water fixtures

A small drip from a faucet may add many litres of unnecessary water to your system every day. To see how much a leak adds to your water usage, place a cup under the drip for 10 minutes. Multiply the amount of water in the cup by 144 (the number of minutes in 24 hours, divided by 10). This is the total amount of clean water travelling to your septic system each day from that little leak.

Faucet aerators and high efficiency showerheads

Faucet aerators help reduce water use and the volume of water entering your septic system. High-efficiency showerheads also reduce water use.



HOME OWNERS CARE GUIDE

• *Caring For Your Wastewater And Sewage System*

Washing machines

By selecting the proper load size, you'll reduce wastewater. Washing small loads of laundry on the large-load cycle wastes precious water and energy. If you can't select load size, run only full loads of laundry. **N.B.** A new Energy Star washing machine uses 35 percent less energy and 50 percent less water than a standard model.

Watch your drains!

What goes down the drain can have a major impact on how well your wastewater system works.

What shouldn't you flush down your toilet?

Dental floss, feminine hygiene products, diapers, cotton swabs, cigarette butts, cat litter, and other kitchen and bathroom items that can clog and potentially damage septic system components if they become trapped. Flushing household chemicals, gasoline, oil, pesticides, antifreeze, and paint can also stress or destroy the biological treatment taking place in the system or might contaminate surface or ground waters.

Care for your Land Application System

Your land application system is an important part of your wastewater system. Here are a few things you should do to maintain it:

- Flush driplines regularly – every 3 months recommended
- Plant only recommended wetland plants over and near your wastewater system. Roots from nearby trees or shrubs might clog and damage the drainfield
- Don't drive or park vehicles on any part of your wastewater system. Doing so can compact the soil in your drainfield or damage the pipes, tank, or other septic system components
- Do not build any structures over it or seal it with concrete, asphalt etc
- Keep roof drains, basement sump pump drains, and other rainwater or surface water drainage systems away from the drainfield. Flooding the drainfield with excessive water slows down or stops treatment processes and can cause plumbing fixtures to back up
- Trees with very aggressive roots, such as willows, should be kept well away from the disposal system, see page 11 for list of recommended plantings
- A soggy drainfield won't absorb and neutralize liquid waste. Plan landscaping, roof gutters and foundation drains so that excess water is diverted away from the Land Application System



HOME OWNERS CARE GUIDE

• In A 'Nutshell'...

DO...

- If your system requires power supply make sure this remains on continuously.
- Check faucets and toilets for leaks; make repairs if necessary
- Use low flush toilets where possible
- Use a 'displacer' to reduce the amount of water needed to flush older toilets
- Use aerators on faucets and flow reducer nozzles on showers to help lower water consumption
- Reduce water levels for small loads of laundry
- Wait until the dishwasher is full to run it
- Densely plant your field to maximise transpiration
- Perform regular monthly visual checks of your system and field
- Grass should be mowed or trimmed regularly to optimize growth and prevent the grass from becoming rank
- Use signs, fences and/or plantings to prevent any vehicle or stock access
- Keep records of all maintenance undertaken on the wastewater systems
- Monitor and care for your Wastewater System as per instructions in the home owner's manual
- You are welcome to install a Waste Master in your kitchen sink. The worms love it!!

DO NOT...

- Switch off power unless servicing
- Use chlorine based disinfectant & cleaning products in the toilets or kitchen sink (Cleaners high in chlorine, phosphorous or ammonia must not be used)
- Over use heavy cleaners that kill beneficial bacteria in the septic system
- Pour any toxic/strong chemicals (paint, oil, grease, paint thinners or pesticides) down any drains
- Pour strong or large volumes of acid down any drains. These include: vinegar, brine, lemon juice.
- Flush down your toilet – Dental floss, feminine hygiene products, diapers, wipes, cotton swabs, cigarette butts, cat litter, dog poo, and other kitchen and bathroom items
- Discard any drugs down the sink or toilet
- Empty rubbish bags into Wormerator
- Alter or add any part of your system without Waterflow NZ LTD's approval



• **Emergency Alarm Checklist**

Systems with a discharge pump will have a high level alarm

This alarm alerts the home owner that the pump out has failed, causing the water level to rise in the tanks.

There 5 simple steps to take in view of determining the cause of the problem:

1. Check the power is switched on at the pump.
2. Check the plug is firmly in the socket.
3. Check the main switch board to ensure no fuses have been tripped.
4. If your system has a disc filter, ensure that it has been cleaned. Blocked disc filters can restrict the pump and cause failure.
5. Call a NaturalFlow service technician. Our number is at the bottom of every page.



• **Household Cleaning Chemicals**

Effects on Wastewater and Disposal System Receiving Environments

Use of many cleaning chemicals in facilities served by on-site disposal systems, can result in high concentrations of the constituents in those cleaning agents being discharged into the receiving soils. These chemicals and constituents can have a massive impact on the quality and condition of the receiving soils over time.

Many of the chemicals can disrupt soil structure and decrease hydraulic conductivity while others can act as bactericides, destroying the essential micro-organisms required to achieve the high level of biodegradation in the treatment and disposal systems.

The following matters need to be considered when using cleaning agents in a domestic situation:

- Laundry powders are often extremely high in sodium which will destroy the salt balance in the soils. Check the labels for low sodium and phosphorous contents.
- Wastewater flow from dishwashing machines can have an impact on wastewater treatment systems, in terms of the strong cleaning chemicals used, so check labels for low sodium products
- Highly corrosive cleaners (such as toilet and drain cleaners) that have precautionary labels warning users to minimise direct contact, are an indication that they can adversely affect the wastewater treatment system. Up to 1 cup of bactericides such as bleach can be sufficient to impact on all the microorganisms/ bugs in a septic system.

Recommended Cleaning Brands:



HOME OWNERS CARE GUIDE

• *Household Cleaning Chemicals*

Substitutes For Household Cleaning Chemicals (Ref TP58)

Use of the following readily biodegradable substitutes for common potentially harmful household cleaning chemicals will reduce the stress on any wastewater system, significantly enhance the performance of the whole system and increase the life of the land application system, while reducing the potential effects of the receiving soils.

General Cleaners

Use soft soap cleaners and bio-degradable cleaners and those low in chlorine levels. Contact us for a new biological cleaner that will help you system.

Ammonia-Based Cleaners

Instead sprinkle baking soda on a damp sponge.

Disinfectants

In preference use Borax (sold in most Bin Inn stores): ½ cup in 4-litres of water.

Drain De-Cloggers

Avoid using de-clogging chemicals. Instead use a plunger or metal snake, or remove and clean trap. Contact us for very effective, worm friendly, drain cleaning products.

Scouring Cleaners and Powders

Instead sprinkle baking soda on a damp sponge or add 4-Tbs baking soda to 1-Litre warm water. It's cheaper and won't scratch.

Toilet Cleaners

Sprinkle on baking soda, then scrub with toilet brush.

Laundry Detergent

Choose one with a zero phosphate content and low in alkaline salts (in particular, a low sodium level) and no chlorine.

Oven Cleaners

Sprinkle salt on drips, then scrub. Use baking soda and scouring pads on older spills.





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Call us today to discuss your needs

0800 628 356

Or for more information www.naturalflow.co.nz



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