



# ECONOTREAT™

Advanced Secondary Treatment  
Aerated Wastewater System



Owner's  
Manual

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# EconoTreat Wastewater Systems

## Owner's Manual

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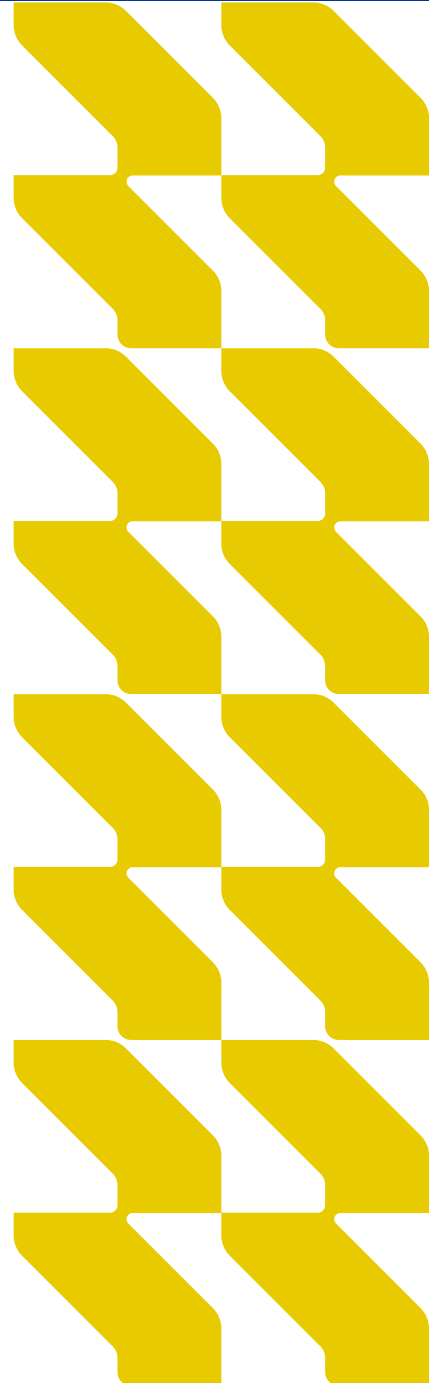
### To the Owner

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

Your EconoTreat System is fully automatic in operation and requires little owner intervention to ensure years of service. It is useful that the owner/operator of the system understand some of the broad concepts of the system operation. This manual has been written to provide this simple explanation and to serve as a future reference so that you can ensure that the system is operating effectively at all times.

We encourage you to monitor and care for your EconoTreat system with our backing and support. By doing so you will learn how your system works and operates and how to keep it in top working order. WaterFlow promises consistent results year after year.

Kind regards,  
The Waterflow Team



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### WaterFlow NZ Ltd Warranty

WATERFLOW NZ LTD warrants that the Waterflow NZ System will be free from defects in materials and workmanship for the following periods from the date of installation, under the following conditions:

1. Plastic-Moulded tanks: 15 years
2. Concrete Tanks: 15 years
3. Filter media: 5 years
4. Dosing float: 2 years
5. Electrical components and Pump: 2 years

WATERFLOW NZ LTD will, at its discretion, repair or replace any defective components with the same or equivalent part at no charge to the consumer, in accordance with the full terms.

**Note: Full warranty document available at your request.**

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### Components of Your Wastewater Septic System

#### Primary Chamber / Tank

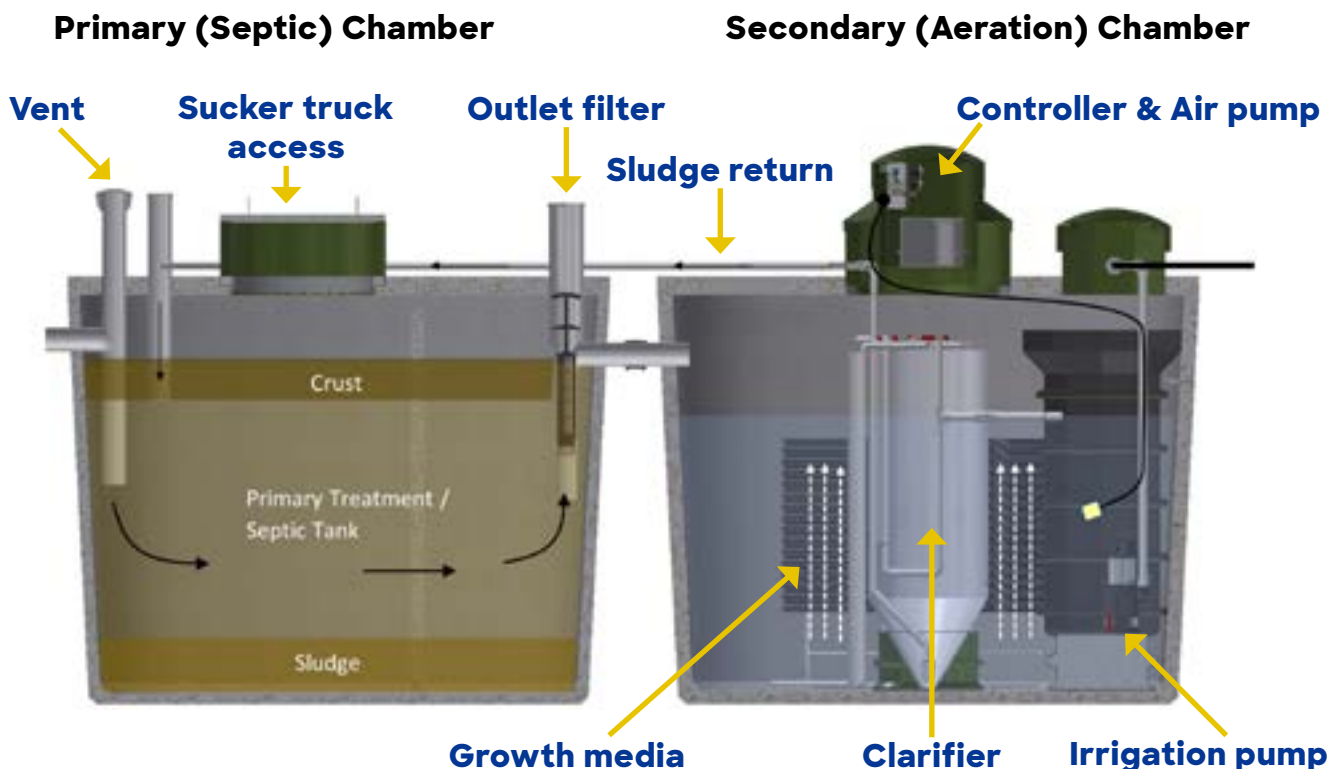
Influent enters the chamber via the source whereby scum and solids capable of settling are separated from the raw influent. Primary treated effluent flows through a transfer port to the aeration tank. This primary tank will also act as a storage chamber for sludge returned from the Clarification Chamber.

#### Aeration Chamber

Water enters from the Primary Chamber. Air is introduced into this chamber via an air blower to create an environment for aerobic bacteria and other helpful organisms to consume the organic matter present. The aeration tank is designed in a manner to help prevent short circuiting of the wastewater to ensure extended aeration. Media is present in the tank to support the growth of bacteria.

#### Clarification Chamber

The Clarification chamber is essentially a quiescent zone where suspended particles/solids are settled out of the water. These particles are returned to the Primary chambers via a sludge return which aids in further biological reduction, denitrification and providing a constant food supply rich in microbes supporting the system through periods of limited flows.



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### Service Agent Role

Your EconoTreat System requires annual service and maintenance inspections unless otherwise specified by local regulations. This will need to be done by our trained technicians. We will phone to arrange a suitable time to attend to your servicing needs. Servicing done by technicians who are not approved by WaterFlow will void your Warranty.

A record sheet (in duplicate) will be completed by our technician at the time of service. One copy is for you the customer and available upon payment, the other copy will be retained for our records.

Please call our office for the cost of servicing after the initial 12-month period.

Servicing includes:

1. A general inspection of tank area, irrigation and drainage.
2. Inspection of electrical equipment including timer, Low powered Blower, irrigation pump, warning lights and connections.
3. Inspection of Pump-out Chamber and septic tank, checking air lines, adjusting air supply (if necessary), operating de-sludging unit, resetting air control, operating submersible switch, checking bio-mass growth, checking sludge level.
4. Inspection of irrigation including lines, jets and outlets. Between 4 - 9 years the tank will need to be de-sludged (pumped out) as with any septic tank. We will notify you of this requirement, as the service technicians will be monitoring sludge depth annually.

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### Owner Care Role

#### 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.

The 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 your approved service provider of any issues

#### Intermittent Use

There are no precautions to take. Your EconoTreat can be left to function automatically for 6 to 12 months. However, if you are likely to be away from home for more than six months you may like to contact our office, so we can make a routine check.

#### Efficient Water Use - it really 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.

#### 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.

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### Inspection Checklist

When checking the system operation, take particular note of;

1. Remove and clean outlet filter every 3-4 months.
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. Clean disc filter 2-3 monthly (if applicable)



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### Care for your Land Application System (LAS / Disposal Field)

Your disposal field 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
- Mow your disposal field and maintain plantings regularly to ensure access to flushpoints etc.
- Plant only recommended wetland plants over and near your wastewater system. Roots from nearby trees or shrubs might clog and damage the disposal field
- Protect both the treatment system and the disposal field from vehicle traffic, including livestock to avoid damage to 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 disposal field. Flooding the disposal field 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 field
- A soggy disposal field won't absorb and neutralise liquid waste. Plan landscaping, roof gutters and foundation drains so that excess water is diverted away from the disposal field



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### Effects of Household Cleaning Chemicals

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 micro-organisms/bugs in a septic system.

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### Substitutes For Household Cleaning Chemicals

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.

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### Do's and don'ts

#### DO

- If your system requires power supply make sure this remains on continuously
- Wipe and bin your fats and frying oils rather than rinsing them down the drain
- 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
- Perform regular monthly visual checks of your system and field
- Keep records of all maintenance undertaken on the wastewater systems

#### DO NOT

- Switch off power unless servicing
- Use cleaners high in chlorine, phosphorous or ammonia in toilets or kitchen sink
- 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. 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.
- Discard any drugs down the sink or toilet
- Alter or add any part of your system without Waterflow NZ LTD's approval

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### Troubleshooting

To ensure the most effective operation of your EconoTreat System you should familiarize yourself with the contents of this manual. The EconoTreat has been designed to include additional safety margins and minor mishaps and normal household usage will not usually affect the operation of the system.

However, if the alarm sounds or strong odours persist, please call your service agent.

Problem	Potential Cause(s)	Remedial Action(s)
<b>Alarm sounds (will indicate air or water alarm)</b>	Irrigation pump not working Air supply not working No power at the tank Blocked Septic filter	Check power source and wriggle pipe from pump to ensure float is not stuck Check water levels Listen for the air compressor Clean septic outlet filter Check your fuse board Open the taps on your drip field to assist water exiting faster High level float switch in the pump well may be triggered - the alarm will reset after the water level in the sump subsides If your system has a disc filter, remove and clean it If everything all looks to be ok, it may be a faulty alarm sensor (mute alarm and contact your service provider.
<b>Water around tank</b>	System overflowing Blocked outlet filter Storm/Surface water	Check there is power on at the system Remove and clean outlet filter Divert Storm/Surface water away from the system
<b>Excessive foaming</b>	Too much laundry detergent Too many washes	Use recommended quantities Spread wash loads over different days

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Problem	Potential Cause(s)	Remedial Action(s)
<b>Persistent odours</b>	<p>Too much water usage</p> <p>Excessive chemicals in use</p> <p>Gully traps dried out or non-existent (if the bathroom does not get used often, the water can evaporate out of a gully trap allowing odour to escape into the house).</p>	<p>Add biologic starter pack</p> <p>Install water saving devices</p> <p>Stop fats, oils, and grease going down the drain</p> <p>Reduce water usage or install water saving devices</p> <p>Avoid using nasty chemicals (Eco store, Earthwise, Ecobeings and Dishpod are great options)</p> <p>Run water down drain to ensure gully trap is blocking odour</p> <p>System will recover</p>
<b>Irrigation system not working</b>	<p>Irrigation pump not working</p> <p>Irrigation lines kinked or blocked</p> <p>Saturated areas at the end of the irrigation field</p>	<p>Check power source and wriggle pipe from pump to ensure float is not stuck</p> <p>Locate all flush valves, check if water is exiting</p> <p>Flush irrigation line and remove kinks or blockages</p> <p>Turn flush valves off to avoid further saturation</p> <p>Check if any large machinery has driven over / near it</p>
<b>Water ponding on irrigation field</b>	<p>Storm/Surface water</p> <p>Irrigation line blocked</p> <p>Excessive water use</p>	<p>Install water saving devices</p> <p>Repair irrigation pipe</p> <p>Redirect any surface water away from the irrigation field</p>
<b>Household drains gurgling</b>	<p>Blocked drain to the tank</p> <p>Check your main switchboard that the power to the system is on</p> <p>Check water levels, if flooded then a technician may be needed to investigate further</p>	<p>Check and make sure you can see the inlet into the tank. If you can you have a drainage issue.</p> <p>Send pictures of the inside of the tank to <a href="mailto:service@waterflow.co.nz">service@waterflow.co.nz</a> to arrange an inspection</p> <p>Please limit water usage until we can come to site</p> <p>Stop and fats, oils, or grease going down the drain</p>

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**Need a hand? We're here to help.**

**0800 628 356**

**[www.waterflow.co.nz](http://www.waterflow.co.nz)**

**[sales@waterflow.co.nz](mailto:sales@waterflow.co.nz)**

