

GREY WATER

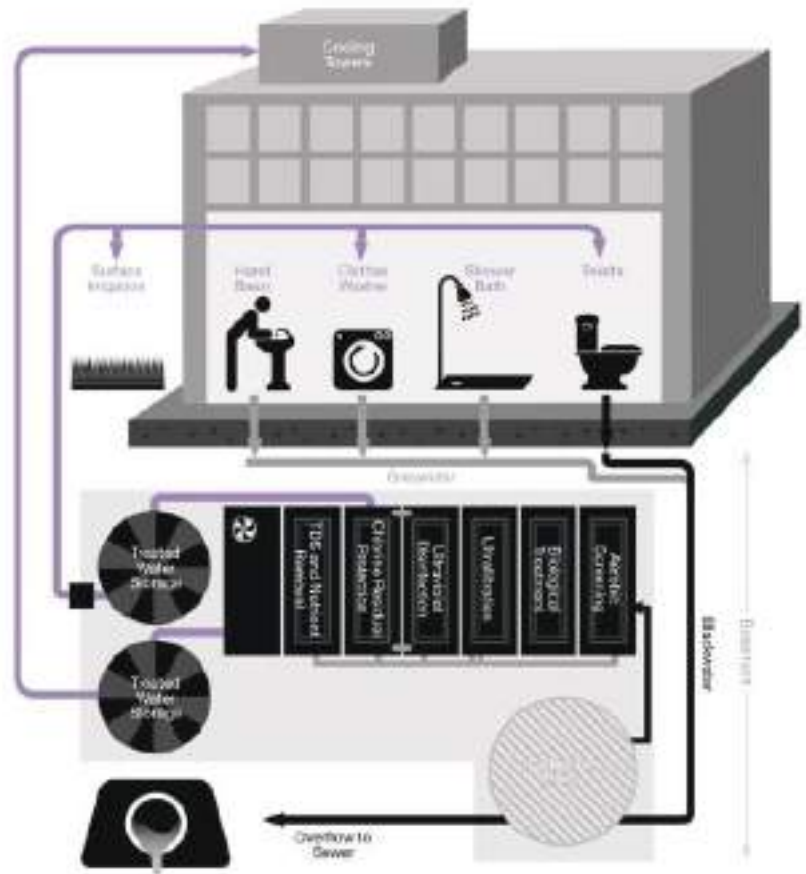
Commercial buildings and multiple dwellings – one recycling solution.

Why lose it when you can re-use it?

Water is a precious commodity. At WES, we're committed to preserving it. Our cutting edge water recycling systems are the sustainable, cost-effective way to reduce water consumption. This gives commercial developers modular solutions to on-site greywater recycling.

Understanding greywater

Greywater makes up around 30–50% of wastewater discharged into our sewers. Therefore, greywater recycling offers facilities the chance to cut their water use by up to half. Generally defined as wastewater from bathrooms and laundries, greywater can come from our showers, baths, basins and washing machines. It may be contaminated with a range of soluble and insoluble (particulate) substances, from soaps and detergents, to skin and saliva, to dirt and lint. Each type of contaminant, whether it is detergent/surfactant, organic, microbial or particulate, must be treated appropriately. Designed with a multi-barrier approach, it combines a range of purifying processes to remove the various contaminants.



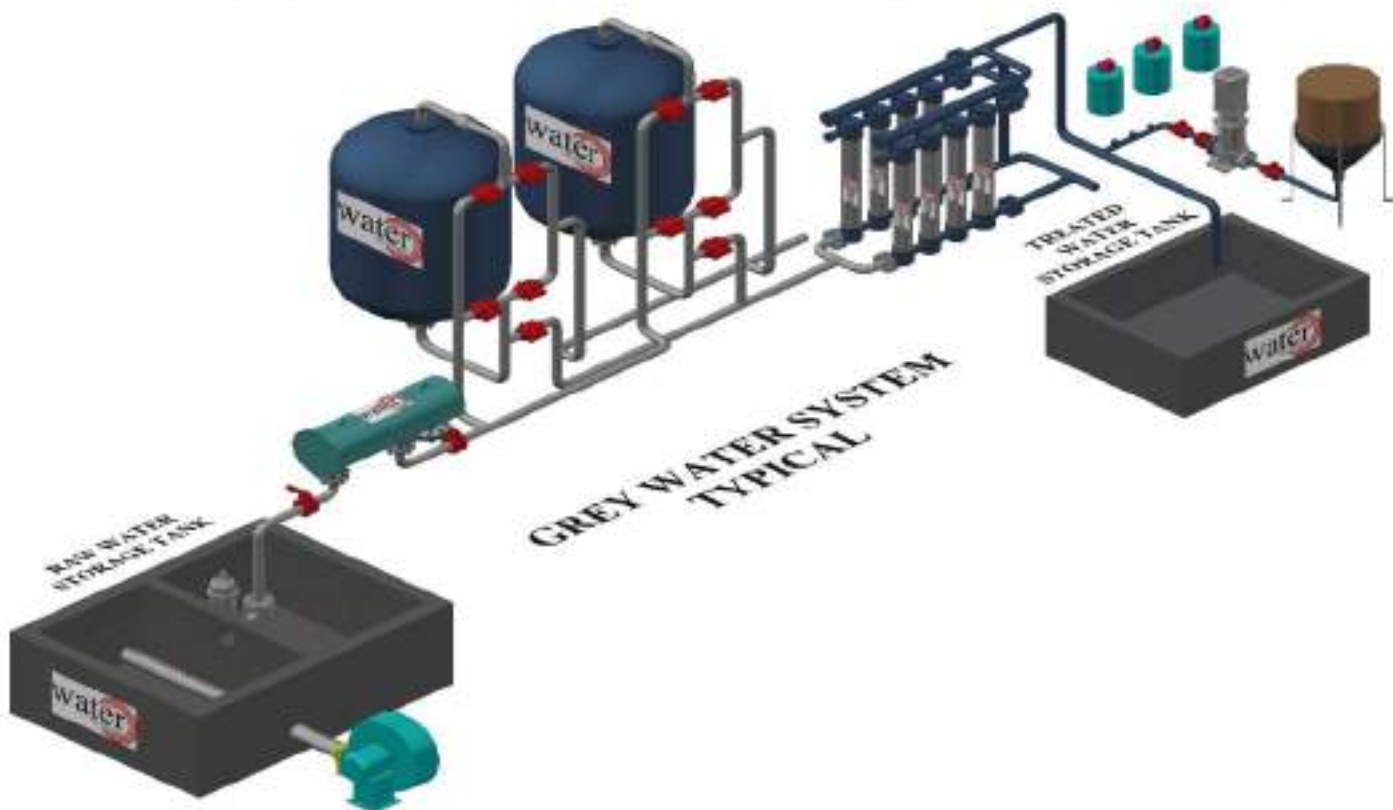
Complete confidence and support

Built-in control logic and instrumentation continuously react to the ever-changing quality of effluent without the need for an on-site operator. Expertly trained engineers remotely monitor all systems via the Internet, twenty-four hours a day, seven days a week.

Regulatory compliance

Data acquisition and compliance reporting are built into the WES system from the ground up. All our systems are backed by expert knowledge, service and maintenance support. This is our ongoing guarantee to ensure your peace of mind.





The System

The technology is utilized in this system features a controlled, robust and comprehensive treatment process that combines physical, microbiological and oxidative treatments into the one package:

Collection point – Water flows from the property to a collection point, whereby it is pumped into the system to begin the treatment process.

Aerobic screening– The first step is a unique odor free process that efficiently reduces insoluble material to a negligible residue.

This residue is usually discharged to sewer and the remaining greywater flows into the second module.

Biological Treatment– Air is diffused into the water to create optimum conditions for bacteria to consume impurities. A sustainable biomass concentration is maintained, which metabolizes all incoming waste – resulting in negligible sludge. Of the incoming water, 99.9% is reused.

Typical Greywater performance

Parameter	Influent water quality	Treated water quality
Biochemical Oxygen Demand (BOD), mg/L	80–200	<5
Suspended solids, mg/L	50–200	<1
Total Nitrogen, mg/L	30–50	<15 *
Total Phosphorous, mg/L	20	<10
Faecal coliforms, cfu/100ml	10^6 – 10^8	<1
E Coli., organisms/100ml	10^6 – 10^8	<1
Turbidity, NTU	<2	
Viruses	99.999%	
Power consumption	Less than 2kWh per 275 gal. produced	
* Levels <10 can be achieved if required.		

Ultrafiltration–Ultrafiltration occurs through a special membrane of microscopic pores that prevents particles, bacteria and viruses from passing through. The membranes are cleaned by air scouring, ensuring no wastewater is produced.

Ultraviolet disinfection– As a precaution, Ultraviolet lamps are provided. These act as a further barrier, providing additional protection against pathogens.

Chlorination – Finally, a chlorine residual is added to protect the water while in storage and the reticulation system – the only time any chemicals are used throughout the treatment process.

Treated water storage – The result is safe water, kept in storage for future use in a variety of applications, including surface irrigation, toilet flushing

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Sustainable Water Solutions



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