



# Wastewater Management

## What is Wastewater?

**Wastewater** is water that is used or created by your business activities. It includes both *blackwater* and *greywater*. Quite often this wastewater contains pollutants and chemicals that are detrimental to the environment. Even if you are using biodegradable or phosphate free cleaning products, which are often labelled 'environmentally friendly', you are still producing wastewater that must be disposed of appropriately.

**Blackwater** is the wastewater from toilet systems and is connected directly to the sewer or an on-site treatment system, such as a septic tank.

**Greywater** is the wastewater from bathrooms, kitchen sinks and laundries and includes wastewater from floor cleaning machines, mop buckets and carpet cleaning.

## Where does it go?

**The sewerage system** is the most common urban wastewater system. A sewerage system consists of an extensive network of pipelines and pump stations that carry all wastewater from properties to a sewerage treatment plant. Once the wastewater is received by the treatment plant and has gone through primary and secondary treatment processes, it is discharged back into the environment.

**A septic tank** is simply a large tank that is buried in the ground. Wastewater from sink basins, the shower and the toilet flow into the tank at one end, displacing the water that is already there, flowing out of the other end into the ground. Any solids inside the tank that float form a layer known as the scum layer. Anything heavier than water sinks to the bottom to form the sludge layer. In the middle is a fairly clear water layer containing bacteria, which break down the solids and nutrients. This water is leached into the ground every time more wastewater enters the tank.

A septic tank requires ongoing maintenance such as pumping out the sludge as the tank becomes full. If the septic tank is not properly maintained, problems with drainage inside the property, and around the tank can occur. In some cases, the drainage soil around the tank becomes clogged as the tanks become full and sludge leaks out into the ground, reducing its drainage ability.

## ***It is very important that wastewater does not enter the stormwater system.***

**Stormwater** is rainwater which has run off the ground surface, roads, roofs, paved areas etc. and is carried away by drains. Stormwater should not be used in any way for domestic or commercial purposes.

**Stormwater drains** are purpose built to provide a drainage route for excess rainwater. Without them our streets would be flooded, creating problems with traffic and flood damage to our properties. Stormwater drains are connected to our rivers, wetlands and the ocean, even if you are located a considerable distance away from these waterbodies. Stormwater is not treated prior to entering these waterbodies. In essence, tipping a bucket of detergent into a stormwater drain is the equivalent to pouring it straight into the river, it just takes a little longer to get there.

In order to protect the natural environment that we all value, we must ensure that wastewater does not get into the stormwater systems and end up polluting our waterways.

Even though half a bucket of wastewater does not seem like a lot, if the 24,000 cleaners in Western Australia poured this amount into the stormwater system in a day, it would result in 120,000 litres of contaminating wastewater entering our rivers, oceans and wetlands. This amounts to approximately 3 average backyard swimming pools, and over one week would equate to 21 backyard swimming pools. You can just imagine how much this comes to in a year!

## How to Dispose of Cleaning Wastewater

### 1. If the site is connected to sewer

All wastewater from mop buckets, general cleaning buckets and cleaning machinery should be discharged to sewer where the site is connected to the sewer system. Please note that discharge of commercial wastewater may require approval by the Water Corporation (consult the Green Stamp Coordinator for advice).

If the site has a mop bucket sink then all wastewater must be discharged to this outlet. On sites without a mop bucket sink, a sewer inspection point, toilet or laundry trough must be used to discharge the wastewater. Wastewater must not be poured into stormwater drains, sumps or the open ground. If this presents a problem the Green Stamp Coordinator will be able to provide advice on alternatives based on a site evaluation.

No solids should be discharged to sewer. A filter or a settling tank should be used when discharging carpet cleaning wastewater or other wastewater containing solids. It is recommended to use a filter of 20 microns or less, but other size filters or filtering mechanisms may be suitable. The solid waste from the filter should then be disposed of into a general waste bin.

### 2. If the site is connected to a septic system

If the site is connected to a septic system, it is preferred that all wastewater is retained in a collection tank or transferred in a suitable container and disposed of at an authorised sewerage discharge point. Where disposal to a sewer is impractical because of transport distance, the wastewater may be discharged to the septic system after seeking approval from the relevant local government authority.

Any insoluble matter or wastewater from industrial premises should not be discharged to septic tanks. Other substances that are not permitted to be discharged into septic systems include inflammable or explosive materials which are not readily soluble in water, or any materials likely to form explosive compounds or interfere with the treatment process of septic systems. It is important that no chemicals that kill bacteria enter the septic tank, because the bacteria play an important role in the septic treatment.

### 3. Wastewater from the cleaning of industrial workshops

If the site is connected to sewer then all wastewater should be discharged to this outlet. Industries discharging to sewer should already have an industrial waste permit, issued by the Water Corporation. It is a good idea to check, as there are penalties for non-compliance.

If the industrial site is not connected to the sewer system, the advice of the Green Stamp Coordinator should be sought. Industrial wastewater should not be discharged to septic systems, stormwater drains or the open ground. Depending upon a site evaluation the wastewater may need to be tanked and transported to a suitable discharge point.

### 4. If there is no suitable discharge point on site

Wastewater should be collected and transported to a suitable sewage discharge point or to a licensed liquid waste contractor (refer to *Products and Services Directory*). Under no circumstances should cleaning wastewater be discharged to a stormwater drain or the open ground. It should be discharged to a proper sewerage point where it will go through the appropriate treatment processes before being released back to the environment.

**Allowing cleaning wastewater or other harmful materials to discharge to the environment is an offence that can result in an on the spot fine or prosecution under the Unauthorised Discharge Regulations (refer to *Information Sheet 2: Environmental Law*).**