

Wastewater Treatment

FREQUENTLY ASKED QUESTIONS



What is wastewater?

Wastewater is any water that has been polluted through human consumption whether it's through use in the home or commercially. Wastewater is usually transported in a combined sewer or sanitary sewer, and treated at a wastewater treatment plant.

What is recycled water?

Recycled water is the high quality effluent that is produced at the end of the wastewater treatment process.

What are the various water treatment processes?

There are a number of wastewater treatment processes available which are usually split into three categories: primary, secondary, and tertiary.

Primary treatment is the first step and involves separating solids from wastewater through screening.

Secondary treatment is the further treatment of wastewater by using a number of different methods such as aerobic or anoxic tanks and clarifiers.

- » Aerobic tanks convert ammonia to nitrate and break down organic matter
- » Anoxic tanks break down nitrates to nitrogen gas

Tertiary treatment is further treatment which results in high quality effluent. Methods of tertiary treatment are membrane bioreactors and UV disinfection.

The processes used at each facility are determined by the quality of wastewater required under government regulations, and the quality of the wastewater prior to treatment.

Where does the recycled water go once it is treated?

Recycled water is often used for irrigation on sporting fields, for agriculture or on-site at the water treatment plant. Otherwise, treated water is discharged to the environment through specified discharge zones.

How safe is the treated water?

Treated water is very safe when the guidelines set by the Environmental Protection Agency (EPA) are followed and is used for its intended purpose. Treatment plants are required to perform regular monitoring and reporting of the water treated at their facilities to make sure it's safe to be used on the surrounding environment.

Will recycled water encourage algal blooms, insect infestations or weeds in the area it's used?

No. Recycled water is treated to required standards and as such does not encourage algal blooms, insect infestations or weeds.

What affect does recycled water have on animals?

The EPA's regulations require the water to be treated to a level that ensures animals are not endangered when it is discharged into the environment.

Do the treatment plants and the areas they are in smell?

Strict regulations are in place for maintaining appropriate air quality and ensuring that bad odours are minimised. Technologies such as bio-trickling filters are used to eliminate odours at the facilities.

What are bio-solids?

Bio-solids are a by-product of the wastewater treatment process. They are rich in essential nutrients and are often reused for fertiliser or land rehabilitation and are highly recyclable.

What are the risks to wastewater treatment facilities in large rain events or natural disasters?

During heavy rainfall or natural disasters treatment facilities will by-pass later stages of the treatment process leading to partially treated water being discharged.

How are peak demand periods met?

During times of high demand, inflows are monitored by operators and computer systems and respond to the high flows as required.

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