

Biosolids

A renewable resource

Biosolids are a by-product of the sewage treatment process. We are seeking new and sustainable uses for this renewable resource.

Biosolids are the dried, stabilised matter that remains after the sewage treatment process has concluded. Biosolids are made up of both organic and inorganic compounds.



Once dry, biosolids look and smell like soil.

About our sewage

- We treat 92% of Melbourne's sewage at our Eastern and Western treatment plants
- This sewage comes from toilets, sinks and laundries in homes across Melbourne
- It also includes wastewater – known as trade waste – produced by businesses and factories
- 99% of the sewage is water
- The treatment process separates the solid material from the water
- The 1% solids that remain from the treatment process are further treated using biological processes to reduce disease-causing pathogens and stabilise remaining organic matter.

Commitment to biosolids reuse

Melbourne Water is committed to sustainability.

We are dedicated to exploring and finding reuse options for the biosolids that we treat and store.

- We intend to reduce the amount of biosolids that we hold to sustainable levels over the long term
- Our key objective is to safely store and re-use biosolids
- We investigate biosolids reuse under regulations established by EPA Victoria.

Researching reuse options

Our dedicated research team is investigating biosolids reuse opportunities and emerging reuse technologies.

The reuse potential of biosolids falls into 3 broad categories:

- Structural: for example, utilising the biosolids as road base
- Energy: using biosolids as fuel
- Nutrient: applying the biosolids to provide nutrients i.e. for forestry and farming.

International reuse options

Around the world, the composition of biosolids varies according to the communities that produce them, and the varying sewage treatment processes employed.

In the case of our own treatment plants (two of the most advanced plants in the world), the composition of the biosolids at the Eastern Treatment Plant varies from those at the Western Treatment Plant.

This variance in types of biosolids means that reuse strategies need to be developed and optimised on a case-by-case basis.

Biosolids at our treatment plants

Biosolids produced and stored at the Eastern Treatment Plant (operating since 1975) have been used in:

- landscaping
- site rehabilitation
- blended organic soil products.

At the Eastern Treatment Plant, we aim to:

- use existing biosolids stockpiles as structural fill
- determine other suitable reuse options.

For over 100 years the Western Treatment Plant (opened in 1897) has been a highly efficient treatment and capture point for sewage.

Melbourne's industrial and manufacturing industries are mainly situated on the western side of the city. As a result, biosolids at the Western Treatment Plant contain higher concentrations of industrial contaminants and have yet to be used off site.

In recent years major upgrades have been made to the plant. These upgrades, and stricter trade waste controls, have meant the quality of the biosolids has steadily improved.

At the Western Treatment Plant, we aim to:

- determine suitable reuse options
- reduce the stockpile of biosolids to sustainable levels over the long term.

We all have a part to play

Everything we put down our toilets, sinks and basins makes its way to a sewage treatment plant.

The higher the quality of sewage we receive at our treatment plants, the more options we have to sustainably reuse the resulting biosolids.

The average family produces between 0.5 and 1 kilogram (dry weight) of biosolids every week. To find out more about what you can do to protect our environment, visit A Toilet is not a Rubbish Bin at: melbournewater.com.au/notarubbishbin

A united industry response

We have joined together with our industry colleagues to establish the Australasian Biosolids Partnership.

The partnership is committed to supporting and promoting the sustainable management of biosolids.

More information is available at the partnership's website: www.biosolids.com.au