

Our sewerage systems

Portland's sewerage system



When you flush the toilet, have a shower or wash the dishes, do you know where your wastewater goes?

Known as sewage, it has to be correctly treated so it doesn't pose a danger to public health or the environment. And that's where Wannon Water comes in.

Where is the sewage treated?

The Portland Sewage Treatment Plant (STP), located just off Oleria Road south of the city, treats all wastewater collected from Portland

The STP services residential customers and also accepts and treats trade waste from important local industries, commercial customers and hospitality venues. These customers are required to pre-treat their trade waste before it's discharged to the sewerage network.

Sewage and trade waste runs through a network of sewer pipes and is collected at three major pumping stations in the city before it is pumped under pressure to the STP.

Sewage actually consists of around 99.6 per cent water. The remainder is made up of mostly biodegradable pollutants and small solid particles.

How does the screening and treatment process work?

Once it reaches the STP, any larger items, rubbish and grit is screened out of the sewage and sent to landfill.

The sewage is then treated in large tanks where naturally-occurring bacteria and micro-organisms use it as a food source, breaking down any solids and organic material and removing physical, chemical and biological contaminants.

This process uses cycles of aeration to treat the sewage before it settles. The treated water is decanted from the surface of the tank. It then travels through an ultra-violet disinfection process, which helps to eliminate harmful bacteria.

Sludge is removed from the bottom of the tank and excess water is removed. The dried sludge is then stabilised in drying beds for several years before it can be re-used on farms as a soil conditioner known as biosolids.

What happens to the treated water?

Treated water at Portland is released to the ocean through an outfall pipe at the base of steep cliffs to the south of the plant. This is an area of high wave energy which helps it to mix into the sea water.

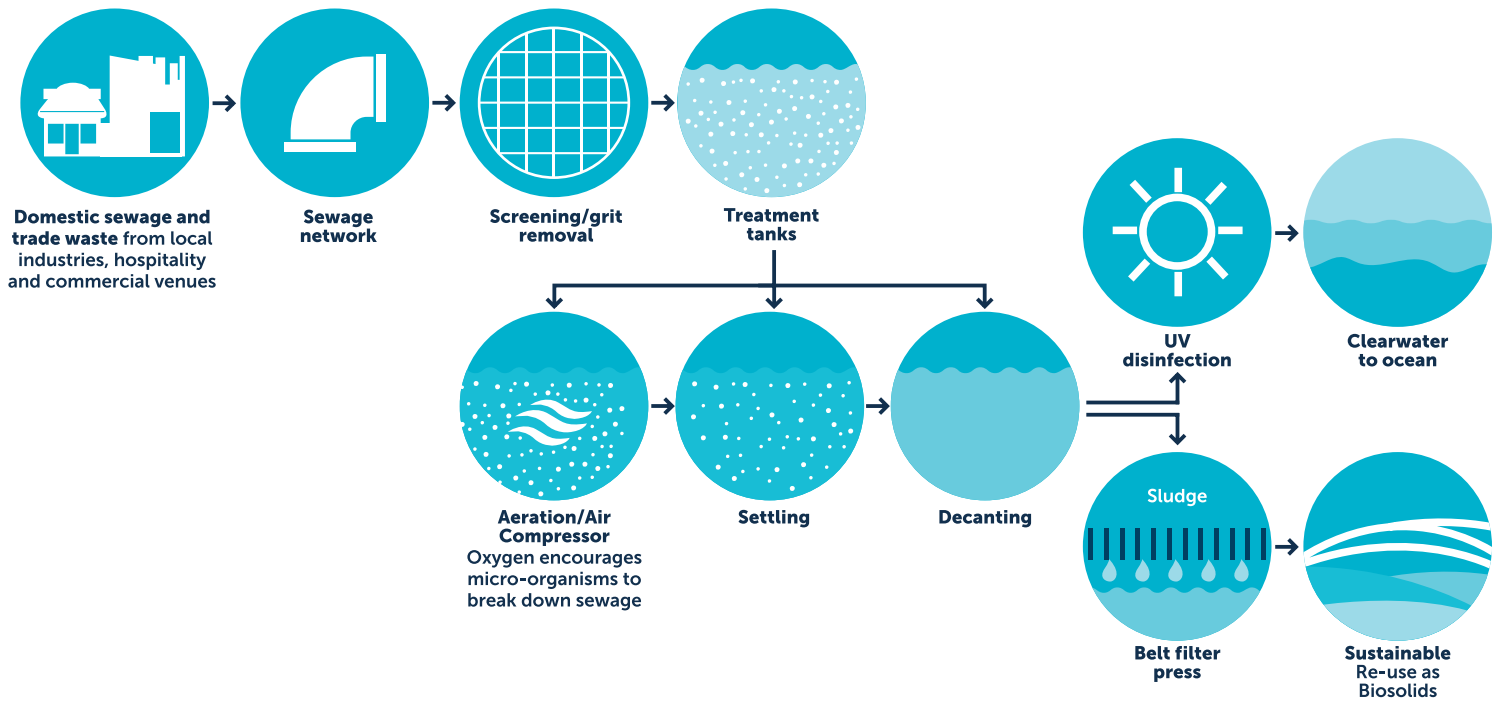
The Environment Protection Authority (EPA) has approved a licence for a mixing zone around the outfall pipe with 16 conditions in place.

Around 1.8 million litres of treated water is released into this mixing zone each year.

Is sewage discharged to the ocean?

No. As outlined, sewage is treated at the Portland STP. Only treated water is discharged into the ocean after it has been treated to within EPA licence requirements.

This water is not the brown, untreated water that people might imagine, but a cleaner and clearer treated water.



How is the water quality monitored around the outfall?

Water quality samples are taken throughout the year and the results are reported publicly in an annual EPA Performance Statement that is available on our [website](#).

There's also a broader environmental monitoring program which includes:

- Collecting ecological data
- Testing the effect of effluent on a selected group of sensitive marine organisms (ecotoxicity testing)
- Assessing the distribution and abundance of 'indicator species'. These are species that show an identifiable increase or decrease in abundance after being exposed to wastewater.

Could the treated water be recycled for other uses?

One of Wannon Water's main functions is to develop and implement programs for the recycling and reuse of treated wastewater. We already recycle around 15 to 20 per cent of all the sewage we treat each year across our region and this is mainly used for irrigating pasture on farms beside our inland treatment plants.

In the past we've investigated opportunities to recycle treated water from Portland, but have not been able to secure any commercial customers.

Our region's reliable rainfall and access to groundwater means there are also very limited markets for its re-use in agriculture.

The wastewater has a high salt content, so expensive and energy-intensive treatment would be required to make the water suitable for any industrial, agricultural or recreational uses.

Using recycled water for drinking purposes is not approved in Victoria.

In short, the costs of recycling treated effluent often outweigh the benefits in our region. We're currently investigating opportunities at the Warrnambool STP, and we hope this might identify new opportunities for our other ocean outfall plants at Port Fairy and Portland.

How does the plant cope in peak tourist periods?

As a coastal holiday destination with a deepwater port and excellent fishing facilities, Portland's population fluctuates during the year, particularly over the summer holidays, at Easter and during the tuna fishing season.

The design and operation of our STP accommodates these spikes and ensures there is appropriate sewage treatment throughout the entire year.