

## Our sewerage systems

# Warrnambool, Allansford and Koroit



**When you flush the toilet, have a shower or wash the dishes, do you know where this 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.**

## What happens to the sewage?

The system that serves Warrnambool, Koroit and Allansford is the largest of our sewerage systems, supporting a total population of around 35,000.

It services residential customers and also accepts and treats trade waste from 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.

The sewage and trade waste runs through an extensive, 300-kilometre-long network of sewer pipes and 42 pumping stations to reach the Warrnambool Sewage Treatment Plant (STP), located near the coast north-west of Thunder Point.

The system also has purpose-built facilities allowing for the disposal of brine from industries and septic tank waste from contractors.

## How does the treatment process work?

Once it reaches the STP, any larger items, rubbish and grit is screened out of the sewage and sent to landfill. It's interesting to note that sewage actually consists of around 99.6 per cent water. The remainder is made up of mostly biodegradable pollutants and small solid particles.

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 reducing 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 a tertiary screening system before being discharged to the ocean.

Sludge is removed from the bottom of the tank and excess water is removed. The dried sludge is then transported offsite and 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 (also known as effluent) at Warrnambool is released to the ocean through an outfall pipe south-west of Thunder Point. This is an area of high wave energy which helps it to mix into the sea water.

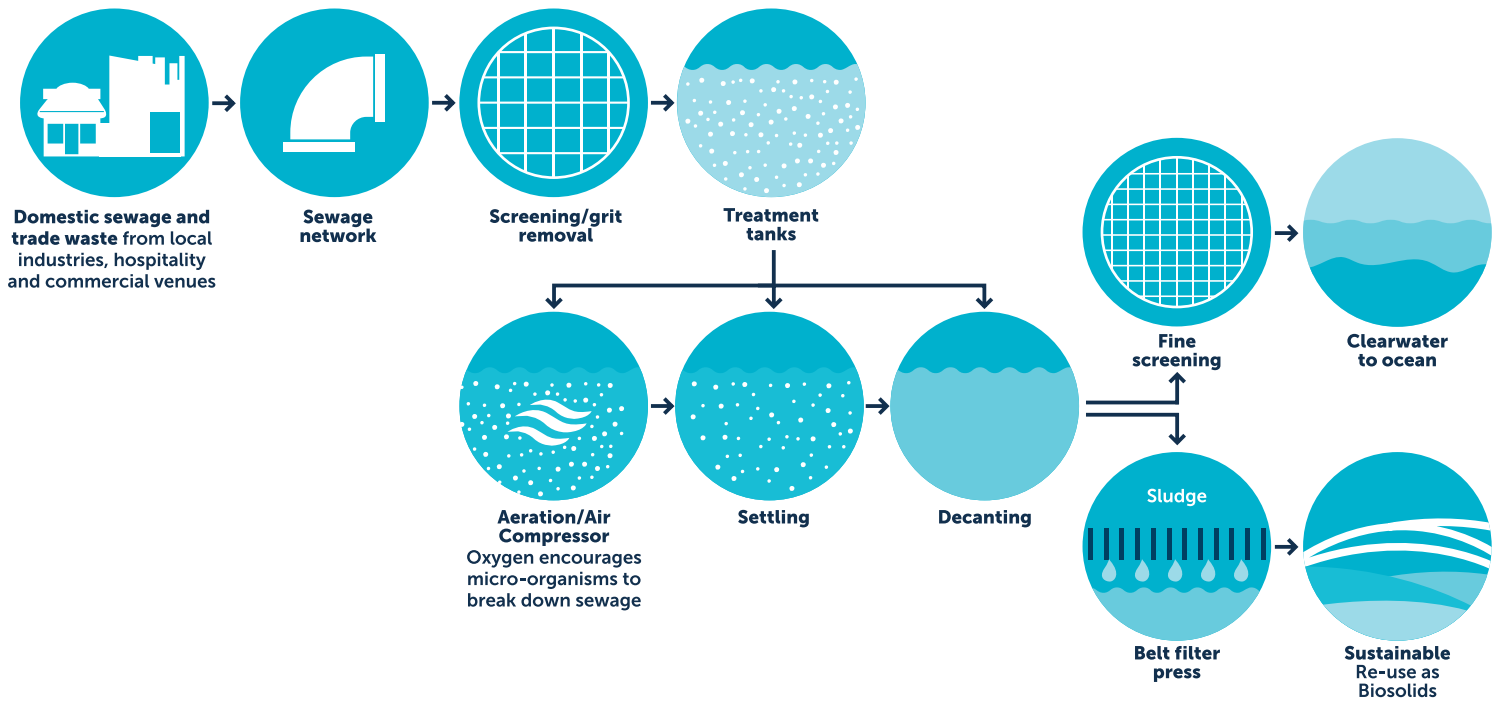
The Environment Protection Authority (EPA) has approved a licence for a 300-metre mixing zone around the outfall pipe with 16 conditions.

Around 5,600 million litres of effluent is released into this mixing zone each year.

## Is sewage discharged to the ocean?

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

Effluent is not 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 routinely 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 treated wastewater.

## Could the effluent be recycled for other uses?

One of Wannon Water's main functions is to develop and implement programs for the recycling and reuse of effluent. We already recycle around 15 to 20 per cent of all the effluent we produce 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 effluent from Warrnambool, but have not been able to secure any commercially viable solutions.

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 effluent suitable for re-use in industrial, agricultural or recreational settings.

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?

Warrnambool is a well-known holiday destination and the population fluctuates during the year, particularly over the summer holidays and busy tourist seasons.

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