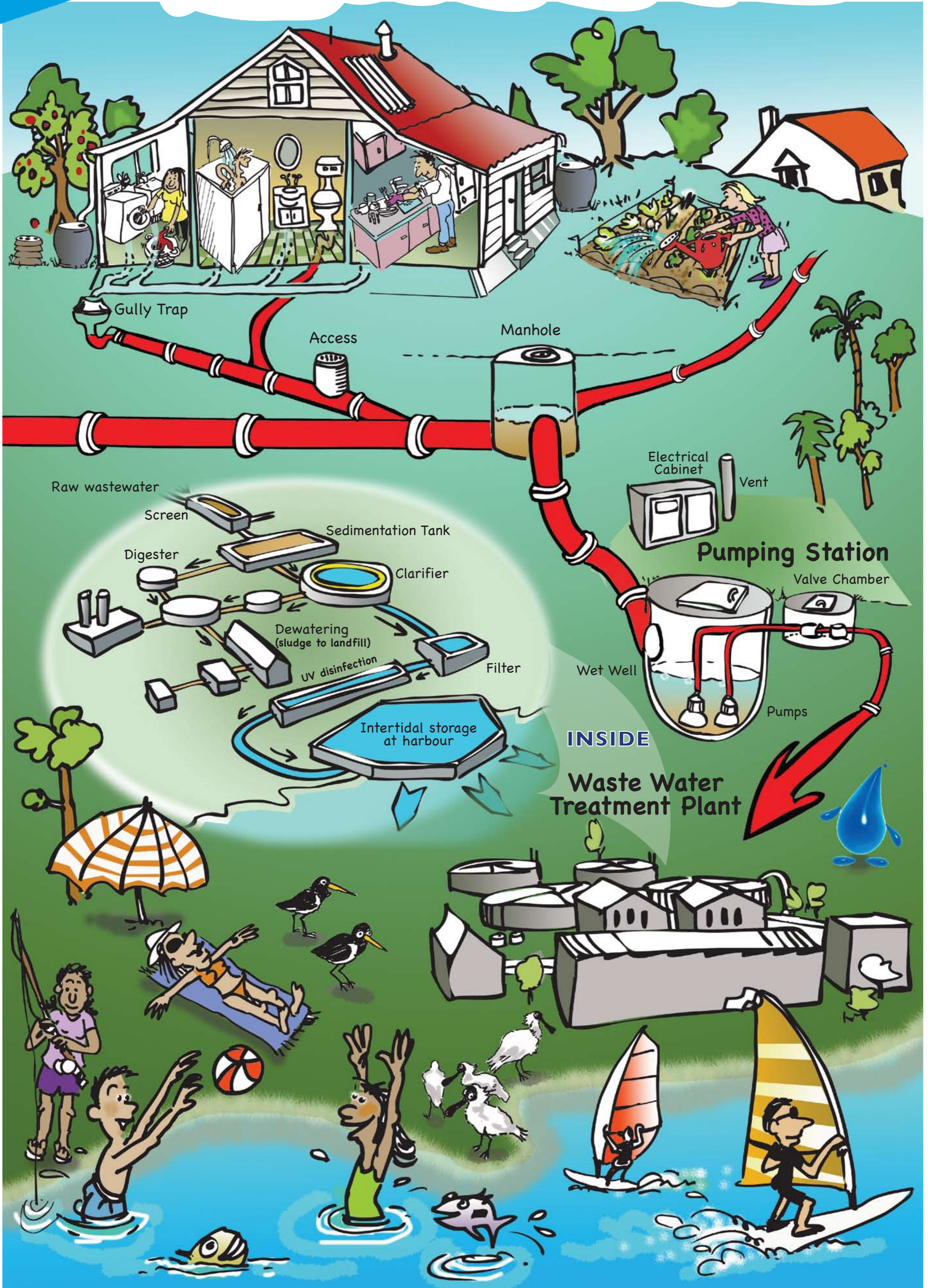


Our Waste Water

Where does it go?



Our Waste Water

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On private property

All the used water from our laundry, kitchen, bath, shower and basin runs through pipes into at least one gully trap. Gully traps help prevent smells and overflows coming into your home. The toilet connects separately to the main house pipe. Also on your property there is often an access point where pipes can be cleaned if they become blocked.

Public property (managed by the council)

Often there will be a manhole near the street to allow the pipes to be inspected, unblocked and cleaned. All the house waste water pipes connect to the main sewer in the street. The main sewer sends the dirty water to the pumping station. In Waitakere everything except the electrical cabinet and vent is hidden underground. The pumps under the dirty water pump the water through valves and send the waste water all the way to the Mangere Waste Water Treatment Plant.

There are many processes that the water goes through at Mangere in order to have rubbish and germs removed to make it safe.

Firstly the raw waste water passes through screens which take out the big particles such as grit, sand and rubbish. Then the sedimentation tanks separate the smaller solid bits from the liquid waste.

Next the solids and liquid go through more separation. The clarifiers remove nitrogen and other nutrients which are harmful to the environment.

The wastewater is filtered and disinfected using UV (ultraviolet) light. The light destroys the bacteria and viruses (germs) before it is sent to the storage basin. At the storage basin, twice a day the high tide rolls in and takes away the effluent, safely into the harbour.

The waste water (effluent) is now so clean you can swim and gather shellfish nearby. It's also safe for the wading birds that live there, such as the Royal Spoonbill and the Pied Oystercatcher.

The less waste we make, the better for our environment and the smaller our waste water bills. Treatment is an expensive process.

Discussion points

Why don't we just send the wastewater from our houses straight to the ocean?

What would happen if our home's waste water pipes and our drinking water pipes were not connected properly?

Why is it really bad when our waste water pipes get blocked with fat, rubbish, tree roots?

The Mangere Water Treatment Plant is very expensive to run. **Who pays for it?**

What parts of this entire process would need energy to make them work?

Who pays for the energy?

The Mangere Waste Water Treatment Plant is a long way from Waitakere so the pumps have to put the dirty water under pressure to send it there.

We can reduce the amount of waste water we create in our homes – **how?**

How would the water quality people check to see if the effluent is safe to swim in?

A clean harbour is something we all need to share with each other and the wildlife. **In what ways do we share the harbour?**

How might the cleaned effluent in the harbour (water) get reused by us? Imagine the water cycle.