



The diagram above illustrates how the Urban Water Cycle works in our service area. See over the page for more information.

About the Urban Water Cycle in our service area

- STEP 1:** Just like with the natural water cycle, water falls from the sky as precipitation, it runs off and the water eventually collects in a **catchment** (e.g. a river, lake or an underground aquifer).
- STEP 2:** We source your drinking water from fresh water catchments. It's important to know that we don't send the water straight from the catchment to your home or school because germs within the water could make you sick. Instead, the water travels through underground pipes to one of our **Water Treatment Plants**. Before the water is treated (cleaned) it is called **raw water**.
- STEP 2:** We treat (or clean) this raw water at one of our 15 **Water Treatment Plants**. We use a number of processes including filtration, sedimentation and disinfection to remove dirt, colour and, most importantly, germs. This ensures the water is safe for you to drink and use. Once the water has been cleaned it is known as **treated water**.
- STEP 3:** This **treated water** travels to homes, schools, businesses and industry through underground pipes so that it may be used. E.g. for you to drink, have a shower, wash your hands and flush the toilet.
- STEP 4:** After you use the water it goes down the toilet or sink and travels into some different underground pipes called the sewerage system. This dirty water is called **wastewater** or sewage.
- STEP 5:** The **wastewater** then travels to one of our 14 **Wastewater Treatment Plants** (including the **Gippsland Water Factory**). Before the wastewater enters the plant it is screened to remove large solids and rubbish (e.g. wipes, cotton buds and toys). Bacteria help to breakdown the waste, so it can be easily separated into clear liquid and **biosolids**. This clear liquid is then filtered and disinfected before being released back into the environment. If we didn't do this, the germs in the wastewater could cause a risk to human health and the rubbish would pollute the environment. Once it has been cleaned, this water is called **treated wastewater**.
- STEP 6:** **Treated wastewater** from the Gippsland Water Factory is piped to **Dutson Downs** where it is cleaned again. Although this treated wastewater is not safe for humans to drink and use, it can be returned to the ocean or used on our **Agribusiness** farm for livestock and to irrigate land.
- STEP 7:** Lastly, the **treated wastewater** rejoins the natural water cycle where it will be evaporated up into the sky to form clouds (condensation) and then fall back down from the sky as precipitation.

Some of the ways we help to look after our environment

- A lot of our treated wastewater is used to irrigate crops on our farms (like our Agribusiness farm located at **Dutson Downs**) and water sporting fields (like golf courses). This conserves our treated water for important things like drinking and washing our hands. This is important all the time - but particularly during periods of drought.
- We collect **biosolids** from wastewater. These treated **biosolids** travel by truck to our **Soil and Organic Recycling Facility** at **Dutson Downs**. Here they are mixed with organic waste (like green waste from gardens) to create an organic compost for farms.