

PALMERSTON NORTH CITY COUNCIL BEST PRACTICABLE OPTIONS REVIEW

OUR WASTEWATER NETWORKS

WHAT IS WASTEWATER?

Wastewater, also referred to as sewage, is the liquid waste that is flushed or washed into the drains from houses and businesses and then enters a Council's wastewater network. It comes from toilets, showers, baths, dishwashers, washing machines, sinks and commercial and industrial processes.

WHAT DO "FLOW" AND "LOAD" MEAN?

There are two main aspects of wastewater which influence management, treatment and discharge options. These are wastewater flow and load. Flow refers to the rate and volume of untreated wastewater reaching the treatment plant. It is generally measured as an instantaneous rate (litres per second) or a longer-term rate (cubic metres per day).

Load refers to the amount of contaminant in the untreated wastewater. Key wastewater contaminants include nutrients (nitrogen and phosphorus), suspended solids and disease-causing microbes called pathogens. Contaminants can reduce the amount of oxygen in water available for fish. The contaminant load of wastewater varies, depending on the mix of residential, commercial and industrial activities in an area. Load is measured as the mass amount. In some instances, this is an instantaneous rate (grams per second) but is more commonly measured over a longer period (kilograms per day).

WHAT IS STORMWATER?

Stormwater is run-off caused by rain falling on paved surfaces or roofs. Ideally wastewater is kept separate from stormwater. However, in reality, some stormwater enters the wastewater network and mixes with the wastewater. This most often occurs during heavy rainfall events and can cause significant spikes in the flow of wastewater.

WHAT ABOUT TRADE WASTE?

Trade waste is wastewater generated by certain businesses and "wet" industries. Trade waste can contain substances which are detrimental to the wastewater network and treatment plant, to human health and the environment. Trade waste can heavily impact the wastewater flows and loads a wastewater network and treatment system needs to cope with.

Types of businesses that often generate trade waste include:

- food, chemical and industrial manufacturers
- laundries and drycleaners
- food premises
- mechanical workshops and car washes
- dentists, GP surgeries, medical and veterinary centres, hospitals, nursing homes and rest homes
- printers
- mortuaries

Trade waste that is discharged to a council's wastewater network is controlled by that council's trade waste bylaw.



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WHAT IS THE WASTEWATER NETWORK?

The wastewater network is the collection of pipes and pump stations that convey untreated wastewater from our homes and businesses to the wastewater treatment plant.

There are both private and public components to the wastewater network.

The private components are the gully traps and small pipes (known as laterals) which connect our homes and businesses to the public network. These are the responsibility of the private property owner.

The public component comprises the large pipes (commonly located under our streets and roads) and pump stations. The public components of the wastewater network are the responsibility of the local city or district council.

DIAGRAM OF A WASTEWATER NETWORK

