

PALMERSTON NORTH CITY COUNCIL BEST PRACTICABLE OPTIONS REVIEW

PALMERSTON NORTH'S EXISTING WASTEWATER SCHEME

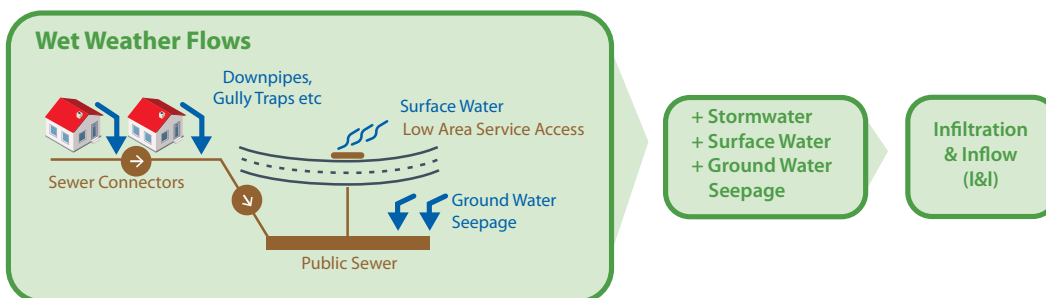
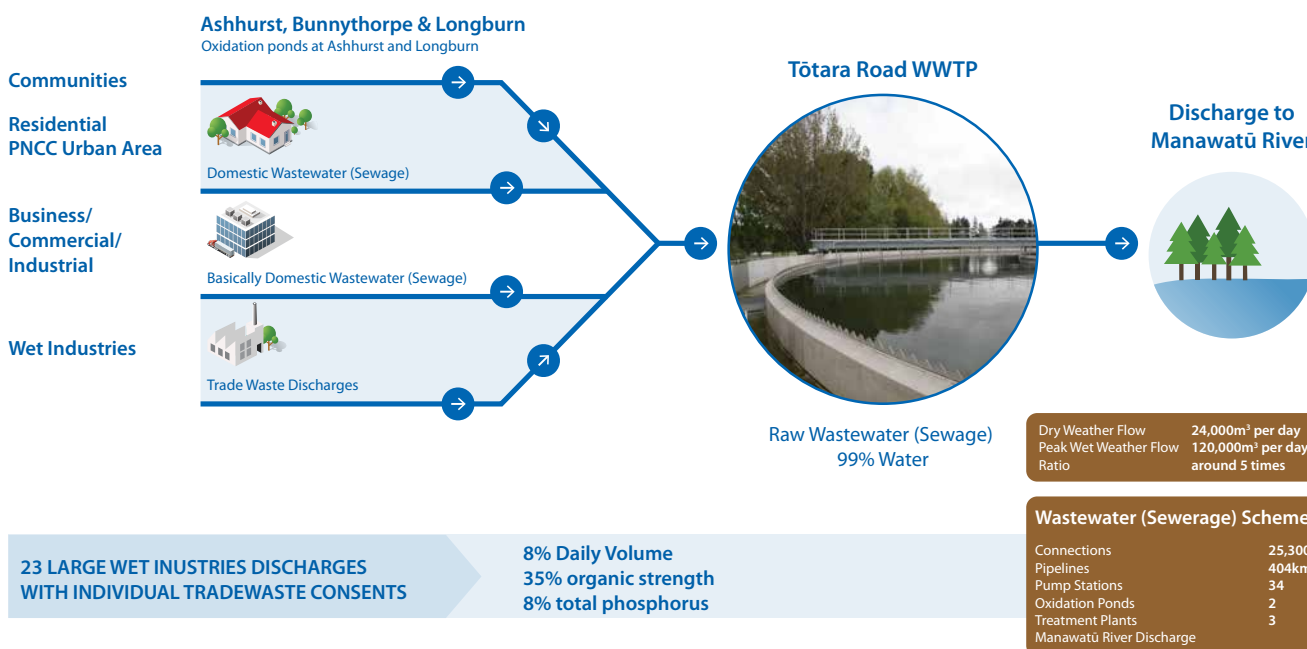
THE EXISTING WASTEWATER SCHEME

Palmerston North City Council provides a wastewater system that collects and treats the majority of the city's wastewater and trade wastes.

The collection and treatment methods must meet strict public health and discharge standards.

Every year, up to 12.9 billion litres of wastewater is collected from 25,300 connections around the city. Thirty four pumping stations help move the wastewater along a network of pipes that, if laid on end, would stretch for 404 kilometres. Council operates three treatment plants: Tōtara Road, being by far the largest, with supporting plants in the communities of Ashhurst and Aokautere.

The following diagram shows the various inputs into the existing wastewater scheme, and how wet weather flows also enter the scheme.



ABOUT THE TŌTARA ROAD WASTEWATER TREATMENT PLANT

The Tōtara Road Wastewater Treatment Plant (WWTP) has the capacity to serve a population of 100,000. It is made up of one plant that has two aerated lagoons which undertake the secondary or biological treatment phase of the overall process. Around 24 million litres of wastewater arrive at the plant every day during dry weather, and this can increase to 120 million litres per day during heavy wet weather.

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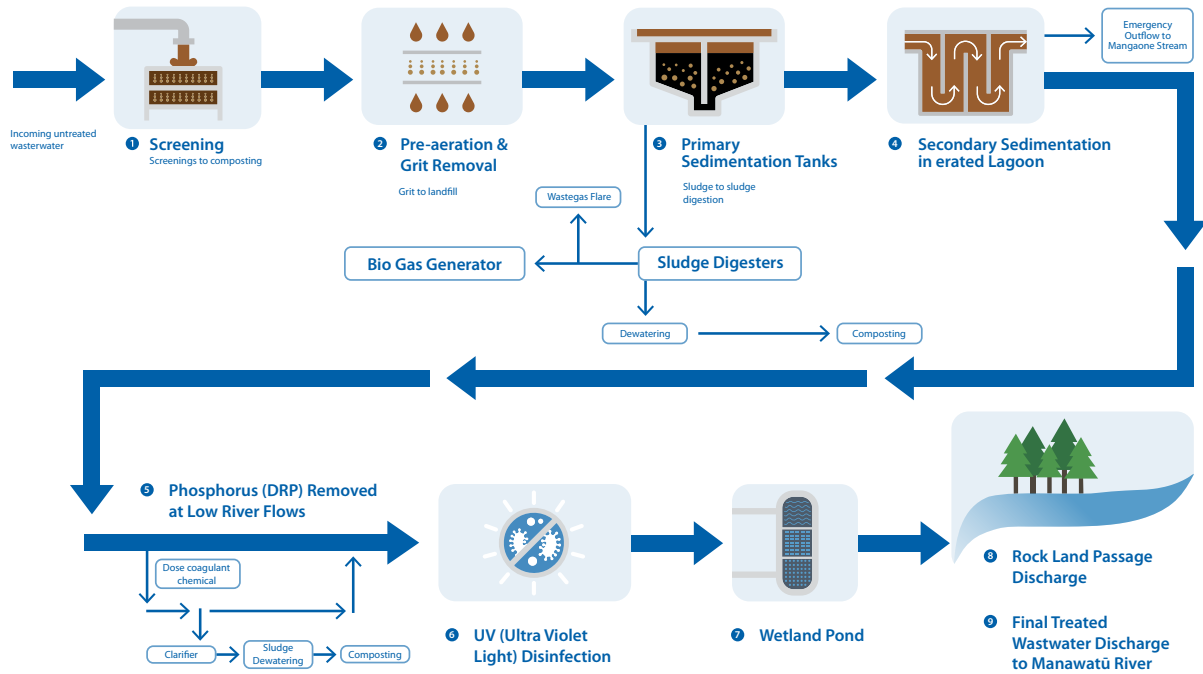
HOW WASTEWATER IS TREATED AT THE TOTARA ROAD WASTEWATER TREATMENT PLANT

The WWTP provides preliminary, secondary and tertiary phosphorous removal and UV disinfection treatment to the wastewater before it is discharged to the Manawatū River.

The WWTP removes the majority of contaminants from the wastewater before it is passed through a wetland pond for further treatment in response to Māori cultural concerns. It is then discharged to the Manawatū River, through a rock structure located on the river bank.

During wet weather, lagoons are also used to store excess treated wastewater, to ensure that consented discharge limits are not exceeded.

The diagram below depicts the arrangement of treatment processes at the WWTP.



The marked up aerial photo shows the location and interrelationship of the main treatment processes.

TYPICAL PLANT FLOW

