

AMP Summary – Wastewater

Introduction

Taupō District Council provides wastewater services for 11 towns and communities in the district. This Wastewater Asset Management Plan enables Council to manage and demonstrate its stewardship of wastewater assets on behalf of its communities in order to provide those services cost-effectively, both now and into the future.

Strategic Issues

Council operates within the context of these strategic issues:

- Protecting public health – the primary purpose of Council owned wastewater systems is to protect the health of communities.
- Protecting our waterways from nitrogen flows and untreated wastewater. Council is responsible for reducing its nitrogen discharge into the Lake Taupo catchment by at least 20% by 2020, as part of the Lake Taupo Protection project.
- Three Waters Reform: Possible amalgamation of the delivery of the three waters services into larger regional entities.

Wastewater Assets

Council's wastewater schemes include physical assets with a replacement value of \$220 million (August 2020).

Council holds resources consents from Waikato Regional Council for discharge of treated wastewater, biosolids and control odour.

The schemes vary widely in size and age, and therefore in the technology they use. A list of the schemes is given below with a map showing their location on the following page.

Taupo District Wastewater Schemes

Scheme	No. of Rateable Properties
Acacia Bay	735
Atiamuri	34
Kinloch	1,068
Mangakino	716
Motuoapa	473
Omori	1,164
Taupo	12,092
Turangi	2,213
Whakamaru	60
Whareroa	164
Grand Total	18,719

Levels of Service

A key objective of this Asset Management Plan is to match the level of service provided by the asset with the expectations of customers. This requires a clear understanding of customers' needs, expectations and preferences.

The levels of service define relate to:

- Sufficient capacity to meet the demands of today and future growth
- We manage the environmental impacts of our wastewater treatment and discharges (compliance with resource consents)
- Quality of effluent discharge from Treatment facilities is acceptable (nitrogen discharges are managed)
- Sewerage systems are maintained to an adequate standard to minimise overflows and minimise harm to the community (including fault response times).
- The number of complaints received by Council relating to the wastewater service.

State of the Assets

Taupō Township

The Taupo township is growing and now requires capital expenditure on reticulation, treatment plants and disposal systems. Changes to related to resource consents are also a driving the need to improve infrastructure. This specifically relates to Rakaunui Road land disposal system where consented nitrogen loading rates are significantly reducing and effluent disinfection may be required.

There remains some uncertainty in the work programme presented for the Taupo WWTP and the scope of the works required will continue to be developed over the

Turangi

Council commissioned a substantial new wastewater treatment plant in Turangi in 2006. That system enabled Council to significantly reduce nitrogen discharges to the lake Taupo catchment. A significant effort has been made to improve the performance of treatment plant and full membrane replacement has occurred over the past few years. The discharge consent expires in 2018 and a new consent was applied for in December 2017. Since this time Council has been working with affected Iwi to consider alternative land disposal options. This remains a work in progress.

Extensive cleaning and condition assessment have been undertaken in the Turangi township. Significant volumes silt and debris have been removed from the network and this will have reduced the risk of overflows in the area. Network condition work is ongoing preliminary results are that the network is in better than expected condition. An inflow and infiltration study is in progress, aiming to identify and reduce sources of stormwater getting into the sewer network.

Mangakino

A significant renewal plan has addressed poor condition pipework in Mangakino, and the reticulation is now in very good condition. The town also appears to be redeveloping and as a result the WWTP will require and upgrade to comply with new resource consent conditions (draft) also aimed at managing nitrogen discharges.

Acacia Bay

The Acacia Bay wastewater treatment plant was granted a new discharge consent in 2016 (a 20-year consent). The major requirement of the consent was to increase the soakage / disposal capacity at the site and this has been completed. The long-term future for Acacia Bay might be to connect to the Taupo network and decommission the plant however there are currently limitations with downstream capacity (control gate bridge siphon).

Kinloch

A new consent for the discharge of effluent from the treatment plant was issued in 2014. The permitted methods of effluent discharges to land include dripper irrigation lines and continued use of the existing trenches. 2021 The Kinloch WWTP will undergo a major treatment plant upgrade. There is also a requirement to improve storm water management to protect the treatment works during high rain fall.

Motuoapa

A new consent for the plant was issued in 2013 which has resulted into more stringent discharge conditions and requiring upgrade to the treatment facility. A minor upgrade was completed in 2016. There appears to be an issue with infiltration into the network when the lake level is high, and this requires further investigation.

Whakamaru

Following a new wastewater discharge consent being granted, a new wastewater treatment plant was commissioned. The new plant reduces the mass of nitrogen being discharged from the site. The reticulation is in good order after some relining work was completed on the poor condition section of the system.

Others highlights

Motutere, Omori and Whareoa have all been granted a new wastewater consent in 2019 and 2020.

The Waitahanui wastewater treatment plant was decommissioned in 2016 with the waste now pumped to Taupo. The WWTP has been removed and the land transferred to the original owners.

Demand forecast

The Council's growth model is due to be updated. Growth appears to have been greater than expected over the recent years and this has put greater pressure on the wastewater assets.

Lifecycle Management

New Works

The significant new capital projects in the 10-year plan (DRAFT) are:

- Kinloch WWTP upgrade
- Taupo wastewater disposal improvements (irrigation expansion, disinfection (provisional) land purchases.
- Turangi wastewater land disposal (provisional on steering group and
- Southern trunk sewer capacity upgrade
- Control gates bridge sewer capacity upgrade
- Mangakino WWTP upgrade.

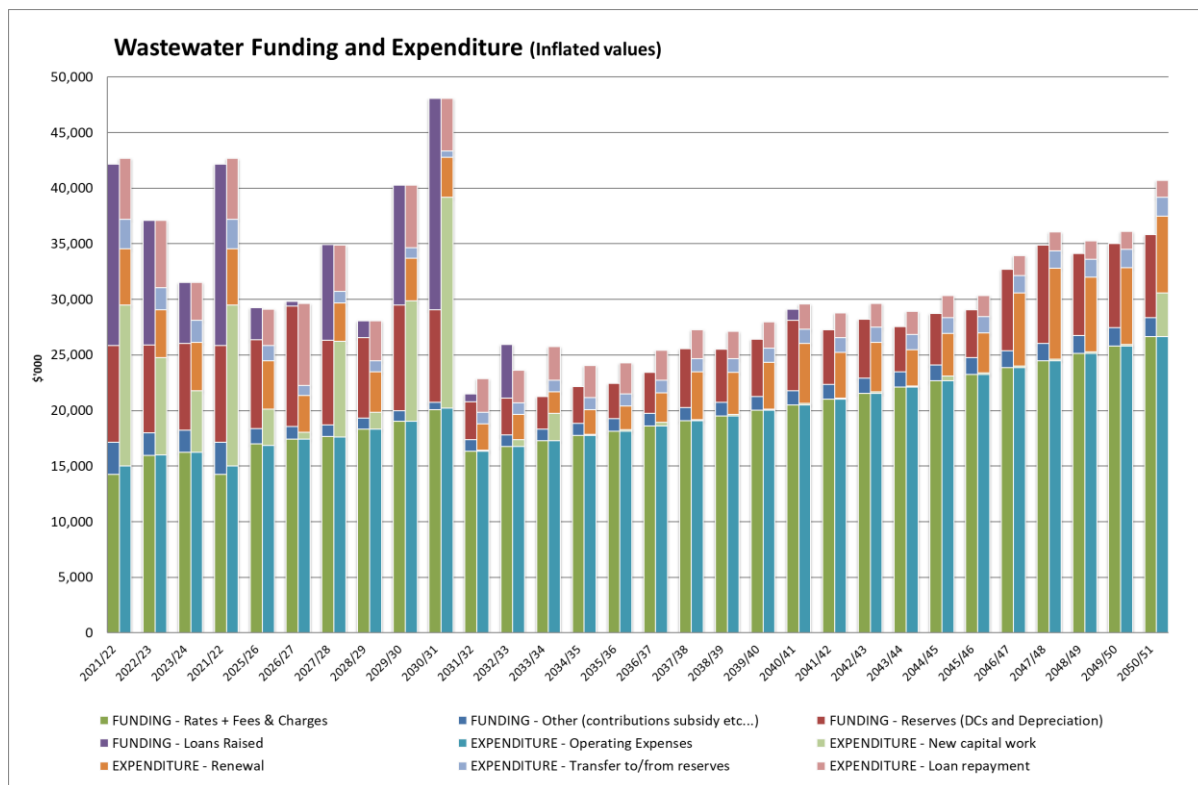
Renewals

Most of the sewer network is not at expected end of life so major expenditure is not planned in the near term. Improvement to wastewater pump station electrical and control system remains a work in progress and is a priority in the near term. Renewal of treatment plant equipment occurs as and when required to maintain effective treatment processes.

Operation and Maintenance

Financials

Draft capital and renewals budgets have been presented above and are an increase over previous expenditure. Operational and maintenance budgets are increased to allow for the operation of these new assets and to maintain levels of service.



Changes through Council and general LTP consultation process

[TBC following consultation]

Asset Management Practices

Council uses a range of decision making tools and data and information from a number of sources (technical, financial, customer service) to establish its maintenance, renewal and new works expenditure, including: process, analysis and evaluation techniques for life cycle asset management; information systems to store and manipulate data.

Council utilizes asset management system (Asset Finda) to manage three waters assets. While reticulation networks are now fully managed within Asset Finda treatment plants and pump station are not yet fully loaded in Asset Finda. Not having this data in Asset Finda does limit the opportunity to use analytics to optimize expenditure however this is an area of continued improvement.