

SUMMARY: WASTEWATER ASSET MANAGEMENT PLAN

Contribution to Council outcomes

(AMP Chapter 2)

Council's Wastewater services are provided for the benefit of the community to ensure that the Vision of 'Healthy people thriving in a safe, vibrant and sustainable community', as expressed in the Long Term Plan, is achieved.

Following an extensive community consultation process, Council developed a number of outcomes and strategies that took a balanced approach to the four well beings (economic, social, environmental and cultural), which together are intended to support the Vision through delivering sustainable, long term growth and development. The provision of wastewater services in urban areas supports all four well beings.

All of Council's activities work towards implementing the Vision, which is implemented through the four well-beings (Economic, Environmental, Social and Cultural), each of which is associated with related outcomes and strategies.

The Wastewater Activity contributes towards all four of the well-being's and their related outcomes and strategies, as further described in the AMP.

Council provides wastewater collection and disposal schemes in Arapuni, Tirau, Putaruru, and Tokoroa communities.

Levels of service

(AMP Chapter 3)

Customers' expectations of the service have been identified and subsequently defined in terms of Levels of Service and Performance Indicators that can be monitored, measured and reported.

In addition, the quality and volume of the treated wastewater effluent discharged to the receiving environment is controlled by the resource consent conditions.

Council has adopted a series of measures which are intended to indicate how well the wastewater infrastructure contributes to the community's well-being.

The key LOS relate to treated effluent quality and continuity of service.

The Community Consultation prior to development of the 2012-2022 Long Term Plan indicated that the community was satisfied with the current levels of service.

Planning

(AMP Chapter 4)

Council expects that the demand from existing sources of wastewater will generally not exceed capacity within the 10 year planning horizon.

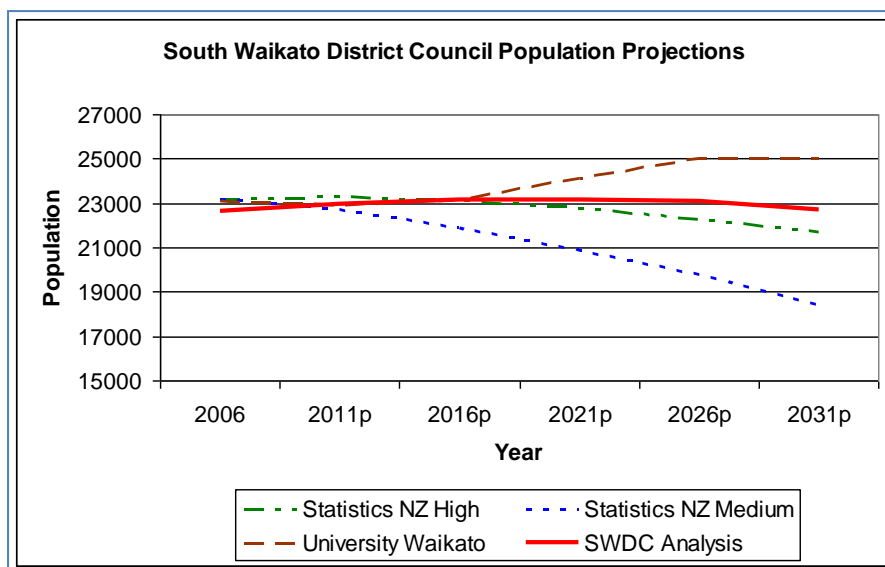
The following legislative requirements apply to wastewater management:

- Local Government Act 2002.
- Health Act 1956.
- Resource Management Act 1991.

Resident population trends

South Waikato District Council has been carefully monitoring population and demographic trends as part of its planning processes for many years.

Due to the 2011 Census being deferred, Council has reviewed the 2008 report and has concluded that the projection remains valid.



The following key issues have been identified for the ten year planning period:

- Reducing inflow and infiltration to the network.
- Management of trade waste.
- Renewal of resource consents and anticipated higher standards.

Lifecycle management

(AMP Chapter 5)

The Council owns and manages four separate wastewater systems in the urban areas, using its professional engineering staff.

The wastewater assets include:

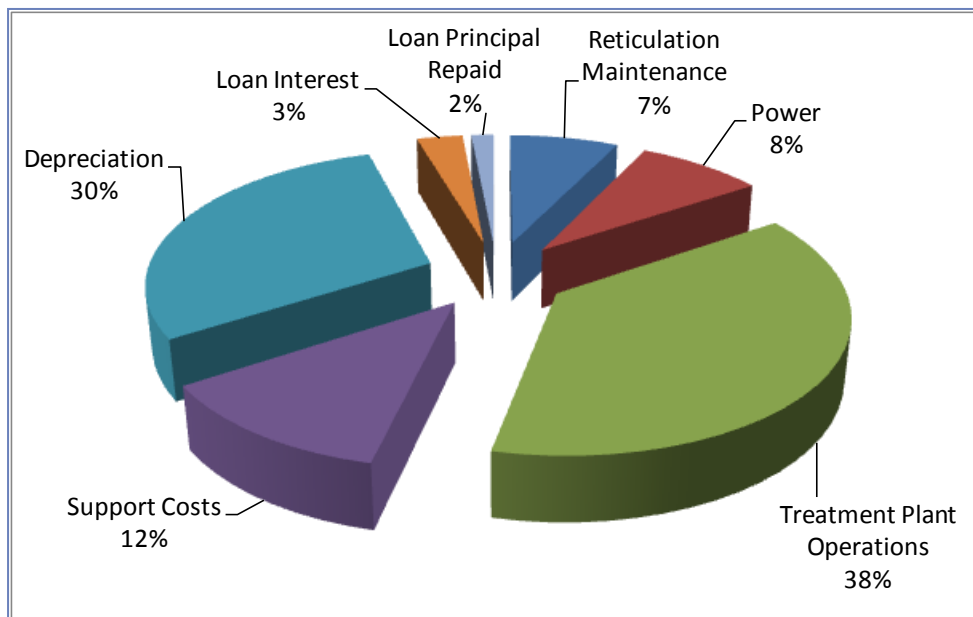
- Reticulation pipe work.
- Manholes and inspection points for access into the wastewater network.
- Wastewater pump stations.
- Electrical controls to monitor the pumping systems.
- Rising mains from pump stations.
- Wastewater Treatment Plants.
- Discharge structures and points.

	Tokoroa	Putaruru	Tirau	Arapuni	Total
Reticulation	116.4km	36.1km	8.6km	4.2km	165.3km
Pump stations	8	6	3	Nil	17
Manholes	2,265	675	148	84	3,172
Treatment plants	1	1	1	1	4

Details of these assets are recorded in a management software system ('BizeAsset'). This enables the individual components to be tracked including size, age, depreciated and replacement value, and reports can be produced to predict theoretical replacement requirements.

Maintenance costs are not recorded against individual assets but the faults on sections of infrastructure are monitored and this performance is considered when selecting assets for replacement. Unless critical, assets are not replaced until their reliability becomes poor.

Maintenance and Operations Costs



Wastewater plants are operated and assets are managed on a day-to-day level by the Watermark Business Unit ('the maintenance contractor') through an annual internal service level agreement with the Assets Group. This includes provision of water quality sampling, with laboratory testing under subcontract.

The general requirements of the 'Service Agreement for Sewerage' with Watermark are:

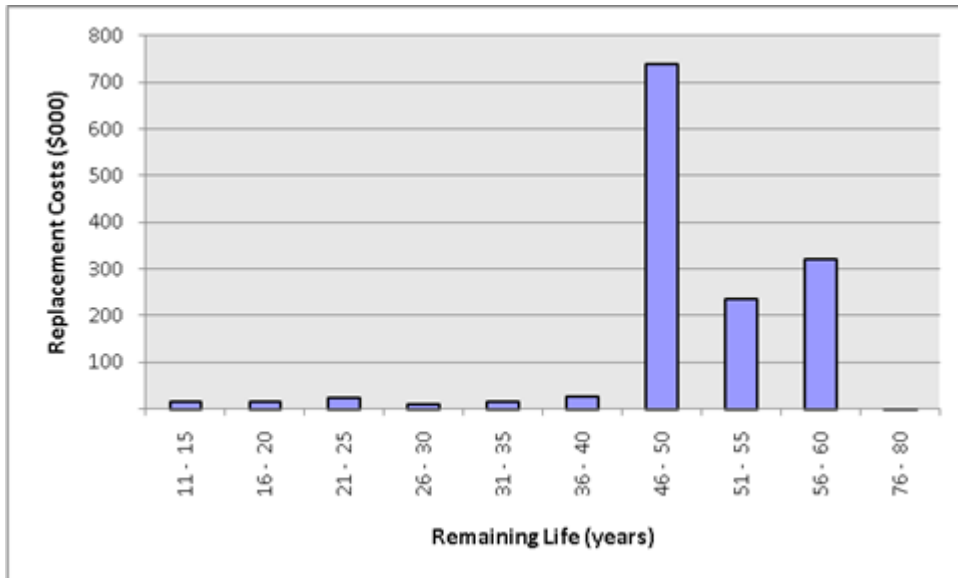
- 'To provide trained staff, plant and material resources to effect prompt and efficient routine maintenance of Council's sewerage systems.
- To receive and treat sewage at each of the sewage treatment plants and monitor effluent water quality as specified.
- To inspect, schedule and programme requirements described in the Agreement.
- To execute the works to specification requirements in a safe, efficient and timely manner that will enhance the Council's assets while minimising any inconvenience to asset users.
- To maintain a close working relationship with Council's Assets Group to enhance the liaison process and ensure a good understanding of what is required'.

Replacement costs for the next ten years are projected to exceed \$2 million based on analysis of the asset register. Network (pipes, manholes and other buried assets) are not expected to require significant renewal over the plan period. Pumping and treatment plant assets have shorter lives than the pipe reticulation system, and more frequent renewals are required.

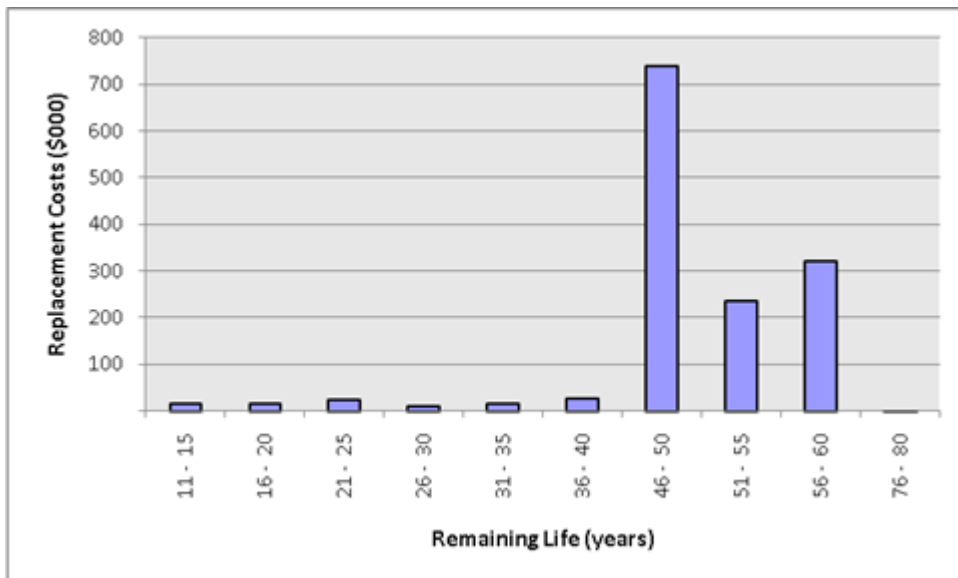
The Projected Renewals (90 Year Horizon) Graph below illustrates the post WW2 infrastructure expansion phase which is clearly visible in the centre of the chart. It can be seen that there are

very few pipes over 60 years old, compared to the base life of 70 to 90 years that has been adopted. Further discussion is found in the renewals section of Chapter 5.

Wastewater Pipes – Projected Renewals (90 Year Horizon)



Projected Replacement Cost For Plant Items:



Managing assets for risk

(AMP Chapter 6)

Sustainable and reliable delivery of the wastewater service requires careful consideration of the various types of risk associated with the service.

The major risks addressed in this Asset Management Plan include:

Business

The Corporate Risk Management Policy addresses the four well beings, vision statement and strategic themes. Full details can be found in the South Waikato Risk Register and Risk Profile, which ranks the risks and includes control measures, where they exist.

Asset management

The 2007 Asset Criticality and Risk Assessment report addressed the consequences of infrastructure failure in terms of the four well beings (with assumed weightings) and identified the critical assets that required further investigation in order to ensure that they would continue to perform reliably delivering the agreed Levels of Service. The necessary action and remedial work has been undertaken.

A follow up report that identifies the probability of failure is currently being prepared.

Insurance

Council is a member of the LAPP fund, which is provided by local authorities to provide funds for reconstruction following major catastrophic events. This type of cover is not available through private insurance providers. Membership requires that all participants undergo a full risk management assessment.

Risk Pool

Council is a member of Risk Pool, which is provided by local authorities for long term legal and professional liability.

Civil Defence

Council participates in a region wide Civil Defence Emergency Management Group, as required by legislation. The scope includes co-ordinated planning, training, public awareness and response to major events that affect the safety of its residents.

Waikato Engineering Lifelines Group

Council participates in the co-ordinated assessment of risks and responses to events that are likely to affect a range of services, some of which are not Council's responsibility, such as communications and energy utilities.

Business Continuity

Council is developing Business Continuity Plans that address the continuation of service delivery, such as fire at its head office or Watermark depot.

Financial forecasts

(AMP Chapter 7)

The following chart details the actual funding programme over the 2009/10 – 2018/19 planning period and compares this with the requirements shown in the asset register.

Expenditure components are as follows:

Direct Costs: The typical composition of this major expense is illustrated in the figure below. It covers costs of operating and maintaining the wastewater treatment plants and reticulation, including fault repairs.

Projected Annual Wastewater Operational Costs:



Support Costs: This item covers the share of Council support costs apportioned to Wastewater.

Depreciation: Both renewal of existing assets and investment in new ones drive a gradual increase in depreciation charge over the plan period. The contribution of the older pipe assets to depreciation charges decreases as their value diminishes toward the end of their lives. Depreciation is based on the useful lives of assets, tabulated in AMP Chapter 7. Useful lives vary depending on many factors:

- Mechanical and electrical plant depreciate faster than reticulation pipes.
- Different pipe materials have different life expectancies.
- Different historical installation standards and service conditions also affect lives.

Interest and Principal: New works are generally funded by borrowing. Interest payments and repayment of principal are an operating expense.

New Works: Capital investment is required to service additional consumers, to meet residents' expectations and to manage risk.

Renewals: This capital cost is mainly for replacing treatment plant equipment to maintain the agreed environmental (plant discharge quality) levels of service. It is funded by drawing from the depreciation reserve.

The main cost-increase driver is power charges, which are forecast to increase during the plan period.

A principal function of asset management is to ensure that the service provided by assets is sustainable in the long term. Council accounts for the wearing-out of assets by putting aside funds in a depreciation account, where the money is invested until needed to pay for new assets. The amount of funding required depends on how long the assets will last, and the cost of replacing them.

Systems and processes

(AMP Chapter 8)

The Group Manager Assets is responsible for all the activities described in the Asset Management Plans, while the Group Manager Corporate is responsible for corporate risk management.

The Wastewater activity uses the BizeAsset software system for recording all relevant information regarding the individual infrastructure items and is updated regularly to include all additions and deletions. The information is used for regular reporting on depreciation and triennial revaluations. BizeAsset is currently being updated to provide increased capability via a web base and is being developed to assist with achieving the target 'core plus' level of asset management.

Accounting is processed via Council's NCS financial system.

Geographic data is managed electronically, using Council's GIS software.

Various other information flows and processes are used to develop the Long Term Plans, establish service agreements, manage contracts, update standard operating procedures, monitor performance and report on resource consent compliance.

Improvement

(AMP Chapter 9)

Council's asset management target is to achieve the 'core plus' level, which is considered to be appropriate for an organisation of its size. Following guidance from the Office of the Auditor General and the NAMS manual, a number of Improvement Plans have been developed and implemented historically, while others are on-going. Further improvement proposals are based on a review of the current status of compliance with the requirements of 'core plus' and the recently updated IIMM, which refers to 'intermediate' rather than 'core plus'.

The 2015 AMPs are planned to be completely restructured to make them more useful and to streamline their structure and content.