

## 1.0 INTRODUCTION

### 1.1 Background

#### 1.1.1 PURPOSE OF THE PLAN

The purpose of the Wastewater Asset Management Plan (WWAMP) is to provide planning and financing to ensure the wastewater service is always operational for the services users in the Taupo District. The key to taking care of these essential services is to “plan now to avoid problems in the future”.

The size of the wastewater infrastructure investment and importance of maintaining wastewater services to the community demands excellence in the management of these assets. The community expects the wastewater asset to be managed in such a way that the existence of the asset goes unnoticed in day to day life.

The overall purpose of asset management (AM) planning is:

*“To meet a required level of service in the most cost effective way (through the creation, operation, maintenance, renewal and disposal of assets) to provide for existing and future customers”.*

This asset management plan (AMP) is the tool for combining management, financial, engineering and technical practices to ensure that the level of service required by customers is provided at the lowest long term cost to the community. The plan is intended to demonstrate that Council is managing the assets responsibly and that customers will be regularly consulted over the price/quality trade-offs resulting from alternative levels of service.

AMP’s are therefore concerned with outlining optimal life cycle management strategies and providing details of the associated costs. This identification of future needs, management options and cash flows provides the ability to even out peak funding demands and account for asset depreciation loss of service potential.

The main benefits derived from AM planning are:

- Improved understanding of service level options and standards.
- Minimum lifecycle (long term) costs are identified for an agreed level of service.
- Better understanding and forecasting of asset related management options and costs.
- Managed risk of asset failure.
- Improved decision making based on costs and benefits of alternatives.
- Clear justification of forward works programmes and funding requirements.
- Improved accountability over the use of public resources.
- Improved customer satisfaction and organisational image.

A fundamental objective throughout the preparation (and future review) of this plan will be to identify potential opportunities for reductions in asset lifecycle costs.

The overall responsibility for asset management with TDC sits with the Asset Manager and the optimum cost efficient operation of treatment plants, implementation of maintenance / renewal works and programmes lie with the relevant operational/ network / project teams. For the management of each scheme, Lifecycle management plans are updated by AM based on the feedback from the Treatment Plant Manager, Network engineers and compliance status and also the consent conditions. Councillor

involvement is through the approval of the TYP and annual plan process. All AMPs are to be formally updated on a 3 yearly basis, which coincides with the TYP review cycle.

This Asset Management Plan has been updated internally by the Infrastructure team building on the existing 2012 AMP document. Data has been collated and updated by the Asset Manager using the available asset condition and recent asset valuation data. Contributions for this plan have also been made from relevant asset managers/engineering officers within Infrastructure team and financial updates via the Management Accountant.

### 1.1.2 LEGISLATIVE REQUIREMENTS FOR ASSET MANAGEMENT PLANNING

The recent focus on AM planning, results from the Local Government Amendment Act 2002, November 2013 amendment and subsequent amendments. This Act places an emphasis on strategic financial planning and requires local authorities to:

- Prepare and adopt a Ten Year Plan (TYP) with a 10 year planning horizon every three years, taking into account asset creation, realisation, and loss of asset service potential.
- In determining their long term financial strategy, consider all relevant information and assess the cost/benefit of options.
- Manage assets prudently, in the interests of the district and its inhabitants and ratepayers.
- Clearly identify significant forecasting assumptions and risks underlying financial estimates.
- Identify any significant negative effects that any activity within the group of activities may have on the social, economic, environmental, or cultural well being of the local community.

The preparation and implementation of an AMP from which long term financial strategies will be developed, is a means of TDC complying with these requirements.

### 1.1.3 LEGISLATIVE DOCUMENTS

The key legislative documents relating to the management of wastewater service assets are listed in the following table.

Local Government Act 2002 and Amendments	The LGA empowers local authorities to carry out various wastewater works, but does not require them to do so. The Act requires public consultation.
Health Act 1956	Requires Council to: <ul style="list-style-type: none"> <li>• provide 'sanitary works', the definition of which includes wastewater disposal and includes all lands, buildings, machinery, reservoirs, dams, tanks, pipes and appliances used in connection with any such works.</li> <li>• ensure the provision in any dwelling house of an adequate and convenient method for the disposal of wastewater.</li> </ul>
Resource Management Act 1991	Requires Councils to: <ul style="list-style-type: none"> <li>▪ sustain the potential of natural and physical resources to meet the reasonable foreseeable needs of future generation</li> <li>▪ comply with District and Regional Plans</li> <li>▪ avoid, remedy or mitigate any adverse effect on the environment</li> <li>▪ take into account the principles of the Treaty of Waitangi in exercising functions and powers under the Act relating to the use, development, and protection of natural and physical resources</li> </ul>

	<ul style="list-style-type: none"> <li>▪ comply with resource consents issued by the Waikato Regional Council for disposal of wastewater and land use (designations for activities such as treatment plants).</li> </ul>
Other Acts and Regulations	Hazardous Substances and New Organisms Act 1996 Building Act 2004 Public Works Act 1981 Health & Safety in Employment Act 1999 Civil Defence Emergency Act 2002 Public Bodies Contracts Act 1959 TDC Trade Wastewater Disposal Bylaw 2010 EW Variation 5 Protecting Lake Taupo

**Table 1-1: Relevant Legislation**

### 1.1.3.1 Water and Sanitary Services Assessment

A Water and Sanitary Services Assessment was updated in 2017.

### 1.1.3.2 Variation 5 Protecting Lake Taupo

The following tables itemise sections of Environment Waikato's Regional Plan Variation 5 – Lake Taupo Catchment that affect TDC. The complete clauses can be found in the Variation 5 document. A map showing the extent of the Lake Taupo Catchment is shown after the Implementation Methods tables.

Number	Section
3.10.4.2 (page 15)	<p><b>Taupo District Council Long-Term Council Community Plan</b></p> <p>Waikato Regional Council will advocate for provision for community wastewater upgrades and reticulation in the Taupo District Council Long Term Council Community Plan, particularly the reticulation and centralised treatment of sewage from lakeshore settlements including;</p> <ul style="list-style-type: none"> <li>• Hatepe</li> <li>• Waitetoko</li> <li>• Oruatua/Tauranga Taupo</li> <li>• Te Rangiita</li> <li>• Waihi Village</li> </ul>
3.10.4.5 (page 15)	<p><b>Research into Development and Implementation of Markets for Nitrogen Offsetting</b></p> <p>Waikato Regional Council will, with Central Government, Taupo District Council and affected landowners, support and facilitate research into the practical implementation of markets for nitrogen offsetting between properties in the Lake Taupo catchment.</p> <p>Waikato Regional Council will provide a central notice board to advertise nitrogen for sale/wanted.</p>
3.10.4.6 (page 15)	<p><b>Wastewater Management</b></p> <p>Develop and implement in conjunction with Taupo District Council a management system for on-site wastewater in the Taupo Catchment that is consistent with Australia/New Zealand Standard 1547:2000.</p>
3.10.4.7 (page 16)	<p><b>Integrated Management of Wastewater</b></p> <p>Work with Taupo District and other stakeholders to:</p> <ul style="list-style-type: none"> <li>• Ensure integrated management of on-site wastewater</li> <li>• Ensure domestic wastewater systems chosen for new subdivisions and individual properties represent the Best Practicable Option, and include provision for nitrogen reduction.</li> <li>• Advocate for centralised wastewater servicing of new subdivisions where</li> </ul>

<b>Number</b>	<b>Section</b>
	<p>such servicing is practicable.</p> <ul style="list-style-type: none"> <li>• Ensure major stakeholders, including designers, manufacturers, installers and users of on-site wastewater systems, are provided with information, advise and discussion forums that help them carry out their wastewater management responsibilities appropriately and in line with Australia/New Zealand Standard 1547:2000</li> <li>• Promote practices to ensure non-domestic point source discharges, such as stormwater and industrial discharges do not adversely affect Lake water quality.</li> <li>• Support joint initiatives with the Bay of Plenty Regional Council and Rotorua District Council for testing treatment efficiencies of advanced wastewater treatment systems.</li> </ul>
3.10.4.8 (page 16)	<p><b>Public Fund</b></p> <p>Waikato Regional Council will, in conjunction with Ngati Tuwharetoa and funding partners Taupo District Council and Central Government continue to be a member of a Joint Committee of a charitable trust call the Lake Taupo Protection Trust, which is a Council Controlled Organisation that:</p> <ul style="list-style-type: none"> <li>• Comprises a board of technical people as Trustees appointed by the Joint Committee.</li> <li>• Implements strategies to permanently reduce nitrogen from rural land use activities by 20 percent.</li> <li>• Contracts appropriately skilled persons to provide advice and nutrient modelling support and education in the nitrogen benchmarking process, as the first phase of achieving a nitrogen cap for farming land uses.</li> </ul>
3.10.4.9 (page 16)	<p><b>Review of Effectiveness of Public Fund</b></p> <p>Waikato Regional Council will, in conjunction with other members of the Joint Committee, Ngati Tuwharetoa, Taupo District Council and Central Government, initiate a review after 2010 of the Council Controlled Organisation's effectiveness toward achieving the nitrogen reduction target using public funding.</p>
3.10.4.11 (page 17)	<p><b>Landowner Involvement in Catchment Management</b></p> <p>Establish a catchment management body that is supported and represented by regulatory authorities, Ngati Tuwharetoa and private owners of pastoral, forestry and undeveloped rural land, that has a formal reporting and advisory role to Waikato Regional Council on matters related to the transition to sustainable rural land uses in the Lake Taupo Catchment, including:</p> <ul style="list-style-type: none"> <li>• Research Needs</li> <li>• Extension and advice</li> <li>• Monitoring and auditing processes for rural land used consents.</li> </ul>
3.10.4.12 (page 17)	<p><b>Advocacy and Joint Approaches</b></p> <p>Waikato Regional Council will, through advocacy and joint approaches with Taupo District Council, proactively seek to prevent adverse effects on the environment and the wider economic, social and cultural values and address resource management issues that arise as a consequence of land use changes.</p>

**Table 1-2: Variation 5 Implementation Methods – Non-Regulatory**

<b>Number</b>	<b>Section</b>
3.10.5	<b>Rules regarding farm/rural discharges</b>

<b>Number</b>	<b>Section</b>
(pages 19-27)	
3.10.6.1 (page 28)	<p><b>Permitted Activity Rule - Discharge of Domestic Wastewater from Existing On-site Systems within the Near-shore Zone</b></p> <p>The discharge of domestic wastewater effluent (including grey water but not stormwater) onto or into land from an on-site domestic wastewater treatment and land application system in the Lake Taupo Near-shore Zone lawfully established or authorised before the date of notification of this rule is a permitted activity until 30th June 2013, subject to the following conditions:</p> <p><i>The owner of the wastewater system shall obtain and supply to the Taupo District Council, at intervals not exceeding 3 years, a report from a Waikato Regional Council approved inspector, certifying that the wastewater treatment and disposal system is fit for purpose, and complies with the conditions of this rule. The report shall also include any recommended maintenance or repairs required. Such maintenance/repairs shall be carried out within 3 months of the date of the report. The first inspection is required by 9 July 2008.</i></p>
3.10.6.2 (page 29)	<p><b>Permitted Activity Rule – Discharge of Domestic Wastewater from Existing On-site Systems Outside the Near-shore Zone</b></p>
3.10.6.3 (page 30)	<p><b>Permitted Activity Rule – New Nitrogen Removing On-site Wastewater Systems</b></p>
3.10.6.4 (page 32)	<p><b>Permitted Activity Rule – New Conventional On-site Wastewater Systems</b></p>
3.10.6.5 (page 33)	<p><b>Controlled Activity Rule - Wastewater Systems in the Near Shore Zone after 30th June 2013</b></p>
3.10.6.6 (page 34)	<p><b>Restricted Discretionary Activity Rule – New Papakainga and Marae Wastewater Discharges</b></p>

**Table 1-3: Variation 5 Implementation Methods – Land Use Controls**

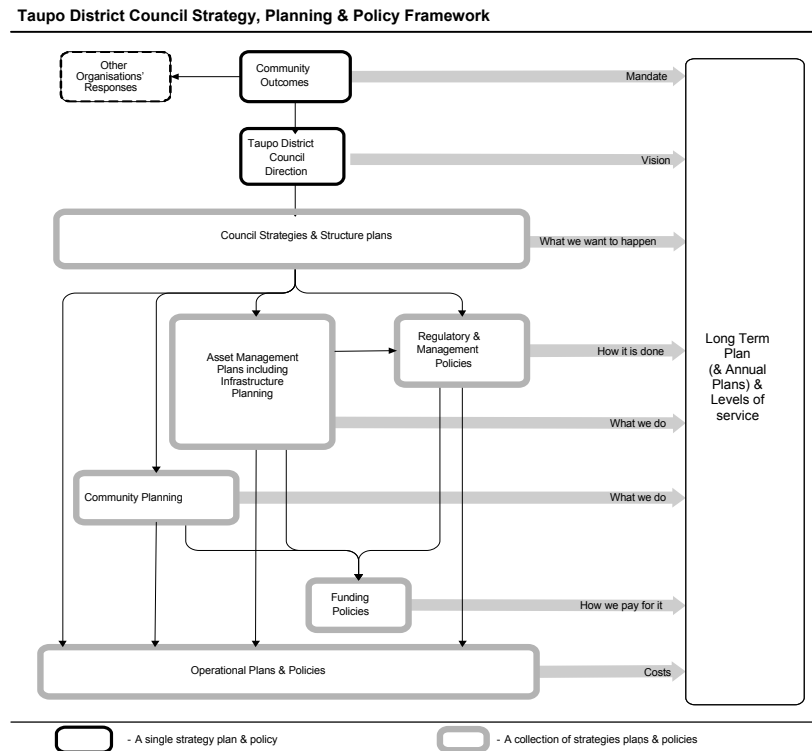




**Figure 1-1: Lake Taupo Catchment**

### 1.1.4 RELATIONSHIP WITH PLANNING AND STRATEGIC DOCUMENTS

The way in which Asset Management planning links the strategic planning process with operations and annual plans is illustrated below.



**Figure 1-2: Council Planning**

AMP's are tactical plans for achieving strategies resulting from the strategic planning process. AMP's are a key component of the council planning process linking with the following documents.

**TYP:** TYP sets the strategic direction for the Council and is the overarching planning tool which describes the activities the Council will undertake to deliver. It identifies the outcomes the community would like to achieve. It also contains the financial forecast for the next 10 years. This financial forecast is drawn from the AMP.

**Annual Plan:** This is prepared for year two and three of the TYP period and sets out how Council will undertake its strategic goals and details the specific activities and functions. The works identified in the AMP should automatically become the basis on which future TYP's and annual plans are prepared.

**District Plan:** The District plan is an implementation tool used to protect values and outcomes important to the community.

**Business/Activity Plans:** The service levels policies, processes and budgets defined in AMPs are incorporated into business plans as activity budgets, management strategies and performance measures.

**Contracts:** The service levels, strategies and information requirements contained in AMPs are translated into contract specifications and reporting requirements.

**Legislation:** The AMP must comply with all relevant legislation and provide the means of meeting legislative requirements.

**Bylaws, standards and policies:** These tools for asset creation and subsequent management are needed to support AM tactics.

**Waikato Regional Plan:** This reference gives the policy framework and give effect to the preferred strategic direction for Wastewater disposal from Waikato Regional Council.

**Growth Management Strategy 2050:** At the core of Taupo District 2050 are 12 Strategic directions. These provide the framework of interrelated policies that guide decision making and growth related issues. Strategic direction 8 and 9 relate to Transportation AMP (refer page 7 of GMS). In 2013/14 the growth model was updated and new lot projections were estimated on a development basis and then aggregated into catchments. The data was then reviewed and amended in a robust team discussion process.

**Structure Plans:** Adopted and proposed structure plans outline how growth is to be managed within areas - Taupo Urban Structure Plan (TUSP), Taupo Town Centre Structure Plan (TTCSP), Kinloch Community Structure Plan (KCSP), Mapara Valley Structure Plan, and Southern Structure Plan (SSP).

## 1.2 Key Stakeholders

This AMP recognises the following as key stakeholders:

<b>External</b>	<b>Internal</b>
<ul style="list-style-type: none"> <li>• The community, including citizens, ratepayers and Iwi</li> <li>• Residential, commercial and industrial wastewater service users</li> <li>• Septage collection contractors</li> <li>• Waikato Regional Council</li> <li>• District Health Board (Health Protection Officer)</li> <li>• Government agencies (e.g. Ministry for the Environment, Audit NZ, Department of Conservation)</li> <li>• Tangata Whenua, Tuwharetoa Maori Trust Board, Taupo Nui-a-Tia Management Board</li> <li>• Lakes and Waterways Group</li> </ul>	<ul style="list-style-type: none"> <li>• Councillors and community boards</li> <li>• Senior leadership Group</li> <li>• Asset Management staff</li> <li>• Maintenance contractors</li> <li>• Treatment plant Operations staff</li> <li>• Development Engineer</li> <li>• Finance Manager &amp; team</li> <li>• Information Technology Manager</li> <li>• Strategic Relationships Manager</li> <li>• Corporate Communication Manager</li> <li>• Internal auditor</li> <li>• Council consultants</li> <li>• </li> </ul>

**Table 1-4: Key Stakeholders**



### 1.3 Purpose of Ownership

One of the biggest contributors to sustainable environment is having a safe reliable wastewater service. Wastewater collection, treatment and disposal is a core council service, and TDC has historically developed and taken ownership of wastewater service assets to principally meet the public health outcomes as well the protection of the environment desired by the community. More details of the historical ownership of wastewater service assets are included in the life cycle section of this WWAMP.

The wastewater service assets are owned by the community they serve. The Local Government Act 2002 (LGA) has clearly signalled that such an ownership arrangement should be retained for the foreseeable future. Comprehensive statutory processes have been prescribed by the LGA for communities that wish to move away from asset ownership.

#### 1.3.1 LINKS OR ORGANISATIONS VISION, MISSION, OBJECTIVES, GOALS

The Wastewater AMP aims to meet the following Community Outcomes:

##### Economy

Our communities prosper in a thriving local economy with a diverse range of rewarding employment opportunities

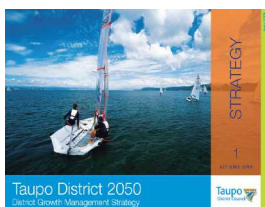
##### Environment

A shared responsibility for places we are proud of

##### Engagement

Council is connected with its communities, advocating for their social and cultural well-being

Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.



TD2050 provides a policy framework to guide where and how future growth should occur and identifies a series of actions to achieve this desired pattern of urban growth. At the core of TD2050 are the 12 Strategic Directions. These provide the framework of interrelated policies that guide decision making on growth related issues. Over time they will be achieved by putting into effect identified policies and undertaking the specific actions identified in TD2050.

Growth review summary October 2014 has seen Taupo's population grow by 2% since 2006. Taupo's population is likely to continue to grow with it peaking at 2035. Taupo is continuing to see a drop in the ages between 20-35 years of age as this group leaves the district to pursue education and other opportunities. Taupo is seeing an aging population that has a significant impact on the levels of service required. This occurrence is likely to see the need for smaller houses with less people per dwelling.

The Strategic Directions, policies and actions out of TD2050 that are specifically relevant to the wastewater service activity are:

#### **Strong Communities - Strategic Direction 5:**

Identify and plan for social and community infrastructure needs in advance of development (Policy 5.2).

**Sustainable Economy – Strategic Direction 7:**

Ensure that economic activities reflect the need to preserve the natural environment that sustains the district's economy (Policy 7.1).

**Integrating Land Use, Infrastructure & Funding – Strategic Direction 8:**

Manage the sequence of development in growth areas so that services are available from inception of new or expanding communities. (Policy 8.1).

**Water Resources – Strategic Direction 10:**

Consider a range of alternatives for managing on-site wastewater discharges inclusive the development of community owned systems. (Policy 10.2).

**Action – A 8.2**

Include agreed growth assumptions in all Asset Management Plans.

**Action – A 8.3**

Ensure Asset Management Plans support the patterns of development defined by TD2050 are aligned with the TYP, proposed District Plan and funding policies.

**Action – A 10.1**

In conjunction with Waikato Regional Council take an integrated approach to management of wastewater by ensuring:

- On-site wastewater management
- Domestic wastewater systems represent the best practicable option and include provision for nitrogen removal
- Information and advice is provided
- Non-domestic wastewater discharges do not adversely affect the Lake water quality.

**Action – A 10.3**

Provide for in the TYP for Community wastewater upgrades and assess the cost economics (and affordability by community) of reticulation particularly in respect of un-serviced Lakeshore settlements.

The wastewater service activity of Council has adopted the following specific goal to support Council's commitment to residents and visitors protecting Lake Taupo:

"Beginning in 2006, at **least 20%** reduction of nitrogen inputs to the Lake by upgrading the treatment plants, reticulating communities with septic tanks, improving the management of communities with septic tanks and higher standards for new on-site systems"

**Section 17A review**

Council has undertaken a review of the "Three Waters" service delivery provided by Council and has determined that the preferred service delivery option is the enhanced status quo with a contract of 5+2+2 duration incorporating network and electrical maintenance of the three waters.

### 1.3.2 ASSET MANAGEMENT'S CONTRIBUTION TO CORPORATE OBJECTIVES

Council's responsibility, as set out in the TYP relating to the wastewater asset is:

Council is responsible through this activity for the collection, treatment and disposal of wastewater from residential, commercial and industrial properties within designated drainage areas of the District in a way which safeguards the environment and provides public health protection.

## 1.4 Assumptions

### 1.4.1 FINANCIAL

The following financial assumptions have been made. Further information can be found in the TYP document.

Assumption	Potential risk	Mitigation measure
1. Asset valuations as at August 2017 have been used as the basis for asset values.	Time between AMP completion and last revaluation	Council undertakes an annual price variance assumption report
2. Investment Returns eventuate as predicted.	Not the required funds to undertake capital works	Councils LTP and annual plan spend is can be adjusted annually to meet Councils revenue and finance policy
3. Interest Rate on borrowings remains as predicted within the financial model.	Not the required funds to undertake capital works	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
4. Expenditure of capital projects occurs and estimated debt levels are as predicted	Potential under performance in capital spend reflected in Council revenue	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
5. No allowance has been made for inflation adjustment within this AMP. The source of funds for the future replacement of significant assets is stated in the revenue and Financing Policy.	Under funding of cost centre	Finance team make allowances for GST and inflation in funding plan and policy
6. The useful lives of significant assets are as per the accounting policies documented in the TYP. Depreciation is charged at 50% for the first year and 100% in subsequent years.	Asset lives have been incorrectly calculated meaning a funding shortfall	Council has asset depreciation checked externally. Asset lives are compared to the latest asset information nationally
7. Levels of service	The community desires	Council undertakes three



Assumption	Potential risk	Mitigation measure
and funding has been based on historic data	changes to level of service which are not reflected in this document.	yearly satisfaction surveys. Council undertakes pre LTP consolation to gauge the community for different service level needs. Council undertakes consultation with the community as part of the development of this LTP document
8. Allowance has been made for vested assets	The level of allowance for vested assets is incorrect.	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
9. Assume that the revenue received from Rates is as per expected.	A shortfall in rates funding	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
10. Assume no costs associated with infrastructures on the lake bed	An increase in unbudgeted operational cost	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy.
11. Development Contributions will continue to be collected.		

1.4.2 NON FINANCIAL

1. That Councils resource consents for its activities will be renewed as required.

Assumption	Potential risk	Mitigation measure
1. Assume that growth is going to occur (creation of dwellings) as per the Growth Model predictions.	Changes in growth will impact capital and operational spending	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
2. The Wastewater discharge quality requirements will remain within the framework of the discharge consent conditions.	Changes to discharge quality through the resource consent will require an increase in operational and capital expenditure	Councils LTP and annual plan spend can be adjusted annually to meet Councils revenue and finance policy
3. Contractors will be available for the development and construction of projects.	A shortage on contractors for project completion will mean an increase in project cost	Council can extend tender periods to enable contractors more time to schedule in works.
4. There will be continued growth in public participation in the	Increased growth in participation could result in changes in levels of service	Councils LTP and annual plan spend can be adjusted annually to meet Councils



Assumption	Potential risk	Mitigation measure
democratic process and Council will need to respond to this growth.	delivery.	revenue and finance policy
5. There will be no unforeseen legislative changes or central government policy changes that will affect this asset.	Changes in legislation could impact on the funding levels	Changes in legislation have an implementation period to enable Councils to plan
6. Economic and labour market constraints may have a direct effect on recruitment.	If Council is unable to recruit to the required level to complete the works program for the year this could have impact on Councils credibility	Council may have to hire consultants to provide support; this could increase the cost of service delivery which will need to be funded through the annual plan process.
7. That Councils resource consents for its activities will be renewed as required.	The renewal of resource consents will depend on Councils prior performance in meeting the conditions of the existing consent and any changes in legislation	Council works closely with the Regional council to achieve consent compliance. Compliance is also a staff performance criteria, so Council is focused on consent compliance and it is considered that any consent related issues can be resolved.
Each of the members of the Joint Management Group will fund and implement their respective actions as outlined in the "2020 Taupo-Nui-a-Tia Action Plan".		
Changing land uses from high nitrogen uses, such as dairying and pastoral farming, to low nitrogen uses will reduce nitrogen levels in the lake.		

### 1.5 Significant Negative Effects to Providing the Wastewater Service

In general providing wastewater services to the community has both public health and environmental benefits.

There is however negative effects in providing this service, these include;

- The risk of overflows due to the concentration of the wastewater within the reticulation system.
- The cost of providing the service on rate payers, especially smaller communities.
- The cost of keeping up with ever increasing environmental standards, regulations (variation5) requiring significant capital investment and increased operating cost.

To mitigate significant negative effects council has undertaken proactive planning approach to carry out optimisation and modelling studies, conditions assessment of above ground asset and for underground asset, physical inspection of manholes, CCTV and smoke testing for Inflow and infiltration issues. For new subdivision the cost of providing new wastewater pump stations, sewer network and its modelling is on the whole funded by new developers as per council's code of practice and is regulated by Development Engineer. The overall maintenance requirements are funded by general rates thus the cost is spread across the community.

## **1.6 Asset Management Plan Complexity**

### 1.6.1 OUTLINE OF APPROACH

Basic asset management functions are those which produce an AMP based on providing current levels of service and meet minimum legislative requirements by supporting a long term (10 year plus) cash flow forecast and accounting for changes in the service potential of assets. Basic AMPs define existing levels of service and identify costs based on renewal accounting principles.

Advanced AMP's identify processes to optimise lifecycle AM strategies and provide a greater degree of confidence in the resulting cash flow predictions. Advanced AM functions include predictive modelling, risk management, optimised renewal decision making (ORDM) and service level reviews.

The Wastewater Asset Management Plan 2015 follows the IIMM framework and it has been developed and collated internally by the Infrastructure team. This asset management plan is considered to reflect an "Intermediate" level of development, however areas such as Risk Management and Levels of Service are considered to be advanced.

### 1.6.2 AMP REVIEW BY COUNCIL

The involvement by councillors, including the reviewing and approving of the AMPs is briefly outlined below:

- Workshops are held with the council for group of activities including AMPs which gives them following information (refer objective link A1342951)
  - What we do
  - Key issues
  - The service(s) we provide
  - Levels of service, performance measures and targets
  - Key projects over the next three years
  - Who pays
  - Fees and charges
  - Financials
    - Capital expenditure (including renewals)
    - Operating expenditure
- Draft AMPs are provided to councillors to view
- Council finally adopts the AMP



### 1.6.3 LIMITATIONS OF THIS AMP

As it currently stands, this AM Plan has limitations in the following areas:

A Levels of Service requires detailed consultation to make the information more current. Asset condition and performance assessment need to be verified through investigations and the renewal programme modelled using condition rating data.

## 1.7 Organisational Structure

Taupo District Council has a flat organisational structure and is structured in order to deliver the key strategic directions of the Ten Year Plan.

This being:

- Economy
- Environment
- Financial Prudence

Wastewater activities come under the Environment management strategic direction. The Asset Managers within the Finance, Regulatory and Infrastructure Group manages all TDC's assets. The aim of the council is:

"To manage and maintain the assets within the Taupo District to an acceptable level of community safety and satisfaction and within the constraints of funding provided."

The Council has three groups to manage overall organisation goal;

1. The Infrastructure team is basically a engineering support function and fulfils legislative responsibilities, preparation of strategies and plan for the districts future asset needs as well as some project management. The team also manages network maintenance contract, renewal of resource consents and compliance reporting.
2. The Policy and Operational team is responsible for day-today operation and management of wastewater treatment plants, disposal fields for wastewater and bio-sludge to maintain the level of service and compliance.
3. The Strategic Community Risk and Relationship Group team is responsible for assisting council to analyse business risk and liaison with iwi.

These teams report to their respective Divisional / Group Manager. All Group Managers report to the CEO.

The wastewater services in the District are managed as follows:

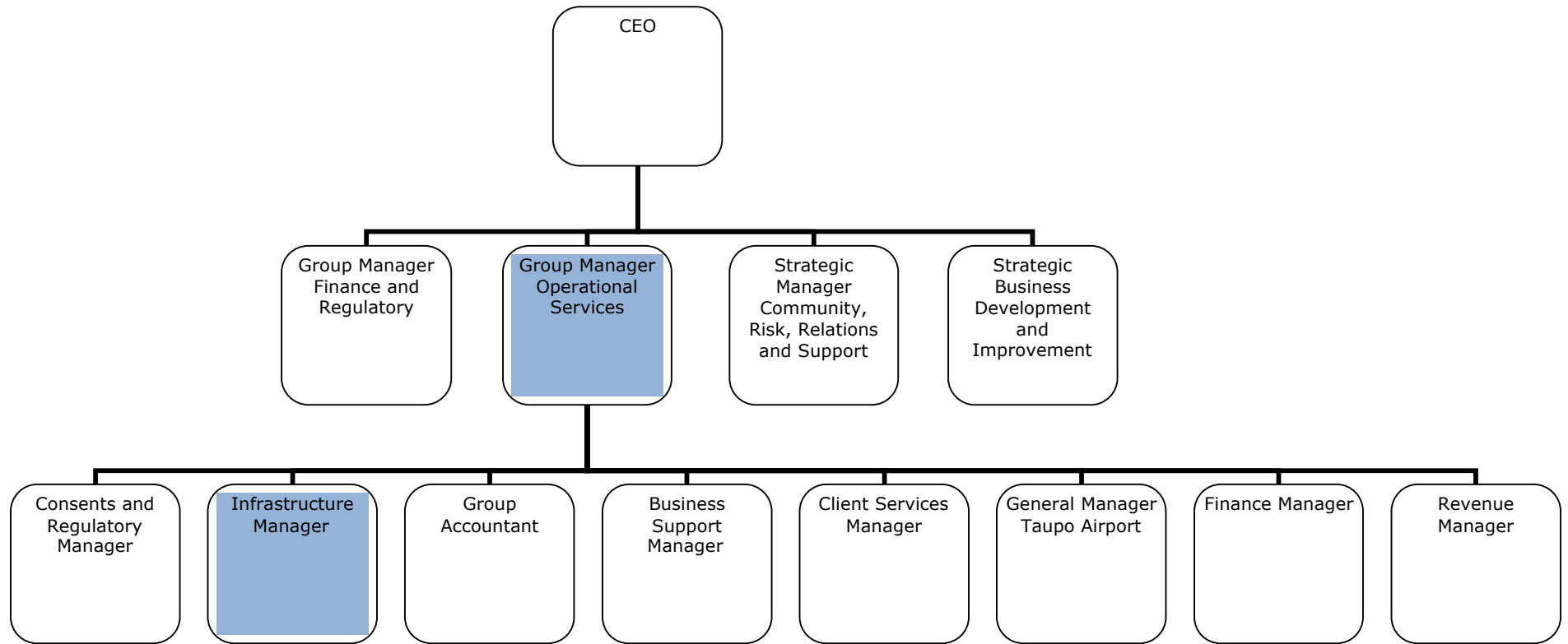
- The Infrastructure Manager has overall responsibility of the Three Water's Asset Management in the District and reports to the Group Manager-Finance, Regulatory & Infrastructure.
- The Asset Manager is responsible for the technical support, strategic planning, asset management, policy planning, service delivery including wastewater pump stations and network maintenance, review and improvement planning for meeting the compliance with legislation.
- The Manager-Water & Wastewater Treatment has responsibility for operation and maintenance of treatment plants and disposal of treated effluents in the district as per consent requirements.

- The Network Engineer(s) are responsible for the monitoring of maintenance contractor(s) and responding to service requests and maintenance queries. Responsibility extends from the sewer connection point (council owned asset) to the treatment plant inlet.
- Development Engineer manages approval process for all connections to the Three Water's asset network and ensures all vested asset including pump station conforms to TDC's Code of Practice. Development Engineer also manages the delivery of engineering advice information to internal and external customers.
- The Senior Monitoring and Compliance officer is responsible for reporting compliance for three waters.

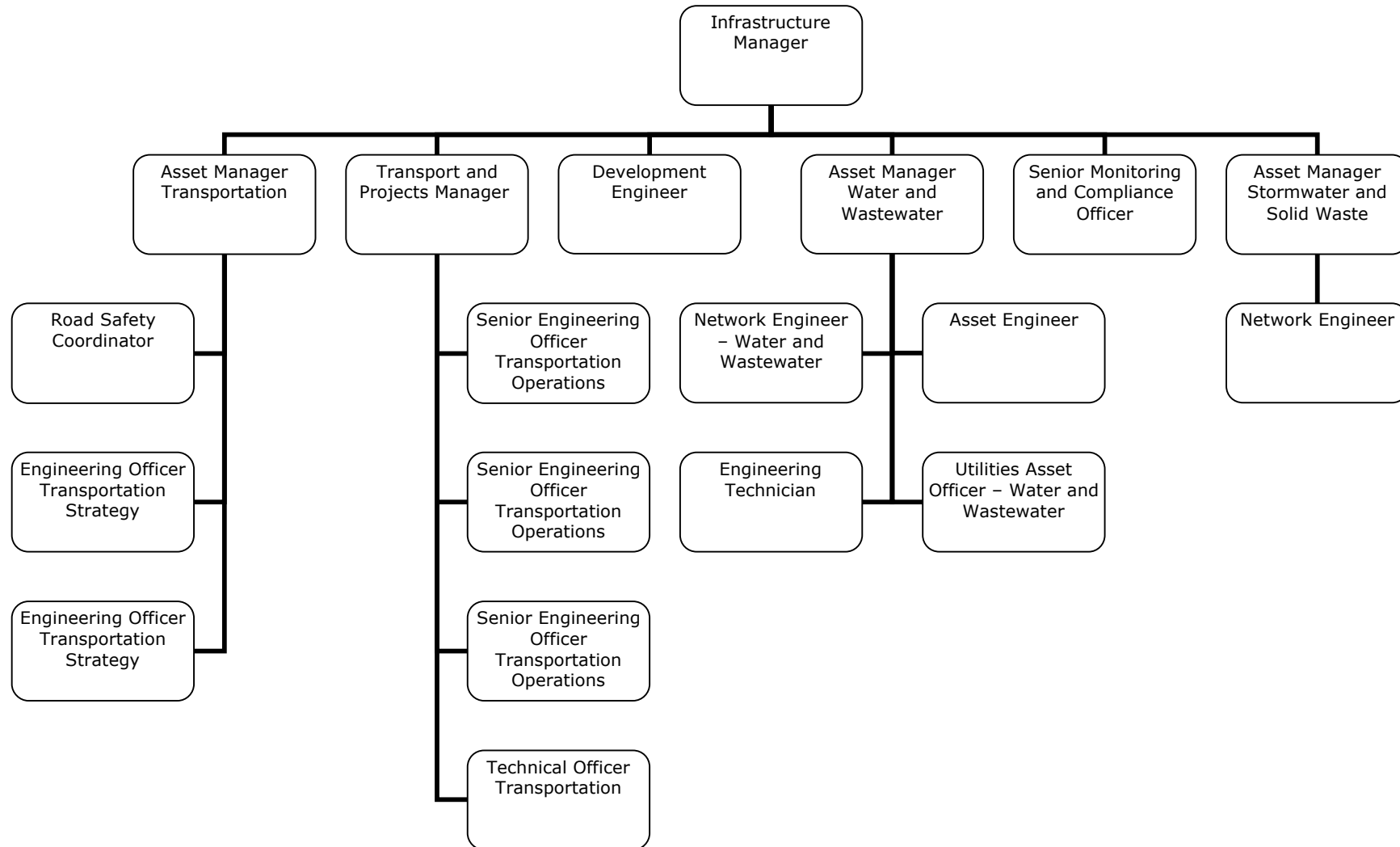
In addition to the 'Treatment Plant Team members, the activity is able to utilize the following in-house resources:

- The Finance Team assists with the development of Asset Management Plan financials;
- IT Team for assisting with development management & maintenance of communication and database systems.

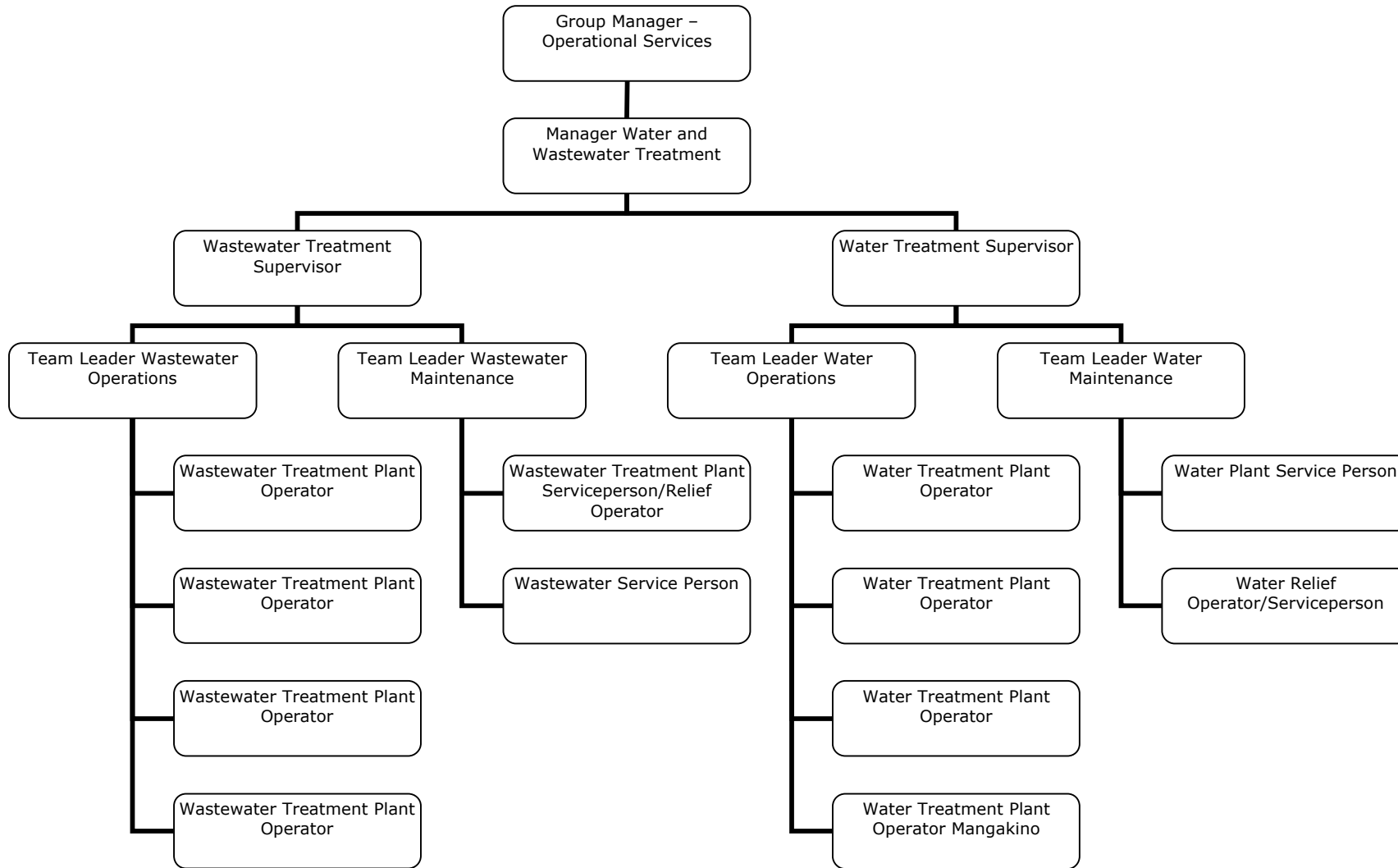
The organisational structure and Infrastructure Operations structure is illustrated in the following figures.



**Figure 1: TDC Organisational Structure as at June 2017**



**Figure 2: Infrastructure team Organisational Structure (i.e. who does the work and how it's managed)**



**Figure 3: The Operational Services team Organisational Structure (i.e. who does the work and how it's managed)**