



LEETON
SHIRE COUNCIL

DRAFT

**WATER ASSET
MANAGEMENT PLAN**

Leeton Shire Council
February 2024

DOCUMENT CONTROL

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REVIEW OF THIS DOCUMENT

This document will be reviewed every 5 years following a comprehensive revaluation of the asset class or as required in the event of legislative changes or operational requirements.

Any major amendments to the document must be made by way of a Council Resolution. Minor amendments such as corrections to spelling, changes to wording for improved clarity, formatting and updates to the Appendixes may be made with the approval of the General Manager.

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1. EXECUTIVE SUMMARY

1.1 Purpose of the Plan

This Asset Management Plan demonstrates that Council is managing its water assets in a responsible manner. It has been developed in accordance with Council's Asset Management Policy and principles of the Strategic Asset Management Plan (SAMP).

This Asset Management Plan details information about Council's water assets. The plan outlines the management approach to:

- Describing and aligning delivery objectives of water assets to Liveable Leeton 2035 strategic objectives.
- Managing the future demand for assets to achieve and maintain financial sustainability.
- Optimising the lifecycle management of assets (achieving service demand at lowest lifecycle cost).
- Identifying and managing risks associated with water assets.
- Funds required to operate the water assets.
- Continual improvement in the management of the assets and performance monitoring.

1.2 Asset Description

This Asset Management Plan has a focus on water services provided to the community and the infrastructure assets that support water service.

Our water asset portfolio has an estimated replacement cost of **\$87.7 million** (as at 30 June 2021).

The water asset portfolio includes water mains, nodes (hydrants, valves, etc.), filtration plants, reservoirs, storage dams and water meters.

1.3 Levels of Service

Council is continuing to develop comprehensive levels of service for its water assets to meet community expectations whilst maintaining financial sustainability.

- At present, management of water assets, including intervention points and chosen treatment methods, is based upon:
- Available budget and resource allocations.
- Feedback from the community.
- Active monitoring of the performance of the water asset portfolio.

Recent community consultations indicate that water assets are a priority for our community in the next 4 years. Therefore, it is necessary to provide sufficient funding in the long-term to achieve,

- improved community satisfaction with the provision of water services,
- improve asset condition,
- better access throughout the Shire.

This plan, and future revisions, will inform the long-term financial planning to fund the future renewal and upgrades necessary to meet the capacity demand and levels of service.

1.4 Future Demand

The future demand for services is impacted by:

- Population and demographic change
- Changing design standards

- Climate change impacts
- Council financial sustainability
- Community satisfaction
- Road safety legislation and industry best practice

These will be managed through a combination of managing existing assets, upgrading of existing assets, minimising climate change impact on assets and better management of customer expectations whilst maintaining financial sustainability.

1.5 Lifecycle Management Plan

Lifecycle planning describes the approach to maintaining an asset from construction to disposal. It involves the prediction of future performance of an asset, or a group of assets, based on investment scenarios and maintenance strategies.

Council's current approach to managing and operating its water assets is transitioning to a more proactive approach as to continually improve knowledge on performance, changing requirements, and service demands.

Council is always striving to improve its approach to lifecycle management to make sure it can deliver on service commitments in the most cost effective and efficient manner.

1.6 Financial Summary

Based on our current forecasting, the renewal demand of existing water assets over the next ten (10) years is **\$24.1 million** or **\$2.41 million** on average per year. This total renewal demand is inclusive of **\$10.5 million** of renewal backlog.

The Long-Term Financial Plan has currently allocated about **\$9 million** which means Council is only funding **37%** of its required renewal over the next 10 years. The following graph shows the financial summary of water assets.

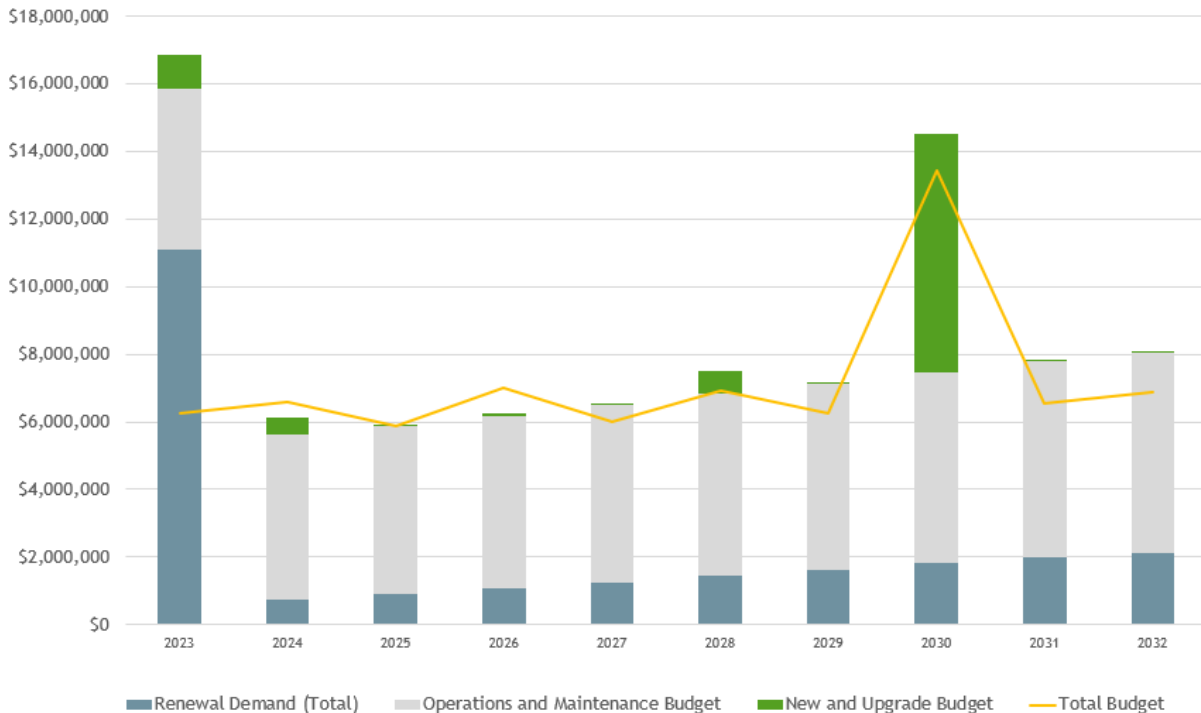


Figure 1: Financial Summary - Water Assets

1.7 Council's priority

Council will continue to inspect and proactively maintain its water assets to ensure they are safe and functional within the current levels of service.

Council will also prioritise renewals, upgrades, expansion and adding new water assets to the water asset base according to priorities and annual budget allocations and ensure water assets comply with all relevant statutory requirements and Australian Standards.

Council will continue to work with local community, industries and businesses to press for more funding from both state and federal government to ensure Leeton Shire can continue to grow.

1.8 Risk Management

There are number of risks that need to be carefully managed in order to maintain Council's asset base to the expected standards and continue to provide the current level of service.

The main risks are:

- Inadequate information to plan for the timely renewal and maintenance of water supply assets.
- Inadequate funding for renewal of water supply assets
- Filtration plant is scheduled to be renewed and upgraded in 2031 and funding allocations may not be adequate.
- Risk of asbestos exposure when replacing asbestos mains.
- Safety considerations

Council will endeavour to manage these risks within available funding by:

- Developing and implementing a planned maintenance and inspection program.
- Undertaking master planning to identify the scope and the cost estimates of filtration plant renewal/upgrade.
- Continuing to implement Liveable Leeton 2035 and supporting strategies to guide development and enhancement of water assets.
- Designing assets to achieve more economical lives.
- Practising safe work methods/protocols and following health and safety guidelines.

1.9 Improvement Plan

This Water Asset Management plan has identified a number of actions to improve overall management of water assets.

Some of these actions include:

- Review resourcing and funding strategies.
- Implement an asset management information system and works management system.
- Implement of cyclic condition assessment programs.
- Develop renewal programs based on asset condition.
- Develop and implement planned maintenance and inspection programs.

2. INTRODUCTION

2.1 Background

Leeton Shire is located in southwest New South Wales, 584km from Sydney, 470km from Melbourne and 371km from Canberra. Leeton is the birthplace of the Murrumbidgee Irrigation Area and was purposely built as part of the Murrumbidgee Irrigation Scheme.

The Local Government Area covers 1,167km² and has a population of 11,452 (ABS, 2021). Leeton is the second largest regional centre in the Western Riverina region and plays an integral role in value-added agricultural processing, agriculture, education and research, transport, and logistics. Leeton Shire Council includes the towns of Leeton, Yanco and Whitton and the villages of Murrami and Wamoon.

Council has about 187 kilometres of water mains, 6 water storage dams, 3 water filtration plants, 10 water reservoirs, 3037 hydrants & valves, and 5090 water meters. These assets are central to providing an effective water service.

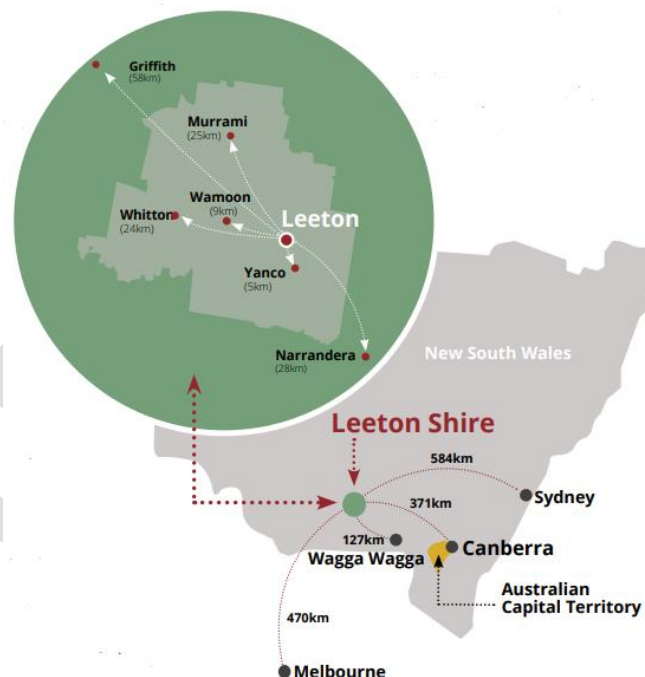


Figure 2: Leeton Shire Council Area

2.2 Purpose of the Plan

This Asset Management Plan covers a 10-year horizon and is intended to demonstrate how we will support its vision in the provision of community assets to plan, develop and maintain infrastructure that is sustainable. This is achieved by applying the principles of responsible asset management planning, the objective of which is to deliver the required level of service to existing and future customers in the most cost-effective way.

The purpose of the Asset Management Plan is to ensure Council's water assets fulfil their intended purpose and life expectancy at the most economical cost to the community. It balances financial, design, landscape, architectural and technical practices with community expectations to achieve this purpose.

The key objectives of this plan are to:

- Provide a plan to convey the long-term planning and strategy for the management of Council's water assets.
- Improve understanding of service level standards and options, while improving customer satisfaction and organisational image.
- Identify optimal whole of lifecycle costs to provide target levels of service.
- Provide the basis for improved understanding and forecasting of asset related management options and costs to meet funding demands.
- Clearly justify long term works programmes and evidence of future funding requirements.
- Manage the environmental and financial risks of asset failure.

2.3 Asset Management Plan Structure

This Asset Management Plan has been prepared using good practice guidance from the ISO55000 - *Asset Management standard, International Infrastructure Management Manual* and has been developed based on existing processes, practices, data, and standards. We are committed to striving towards best appropriate asset management practices and it is recognised that this Asset Management Plan will need to be updated periodically to reflect changes to management of Council's assets.

It is intended that this Asset Management Plans should always reflect as closely as practicable actual practices used in managing its assets. Only in this way will Council be best able to ascertain its long-term financial needs for delivering sustainable assets and services.

2.4 Our Water Assets

Council operates three separate potable water systems; the separate systems comprise a network of reticulation pipes, trunk mains, pumping stations and a filtration plant.

The following table shows the summary of our water assets.

Asset Class	Asset Type	Asset Quantity
Water	Water Mains	187 km
	Water Storage Dams	6
	Water Filtration Plants	3
	Water Reservoirs	10
	Hydrants/Valves	3037
	Water Meters	5090

Table 1: Summary of Water Assets

Water Filtration Plant

The Leeton Water Supply System supplies Leeton township, Yanco, and Wamoon. The supply of water is from the Murrumbidgee Irrigation system which is fed from the Murrumbidgee River via the 'Main Canal' from Berembid Weir, upstream from Narrandera. Water for Leeton is drawn from the canal system and stored in an in-ground open earth reservoir, with a capacity of 240 megalitres.

Raw water is pumped from the in-ground open earth reservoir to the Leeton Water Treatment Plant in Acacia Avenue/Racecourse Road.

The treatment process in Leeton Water Treatment Plant consists of coagulation, flocculation, sedimentation, filtration, fluoridation, and chlorination. The drinking water from the water treatment plant is pumped into the reticulation system as well as to four reservoirs (Chelmsford Place, Mountford Park, Central Park, and Wattle Hill) which is then reticulated to the properties in Leeton Township, Yanco, and Wamoon.

Whitton Water Treatment Plant

Water for Whitton is supplied from an extension of the Gogeldrie Branch Canal with an offtake into an in-ground storage facility, having a total capacity of approximately 20 megalitres.

Raw water is gravitated to an earthen ground storage tank from an irrigation supply channel and from there it is pumped to the treatment plant. The treatment process consists of coagulation, flocculation, sedimentation, filtration, and chlorination. Drinking water is then pumped through a rising main into the reticulated system.

Murrami Water Treatment Plant

A Water Treatment Plant and reticulation system supplies potable drinking water to the Murrami village.

Murrami is supplied through an open channel system from the Main Canal. The water is pumped into a lagoon sedimentation system and stored in a 12 megalitre in-ground storage reservoir.

The treatment process consists of coagulation, flocculation, lagoon sedimentation, glass filtration and chlorination. Drinking water is pumped from the storage dam to two reservoirs which feed the village by a gravity system.

3. STRATEGIC ALIGNMENT

This Asset Management Plan is aligned with Asset Management Policy, Strategic Asset Management Plan (SAMP) and Community Strategic Plan. The objective of this asset management plan is to support delivery of the Liveable Leeton 2035 Community Strategic Plan.

The following diagram shows the Integrated Planning and Reporting (IP&R) framework which helps deliver the community, Council and Government aspirations.

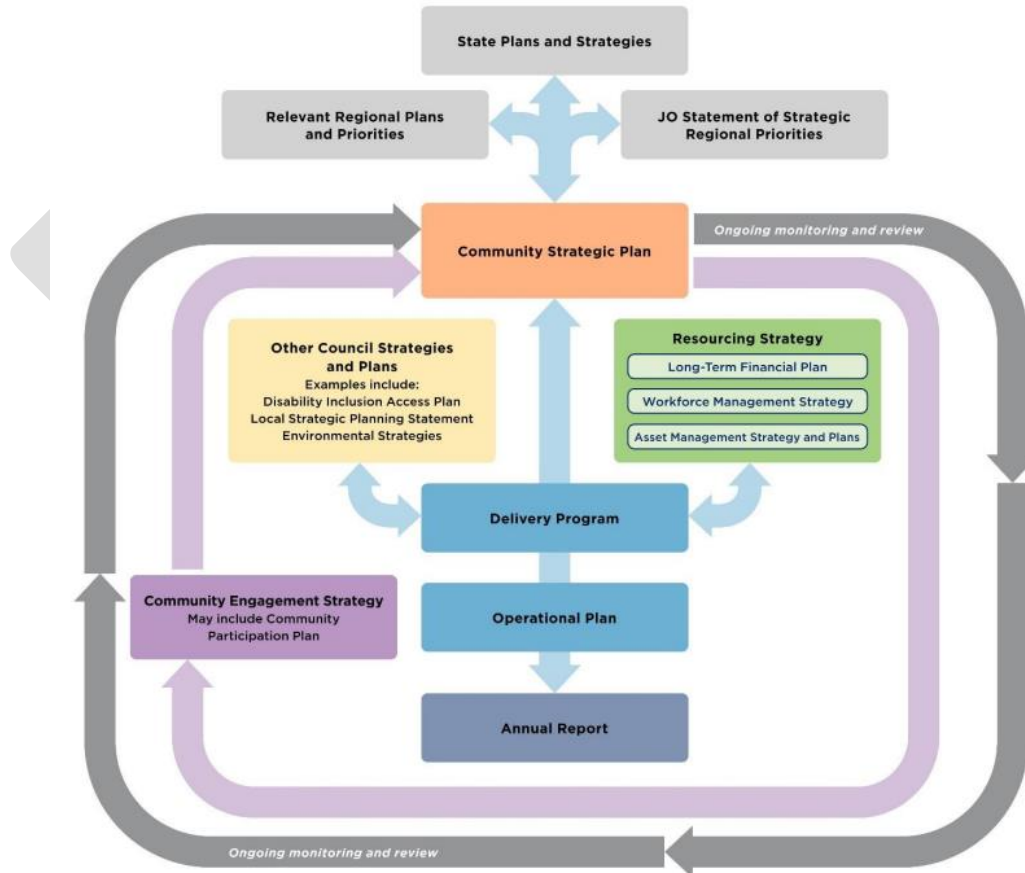


Figure 3: Integrated Planning & Reporting Framework – Leeton Shire Council

3.1 Strategic Goals and Objectives

Liveable Leeton 2035 is Leeton Shire's Community Strategic Plan. It outlines the community's aspirations and long-term vision for Leeton Shire. The vision for liveable Leeton 2035 is:

“We are a healthy, safe and connected community that respects people and the environment, enjoying active lives in a strong local economy underpinned by quality, accessible infrastructure, reliable water supplies and strong leadership”.

It has been prepared by Council in collaboration with, and on behalf of residents, other levels of government and agencies. Responsibility for meeting the long-term, community vision and desired outcomes rests with everyone.

The Liveable Leeton 2035 Community Strategic Plan not only provides a clear vision it also sets out the priority steps Council and others can take towards achieving that vision so that we can work together to make Leeton Shire the place we want it to be.

Liveable Leeton 2035 makes a commitment to outcomes and priority initiatives across several strategic objectives that align with the Community Vision. The Community Strategic Plan is broken into five focus areas and for each focus area there is a set of outcomes.

The five focus areas are,

- FOCUS AREA 1. A connected, inclusive and enriched community (Cc)
- FOCUS AREA 2. A safe, active and healthy community (Sc)
- FOCUS AREA 3. A thriving regional economy (Ec)
- FOCUS AREA 4. A quality environment (En)
- FOCUS AREA 5. Strong leadership and civic participation (L)

Effective asset management supports the strategic objectives and outcomes of the Liveable Leeton 2035 and the delivery of sustainable services and programs.

This Asset Management Plan is integrated with Liveable Leeton 2035 and provides a view (both strategic and in financial terms) of how Council proposes to manage the water assets that it owns and controls.

Liveable Leeton 2035 Strategic Objectives – Water Assets

The following table shows Shire’s relevant strategic objectives for water service and assets to achieve the Liveable Leeton 2035 vision.

Focus Area	Strategic Community Objective	Outcome
A safe, active, and healthy community (Sc)	Sc1.2 Take action to safeguard public health and safety	Our community is safe to live in and move about
A quality environment (En)	En2.2 Mitigate the impacts of climate change reduce our carbon footprint and apply sustainable energy solutions	We live sustainably, use our resources responsibly and have adapted to climate change
	En2.3 Use town water responsibly	
	En3.2 Provide reliable town water in urban areas	Our built environment is attractive and serviceable
	En.4.2 Intelligent land use planning and utilities planning to meet the needs of a growing population, with consideration for the environment and future generations	We balance the needs of our natural and built environments
Strong leadership and civic participation (L)	L1.1 Provide clear, accessible, relevant information to our community	We are well informed and engaged in decision-making
	L1.2 Actively engage with and seek direction from our community and other stakeholders	
	L2.2 Advocate on behalf of the community to ensure the long-term sustainability of our region and lifestyle	Our leaders speak out for the good of our community
	L3.1 Develop and maintain relationships and partnerships for the benefit of the community	We work together to achieve our goals
	L4.1 Provide and promote opportunities for community involvement	We are active community members who recognise we all have a role to play
	L5.1 Practice sound financial and resource management	Our Council operates efficiently and effectively

	L5.2 Maintain a framework of up-to-date plans, policies, procedures, systems, and service standards	
L5.3 Sustainably manage our assets and infrastructure to ensure they are fit for their current purpose and are maintained for future generation		
L5.4 Effectively manage risk, quality assurance, and work health and safety		
L5.5 Deliver high quality customer service		
	L6.1 Provide effective disaster prevention/mitigation, emergency management and disaster recovery services	We demonstrate leadership in the face of disaster

Table 2: Strategic Community Objectives – Water Assets

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3.2 Liveable Leeton 2035 Alignment to Council Services & Key Stakeholders – Water Assets

The following table presents the activities and the key stakeholders involved in achieving relevant strategic objectives of Liveable Leeton 2035.

Liveable Leeton Strategic Objective	Service/Activities	Key Stakeholders
Sc1.2	Compliance programs for breaches of legislation.	Council, Community
En2.2	Energy Masterplan, Shire activation	Council, local businesses, farmers, Department of Planning and Environment, Federal Government
En2.3	Education, watering of public gardens, parks and other open spaces	Council, community members, Department of Planning and Environment – Water
En3.2	Water treatment and filtration, water mains, water meters, pumps, and other infrastructure	Council, Murrumbidgee Irrigation Ltd
En4.2	Planning and development services, Leeton Local Environment Plan, Leeton Strategic Planning Statement, Development Control Plan	Council, Department of Planning and Environment, developers
L1.1	Media releases, Council News, reports, social media, Council Meeting Business Papers	Council, State and Federal Governments, media outlets
L1.2	Engagement activities, advisory groups	Council, State and Federal Governments, community members
L2.2	Advocacy	Council, Local Members of Parliament (State and Federal), RAMJO
L3.1	Community Water	Council, State and Federal Governments and their agencies, businesses, community groups, Department Planning, Housing & Infrastructure – Crown Lands and Department of Climate Change, Energy, the Environment and Water - NSW Parks, and Wildlife, Interagency Forums
L4.1	Working groups	Council, community groups, Leeton Connect, community members
L5.1	Financial management, human resource management	Council, State Government
L5.2	Governance, integrated planning and reporting, information technology, customer service	Council, Office of Local Government
L5.3	Corporate Services – Finance, Operations – roads and drainage, waste, water and wastewater, parks and gardens	Council
L5.4	Work health and safety, risk management, quality control	Council, Audit, Risk and Improvement Committee, Safe Work Australia

Liveable Leeton Strategic Objective	Service/Activities	Key Stakeholders
L5.5	Customer Service	Council
L6.1	Disaster planning, disaster recovery, emergency services support, business continuity	Council, State and Federal Governments, Murrumbidgee Irrigation, Rural Fire Service, NSW Fire Brigade, NSW Reconstruction Authority NSW Police, NSW Health/MLHD

Table 3: Services Delivered by Water Assets

3.3 Council Policies, Strategies and Plans Relevant to Water Assets

The following table shows various Council policies, strategies and plans that are relevant to and support management of water assets.

Policy/Strategy/Plan
<ul style="list-style-type: none"> - Asset Management Policy 2022 - Revenue Policy - Long Term Financial Plan - Strategic Asset Management Plan 2022-2032 - Delivery Program 2022–2025 - Operational Plan 22/23 - Workforce Management Strategy 2022-2025 - Procurement Policy - Risk Management Policy - Business Continuity Plan - Development Control Plan - Engineering Guidelines

3.4 Goals and Objectives of Asset Ownership

Our goal in managing infrastructure assets is to meet the defined range and levels of service in the most cost-effective manner for present and future consumers. By achieving the most cost-effective approach, Council will contribute to affordability and liveability contributing to a vibrant, growing, and connected community.

The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance.
- Managing the impact of growth through demand management and infrastructure investment.
- Taking a lifecycle approach to developing cost-effective management strategies that meet the defined levels of service.
- Identifying, assessing, and appropriately controlling risks.
- Linking to a long-term financial plan that identifies required expenditure and how it will be allocated.

Ownership and Stakeholder Arrangements

The ownership and management of water assets within the municipal area can take various forms and involves various public entities. The number of stakeholders involved in the provision of water services within the Shire indicates why engagement and co-ordinated decision making is vital for successful planning and delivery.

4. LEVELS OF SERVICE

Levels of Service is the defined quality of service of an asset. Understanding the required level of service is vital for lifecycle management, as this largely determines an asset's development, operation, maintenance, replacement, and ultimate disposal. In developing the levels of service outlined in this Asset Management Plan, Council has given due regard to the following:

Community Requirements <i>(Customer Expectations)</i>	These are the expectations of the customers/community. These expectations must be balanced with the community's ability and desire to pay (balancing risk, cost, and performance).
Strategic Goals and Objectives <i>(Strategic Drivers)</i>	The lifecycle management of assets (service offered by assets, service delivery mechanism and specific levels of service that Council wishes to achieve) will be consistent with goals and objectives stated in the Community Vision and Council Plan.
Legislative Requirements <i>(Mandatory Requirements)</i>	These are the objectives and standards that must be met, set by legislation, regulations, Codes or Practice, etc that impact the way assets are managed.
Industry Standards and Guidelines <i>(Operating Requirements)</i>	Design and construction standards and guidelines that provide the principles and minimum standards for an asset.

Table 4: Key Levels of Service Drivers

4.1 Customer Research and Expectations

Leeton Shire Council 's Community Strategic Plan was prepared with the input of many people from the Leeton Shire community. Starting as early as 2020, a range of community engagement activities were undertaken to give Leeton Shire residents the opportunity to list what they value now, what they'd like to see changed and what they'd like Leeton Shire to look like in 2035.

In July 2021, community engagement sessions were held in Leeton, Murrumbidgee, Wamboon, Whitton and

Yanco. Also in July 2021, emails requesting input into the development of the Community Strategic Plan were sent to a range of community groups, government agencies and other organisations identified as having a stake or a role to play in Leeton Shire.

Based on the customer research and expectations 5 areas of focus have been identified in Liveable Leeton 2035:

- A connected, inclusive, and enriched community
- A safe, active, and healthy community
- A thriving regional economy
- A quality environment
- Strong leadership and civic participation

A number of Strategic objectives to realise these focus areas have been identified and the strategic objectives relevant to water assets are documented in Chapter 3 of this plan. These strategic objectives help identify strategic direction for water assets to realise Liveable Leeton 2035.

Community Consultation

Leeton Shire Council's most recent community satisfaction survey was conducted in June 2021.

Based on the 2021 community consultation, the following areas related to water assets have been identified as the priorities for the next 4 years for the Leeton community:

- General maintenance/updated appearance of town/maintaining local infrastructure
- Better communication and involvement with the community/a proactive Council

Community Satisfaction/Importance Rating

According to the 2021 community consultation results, reliable water supply and service has been identified as the Council Service of most importance by the community. The "importance" rating of the water supply and service was 95%.

However, water supply and service has not made it to the top 5 categories in terms of the community satisfaction.

It should be highlighted that the Leeton community support growth and want to see more housing developed. This can't happen without getting a full understanding of how new houses must be serviced with water and sewer. Therefore, there will be a strong focus on sewer and water strategic planning over the period of 2022-25.

4.2 Legislative Requirements

There are many legislative requirements relating to the management of assets.

The following table shows a list of legislations applicable to water assets.

Legislation	Requirement
<ul style="list-style-type: none"> - <i>Local Government Act 1993.</i> - <i>Local Government Amendment (Planning and Reporting) Act 2009.</i> - <i>Local Government (General) Amendment (Planning and Reporting) Regulation 2010.</i> 	Sets out role, purpose, responsibilities, and powers of local governments including the preparation of a long-term financial plan supported by asset management plans for sustainable service delivery. Including integrated planning requirements for NSW Local Governments which cover asset management planning, long term financial plan and community strategic plan integration.
<ul style="list-style-type: none"> - <i>Work Health and Safety Act 2011</i> - <i>Work Health and Safety Regulation 2017</i> 	Sets out roles and responsibilities to secure the health, safety, and welfare of persons at work and covering injury management, emphasising rehabilitation of workers particularly for return to work. Organisations are to provide a safe working environment and supply equipment to ensure safety.
<i>Environmental Protection Act 1994</i>	Sets out guidelines for land use planning and promotes sharing of responsibilities between various levels of government across the State.
<i>Civil Liability Act 2002 and Civil Liability Regulation 2019</i>	The Act establishes the principle of negligence in pursuit of civil claims.
<i>Public Health Act 2010</i>	The Act addresses a range of public health matters, such as notification of diseases and conditions and the regulation of areas that have the potential to affect public health, such as drinking water, water cooling systems, skin penetration and public swimming pools. The Act sets out a series of legislative requirements governing a wide range of public health issues including water.
<i>Dams Safety Act 2015</i>	Provides the management requirements and risks that may arise in relation to dams (including any risks to public safety and to environmental and economic assets) are of a level that is acceptable to the community, proper and efficient management in matters relating to dams' safety and the application of risk management and the principles of cost benefit analysis in relation to dam safety.
<i>Water Supply (Critical Needs) Act 2019</i>	The Water Supply (Critical Needs) Act 2019 facilitates the delivery of emergency water supplies to certain towns and localities and to declare certain development relating to dams to be critical State significant infrastructure.
<i>Water Management Act 2000</i>	The Water Management Act 2000 provides a framework for controlling the extraction of water, the use of water, the construction of works such as dams and weirs, and the carrying out of activities on or near water sources in NSW.
<i>Water NSW Act 2014</i>	The principal objectives the Act are to capture, store and release water in an efficient, effective, safe, and financially responsible manner and to supply water in compliance with appropriate standards of quality. The act also provides for the planning, design, modelling and construction of water storages and other water management works and to maintain and operate the works efficiently and economically and in accordance with sound commercial principles.

Legislation	Requirement
<i>Environmental Planning and Assessment Act (1979)</i>	The Act requires that the environmental impact of projects be studied at all stages based on scale, location and performance.
<i>Protection of Environment Operations Act (1997)</i>	The Act requires licenses for activities with potentially significant environmental impacts. Prosecution may be carried out under this act for any chemical leakage, spill and disposal of wastes or similar
<i>Independent Pricing and Regulatory Tribunal Act (1992)</i>	The Independent Pricing and Regulatory Tribunal has developed a set of consistent pricing principles/guidelines to be adopted by Local Government authorities.
<i>Catchment Management Authorities Act (2003)</i>	Promotes the co-ordination of activities within catchment areas. This Act has implications for the management of river quality and quantity.
<i>Crown Lands Management Act 2016</i>	Act to provide for the reservation of Crown Lands for certain purposes and for the management of such reserved lands and for other purposes.

Table 5: Legislations Relevant to Water Assets

4.3 Industry Standards and Guidelines

The majority of standards applicable to water infrastructure are covered by Council Standard Drawings, guidelines or design standards, along with other industry standards. The following table shows a list of standards and guidelines applicable to water assets.

Standards and Guidelines	Requirement
Australian drinking water guidelines 2011	The guidelines are intended for use by all agencies involved in the supply of drinking water including catchment and water resource managers, drinking water suppliers, water regulators, and health authorities.
AS3500 - Plumbing and drainage Part 1: Water services	This Standard specifies the requirements for the design, installation, and commissioning of cold-water services. It applies to new installations as well as alterations, additions, and repairs
Water Services Association Australia 03 – Water Supply – 2011	Addresses the planning, design, construction, testing and commissioning of drinking water and non-drinking water supplies.
Leeton Shire Council Engineering Guidelines	The document outlines how Leeton Shire Council undertakes water and wastewater installations and makes decisions.
Leeton Shire Council Building in the Vicinity of Sewer and trunk water Mains Guidelines	The document outlines if and when a development (structure) can be constructed in the vicinity of a Council trunk water main
SafeWork NSW – How to Safely Remove Asbestos Code of Practice December 2022	An approved code of practice provides practical guidance on how to achieve the standards of work health and safety required under the WHS Act and the Work Health and Safety Regulation (the WHS Regulation) and effective ways to identify and manage risks.

Table 6: Standards and Guidelines Relevant to Water Assets

4.4 Level of Service

Levels of service are generally set based on legislative and compliance obligations, and historical standards that Council has used in the past. To support this, in future, Council expects to undertake further community engagement to validate levels of service and ascertain the community's willingness to pay.

Service levels are defined service levels in two terms, community levels of service and technical levels of service. These are supplemented by organisational measures.

The level of service provided by water assets are documented in Operational Plan 22/23 and the Delivery Program 2022/25.

Community Levels of Service

Community Levels of Service measure how the customer receives the service and whether value to the customer is provided. Community levels of service measures used in the Asset Management Plan are:

Quality	How good is the service, what is the condition or quality of the service?
Function	Is it suitable for its intended purpose, is it the right service?
Capacity/Use	Is the service over or under used, do we need more or less of these assets?

Activity	Performance Measure	Target Performance	Outcomes as at January 2024
Operate and supply water treatment services at Leeton, Whitton and Murrumbidgee	Percentage of customer requests/complaints responded to within 2 days	90+%	Not determined
	Percentage compliance with drinking water standard	100%	100%
Minimise water use	Increase/decrease in water use	Reduction in average water use	130KI down from 323KI the same period 2023

Table 7: Customer Level of Service

4.5 Technical Levels of Service

Supporting the customer service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities to best achieve the desired customer outcomes and demonstrate effective performance. Technical service measures are linked to the activities and annual budgets covering:

Operations <i>(Reliability, Safety, and Responsiveness)</i>	The regular activities to provide services
Maintenance <i>(Reliability, Safety, and Responsiveness)</i>	The activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life
Renewal <i>(Condition and Cost)</i>	The activities that return the service capability of an asset up to that which it had originally

Asset Improvements

(Availability, Function, Sustainability and Capacity)

The activities to provide a higher level of service or a new service that did not exist previously.

Council's Delivery Program 2022-2025 is Council's statement of commitment to the community regarding what Council will do during its term of office to bring the community closer to achieving its long-term goals using the resources identified in the Resourcing Strategy. It turns the community's strategic goals into actions in asset operations, maintenance, renewal, and improvements. Its overall purpose is to program the strategies and activities Leeton Shire Council will undertake to deliver the aspirational goals of the community, as set out in the Liveable Leeton 2035 Community Strategic Plan.

Leeton Shire Council's Operational Plan 22/23 details the projects, programs, and actions to be undertaken in the 2022/23 financial year to achieve the Delivery Program commitments.

Operational Plan 22/23 provides performance measures and targets expected to be provided by the Council in delivering Delivery program 2022-2025.

Activity	Performance Measure	Target Performance	Outcomes as at January 2024
Operate and supply water treatment services at Leeton, Whitton and Murrarni	Percentage of scheduled maintenance program completed	90+%	10%
	Percentage scheduled capital works program completed	100%	10%
	Volume of treated water produced	No target – report volume	15%
Minimise treated water losses. (Non-Revenue Water)	Litres of treated water lost	Reduction in Non-Revenue Water	100MI(15%)
Minimise number of water main bursts	Number of bursts per year	Reduction in number of bursts each year	2
Complete an Integrated Water Cycle Management (IWCM) Strategy that complies with new regulations and requirements	Percentage completion of IWCM	100%	60%
Complete a water services strategy	Percentage completion of Water Services Strategy	100%	50%
Continue effective Asset Management Planning (AMP) and GIS Service	Percentage completion of revaluation and condition assessments	100%	80%

Table 8: Technical Levels of Service

5. FUTURE DEMAND

The objective of asset management is to create, operate, maintain, rehabilitate, and replace assets at the required level of service for present and future customers in a cost effective and environmentally sustainable manner. The Asset Management Plan must therefore forecast the needs and demands of the community in the future and outline strategies to develop the assets to meet these needs.

5.1 Demand Forecasts and Impact on Assets

The present position, demand drivers, and their potential impacts on future service delivery and use of assets are presented in table below.

Demand Drivers	Present Position	Projection	Impact
Population Change	11,452 in 2021	12,700 by 2041	Future population growth will generate additional demand for water infrastructure. However, demand will not be greatly impacted by the growth.
Increase in Level of Service	Evolving design standards for water assets	Further improvements to design standards to bring water assets to current standards	Increased level of service and economical assets
Climate Change	The Bureau of Meteorology and CSIRO 2022 State of the Climate report outlines the following impacts of climate change in Australia: Australia's climate has warmed by an average of 1.47 ± 0.24 °C since national records began in 1910. Sea surface temperatures have increased by an average of 1.05 °C since 1900. This has led to an increase in the frequency of extreme heat events over land and sea. The duration, frequency and intensity of extreme heat events have increased.	Water assets are impacted by a range of changing climate conditions: <ul style="list-style-type: none"> - More intense and frequent rainfall - More severe drought periods. - Changes to humidity levels - Longer and more intense heat spells - Changes to ground water levels 	Higher levels of deterioration may result in increased asset maintenance requirements and changed schedules to maintain asset in a serviceable condition, resulting in increased maintenance costs. Frequent drying and wetting of soil causing stabilisation issues in buried pipes.
Council Financial Sustainability	Utility charges are the main source of funding for renewal, upgrade, and new projects.	May result in funding constraints for future projects.	<ul style="list-style-type: none"> - Achieving equitable distribution of resources - Ensure community receives maximum benefit from the investment in water infrastructure.
Community Satisfaction	Meeting the communities water quality expectations.	Increased expectations from the community	Council will be expected to revisit asset intervention levels to meet community expectations. Need for management of community expectations.

Table 9: Demand Drivers, Projections, and Impact on Service

Demand Management Strategy

The table below presents the strategies to meet the current projected demands on water assets.

Demand	Demand Management Activities
Population Change/Increase in Level of Service	Complete and implement a water services strategy
Increased Community Expectations Achieve Financial Sustainability	<ul style="list-style-type: none"> - Prepare long term water asset maintenance and renewal programs according to priorities and funding availability. - Review asset criticality, inspection programs and maintenance programs to identify improvements. - Conduct level of service analysis including community desired level of service and review affordability and risks. - Ensure that the Financial Plan and Asset Plan are integrated and reflect future asset needs.
Adapting to climate change	<ul style="list-style-type: none"> - Undertake impact analysis of climate change on water assets. - Undertake flood studies to identify impact on water assets.
Design Standards	Ensure design standards take into consideration climate change, local conditions, increasing demand and whole of life costings.

Table 10: Demand Management Strategies

6. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Council plans to manage and operate the assets at the agreed levels of service while managing life cycle costs.

Council is the custodian of a portfolio of water assets with a replacement value of \$88 million as reported in our financial statements as at 30 June 2021. These assets require significant and ongoing planning and management to meet both stakeholder and legislative requirements within the financial resources available to us.

Our water portfolio is summarised in the table below.

Asset Class	Asset Type	Asset Quantity	Replacement Value as at June 2021	Written Down as at June 2021
Water	Water Mains	187km	\$38,555,281	\$18,550,705
	Water Nodes	3037	\$3,929,338	\$1,206,385
	Water Reservoirs	10	\$11,840,981	\$5,613,880
	Water Storage Dams	6	\$6,591,375	\$3,746,925
	Water Filtration Plants	3	\$25,333,367	\$10,513,704
	Water Meters	5090	\$1,475,979	\$1,312,777
	Total			\$87,726,322

Table 11: Summary of Water Asset Information

6.1 Asset Data & Information

Council is committed to maintain the currency of all water asset data. There are number of initiatives currently underway (eg. hydrant inspection program) to improve asset data and systems to centralise water asset information.

- Capturing asset condition information and collecting attribute data.
- Configuration of "Univerus Assets" (Asset Management Information System) and migration of asset data including condition and valuation information.
- Configuration of "Univerus Assets" works order management system to streamline work order management.

These initiatives will place the Council in a better position in future in life cycle management of water assets. It should also be noted that Operation and Maintenance (O&M) manuals for our filtration plants and pump stations are currently not available.

Improvement Opportunity

- Review water asset information for accuracy and completeness and identify gaps.
- Develop and implement asset condition assessment and data collection program.
- Upload all water asset data onto "Univerus Assets".
- Identify and develop/obtain critical O&M manuals for filtration plants and pump stations.

6.2 Asset Condition

Asset condition is a measure of the health of an asset and is a key consideration in determining remaining useful life, as well as predicting how long it will be before an asset needs to be repaired, renewed, or replaced. Asset condition is also an indicator of how well it can perform its function. Condition data is valuable for developing long term funding scenarios for strategic planning of our budgets.

Council uses a 1 to 5 condition rating system for its water assets as described in table below.

Score	Condition Rating	Characteristics
1	Very Good	Asset looks new or very close to as new.
2	Good	Asset is no longer in new condition. Only minor maintenance may be required.
3	Fair/ Average	The asset is serviceable and in a satisfactory condition however some maintenance may be required to address aesthetic, safety, or functional issues.
4	Poor	Asset requires significant maintenance or replacement of the asset is required
5	Very Poor	Asset is physically unsound, and replacement is required

Table 12: Condition Rating System

Council's condition grading system follows good practice guidance as provided by various industry standards including the *International Infrastructure Management Manual*. Condition data for Council's water assets is recorded in valuation registers as at June 2021 have been used for renewal modelling. The following sections provide an overview of the condition of our water assets.

Current Condition - Water Mains

The majority of Council's water mains are in poor to very poor condition and will require immediate intervention. This is based on the age of the pipe network which has been assumed in the absence of observed condition. Therefore, it is highly likely that there may be a high degree of variation to this condition information.

Based on the available information, all Mild Steel pipes are in very poor condition and so are 50% of Cast Iron pipes. The remaining 50% of Cast Iron pipes are in poor condition. 50% of asbestos pipes are also in poor condition.

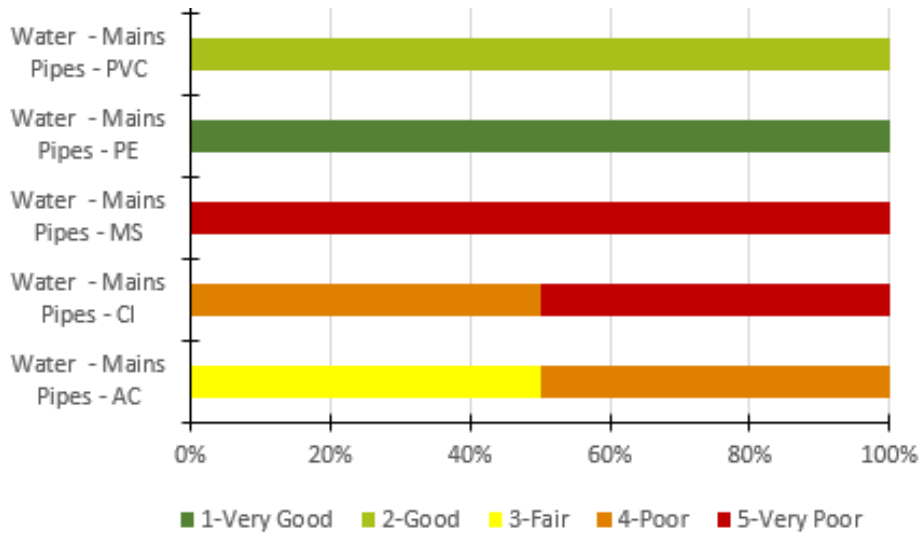


Figure 4: Condition Profile – Water Mains

Current Condition – Water Nodes (Hydrants/Valves/End Caps)

Currently, about 47% of hydrants, 48% of scour valves and 24% of stop valves are in very poor condition and may require immediate intervention.

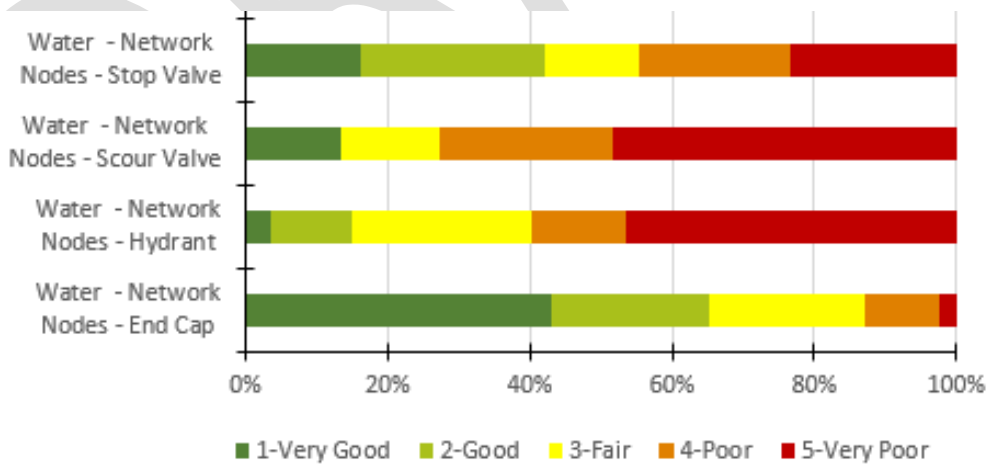


Figure 5: Condition Profile – Water Nodes

Current Condition – Water Reservoirs

Currently, about 15% of concrete water reservoirs are in very poor condition and 18% of steel reservoirs are in poor condition. However, it should be noted that three concrete water reservoirs are not used, two are kept in heritage list and the other has been flagged for disposal. These are Chelmsford No2, Chelmsford No3, and Yanco water reservoir.

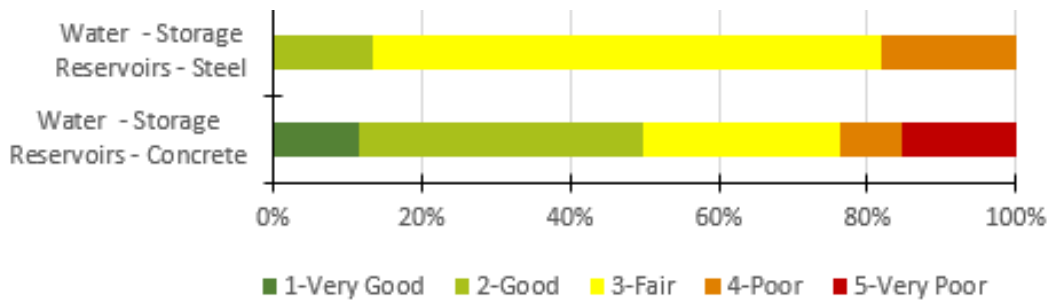


Figure 6: Condition Profile – Reservoirs

There is also an old reservoir in Whitton Park, near RFS shed that also has not been in operation for some time and should be considered for disposal. This reservoir has not been included in valuation data and has not been included in this analysis.

Improvement Opportunity
 Conduct a structural assessment of reservoir in Whitton (near tennis courts and skate park) that is currently offline. Consider for disposal based on the risks.

Current Condition – Storage Dams

Overall, Council's storage dams are in very good to fair condition.

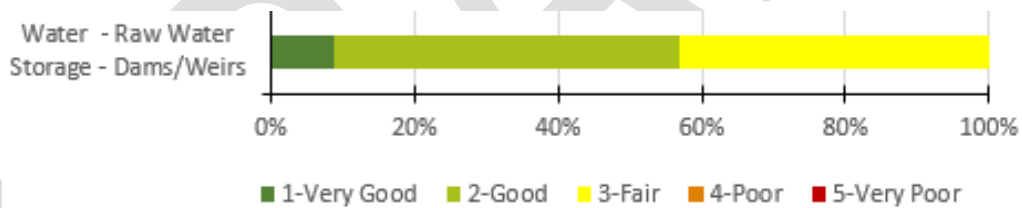


Figure 7: Condition Profile – Storage Dams

Current Condition – Water Filtration Plants

The majority of filtration plant assets are in good to fair condition. The following assets in the filtration plants are in poor to very poor condition and will require intervention following a condition assessment.

Leeton water filtration plant:

- Soda ash dosing system
- Old settlement tank

Murrumbidgee water filtration plant:

- Alum dosing system/Powder active carbon system/Soda ash dosing system
- Chlorinator
- Clear water pump 1 and 2

Whitton water filtration plant:

- Settlement tank
- Filter tank
- Polymer dosing system/Soda ash dosing system
- Clear water pump 1
- Pumps ancillary assets

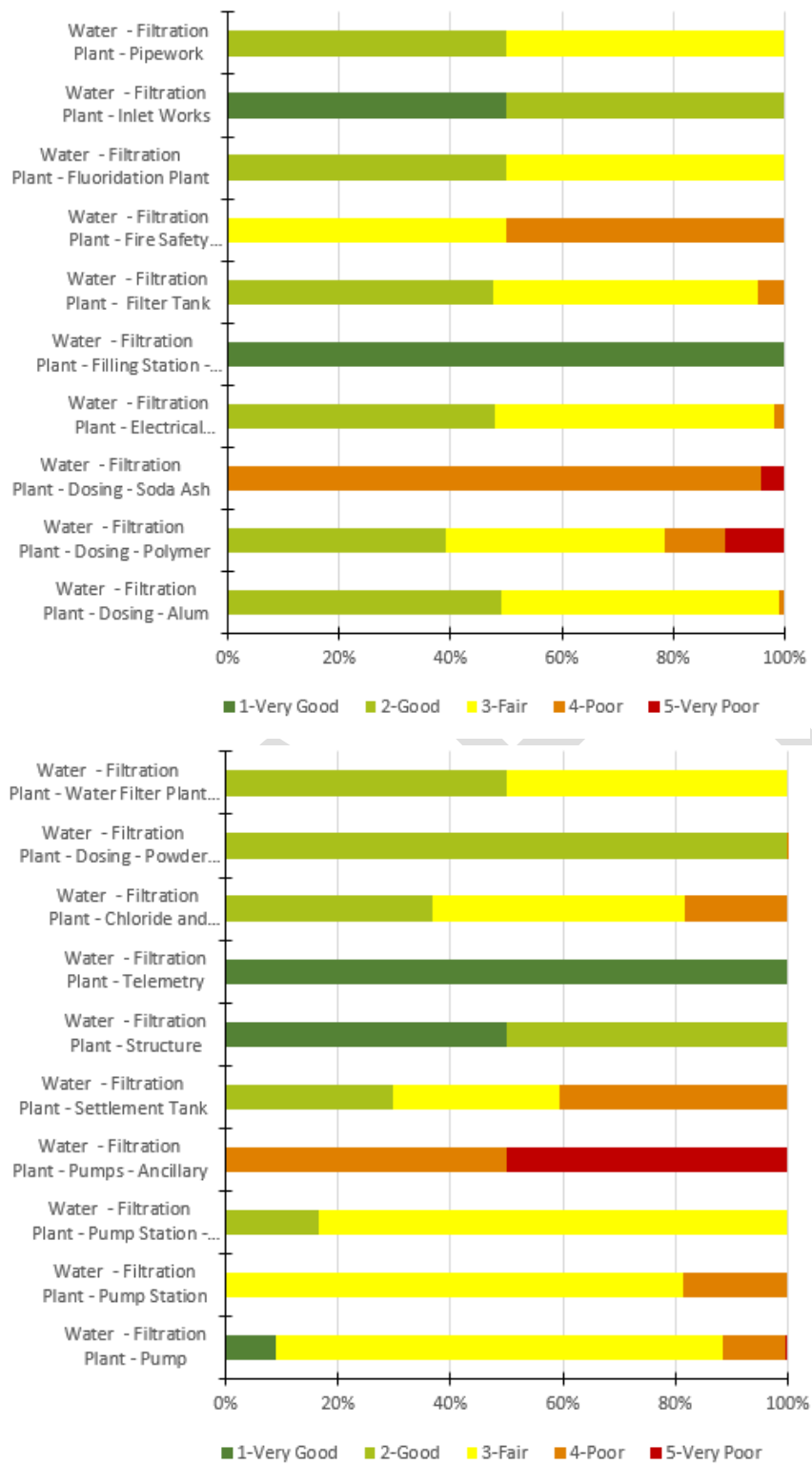


Figure 8: Condition Profile – Water Filtration Plants

Current Condition – Water Meters

At the time of the last valuation (2021), Council's had 4382 meters of that 4006 had been upgraded to digital smart meters and are generally in good or very good condition.

Between the period of 2021 and end of 2023, 326 additional analogue meters were upgraded to digital smart meters. This shows a continuous improvement of Council's water meter fleet.

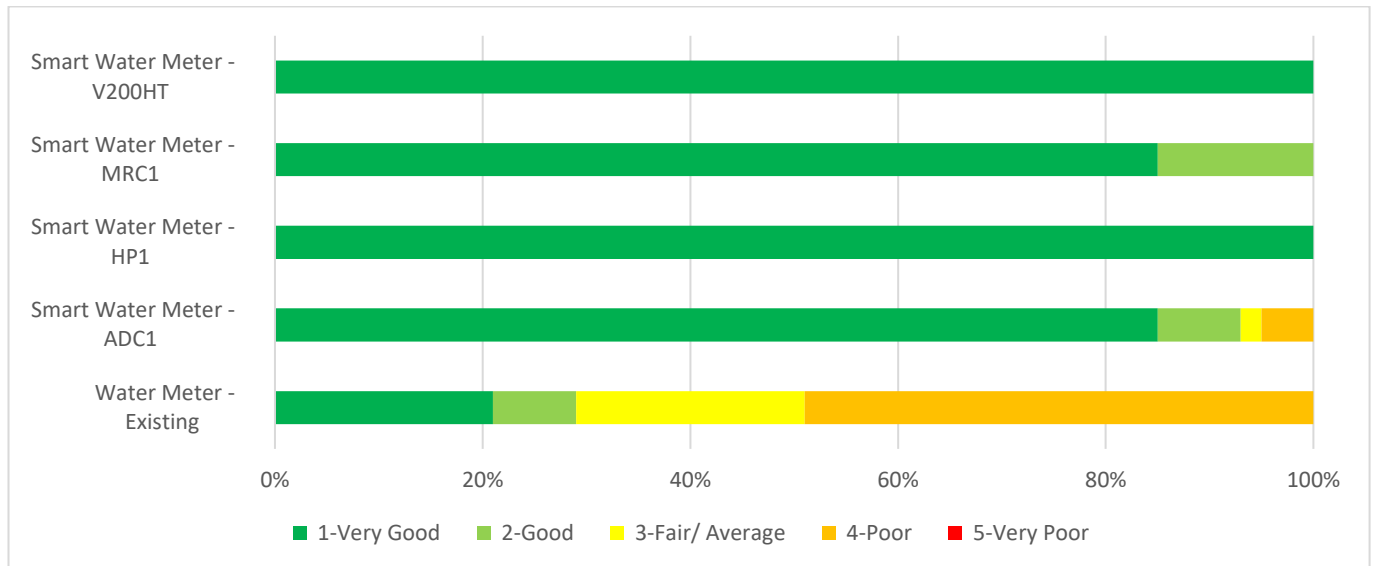


Figure 9: Condition Profile – Water Meters 2021

6.3 Water Asset Maintenance and Inspections

Leeton Shire Council carries out a number of maintenance and inspection programs to enable existing assets operate to their service potential over their useful life. This is necessary to meet service standards, achieve target standards and prevent premature asset failure or deterioration. This is achieved by providing the optimum level of maintenance and care in a financially and environmentally sustainable manner.

The objectives in maintaining and operating water assets are:

- To maintain safety, amenity, and aesthetics of water networks and assets to the satisfaction of Council and the community.
- To maintain and preserve the functionality and value of the existing assets.
- To provide and maintain a safe environment for the community within the constraints of our financial capacity and resource capability, while displaying a reasonable 'duty of care'.
- To ensure the provision of excellent customer service and that customer requests are responded to quickly and efficiently.

Water Asset Maintenance & Inspection

In order to carry out effective planning and competent management of our water assets, it is essential that maintenance and performance related information is collected through disciplined and regular inspections of the whole portfolio.

Some programs we currently undertake are listed below:

- Test & tag electrical equipment
- Pump service & maintenance - Every 12 months

Inspections and maintenance are predominantly reactive, and Council is striving to implement a planned maintenance and inspection program.

Improvement Opportunity

- Develop and implement planned maintenance and inspection program for water assets.
- Identify resource requirement for implementation of planned maintenance and inspection program.

Future Operation and Maintenance Costs

The figure below outlines the forecast operations and maintenance budgets based on the understanding of the current levels of service delivered for our water assets.

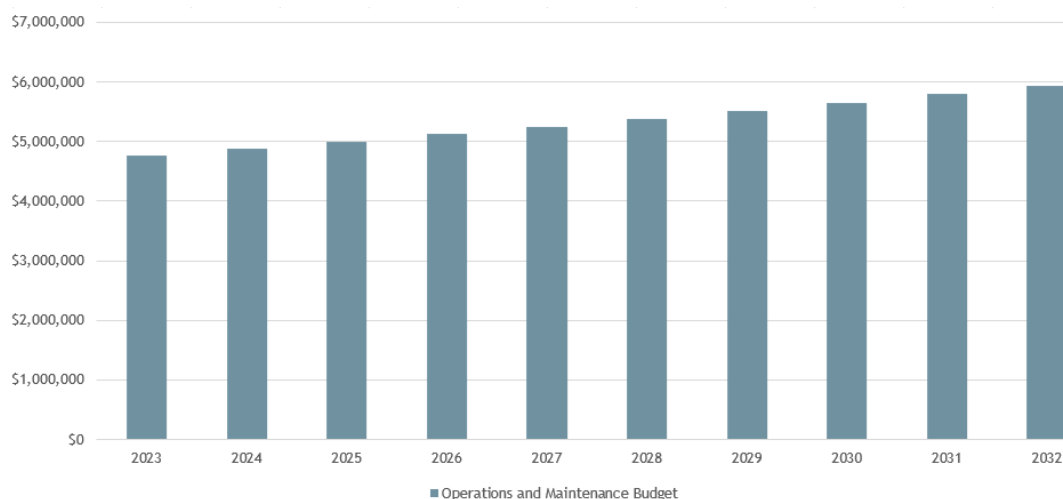


Figure 10: Projected Operations and Maintenance Expenditure

The total operations and maintenance budget over the next 10-years starting 2022/23 is \$53.3 million. This is the required operations and maintenance budget to continue to deliver present service standards over the long term. An annual indexation rate of 2.5% has been applied to the forecast consistent with Council's Long Term Financial Plan. The forecast maintenance expenditure requirements comprise two components: routine maintenance and operations, and consequential maintenance.

The routine program is made up ongoing activities required to maintain the amenity, safety, and functionality of our water networks. The increase in the routine program is indicative of the need to fund operations and maintenance associated with the creation of new assets acquired over the forecast period. The majority of these new assets are created through our own capital works program.

Detailed analysis of the current levels of service compared to desired levels of service has not yet been undertaken. Council will need to review the budget allocations set aside for water maintenance and operations within its Financial Plan. This is to make sure that they are adequate for Council to continue to maintain current levels of service and maintain safe and serviceable water assets. Depending on funding availability, Council may also need to review its levels of service to ensure that they are affordable and financially sustainable.

Improvement Opportunity

Review current funding allocations allocated to water asset operations and maintenance to ensure that that they are sufficient to deliver current levels of service and compare against any desired levels of service.

6.4 Water Asset Renewal

Renewal is major work that does not increase the design capacity of an asset but restores, rehabilitates, replaces, or renews the asset to its original service potential. Work over and above restoring an asset to original service potential is an upgrade/expansion or new work expenditure resulting in additional future operations and maintenance costs. Assets requiring renewal are identified using a combination of an analysis of the long-term financial needs at a portfolio level and other information that identifies specific assets that require renewal at a project level.

Renewal Strategy

Renewal strategies are based on assessing a range of factors to ensure the appropriate level of investment is targeted at the optimum time to ensure assets remain fit for purpose and that renewal plans are efficient and effective.

The factors considered include the following:

- Criticality
- Maintenance and/or failure history
- Age
- Expected life
- Remaining useful life
- Condition (where known)
- Condition prediction
- Climate change factors and impacts affecting assets
- Geographical grouping
- Demand and use patterns
- Timing in relation to linked asset renewal plans

As a general principle, the number and cost of repairs will determine the optimum timing to invest in the renewal of assets. Every time an asset is repaired it provides information about its performance and rate of deterioration and is a prediction of the optimum time to renew.

As the rate of repairs increase a prediction can be made about the best time to renew an asset to keep the cost of ownership at the lowest possible levels.

Renewal Standards

Renewal work is carried out in accordance with the current standards and specifications.

Renewal Ranking Criteria

In general, renewal works are prioritised and planned by assessing the following considerations:

- Safety issues.
- Physical condition.
- Risk and asset criticality.
- Community/user feedback.
- Location and use type and patterns.

The following indicators are generally used to determine the criticality of an asset:

- Have a high consequence of failure.
- Have high use and subsequent impact on users would be greatest.
- Have a total value representing the greatest net value.
- Have the highest average age relative to their expected lives.
- Are identified in the Asset Management Plan as key cost factors.
- Have high operational or maintenance costs.
- Have replacement with a modern equivalent asset that would provide the equivalent service at a savings.

Leeton Shire Council renewal program development is based upon the principles set out in Council's Strategic Asset Management Plan (SAMP). Renewal planning is carried out utilising a predefined set of indicators as well as the technical expertise of staff.

These indicators, when placed into a weighted matrix, produce a prioritised lists of assets requiring renewal works. This list is then assessed by technical staff for accuracy and validity. Following Council approval, renewal programs are rolled into annual, and 4 year works programs.

Following the development of a 4 year works program (Delivery Plan), Council Officers begin selecting and working on the planning and development of the various renewal works as separate projects to be completed within the year / operational plan. See below for the breakdown of tasks:

- Development of a proposed 4 year works program with budget as the limitation on a year's work.
- Council staff review this list (desktop exercise) for validation.
- Council staff review the first year of the program with a view to:
 - Assess for overlaps with upcoming upgrades or expansion (within or outside of the current asset class)
 - Promote or demote works from/to the year 1 program based on spatial economies (i.e. proximity of works), overlaps identified, and/or obvious errors within the matrix computation method.
- All works within the finalised year 1 program are costed and assessed prior to submission for delivery.

Improvement Opportunity

- Develop a capital work prioritisation framework and include renewal ranking criteria.
- Undertake cyclic condition assessments and develop renewal programs based on asset conditions.
- Align roads capital works program and water main replacement program to avoid roads being replaced in quick succession.

Summary of 10-Year Water Asset Renewal, Upgrade and New Program

The following table presents a summary of our 10-year water asset renewal, upgrade and new programs.

	PROGRAM	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	10 Year Total	
Renewals	Water Treatment - Chelmsford Place Reservoir Painting	0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000	
	Water Treatment - Reservoirs/Dams	\$51,000	\$0	\$0	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,051,000	
	Water Treatment - Water Management - Water Meters	\$20,006	\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$180,006
	Water Treatment - Water Management - Filtration Plants	\$9,430	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,430
	Water Mains - General Water Mains	\$41,285	\$320,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,961,285
	Water Mains - General Water Mains - Chelmsford Place Water Tower Ladder Access	\$0	\$130,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,000
	Water Mains - General Water Mains - Fluoride Dosing Plant	\$51,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,000
	Water Mains - General Water Mains - Hoist & Crane Equipment	\$51,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,000
	Water Mains - General Water Mains - Leeton WTP Centre Trough Relining	\$51,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,000
	Water Mains - General Water Mains - Leeton WTP Sedimentation Tank Refurbishments	\$103,000	\$0	\$0	\$0	\$0	\$0	\$150,000	\$0	\$0	\$0	\$150,000	\$403,000
	Whitton WFP Access Ramp & Pit Platform/Pump Monorail	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40,000
	Water Main Replacements	\$0	\$0	\$470,000	\$470,000	\$470,000	\$470,000	\$470,000	\$470,000	\$470,000	\$470,000	\$470,000	\$3,760,000
	Water Main Replacements - Willow Street	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
	WTP- Valve audit and repair	\$0	\$30,000	\$0	\$30,000	\$0	\$30,000	\$0	\$30,000	\$0	\$30,000	\$0	\$150,000
	WTP-Chemical storage shed	\$0	\$70,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,000
WTP-Sedimentation Tank Launder Replacement	\$0	\$130,000	\$130,000	\$130,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$390,000	
Upgrades	Water Treatment - Leeton RWP - VSD and Switch Board Upgrade	\$265,611	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265,611	
	Water Treatment - Renewable Energy LED Installation Upgrade	\$43,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,500	
	Water Treatment - Telemetry Upgrades - 2023	\$52,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,000	
	Water Treatment - Telemetry Upgrades - 2024	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$450,000
	Automatic Meter Reading Project-completion	\$0	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000
	Water Mains - General Water Mains - PLC Upgrade	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,000
	Murrami Filtration Plant Upgrade	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000
	Open Cut Dam Inlet Upgrade/Dam Cleaning	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000
	Water Reservoir OHS Upgrades	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000
	Whitton Filtration Plant Upgrades	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000
Water Main Replacements - Ring Main Extensions	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	
New	CBD Fire Services Compliance (Roxy)	\$314,800	\$80,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$394,800	
	Water Treatment	\$0	\$0	\$0	\$0	\$0	\$600,000	\$0	\$7,000,000	\$0	\$0	\$7,600,000	
	Water Treatment - Solar Array Murrami WTP	\$38,931	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$38,931	
	Water Mains - General Water Mains -Servicing Strategy	\$125,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125,000	

Table 13: 10 Year Renewal, Upgrade, and New Budget -Water Assets

A planned expansion or new water treatment plant for Leeton has been identified in Council's financial forecast to commence in 2028 with construction in 3030. This allocation is well under the required funding amount to upgrade/ construct a plant to meet the water supply needs of the community into the future.

The current plant is expected to reach capacity by 2031 and there is currently no redundancy as the plant cannot be taken offline for construction. In addition, the existing site is constrained by the Crownlands / Showground, is heritage listed and may not be suitable to construct a treatment facility of the size required to service Leeton township into the future.

A number of potential sites have been identified that could accommodate a new treatment plant; these will be confirmed during the master planning stage. Planning for this new plant is expected to commence in 2026 through to construction completion in 2031. The current new and upgrade forecast will need to be reviewed based on detailed master planning and design of the required facility. This issue has been identified as a key risk to the continuity of water supply to the Shire.

Improvement Opportunity

- Develop a strategy for the renewal/ upgrade of the Leeton Water Filtration Plant
- Develop a master plan for the site to meet the water supply needs of the community into the future.

Renewal Modelling Assumptions

The analysis to determine future asset renewal requirements is based on the best available information held by the Council. The future funding forecasts will be revised and refined to best represent the performance of the asset base as the maturity of asset management practices improves.

The renewal funding projections presented within this Asset Management Plan are based on the following assumptions:

- The renewal costs are based on the asset data register as of 1 July 2021.
- Asset quantities, condition data and financial information within the current asset registers are assumed to be correct.
- Intervention standards are based on providing a balanced level of service before assets reach "very poor" condition.
- The renewal models are subject to the limitations of the CT Management renewal model and data used in it, which includes assumed performance of the asset types, deterioration curves, and trigger intervention levels.
- Useful lives for water assets are Council's adopted lives and are assumed to be a reasonable estimate of the life of the water assets.
- All projections are in present dollar value.
- Future renewal funding levels are derived from the Financial Plan.
- Service levels are based on current service levels and may not reflect community's future expectations or Council's future strategic goals and objectives.

Asset Useful Lives

The following table shows a high-level summary of useful lives of water assets.

Asset Sub Class	Asset Type	Useful Life (Years)
Pipes	AC	80
Pipes	CI	80
Pipes	MS	90
Pipes	PE	80
Pipes	PVC	80
Storage	Dams/Weirs	100
Nodes	End Cap	100
Nodes	Hydrant	100
Nodes	Scour Valve	100
Nodes	Stop Valve	100
Reservoirs	Concrete	100
Reservoirs	Steel	100
Water Meters	Unknown	15
Water Meters	ADC1	15
Water Meters	HP1	15
Water Meters	MRC1	15
Water Meters	V200HT	15
Filtration Plant	Dosing - Alum	30
Filtration Plant	Dosing - Polymer	30
Filtration Plant	Dosing - Soda Ash	30
Filtration Plant	Electrical components	30
Filtration Plant	Filling Station - Water	25
Filtration Plant	Filter Tank	80
Filtration Plant	Fire Safety Equipment	10
Filtration Plant	Fluoridation Plant	30
Filtration Plant	Inlet Works	80
Filtration Plant	Pipework	50
Filtration Plant	Pump	40
Filtration Plant	Pump Station	60
Filtration Plant	Pump Station - Irrigation	30
Filtration Plant	Pumps - Ancillary	30
Filtration Plant	Settlement Tank	100
Filtration Plant	Structure	80
Filtration Plant	Telemetry	15
Filtration Plant	Chloride and Filtration Plant	30
Filtration Plant	Dosing - Powder Active Carbon	30
Filtration Plant	Water Filter Plant Equipment	50

Table 14: Useful Life - Water Assets

Renewal Forecast and Budget – Water Mains

The backlog of renewal of water mains requiring immediate renewal is approximately \$7M. These are predominantly older CI and MS pipes. Current funding levels are not adequate to maintain water mains in a good condition and at the end of the 10-year period approximately 23% of water mains that are worth approximately \$9M will be above the intervention level.

However, it should be noted that the remaining life/condition of the CI and MS pipes are based on age and therefore assessment of the condition of these pipes is necessary prior to investing in replacement.

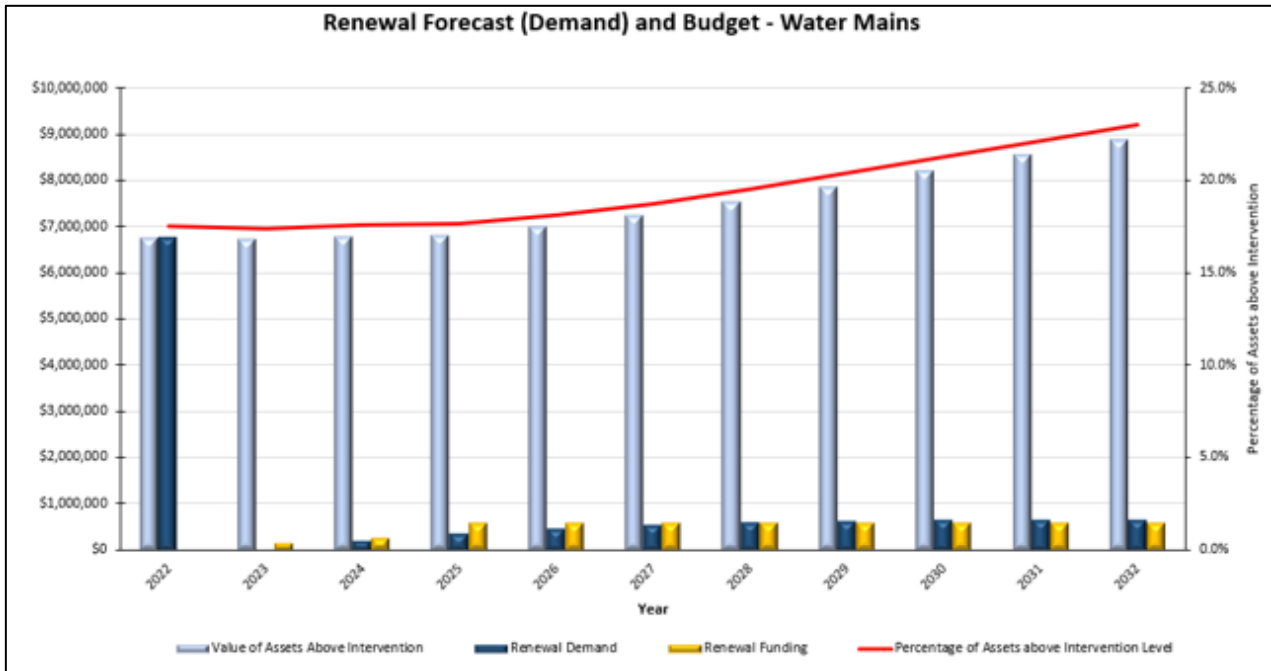


Figure 11: Renewal Forecast and Budget – Water Mains

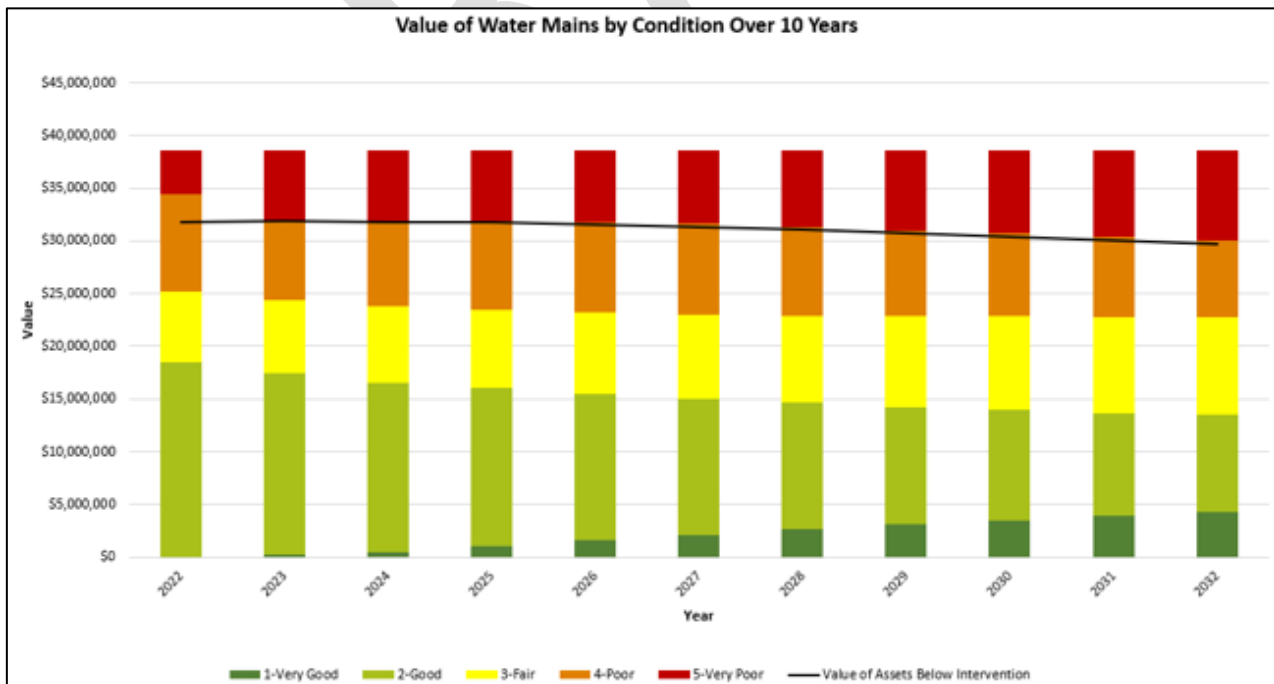


Figure 12 : Value of Water Mains By Condition Over 10 Years

The forecast condition profile for water mains shows current funding levels allocated in the financial plan are not sufficient to improve the condition profile over the next 10 years. Due to lack of funding for water main renewals, the value of assets above intervention level will increase from approximately \$1.5M to \$7.6M over the next 10 years.

Renewal Forecast and Budget – Water Nodes

The backlog of water nodes; hydrants, scour valves, stop valves and end caps that require immediate renewal intervention is worth approximately \$2M. The majority of these assets are in older parts of Leeton. Current funding levels are not adequate to maintain these in a good condition. At the end of the 10-year planning period, 35% of nodes will be above the intervention level.

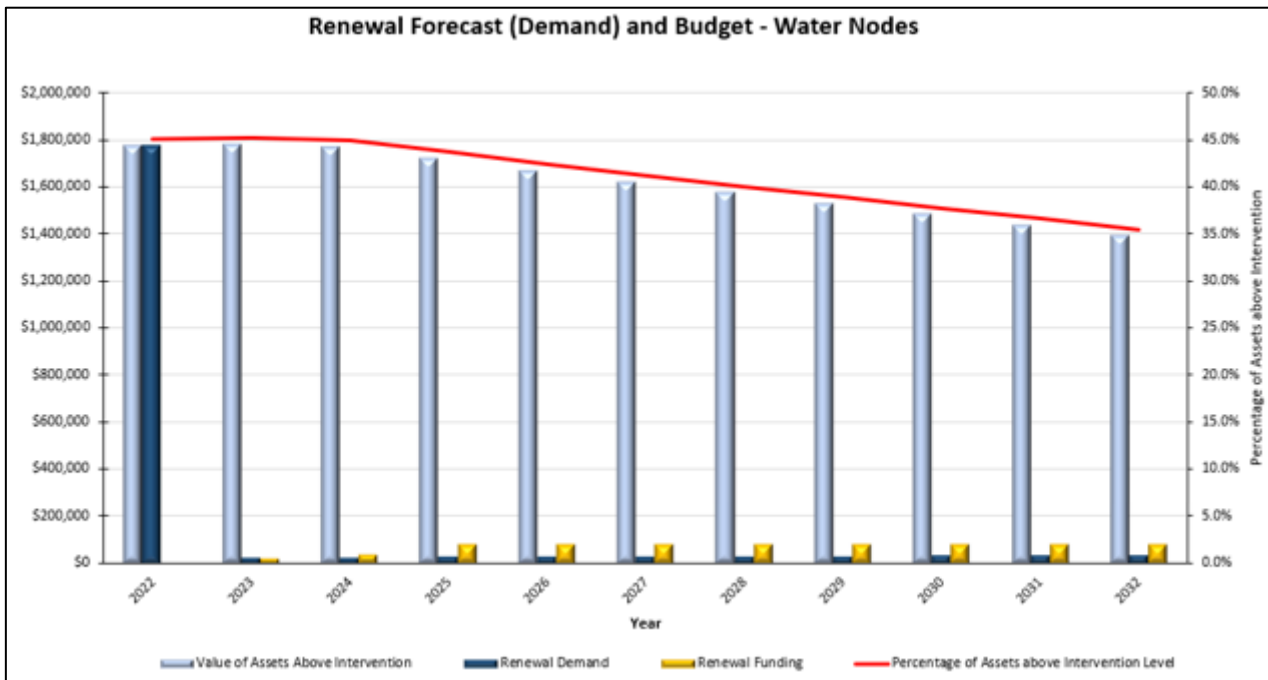


Figure 13: Renewal Forecast and Budget - Water Nodes

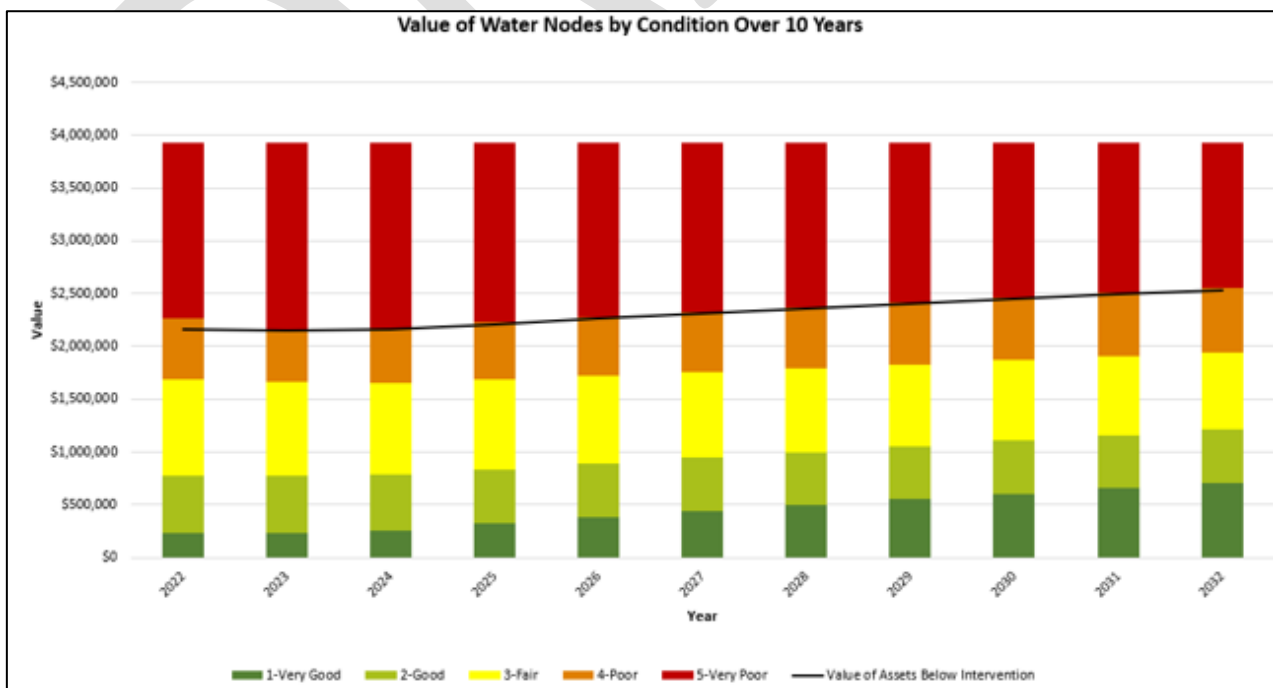


Figure 14: Value of Water Nodes by Condition Over 10 Years

The forecast condition profile for water nodes shows current funding levels allocated in the financial plan are not sufficient to improve the condition profile over the next 10 years. Due to a lack of funding for water node renewals, value of assets above intervention level will fluctuate between from \$1.5M to \$1.3M annually over the next 10 years.

Renewal Forecast and Budget – Water Reservoirs

The current renewal backlog of water reservoirs is about \$1.3M. The reservoirs that require immediate intervention are Chelmsford No2, Chelmsford No3, and Yanco water (1) reservoirs. However, it should be noted that none of these reservoirs are used as part of providing water to the community and Chelmsford place 2 and 3 are both heritages listed.

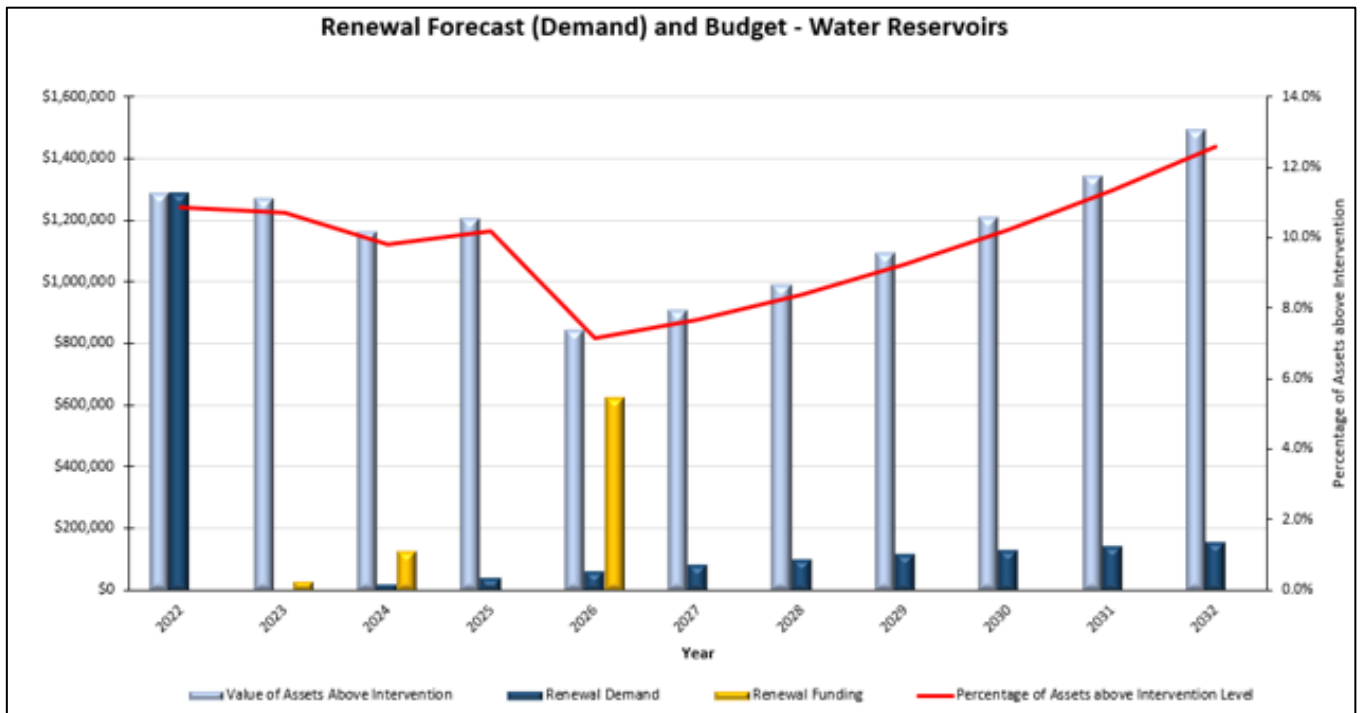


Figure 15: Renewal Forecast and Budget – Water Reservoirs

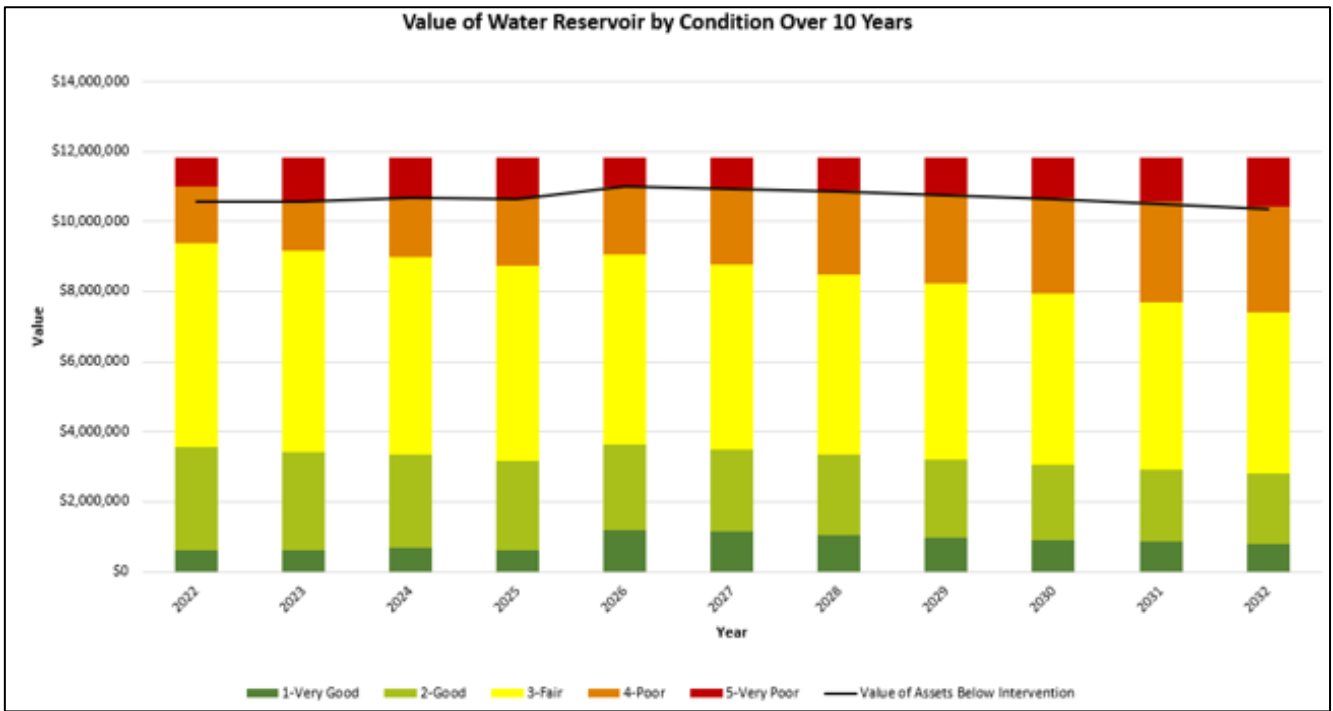


Figure 16: Value of Water Reservoirs by Condition Over 10 Years

Due to the lack of renewal funding for water reservoirs, it is forecasted that assets in very poor condition will increase from \$350k to \$1.2M over the next 10 years.

Renewal Forecast and Budget – Storage Dams

Council's storage dams only require minimal intervention over the next 10 years. The total renewal funding over the next 10 years is \$375K. It is important that this budget is reviewed, and funding is allocated appropriately.

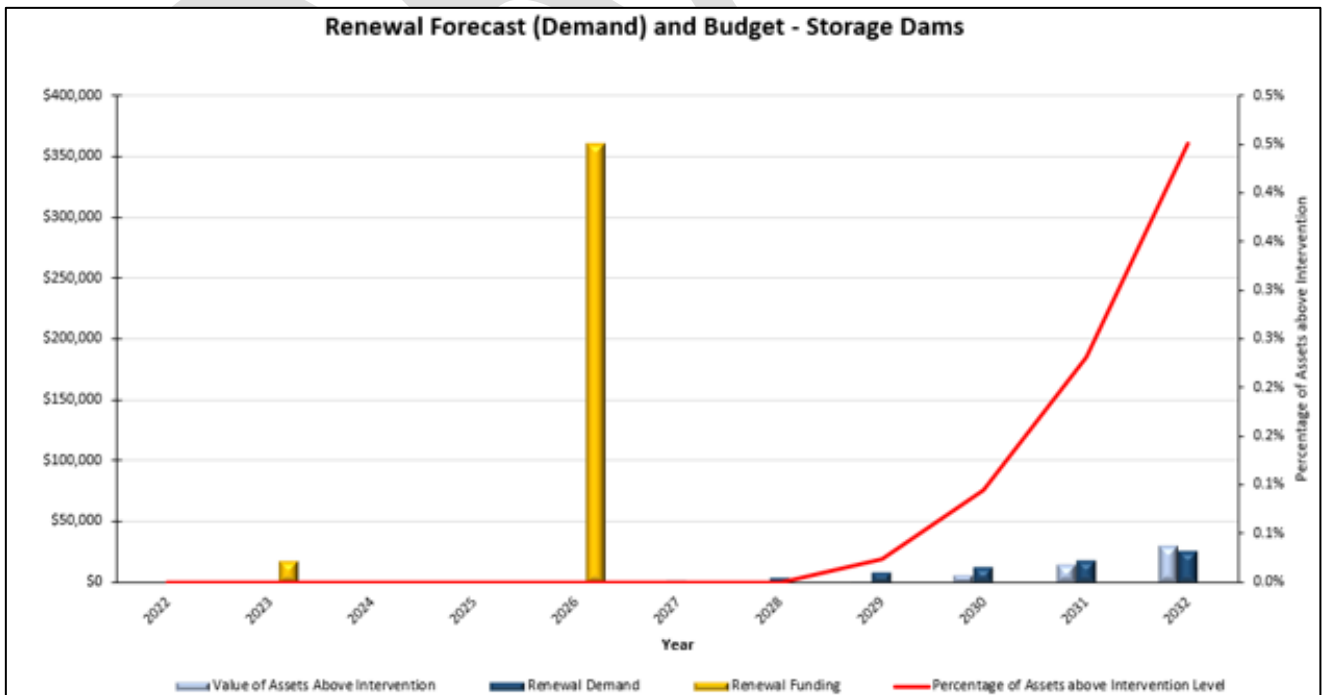


Figure 17: Renewal Forecast and Budget – Storage Dams

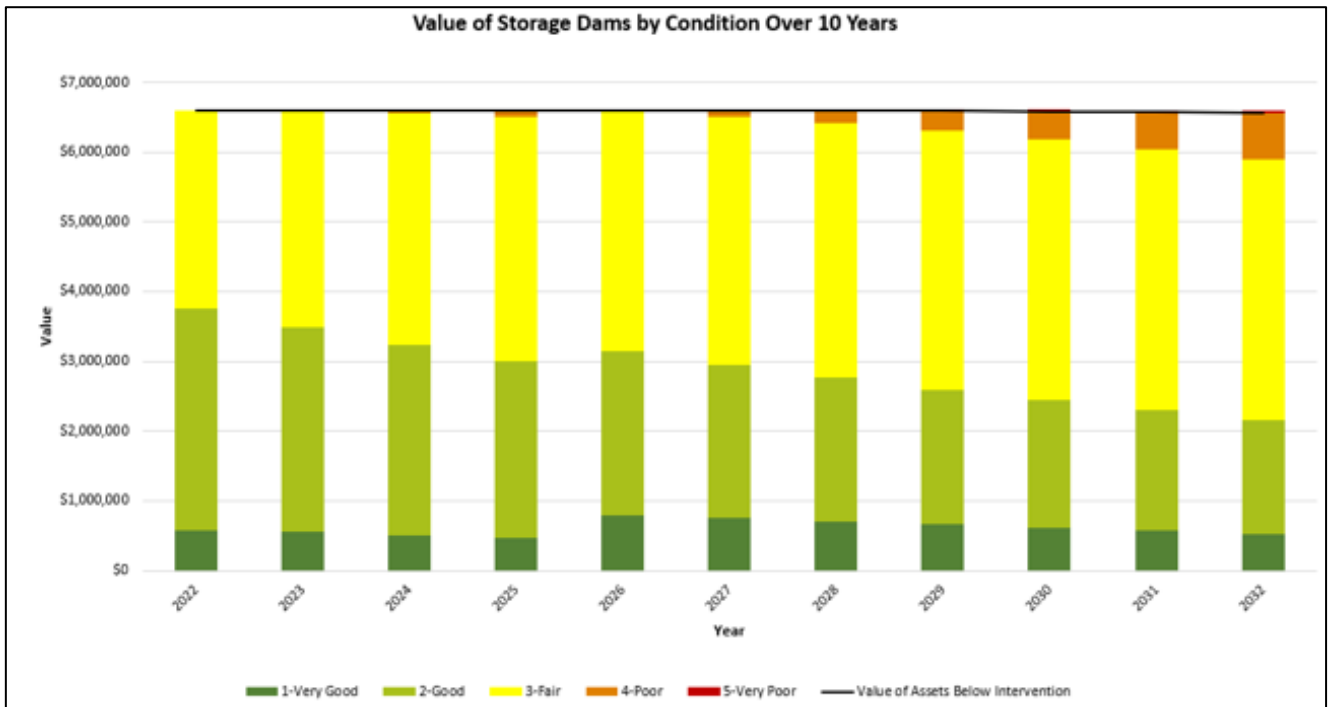


Figure 18: Value of Storage Dams by Condition Over 10 Years

Storage dams require a minimal amount of renewal funding for the next 10 years based on the 10-year condition forecast.

Renewal Forecast and Budget – Water Filtration Plants

We do not invest adequately on renewals of filtration plant assets. The renewal demand will increase from \$0.8M to \$6.7M over the next years due to lack of renewal funding.

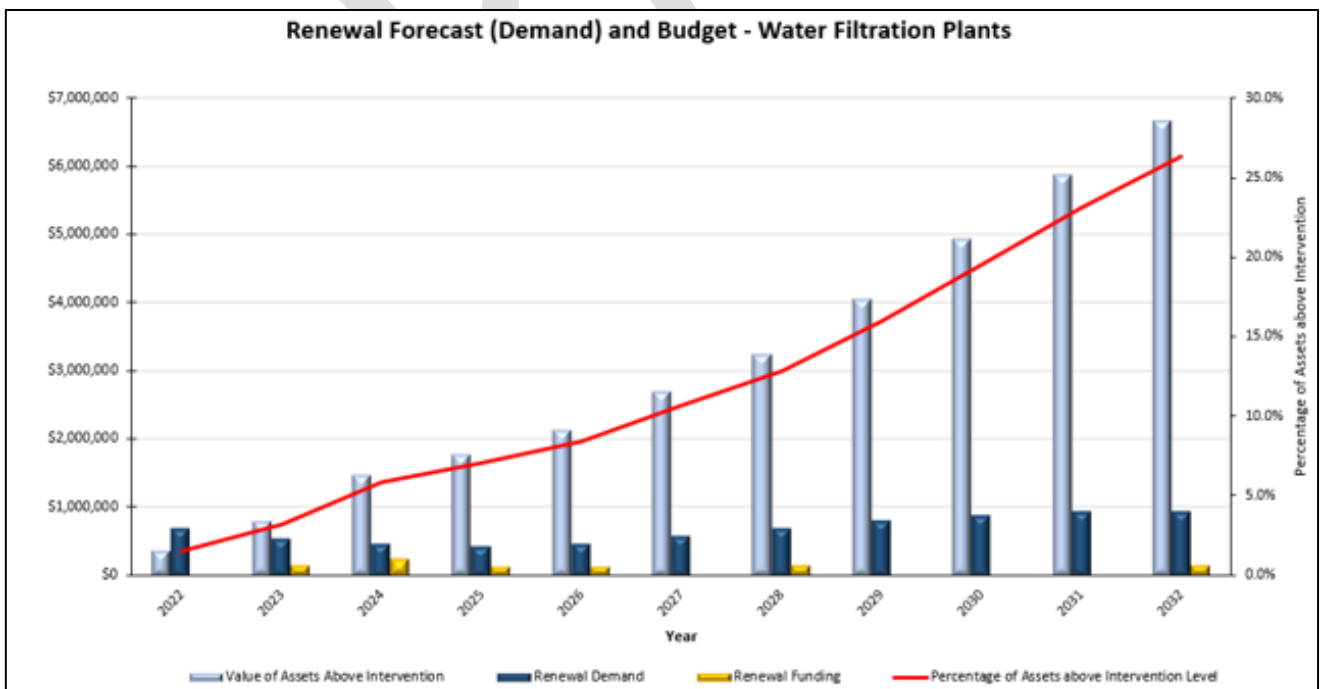


Figure 19: Renewal Forecast and Budget – Water Filtration Plants

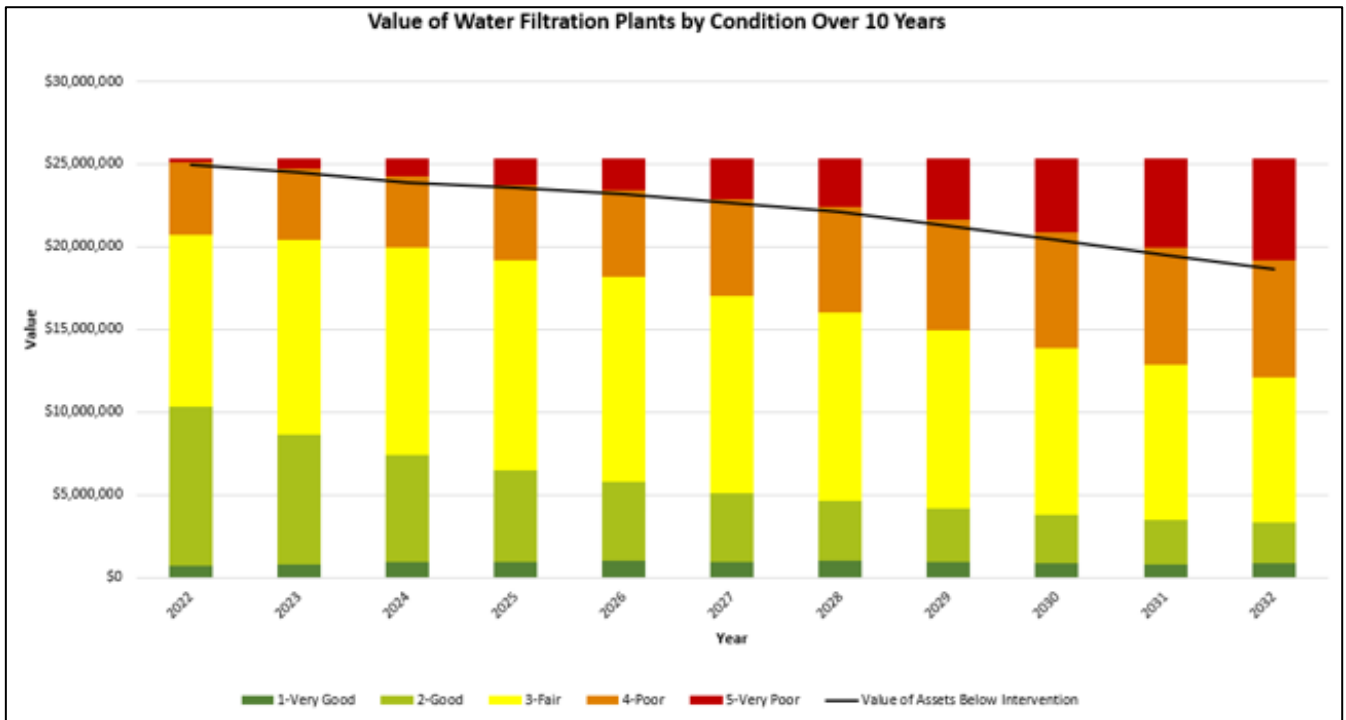


Figure 20: Value of Water Filtration Plants by Condition Over 10 Years

10-year forecast condition profile for filtration plants shows a significant decline in condition over the next 10 years. The assets in very poor condition will increase from \$400K to \$4.8M over the next 10 years if the current funding levels are maintained. Therefore, it is important that the filtration plant renewal program is prioritised based on current condition data to maintain the assets in very good to fair condition over the next 10 years.

Renewal Forecast and Budget – Water Meters

At the end of 10-year period, the value of water meters above intervention level will be approximately \$500K. Current renewal funding is not adequate to replace water meters in poor condition.

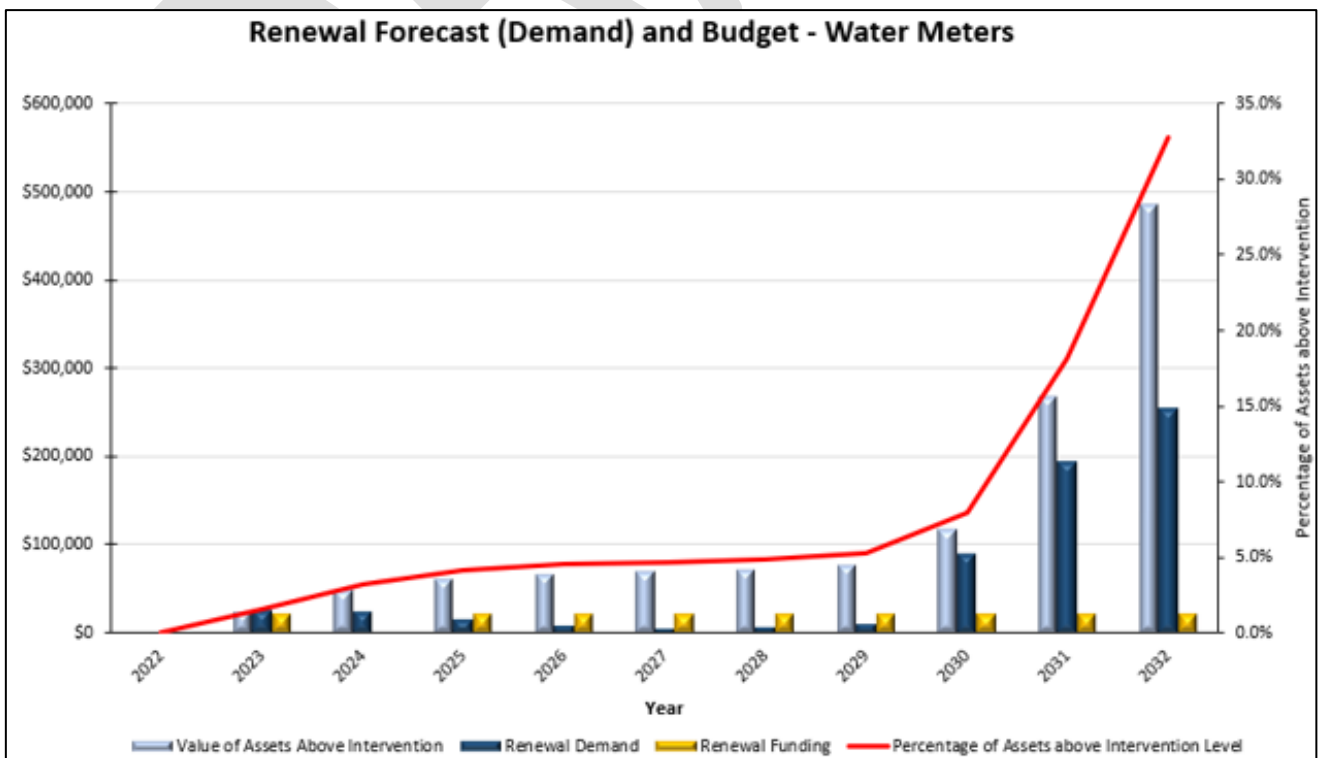


Figure 21: Renewal Forecast and Budget – Water Meters

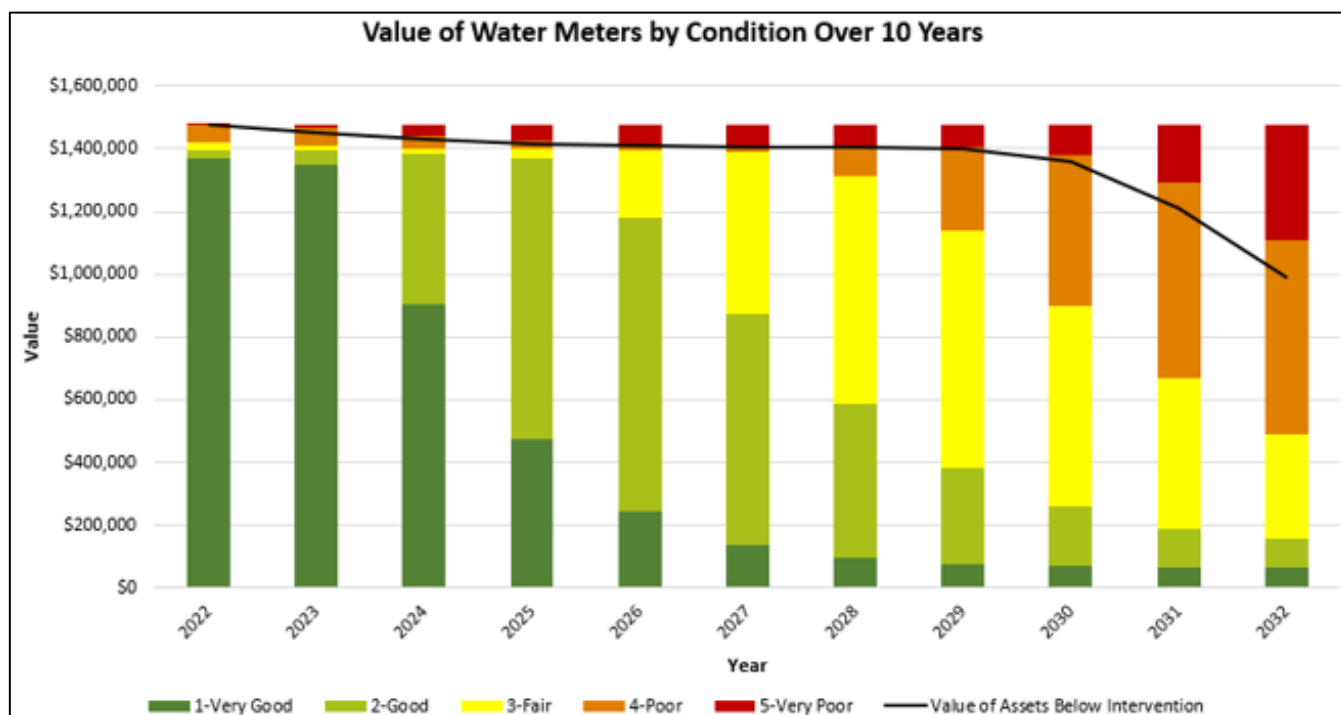


Figure 22: Value of Water Meters by Condition Over 10 Years

Based on the 10-year condition profile forecast, water meters in poor to very poor condition will be approximately \$1 million.

Overall Renewal Forecast and Budget – Water Assets

The following graph shows a comparison between the:

- Level of funding required to renew water assets to achieve service level objectives; and
- The amount of funding projected to commit to renewing these assets from our current Long Term Financial Plan.

The renewal forecasts show Council's water renewal program is not adequately funding renewal requirements over the next 10 years. It is, therefore, important to conduct a condition assessment of all water assets to develop and prioritise a 4-to-5-year renewal program. This condition-based renewal program will identify the gaps in current renewal funding allocations and allow for the development of a better informed LTFP.

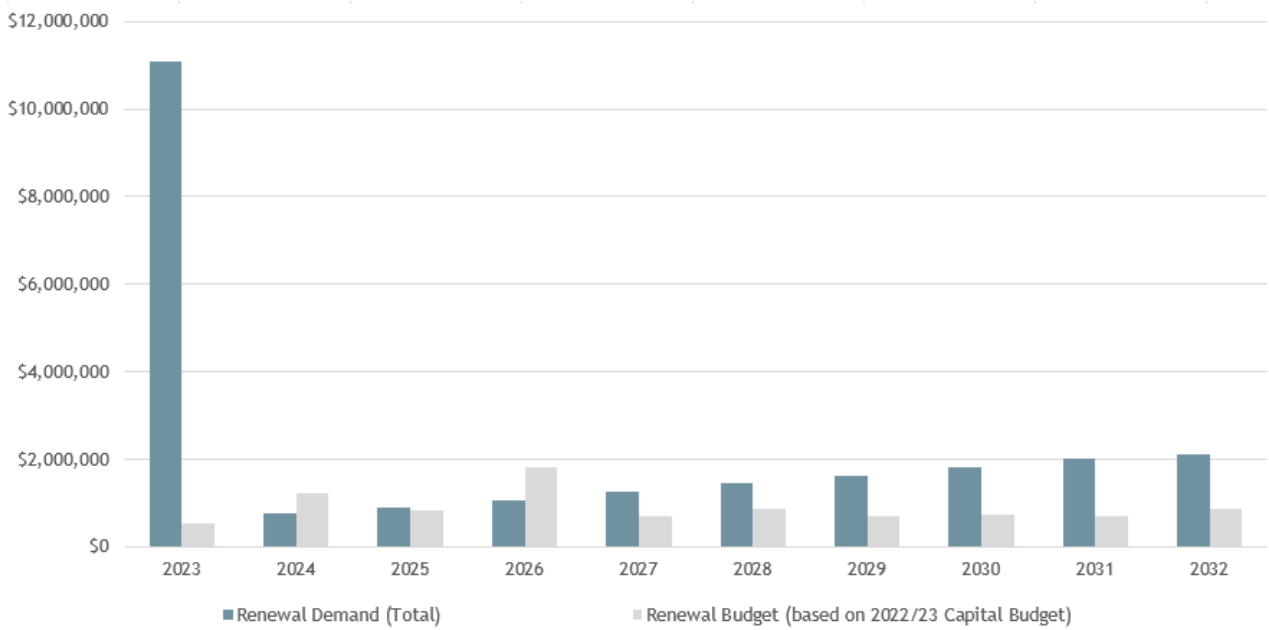


Figure 23: Renewal Forecast Vs Renewal Budget

Based on this renewal demand forecast the average annual renewal demand over the next 10 years is \$ 2.4 million , including \$10.5 million of renewal backlog.

The average annual renewal demand serves as an indicative measure, rather than an exact year-to-year requirement. Some years will require higher than average annual renewal demand, others will require lower than average annual renewal demand.

Improvement Opportunity

- Undertake cyclic condition assessments and develop renewal programs based on condition of assets.
- Review current renewal funding allocations for adequacy.

Acquisition/Upgrade/Expansion Plan

Decisions pertaining to the acquisition, upgrade, and expansion of an asset is carried out taking into account of full lifecycle costing of the planned asset. Leeton Shire Council follows the following criteria when a budget proposal is prepared:

- Capital cost of the asset,
- Total borrowing costs associated with acquisition of the asset (if any),
- Total capital outlay required for the asset (sum of the above),
- Expected annualised maintenance & operational costs associated with the asset,
- Expected reduction in any existing annualised maintenance & operational costs via efficiency gains or asset rationalisations,
- Expected annualised renewal costs associated with the asset,
- Total annualised lifecycle cost (sum of the above annualised costs),
- Total lifecycle cost (total annualised cost times useful life),
- Forecasted net position after acquisition, and consequences of not acquiring the asset.

The current forecast is based on water new and upgrade capital projects included in the LTFP. Total forecast expenditure on water new and upgrade projects totals \$9.5M over the next 10 years which is an average of approximately \$1M per annum.

Projected upgrade/new asset expenditures are shown in the graph below.

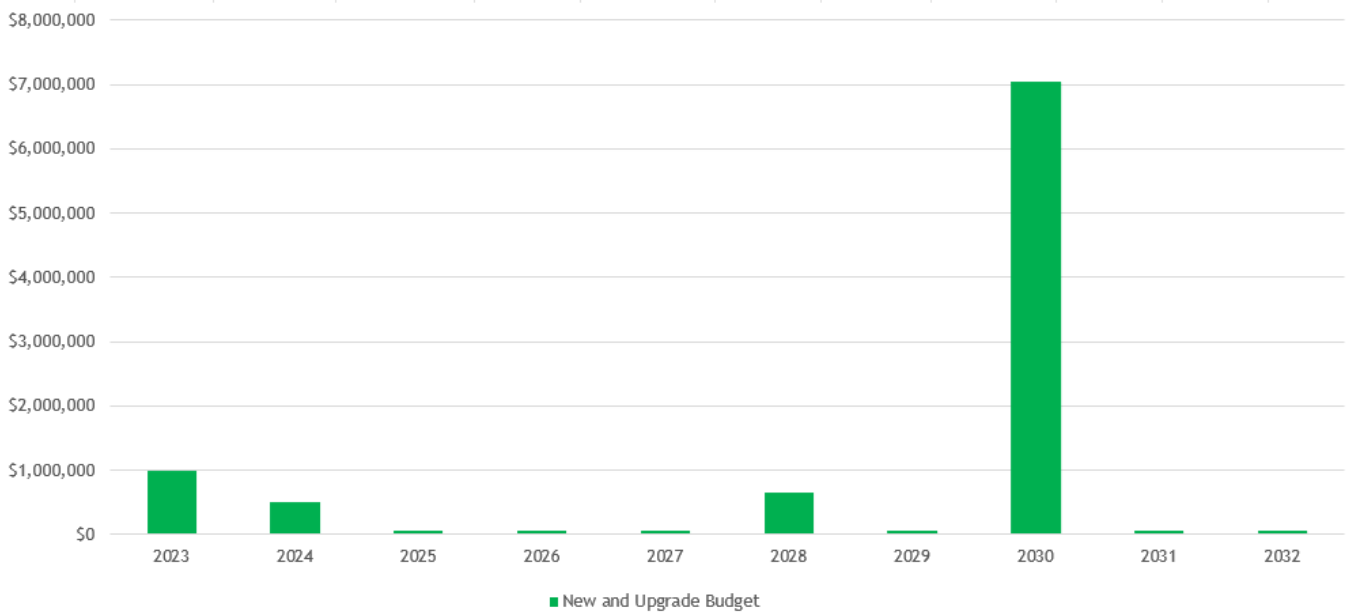


Figure 24: Budget - New & Upgrade Projects

6.5 Disposal Plan

The strategy for the development of an asset disposal plan is to first identify those water assets, or parts thereof, that are either:

- Surplus to requirements;
- Technologically obsolete;
- No-longer meeting community needs; or

Have reached the end of their useful life and there is no demand for renewal or replacement.

Where appropriate, such assets should also be considered for consolidation and rationalisation based on service needs and community benefit prior to being placed in the Disposal Plan. When disposal does occur, recognition needs to be made in the recurrent/operating budget of the reduction of associated operating or maintenance costs of the decommissioned assets, as well as any disposal costs. Costs associated with the sale, demolition or relocation of decommissioned assets and any associated works are to be included as part of the Disposal Plan. Associated works could include any necessary site remediation or rehabilitation.

Improvement Opportunity

Develop an Asset Disposal Policy and identify a mechanism to streamline the asset disposal process.

6.6 Summary of Asset Expenditure Requirements

Council is projecting a deficit in capital and operational funding when compared to the level of funding that we predict will be required over the forthcoming 10-year period.

Key Financial Performance Indicators for Current Projected Funding	
Total Lifecycle Costs over next 10 years (projected demand)	\$86,864,625
Total Lifecycle Budget over next 10 years (from Financial Plan)	\$71,741,422
Total Lifecycle Funding Deficit	\$15,123,203
Average Lifecycle Funding Deficit per annum	\$1,512,320
Percentage Lifecycle Funding Being Met	83%

Table 15: Summary of Asset Lifecycle Costs and Budget

However, Council needs to ensure that its forecasts are correct and need to put effort into reviewing asset condition and useful lives where appropriate and the funding being proposed to set aside in long-term plans.

It should be noted that 2021 valuation and condition data has been used for renewal modelling. Therefore, it is important that Council undertakes condition assessment of all water assets to validate these forecasts.

Council also needs to focus on determining appropriate and affordable levels of service in consultation with the community. Council is committed to achieving financial sustainability via sustainable asset management across the water network.

7. RISK MANAGEMENT

The purpose of this section is to describe the basis of Council's strategic risk and investment policies and the way it will manage risk associated with water assets.

7.1 Risk Management Process

The risk management framework and processes are in accordance with AS/NZS ISO 31000:2009 – Risk Management – Principles and Guidelines.

The Framework is designed to provide the architecture for a common platform for all risk management activities undertaken by Council and is used to identify specific risks associated with the delivery of services and management of assets. The objective of the risk management process with regards to assets is to ensure that:

- All significant operational and organisational risks are understood and identified.
- The highest risks that need to be addressed in the short to medium term are identified.
- Strategies and treatments to address risks are identified and applied.

An assessment of risks associated with service delivery from infrastructure assets has identified the most critical risks we face in relation to the water asset portfolio. The risk assessment process identifies and assesses risks, develops a risk rating, and develops a risk treatment plan for non-acceptable risks.

This process helps determine the risks associated with water assets by identifying the use, priority, and timeframes to be considered. The principal objectives of this risk management process in relation to water assets include:

- To provide safe water supply and service to the community,
- To enable a system of proactive maintenance (where possible),
- To identify areas that require maintenance through a systematic and prioritised inspection system,
- To facilitate scheduling and resource allocation where required, and
- To establish a priority system for carrying out maintenance works.

Risk Assessment

There are four (4) types of inspections that Council carries out with respect to risk identification and assessment, they are:

- Routine Inspections
- Supplementary Inspection
- External Inspection Request
- Internal Inspection Request

Routine Inspections are the primary type of inspection carried out by Council and represent a proactive method of risk identification.

The Supplementary Inspections are performed in addition to Routine Inspections. These inspections may be performed for the following reasons:

- Following a storm event, flood, bushfire
- Review / audit of previously completed Routine Inspections
- Inspection seeking a specific defect type
- An inspection completed while driving to or from a Routine Inspection on a different asset
- Unauthorised third-party repairs
- Criticality of asset

External Inspection requests are the requests from the public on condition and risks associated with our water assets. These inspection requests are registered by Council's Customer Request Management (CRM) system and assigned to the appropriate council officer for action.

Internal Inspection requests are generated by councillors, council staff and other council representatives. These requests are handled in the same manner as External Inspection Requests.

Risk Control

During Inspections Control of "risk exposure" requires control measures to be implemented.

Some of the control measures that Council will be able to use to lessen our exposure to risk are;

- Use of warning signs to indicate potential hazard.
- Erection of temporary barriers or barricades around the area until the risk is eliminated.
- Planning and allocating resources for the long-term replacement.
- Eliminate the risk by asset repair.

All requests are assigned a typical response time based on the criticality of asset.

Risk Event and Cause	Risk Rating	Possible Risk Mitigation Practice	Residual Risk*
Absence of planned maintenance and inspection programs Inability to identify and intervene proactively to mitigate asset failures.	High	<ul style="list-style-type: none"> - Develop planned maintenance and inspection programs. - Identify resource requirements to fully implement maintenance and inspection programs. 	Low
Absence of O&M manuals for filtration plants and pump stations Inability to operate filtration plant and pump stations efficiently.	Medium	<ul style="list-style-type: none"> - Identify and develop/obtain critical O&M manuals for filtration plants and pump stations. 	Low
Water Filtration Plant upgrade in 2031-Budget allocation (\$7.6M) may not be adequate.	High	<ul style="list-style-type: none"> - Undertake master planning to identify costs and validate current budget allocations. 	Low
Water Filtration Plant upgrade in 2031 - this plant is heritage listed	High	<ul style="list-style-type: none"> - Undertake master planning to identify issues relating to the plant being heritage listed. - Identify options available to Council to mitigate these issues. 	Low
Exposure to Asbestos Staff and contractors exposed to asbestos when replacing AC pipes.	High	<ul style="list-style-type: none"> - Practice safe work methods relevant to asbestos management. 	Low
Inadequate renewal funding. Current funding ratio is 37% and will result in majority of our assets in very poor condition over the next 10 years.	High	<ul style="list-style-type: none"> - Conduct condition assessment of all water assets. - Identify assets in poor to very poor condition. - Allocate funding for renewal of assets above intervention level. 	Low
Not able to identify asset requiring renewal in a timely manner. Insufficient asset condition data or	High	<ul style="list-style-type: none"> - Additional resourcing for capital works planning as per resourcing plan August 2023 	Moderate

Risk Event and Cause	Risk Rating	Possible Risk Mitigation Practice	Residual Risk*
asset age useful life information resulting.		to address asset management BAU functions. – Resourcing for undertaking required condition assessment activities and analysis of results and asset planning/ identification of assets requiring renewal and development of business cases.	

Table 16: Risk Register

7.2 Critical Assets

Assets which have a high consequence of failure are identified as critical assets.

Generally, criticality frameworks assess assets against the following areas outlined in Risk Management Framework:

- Service interruption
- Public safety
- Environmental impact
- Environmental incident impact
- Financial Impact
- Reputation/ Complaints and Legal Action impact
- Political impact
- Obligation/ Legislative/ Standard Compliance impact

7.3 Climate Change Risk

The impacts of climate change have the potential to have a significant impact on the assets that Council manages and the services that are provided. In the context of the asset management planning process, climate change can be considered as both a future demand and a risk. How climate change will impact on assets can vary significantly depending on the location and the type of asset and services provided, as will how Council responds to and manages these impacts.

Adaption and mitigation strategies for water assets are developing as Council understands the climate change impacts in greater detail. As a minimum Council must consider how to manage existing assets given potential climate change impacts for the region.

Climate change indicators, potential impacts as they relate to water assets and suitable management actions have been identified in the table below:

Climate Change Indicator	Potential Impact on Water Assets and Services	Management Actions
Drought	Reduction in water available for consumption	<ul style="list-style-type: none"> - Investigate different scenarios for water availability, supply and demand. - Develop strategies to reduce water consumption.
Extreme rainfall (riverine flooding and pluvial flooding)	Accelerated degradation of assets, reduced life expectancy, and increased lifecycle costs.	<ul style="list-style-type: none"> - Identify when and where water assets are most likely to be exposed to increased frequency and intensity of riverine and pluvial flooding through asset risk modelling. Undertake flood mapping to identify hot spots. - Reactive and proactive maintenance – to identify and initiate repairs where needed to maintain/improve asset integrity now. - Factor future flooding impacts into design and maintenance program.
Soil Subsidence	Soil expansion and contraction causing damage to water mains	<ul style="list-style-type: none"> - Use climate risk modelling to identify when and where water assets are most likely to be exposed to soil subsidence. - Understand the prevalence of clay soils and changes to the wetting and drying climate cycles.
Bushfires	Destruction of water assets	<ul style="list-style-type: none"> - Use climate risk modelling to identify when and where water assets are most likely to be exposed to bushfire. - Plan for rapid assessment of fire impacted assets to ensure that assets have maintained integrity post event. - Train staff for assessment tasks particularly for priority asset classes.
Extreme wind	Trees and debris causing damage to assets	<ul style="list-style-type: none"> - Identify when and where assets are most likely to be exposed to increased frequency and intensity of extreme wind through asset risk modelling. - Where possible initiate ongoing management of vegetation to reduce risk of trees and debris impacting water assets.
Higher Carbon Emissions	Legislative requirements to reduce emissions.	<ul style="list-style-type: none"> - Implement energy efficient methods in operation and maintenance of assets.

Table 17: Managing the Impact of Climate Change on Water Assets

7.4 Building Resilience into New and Upgraded Assets

The way in which Council constructs new assets should recognise that there is opportunity to design and build in resilience to climate change impacts.

Building resilience in water assets will have the following benefits:

- Assets will withstand the impacts of climate change,
- Services can be sustained,
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint,
- Potentially increasing asset life and protecting financial investment returns.

As a minimum, Council should consider how to manage existing assets given the potential impacts of climate change and how to create resilience to climate change in any new works or acquisitions.

The table below summarises climate change resilience opportunities for water assets.

Climate Change Risk Event	Water Asset Resilience Opportunities
Accelerated degradation and structural damage due to climate change	<ul style="list-style-type: none"> – Review engineering standards to ensure more robust climate resilient structures. – Factor in coefficient of thermal expansion for materials used where applicable (increased movement allowances) – Use trenchless technologies
High rainfall and storm events	<ul style="list-style-type: none"> – Use materials that will weather and withstand future conditions, that is materials that are stronger, can withstand longer periods of wetting, are more resistant to thermal expansion and contraction, and are more durable in acid and saline conditions.
Increased frequency and intensity of flooding/storm	<ul style="list-style-type: none"> – Design assets above flood levels (where applicable) or outside of flood zones, low-lying areas and areas vulnerable to rising water table.
Drought	<ul style="list-style-type: none"> – Favour higher quality construction materials and ensure reactive soils (particularly acid sulphate soils) are identified during design and design is altered accordingly.
Bushfires	<ul style="list-style-type: none"> – Design assets that are more cost effective and replaceable in localities that are likely to experience multiple and frequent climate risks. – Implement appropriate vegetation management programs
Reduced carbon emissions	<ul style="list-style-type: none"> – Use low embodied energy materials and employ energy efficient operation and maintenance practises.
Reduced carbon emissions	<ul style="list-style-type: none"> – Use either LED or solar LED and purchase green power and other renewable energy sources such as solar energy for lighting.

Table 18: Climate Change Resilience Opportunities – Water Assets

8. FINANCIAL SUMMARY

The Long-Term Financial Plan provides a view of the resources that Council plans to be available and how these will be allocated and prioritised over the next ten (10) years.

The Financial Plan identifies current and projected financial capacity to continue delivering high quality services, facilities, and infrastructure while identifying critical new capital investment to support the community's prosperity and to respond to future challenges.

This Water Asset Management Plan will inform the budgets and projections outlined in the Financial Plan for water asset management. Ongoing affordability and financial sustainability are key objectives and the Long-Term Financial Plan, in combination with the Asset Management Plans, supports achieving these objectives.

This section contains the financial information resulting from all the information presented in the previous sections of this Asset Management Plan. The financial forecasts made will be refined as Council improves its understanding of future asset performance and required levels of service.

8.1 Financial Statements and Projections

Asset Valuations

The value of the assets covered by this Water Asset Management Plan as recorded in the financial asset register as of 30 June 2021 are shown below.

Current Replacement Cost	\$87,726,322
Accumulated Depreciation	\$46,781,945
Depreciated Replacement Cost (Fair Value)	\$40,944,376
Annual Average Asset Consumption	\$1,370,668

Asset Sustainability

Council uses the following indicators to measure asset sustainability:

- Asset renewal funding ratio, and
- Projected funding requirements compared with budget allocations (Long Term Financial Plan)

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio	37%
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The Asset Renewal Funding Ratio is the most important indicator and shows that over the next ten (10) years Council is expected to only have 37% of the funds required for the optimal renewal and replacement of assets. The Asset Renewal Funding Ratio is calculated as the ratio between the calculated asset renewal forecast and allocated renewal funding.

Projected Expenditure for Long Term Financial Plan

Council's Asset Management Plans and Long-Term Financial Plan are the foundation of long-term resource planning. These plans work together to ensure that expectations are achievable and sustainable. Council is working to improve the integration between its Asset Management Plans and Long-Term Financial Plan. The Asset Management Plans inform the Long-Term Financial Plan by identifying the amounts that are required to renew, maintain, and improve assets over their lifecycle. The Long-Term Financial Plan determines how much funding is available to support council's assets. It incorporates knowledge of the condition of our assets, and risk assessment issues, as well as the impact of reviewing and setting intervention and service levels for the infrastructure.

The financial projections from this Asset Management Plan are shown in Figure 26 and Table 19. This covers the full lifecycle costs over the next ten (10) years to sustain current levels of service. Note that all costs are shown in real values.

The bars in the graphs represent the anticipated budget needs required to achieve lowest lifecycle costs. The yellow budget line indicates the funding that is forecast to be available.

These amounts need to be verified against affordable levels of expenditure as determined through the Long-Term Financial Plan and cyclic condition assessment of water assets. The gap between these informs the discussion on achieving the balance between services, costs, and risk to achieve best value outcomes.

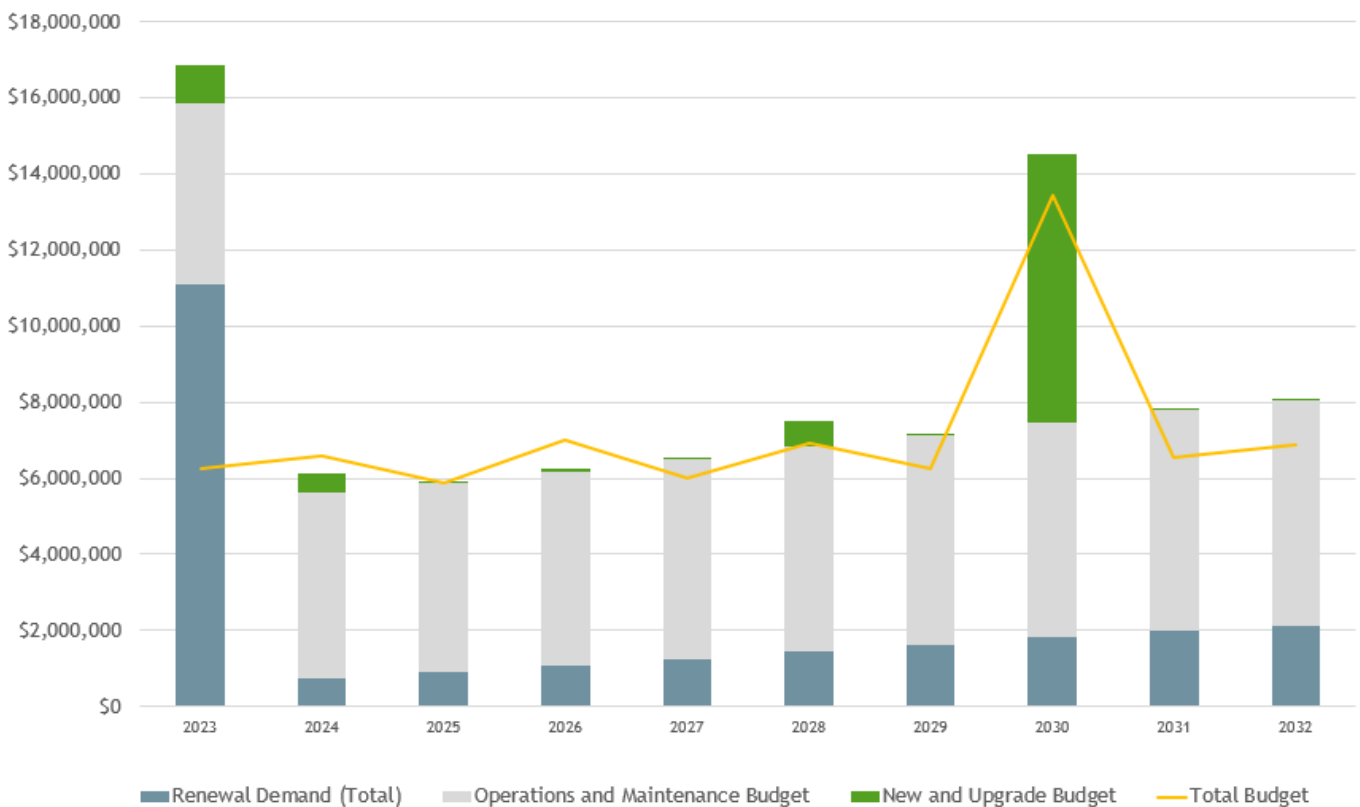


Figure 25: Total Lifecycle Cost Demand - Water Assets

Year	Renewal Demand	Renewal Budget	New and Upgrade	Operation & Maintenance	Total Budget	Total Lifecycle Demand
2022	\$11,096,945	\$528,765	\$984,842	\$4,757,828	\$6,271,435	\$16,839,614
2023	\$763,369	\$1,222,024	\$505,000	\$4,876,774	\$6,603,798	\$6,145,143
2024	\$889,895	\$822,025	\$50,000	\$4,998,693	\$5,870,718	\$5,938,588
2025	\$1,060,040	\$1,832,826	\$50,000	\$5,123,660	\$7,006,486	\$6,233,700
2026	\$1,257,803	\$692,027	\$50,000	\$5,251,752	\$5,993,779	\$6,559,555
2027	\$1,453,411	\$872,028	\$650,000	\$5,383,046	\$6,905,074	\$7,486,457
2028	\$1,619,701	\$692,029	\$50,000	\$5,517,622	\$6,259,651	\$7,187,323
2029	\$1,821,810	\$722,030	\$7,050,000	\$5,655,562	\$13,427,592	\$14,527,372
2030	\$2,004,272	\$692,031	\$50,000	\$5,796,951	\$6,538,982	\$7,851,224
2031	\$2,103,774	\$872,032	\$50,000	\$5,941,875	\$6,863,907	\$8,095,649
Total	\$24,071,019	\$8,947,817	\$9,489,842	\$53,303,763	\$71,741,422	\$86,864,625

Table 19: 10 Year Total Forecast and Current Budget (22/23)- All Water Assets

It has been assumed that at least the 22/23 Operation and Maintenance budget is available for water asset operation and maintenance for the next 10 years.

8.2 Funding Sources

Funding for assets is provided from Council's annual budget and Financial Plan. Council's financial strategy determines how funding will be provided, whereas the Asset Management Plan communicates how and when this will be spent, particularly in the area of renewal investments.

Major funding sources to maintain, renew and improve our water assets are shown in the table below.

Activity	Funding Source
Maintenance and Operations	Residential and non-residential fees and charges
Renewal	Residential and non-residential fees and charges
Capital Investments (i.e. new, upgrade, and expansion)	Renewal component of project - residential and non-residential fees and charges Growth component of project - Developer contributions

Table 20: Funding Sources

8.3 Key Assumptions Made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this Asset Management Plan. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this Asset Management Plan are:

- Current levels of service reflect community needs.
- Future funding levels are derived from the Long-Term Financial Plan.
- No known legislative changes or other influences that will impact on or demand a change in level of service and associated funding throughout the period of the plan.
- Adequate funds to maintain water are provided to maintain the current level of service.
- 2021 valuation data including the condition of assets are accurate and valid for current year.

9. IMPROVEMENT PLAN

A number of improvements for overall asset management at Leeton Shire Council have been identified in this Water Asset Management Plan. It is important that these improvement actions are prioritised based on the business needs/ongoing projects and are sufficiently resourced.

9.1 Asset Improvement Plan

The asset management improvement plan generated from this Asset Management Plan is shown in Table below.

Item No.	Task	Responsibility	Priority
	Undertake water strategic planning within next 2-4 years	Manger Water & Wastewater	High
	Identify and develop/obtain critical O&M manuals for filtration plants and pump stations	Manger Water & Wastewater	High
	Review and implement water main condition assessment program	Manger Water & Wastewater	High
	Investigate water losses (Non-Revenue Water) throughout the system	Manger Water & Wastewater	High
	Undertake concept study for water network to identify improvements	Manger Water & Wastewater	High
	Undertake cyclic asset condition assessment program (every 4-5 years).	Manger Water & Wastewater/Manger Assets	High
	Develop and prioritise renewal programs based on condition of the assets.	Manger Water & Wastewater/Manger Assets	High
	Develop an Asset Disposal Policy and identify a mechanism to streamline the asset disposal process.	Asset Management Coordinator /Manager Finance	Medium
	Review current level of service including response times of unplanned maintenance work	Manger Water & Wastewater	High
	Develop an inspection program and identify budget required to implement the program. Implement the inspection program.	Manger Water & Wastewater	High

Item No.	Task	Responsibility	Priority
	Develop a planned maintenance program and identify budget required to implement the program. Implement a planned maintenance program.	Manger Water & Wastewater	High
	Continue implementation of "Univerus Assets" asset and work order management system to centralise asset data management.	Asset Management Coordinator	High
	Review current renewal funding program for adequacy.	Manger Water & Wastewater	High
	Align roads capital works program and water main replacement program to avoid roads being replaced in quick succession	Manger Water & Wastewater/Manager Roads & Drainage	High
	Conduct a structural assessment of reservoir in Whitton (near tennis courts and skate park) that is currently offline. Consider for disposal based on the risks.	Manger Water & Wastewater	Medium

Table 21: Water Asset Management Improvement Plan

9.2 Monitoring and Review – Improvement Actions

Prioritisation and implementation of the improvement plan of this Water Asset Management Plan will be the responsibility of the Manager Assets with the support and guidance from the Senior Management Team.