



Stormwater Drainage Asset Management Plan

2023-2027



Mildura Rural City Council





Acknowledgment of Country

Mildura Rural City Council acknowledges the Traditional Owners and Custodians of the land, which now comprises the Mildura Rural City municipality. We pay our respects to Elders past and present and celebrate and respect their continuing cultures and acknowledge the memories of their ancestors.



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Executive Summary

The objective of asset management is to ensure that assets provide their required levels of service in the most cost-effective manner both now and into the future. This asset management plan focuses on the management of Mildura Rural City Council's stormwater drainage assets. This plan specifies the requirements for effective management of this asset group and the corresponding financial implications. The condition and financial data in this plan will be reviewed annually, with a full update completed every four years.

Our Community Vision outlines what is valued and what should be prioritised for our Stormwater Drainage assets.

Our Community Values

- Good public facilities and infrastructure
- Prompt and respectful service
- Efficient planning and use of public resources

Our Community Priorities

- Responsible financial management
- Engaging community in decision-making and listening to feedback
- Maintenance and safety

Our Council Plan

Effective management of Mildura Rural City Council's stormwater drainage assets enables Council to demonstrate its commitment to the aspirations of 'Our Community Vision' by achieving the following key strategic outcomes of the Council Plan.

- Sustainable infrastructure that meets the current and future community needs
- A financially sustainable organisation
- Serve the community by providing great customer experience, value for money and quality servicesImplement an integrated approach to planning, monitoring and performance reporting to ensure Council is accountable to the community
- Regularly communicate information about Council decisions, projects, services, strategies, and performance

Our Asset Management Strategy

"Deliver the required level of service at the lowest lifecycle cost for our community."

Council's Asset Management Strategy 2020 is an internally focused strategy designed to provide strategic direction on the development and refinement of the organisation's asset management framework, systems and practices to:

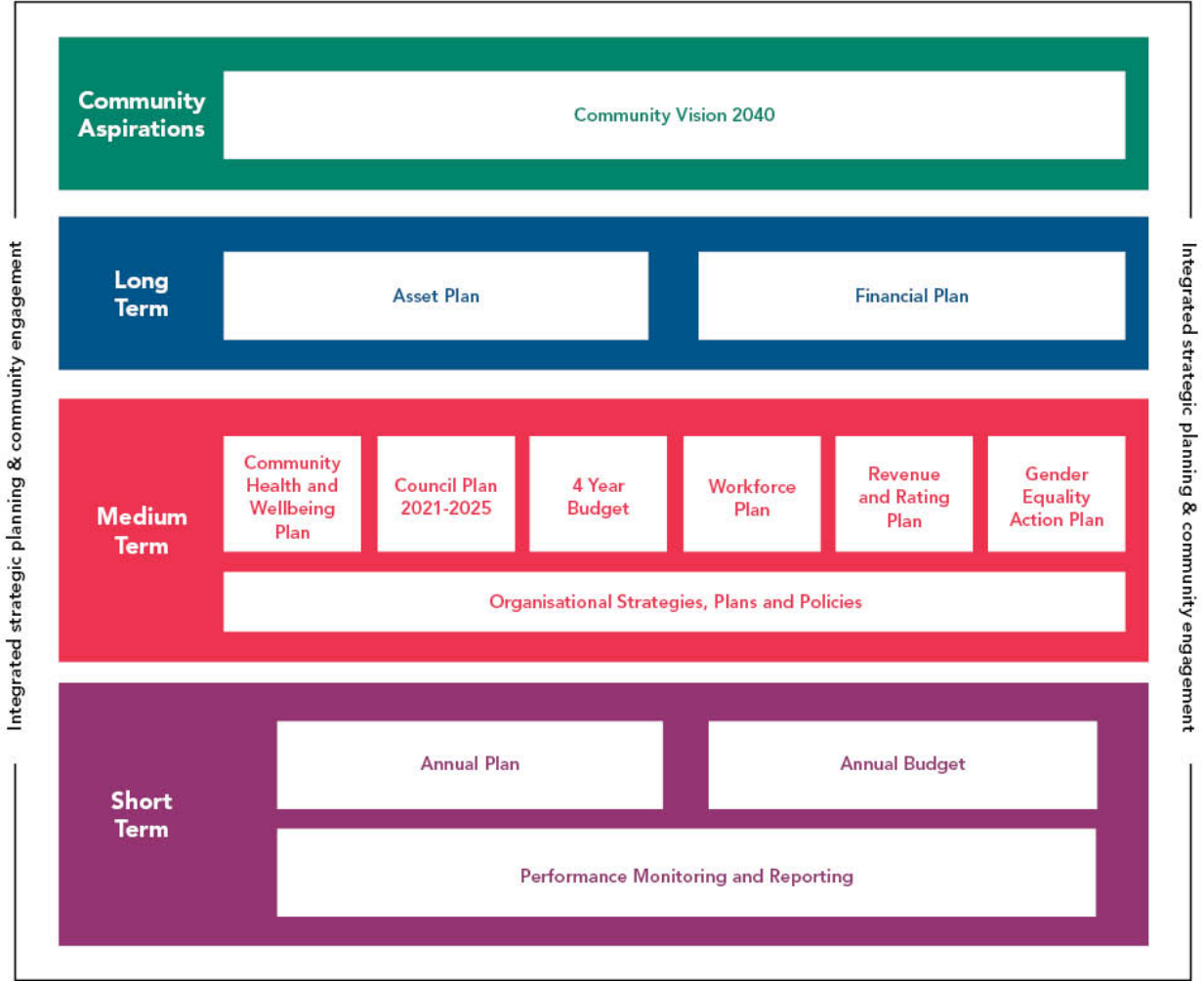
- Effectively and systematically manage all assets over their lifecycle
- Align asset management plans and systems with organisational goals and outcomes
- Provide a framework for long-term asset planning and development for capital and/or maintenance works
- Integrate effective management of assets with service planning

Our Consultation

Community input was gathered, and consultation undertaken during the development of the Community Vision and Council Plan. This community input has been reviewed and incorporated in this Stormwater Drainage Asset Management Plan.

Future revisions of this plan will incorporate deliberative community engagement to guide Council's approach to managing stormwater drainage assets.

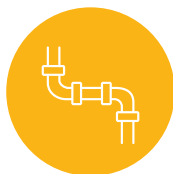
Integrated strategic planning and reporting framework and outcomes



Our Stormwater Drainage Assets

The function of the stormwater drainage system is to protect people, property, public health and the environment by safely and efficiently collecting, transporting and disposing of stormwater runoff. Stormwater drainage systems represent significant investment by the community and is vital to its health and wellbeing.

Assets featured in this plan:



Stormwater Pipes



Stormwater Pits



Drainage Basins

\$203m

The total current replacement cost of Mildura Rural City Council's stormwater drainage assets.

The projected renewal expenditure necessary to meet the service standards for these assets averages approximately \$3.7M per year over the next 10 years. This is the average annual level of spend required to ensure all assets are maintained in accordance with current standards and service levels and renewed at appropriate times. Actual annual expenditure requirements will differ from year to year as specific assets are due to be renewed. The total expenditure required to meet the service standards for stormwater drainage versus the allocated budget, results in a funding surplus of approximately \$20,000 per year over the next 10 years. The financial sustainability of delivering stormwater drainage to the community is identified as neutral in 2022/2023 financial year dollar value. Future risk and shortfalls are displayed within the plan.

Our opportunities for improvement

The development of this plan has highlighted areas for improvement in the effective assessment and management of our stormwater drainage assets. These are included as tasks in Our Improvements and Monitoring section of the plan. Immediate tasks include:

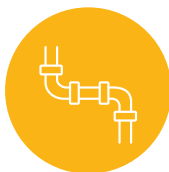
- Improve accessibility to asset information and data.
- Rolling inspection forecasted from 2023 to 2026 with an aim to cover 100% of network.

Stormwater Drainage Infrastructure Summary

Infrastructure

Channels	Drains	Gross Pollutant Traps
Pits	Weirs	Lakes
Culverts	Pipes	Swales
Headwalls	Basins	

Stormwater Pipes



\$131m

Stormwater Pits



\$52m

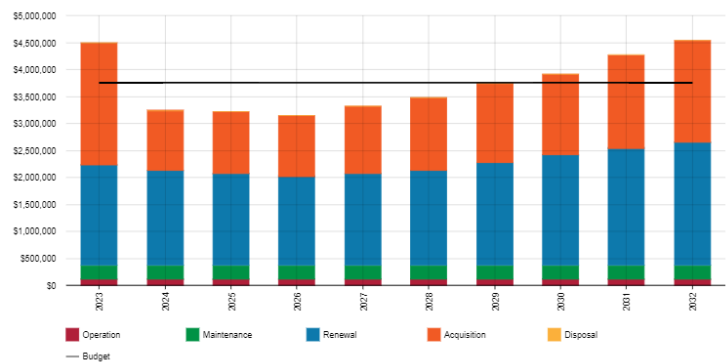
Drainage Basins



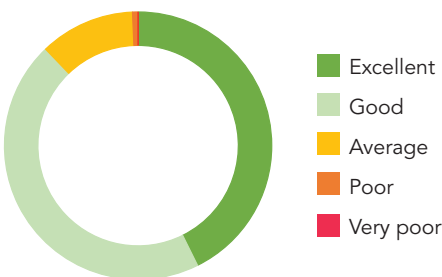
\$20m

Total Value of Assets: \$203m

Expenditure Projection



Average Condition



Introduction

The function of Mildura Rural City Council's stormwater drainage assets is to protect people, property, public health and the environment by safely and effectively collecting, transporting and disposing of stormwater. Council has an obligation to the community to manage the assets to ensure that the standard of services is achieved and in a manner that also meets environmental requirements. Stormwater drainage assets must be properly maintained and developed to continue to provide adequate service and benefits now, and for future generations.

Our Plan

This plan outlines Council's approach to the management of stormwater drainage assets, compliance with regulatory requirements and proposed funding requirements to provide the required levels of service. Our community is sensitive to the need to conserve our available water and protect the river system for the future of the region and the stormwater drainage service plays a role in this. This plan demonstrates how Council will achieve this outcome by applying the principles of asset management as set out in the Asset Management Policy and Strategy, and achieve the asset management mission to:

"Deliver the required level of service at the lowest lifecycle cost for our community"

The key fundamentals of asset management are:

- Taking a lifecycle approach
- Developing cost-effective management strategies for the mid to long-term
- Providing a defined level of service and monitoring performance
- Understanding and meeting future demand through demand management and infrastructure investment
- Managing risks associated with asset failures
- Continuous improvement in asset management practices

The vital contribution of stormwater drainage services towards social, economic, and environmental benefits include:

- Quality and reliability
- Improved personal and societal health and wellbeing
- Safer communities through Crime Prevention Through Environmental Design (CPTED)
- Increased environmental awareness, climate adaptation and stewardship in the community
- Drainage to natural areas provide flora/fauna habitats and protection
- Protects property from flooding

The plan is structured to provide relevant detail on the following elements, which are key drivers in successful management of stormwater drainage now and into the future:

- Levels of Service
- Future Demand
- Lifecycle Management
- Risk Management
- Financial Summary
- Asset Management Practices
- Improvement and Monitoring



Key Stakeholders

Stormwater drainage assets are used by community and industry. It is critical that assets are provided, maintained, and renewed based on need and fit for purpose. Varying levels of engagement is necessary with the following stakeholders when Council seeks input in relation to determining levels of service and intervention levels. This should be delivered in accordance with Council's Community Engagement Policy (CP020) to ensure compliance with the Local Government Act 2020.

- Community
- Local Government Authority (Council)
- State and federal Government departments
- Lower Murray Water
- Executive Leadership Team
- Service Managers
- Asset Managers
- Maintenance Managers
- Financial Services
- Strategic Asset Systems



Our Levels of Service

The adopted levels of service for stormwater drainage assets are based on legislative requirements, community consultation and expectations, and strategic goals. The primary objective of stormwater drainage assets is that they are safe, convenient, defined, regularly maintained, and meet the needs of users.

Strategy Development feedback:

Community priorities and issues were gathered during the consultation process of developing the Public Open Space Strategy. These priorities and issues will help guide the direction of provision of stormwater management areas and asset planning.

Council Plan 2021-2025

The Council Plan contains the following outcomes and priorities which relate to stormwater drainage:

- Sustainable Infrastructure that meets current community needs
- A financially Sustainable organisation
- Provide safe public spaces and facilities
- Create and maintain welcoming open spaces that are accessible and connected
- Implement an integrated approach to planning, monitoring and performance reporting to ensure Council is accountable to the community.
- Regularly communicate information about Council decisions, projects, services, strategies, and performance

Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of Stormwater Drainage services are outlined below.

Legislation	Requirement
Building Act 1993, Building regulations 2018 & Plumbing Regulations 2018	The Act sets out the legal framework for the regulation of construction of stormwater and other structures, stormwater standards and maintenance of specific stormwater safety features in Victoria. The Regulations are derived from the Act and contain, amongst other things, the requirements relating to stormwater permits and stormwater inspections.
Catchment and Land Protection Act 1994	Includes setting up a framework for the integrated management and protection of catchments (S1). The Act establishes the catchment management authorities (S11).
Emergency Management Act 2013	Requires Council to have a Emergency Management Plan to address local emergency risks, This may include hazards arising from the storm water flows in the drainage system.
Environment Protection Act 2017	Creates a legislative framework for the protection of the environment in Victoria having regard to the principles of environmental protection.
Local Government Act 2020 & Local Government (Planning and Reporting) Regulations 2020	Sets out the 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.
Occupational Health and Safety Act 2004	Aims to secure the health, safety, and welfare of people at work. It lays down general requirements that must be met at places of work in Victoria. The provisions of the Act cover every place of work in Victoria.
Occupational Health and Safety Regulations 2007	Outlines minimum actions to be taken to comply with OH&S Act.
Planning and Environment Act 1987	Sets out legislative requirements for planning and environmental concerns in new and upgrade areas. It allows for the impact of asset construction and growth and sets parameters to trigger Council activities/actions.
Protection of the Environment Operations Act (NSW) 1997	The Acts primary focus is to protect, restore and enhance the quality of the ecology within NSW. This act is applicable to MRCC as it disposes portions of stormwater into the Murray River.
State Environment Protection Policy, Waters of Victoria	Sets the framework for government agencies, businesses, and the community to work together, to protect and rehabilitate Victoria's surface water environments
Water Act 2000	Applies to the management of the use of water resources including conservation, protection, and quality of discharges in waterways.

Service Levels Commitment

The levels of service defined in this section will be used to:

- Clarify the level of service that our customers should expect
- Identify works required to meet these levels of service
- Enable Council and community members to discuss and assess the suitability, affordability, and equality of the existing service level and to determine the impact of increasing or decreasing this level in future

Current Levels of Service

Output	Service level	Technical performance	Customer performance
All Stormwater Drainage Assets are safe and well maintained	<p>>=90% of the network above intervention level</p> <p>100% Condition inspection completed via rolling inspection every 5 years</p>	<p>98% percent of network above intervention level</p> <p>107 defects were identified in the financial year of 2022/23</p>	
Stormwater meets the needs of users	<p>Improvement in satisfaction survey performance</p> <p>Achieve reduction of customer related requests and complaints</p> <p>Cost of Service</p>	<p>100% customer interaction data collected via CRM software</p>	<p>Customer related requests and complaints: 2022/23 = 162, 2014/15= 51</p> <p>Average costing per rateable property: 2022/23= \$106, 2014/15= \$54</p>



Our Future

This section of the plan analyses potential factors affecting demand including population growth, social and technology changes. The impact of these trends is examined, and strategies recommended as required to modify demand without compromising customer satisfaction.

Demand Forecast

Factors affecting demand include (but are not limited to) population change, changes in demographics, seasonal factors, consumer preferences and expectations, economic factors, and environmental awareness. The population for Mildura Rural City Council was 55,937 in 2021 and is projected to grow to around 62,550 by 2031, which will have an impact in the provision and maintenance of stormwater drainage assets.

Council rate capping is having an impact on effectively managing assets as there are insufficient funds to manage existing assets to agreed levels of service, or to provide new assets desired by the community.

The demand for local government stormwater drainage infrastructure is high, with stormwater drainage highly valued and used by the local community. There will also continue to be an ongoing demand for renewing existing infrastructure as it completes its useful life.

The following trends are likely to arise due to external influences and societal changes:

- Stormwater harvesting
- Water sensitive urban design initiatives
- Future climate change adaptation
- Legislative and policy influences
- Changing community needs
- Population trends
- Community desire to access and use stormwater drainage reserves as open space

Consideration will be given to these trends in managing and planning for infrastructure, within the fiscal constraints of a rate capping environment and the community's capacity to pay.

Demographics

Demographic indicators and the implications for open space planning are detailed in section 3 of Council's Public Open Space Strategy. Where this is relevant to stormwater drainage asset management is Council's forecast population growth, an overall low population density with much of the population residing in the Mildura and surrounding areas. Increasing community expectation for high quality open space and an increasing demand for environmental stewardship. The 2023 liveability census supports our community sentiment with *'medium density suburbs with diverse housing options, green space and "local centres" outperforming outer ring suburbs or high-rise havens'*.

These competing community demands for will impact the demand placed on our stormwater drainage asset network now and into the future.

The topography of Mildura and broader MRCC area is quite flat, although there are some minor variations in localised landscapes. To address this, we need to consider innovative solutions to stormwater management beyond traditional neighbourhood drainage basins. Hydrological modelling and Water Sensitive Urban Design (WSUD) principles should be considered in the future to address these impacts. Hydrological modelling will indicate land cover changes, and that adaptation efforts will need to adopt a variety of approaches in both existing and growth zones.

Innovation

The following outlines the potential for improvements in efficiency due to evolving technology and innovation.

- Improvements in CCTV or pipe inspection technology, which can include more cost-effective methods of monitoring stormwater networks
- New pipe materials. Obsolete pipe is being replaced with modern more cost effective and appropriate materials such as poly pipes and reinforced concrete.
- Innovative urban greening planning and enhanced stormwater management (green-blue planning)

Demand Management

The key long-term strategy is to manage demand so that services can still be provided into the future at a reasonable cost.

Council currently manages demand in relation to stormwater drainage through several corporate and strategic documents, including:

- Community Vision 2040
- Council Plan 2021-2025
- Asset Plan 2021-2031
- Financial Plan 2021-2031
- Asset Management Strategy 2020

Climate Change

The current and predicted change to climate has the potential to significantly impact on a range of stormwater drainage assets. Forecast impacts of climate change include the risk of increased summer temperatures, prolonged periods of extreme/high temperatures, prolonged periods of drought, and flooding.

Forward planning is required to provide a stormwater network which is resilient to the impacts of climate change and can adapt to meet the needs of the community and the natural environment into the future.

Forward planning includes undertaking an asset vulnerability assessment to determine the risks associated with stormwater drainage due to climate change. This needs to include cost implications associated with different emission scenarios and which assets are likely to be impacted in the future. We need to understand the cost implications of climate change so that we can ensure intergenerational equity by spreading the costs equitably over time.

Community Vision 2021-2040 contains the values, challenges and priorities our community want Council to consider when planning for the future. In March 2020 Council declared a state of climate emergency requiring urgent action by all levels of government. One major target Council has identified in the fight against climate change is sustainability. Sustainability is about more than just our natural environment. We value sustainable development, sustainable communities and financial sustainability. We recognise that resources are finite and must be used responsibly to meet our current needs without compromising the needs of future generations.

Stormwater Drainage in New Developments

Mildura Rural City Council has seen a steady growth in recent years, particularly in the Mildura city and surrounding areas. New developments have new assets that are frequently handed over to Council to manage thereafter. Stormwater drainage assets in some new development areas are tied to Development Contributions Plan that include the provision of stormwater drainage assets. The Council budget currently commits over \$4 million per annum to DCP projects, of which stormwater drainage assets form a substantial part of.

All new development proposals will need to demonstrate how they meet Council's standards for stormwater management. WSUD principles and opportunities for integrated open space in alignment with Council's Public Open Space Strategy are to be considered.

Drainage and unembellished areas:

Council's Public Open Space Strategy has identified a community desire for stormwater management areas to be dual purpose and made available and accessible as open space.

There are a high number of drainage reserves which are fenced and/or signed to restrict community access, which may have had the potential to also provide a recreational function if designed to do so. It is acknowledged that it will not be physically or economically feasible to provide recreational value at all these drainage reserves, but consideration should be given to this in areas where open space provision has been identified.

There are also numerous parcels across the open space network which have not been embellished. Many of these parcels of land were raised during community engagement and embellishment into a recreational park is one option available to meet expectations and needs of the community.

Our Management of the Asset Lifecycle

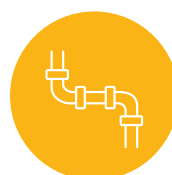
Council's Asset Management Policy and Strategy emphasises that asset management must take a whole of organisation approach to achieve the Council vision and long-term strategic objectives. The sustainable management of assets throughout their lifecycle is the responsibility of several areas across the organisation – those that manage the service to those who maintain the infrastructure. Details of roles and responsibilities can be found in Our Principles and Practices section of this plan.

This section outlines asset details including condition information and uses Asset Management fundamentals to develop broad strategies and specific work programs to achieve the service standards previously outlined. It presents an analysis of available asset information and the lifecycle management plans covering the work activities to manage stormwater drainage assets.

Our Stormwater Drainage Assets

Mildura Rural City Council's stormwater drainage provide a valuable service to the community, represents a significant multi-generational investment, and is vital to the health and wellbeing of the community.

These assets must be properly maintained and developed to continue to provide adequate service to benefit present and future generations. Stormwater drainage assets are divided into functional categories as they provide different roles within the network. The three level categories are:



Stormwater Pipes

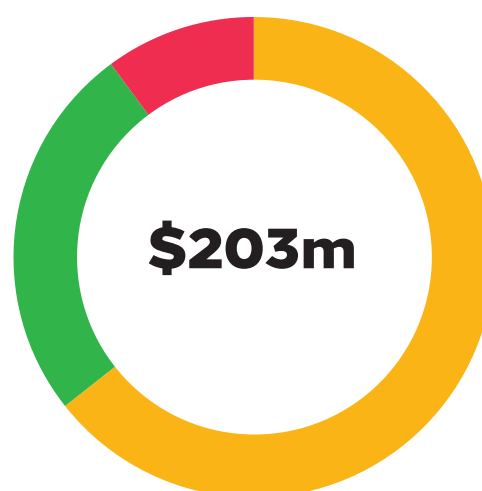





Stormwater Pits



Drainage Basins

Total Current Replacement Cost of Stormwater Drainage assets



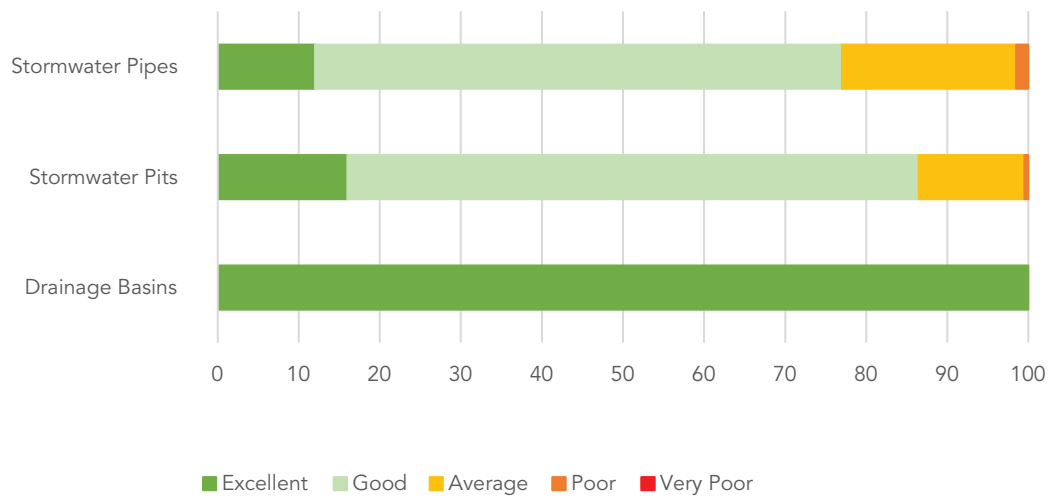
-  Stormwater Pipes
-  Stormwater Pits
-  Drainage Basins



Category	Asset	Quantity	Replacement Cost
Stormwater Drainage	Stormwater Pipes	340,528m	\$130,975,146
Stormwater Drainage	Stormwater Pits	12,231	\$51,864,163
Stormwater Drainage	Drainage Basins	135	\$20,612,989

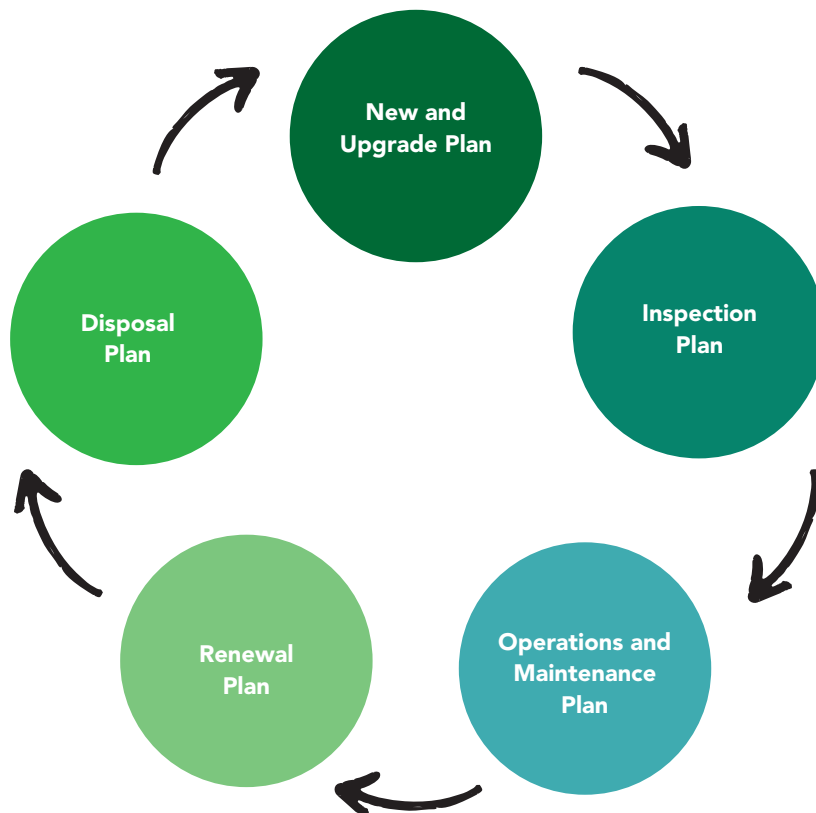
Overall asset condition

Asset condition has been determined for Council’s stormwater drainage assets. Council is committed to regular condition data collection to mitigate risk and make informed decisions when formulating forward Capital Works Programs. Asset condition is usually determined through field observations of defect parameters. As at writing, condition inspections are carried out by third party contractors.



A majority of Councils stormwater drainage assets are in good condition. Typically, maintenance costs are far less than the cost to renew assets. The most cost-effective approach will be to ensure assets are appropriately maintained during their lifecycle to avoid having to prematurely renew the assets.

Asset Lifecycle Activities

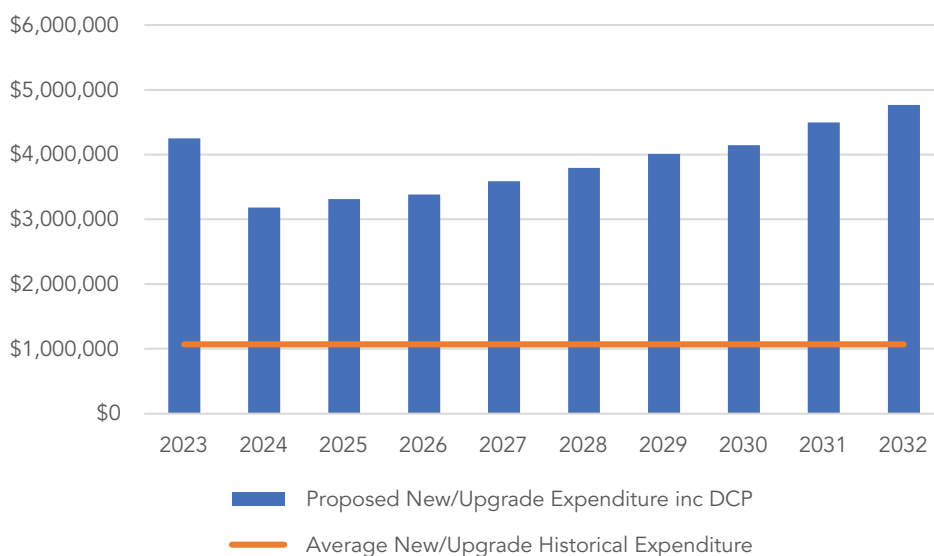


New and Upgrade Plan

Provides a program of works to create new assets or upgrade existing assets. Primarily driven by community, growth, social and/or environmental priorities.

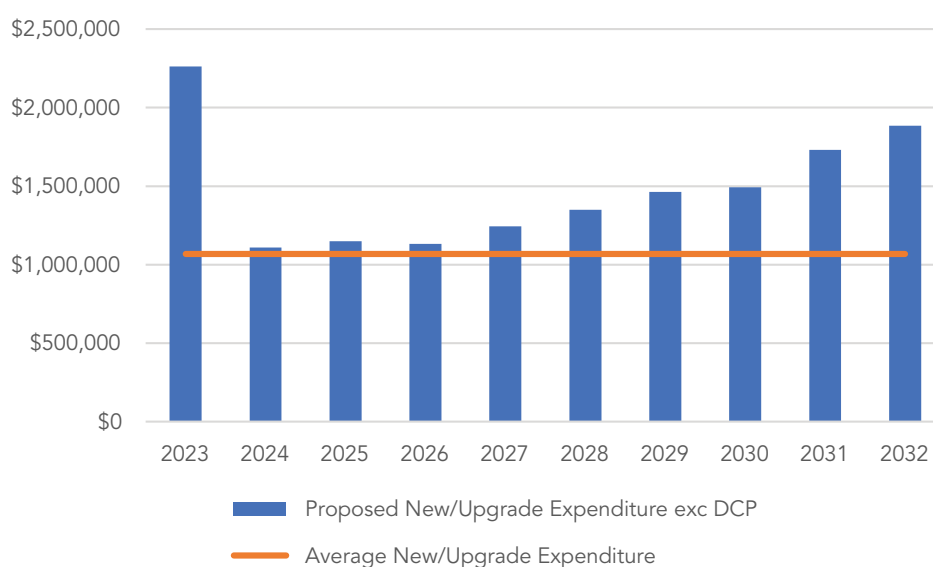
All new works proposals should be assessed in terms of their lifecycle costs i.e. cost to operate and maintain the asset. Increasing the asset network will typically increase operational and maintenance costs. The plan is to monitor and report on these trends in the future.

The forecast used for this plan is based on data listed in Council's 10-year capital works plan.



Strategies are currently being developed which will better inform the new / upgrade capital works program. The first chart includes Development Contributions Plan (DCP) expenditure from year 2022, where the second chart excludes DCP expenditure.

Average historical spend is represented in both charts for comparative purposes



Population growth, demographic changes and addressing climate impacts will increase future capital works programs. Addressing community demand for accessible and useable (integrated) stormwater management areas as open space will result in a significant increase in both the capital works program and cost to operate and maintain the assets. The cost of these strategic actions will be assessed against the finite resources available ensuring they are strategically allocated for maximum community benefit. These costs will be factored into future versions of this plan.

Inspection Plan

Inspections are undertaken to guide maintenance and renewal activities and to proactively identify any risks or hazards that require immediate attention.

Category	Inspection Type	Frequency	Responsibility
Stormwater Pipes	Maintenance and Defect Inspections	Every 6 Months	W&I, DM
	Condition Inspection	5 Year Rolling Inspection	F&A, SAS
Stormwater Pits	Maintenance and Defect Inspections	Every 6 Months	W& I, DM
	Condition Inspections	5 Year Rolling Inspection	F&A, SAS
Drainage Basins	Maintenance and Defect Inspections	Every 6 Months	W&I, DM P&R, P&G
	Condition Inspections	5 Year Rolling Inspection	F&A, SAS

W&I DM Works and Infrastructure Drainage Maintenance
F&A SAS Facility and Assets Strategic Asset Services
P&R PG Parks and Recreation Parks and Gardens

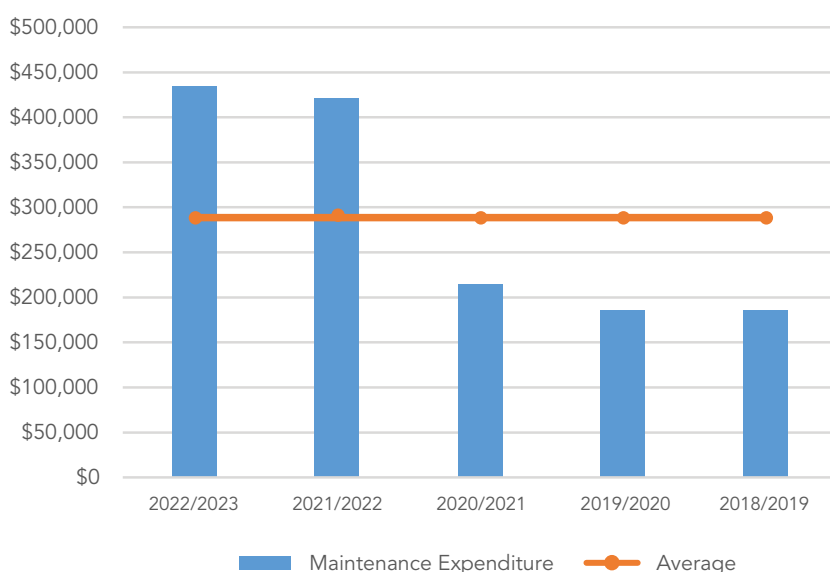
Operations and Maintenance Plan

Maintenance activities are undertaken to ensure efficient operation and serviceability of the assets. This will ensure that the assets retain their service potential over the course of their useful life.

Routine maintenance is the regular on-going work necessary to keep assets operating, including instances where portions of assets fail and need immediate repair to make the asset operational again. Maintenance includes reactive and proactive work activities.

- Reactive maintenance is unplanned repair work carried out usually in response to service requests.
- Proactive maintenance is repair work that is usually identified through routine inspections.

Maintenance expenditure trends for stormwater drainage asset are shown below. This trend is likely to increase with the addition of assets handed over to Council from new subdivisions.



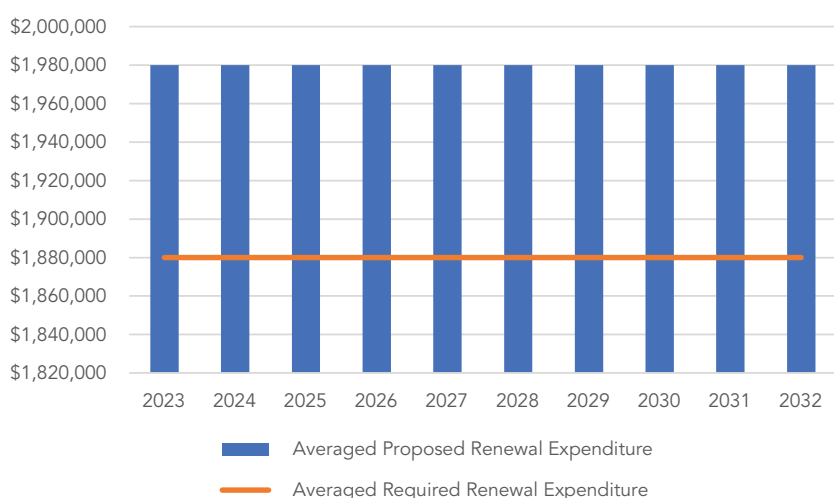
Renewal Plan

Provides a program of renewal for individual assets.

Deteriorating asset condition primarily drives renewal needs, with increasing maintenance costs also considered.

Renewal expenditure is major work that restores, rehabilitates, or replaces an existing asset to its original service potential. Assets requiring renewal are identified from remaining life estimates from condition assessments. Proposed renewals are reviewed to verify accuracy of remaining life estimates and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled into future capital works programs.

Required vs Proposed Renewal Expenditure



Projected future renewal expenditure costs are summarised in this chart.

The required renewal expenditure is compared to the available budget, which has an averaged surplus of \$100,753. Over the 10-year planning period the renewal surplus is projected to grow to \$1,007,534

Renewal works may be deferred if the cost is beyond the current financial ability to fund. This can occur when there are short term renewal profile peaks, or higher priority works required on other infrastructure groups. When renewal works are deferred, the impact of the deferral on the asset's ability to provide the required level of service will be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term, and this needs to be taken into account before making a decision to defer.

Disposal Plan

Provides a program of which assets will be disposed of in response to levels of service.

Council has no stormwater drainage infrastructure assets proposed to be decommissioned. As such, there is no funding required or expected from the decommissioning of any assets at this point in time.



Our Management of Risks

The objective of the risk management process with regards to stormwater drainage 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 to Council.

The key risk management criteria relating to stormwater drainage include:

- Public health and safety
- Service provision
- Environmental and legal compliance
- Business interruption
- Financial risk (escalating costs in deterioration)
- Asset damage through storms, flooding, water damage or events such as accidents.

Increased temperatures associated with climate change increases the risk that assets will fail or need to be maintained earlier than expected. However, it is still unclear as to the exact impact of these changes. By assessing the assets level of vulnerability to climate impacts we are continuing to ensure that Council has the best possible information about its assets, and are able to better predict future demand and account for any potential required changes as a result of climate change.

The financial sustainability of delivering stormwater drainage assets to our community will be closely monitored and measured.

A growing renewal gap across Council's infrastructure portfolios will need to be addressed and managed appropriately, with treatments being explored through service planning and service profile development which is planned to occur during the life of this plan.

Risk	Consequence	Likelihood	Risk Rating	Treatments in place	Responsibility
Strategies, plans and objectives not aligned to community expectations	Moderate	Possible	Low	Council plan reporting Community Engagement Policy Integrated Planning Framework & Reporting Annual Community Satisfaction Survey	W&I F&A ED&D
Financial sustainability of service in a rate capped environment	Moderate	Likely	High	Service profile linking to infrastructure requirements and financials	F&A FS
Climate change	Moderate	Likely	High	Environmental Sustainability and Climate Change Policy, Towards Zero Emissions Strategy, Environmental Education Plan	W&I ED&D
Emergency impacts	Major	Possible	High	Municipal Emergency Management Plan, Municipal Relief and Recovery Plan, Standards	W&I ED&D
Injury/harm to people using Stormwater Drainage assets	Minor	Unlikely	Low	Regular inspection programs and rectification of defects	F&A W&I
Significant breach of legislation, policy	Moderate	Unlikely	Low	Operational policies and processes in place	F&A W&I ED&D
Confidence levels in asset data	Moderate	Possible	Moderate	Asset Management Strategy action to improve data management practices and processes, quarterly validation reports	F&A
Established development plans not in place for all localities	Moderate	Possible	Moderate	Regular review and update of development plans	W&I F&A ED&D SP

CP
ED&D
F&A

Community Partnerships
Engineering Design & Development
Facilities & Assets

FS
W&I
SP

Financial Services
Works & Infrastructure
Strategic Planning

Assets at risk

Councils stormwater drainage assets have a number of risks that can affect how the network performs, some of these risk include:

- Assets are not reaching the life expectancy that is required
- Usage changes for stormwater drainage due to environmental and seasonal changes
- Confidence levels in service condition at outlying areas within Council boundaries
- Population growth and demographic changes altering demand on the network

While the risk of our stormwater drainage assets failing is low, treatment plans are in place including:

- Council projects are run through our contract management software
- Projects are designed to the appropriate standard for all Council run projects
- Development plans established and adopted across all areas of the municipality to provide consistent guidance and direction to all during decision making
- For developer run sub-divisions through the construction stage, hold points for inspections are stipulated and the inspections are carried out via remote CCTV providing the evidence required to satisfy the conditions of contract, the risk of premature failure of the asset is reduced
- Regular inspections completed by the Drainage Maintenance and Asset Preservation teams
- Advocating for stormwater drainage not under the control of Council to be maintained to a better standard

Work is being done with the Engineering Development and Delivery and Works and Infrastructure teams on building a more detailed risk chart for our most at risk stormwater drainage assets.

Our Financial Summary

Asset value

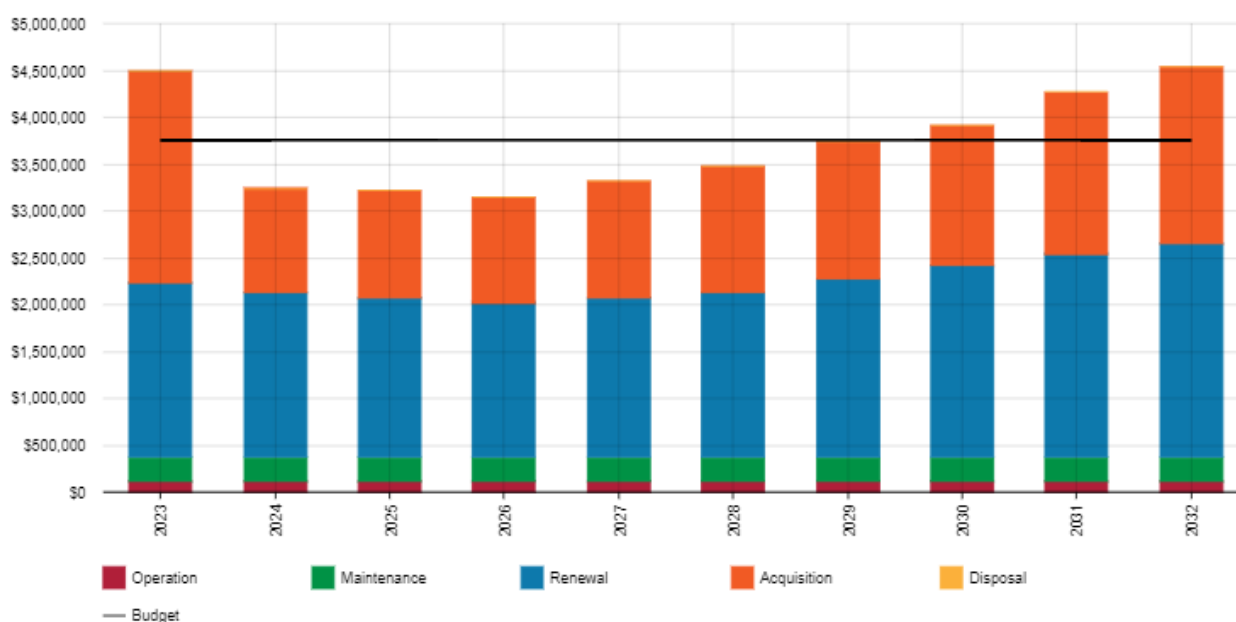
The value of Council's stormwater drainage is summarised in the table below.

Category	Current Replacement Cost	Depreciated Amount	Depreciated Replacement Cost	Annual Depreciation
Stormwater Pipes	\$130,975,146	\$104,851,660	\$26,123,486	\$916,991
Stormwater Pits	\$51,864,163	\$37,009,221	\$14,854,941	\$558,833
Drainage Basins	\$20,612,989	\$20,612,989	N/A	N/A
TOTAL	\$203,452,299	\$162,473,871	\$40,978,428	\$1,475,824

Financial Projections

The chart below highlights the financial projections for planned operating and capital expenditure for stormwater drainage. The target is to retain relatively stable levels of operating expenditure for all asset types.

Projected expenditure is to be funded from Council's operating and capital budgets. The funding allocation is detailed in Council's 10-year Long Term Financial Plan (LTFP).



Sustainability Report

Ideally, the renewal of assets should occur at the time that they require it to ensure that the service levels provided (through the assets) to the community can continue both now and into the future. Factors such as limited funds, increased customer demand and expectation, and statutory requirements can affect the ability to undertake renewal activities.

The Asset Renewal Funding Ratio (ARFR) represents how much is budgeted on renewals versus how much is required to be spent (Capital Renewal Planned Budget for a period / Capital Renewal Forecast Outlays for the period).

Target ARFR	Actual ARFR	Comments
80 – 100%	105%	ARFR indicates over-expenditure on budget for renewal projects. Calculations are extracted from information within Councils Long Term Financial Plan. Close observation is required on the proposed allocation versus actual expenditure displayed in the annual financial reports to avoid overspending. Strategies to meet target include reviewing existing service levels and intervention levels, accepting level of risk, closure or decommissioning assets.

Depreciation can also be used to indicate asset consumption, however due to the nature of how this is calculated (straight-line, age based) this is a less accurate measure of consumption, when comparing to the condition-based assessment of remaining useful life.

The long-term lifecycle sustainability indicator (depreciation model, including operational and maintenance expenditure) represents how much is budgeted on renewal, operations, and maintenance versus the depreciation amount plus forecasted operations and maintenance (Lifecycle Planned Budget / Lifecycle Forecast).

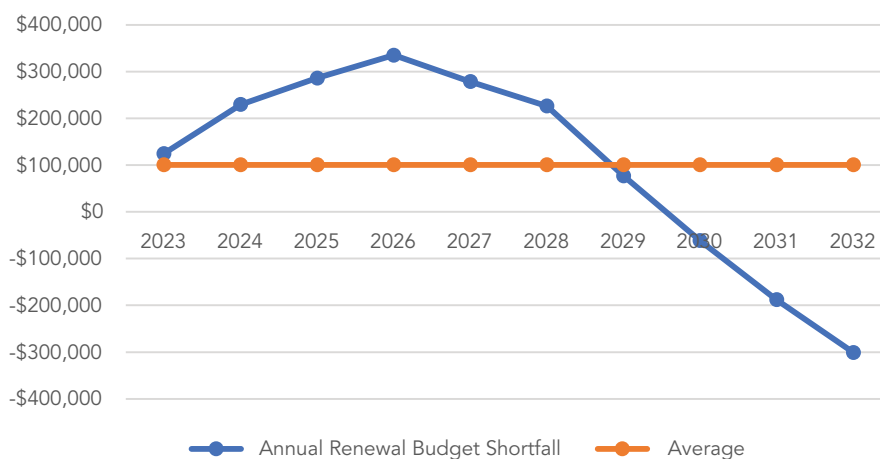
Lifecycle Forecast (average 10 years forecast ops, maint and depreciation)	Lifecycle Planned Budget (average 10 years planned budget ops, maint and depreciation)	Lifecycle Gap (Lifecycle Planned Budget – Lifecycle Forecast)	Mildura Rural City Council Target	Lifecycle Indicator (Lifecycle Planned Budget / Lifecycle Forecast)
\$2,254,582	\$2,355,335	\$100,753	100%	104%

Budgeted Renewal and Shortfall (Renewal Gap)

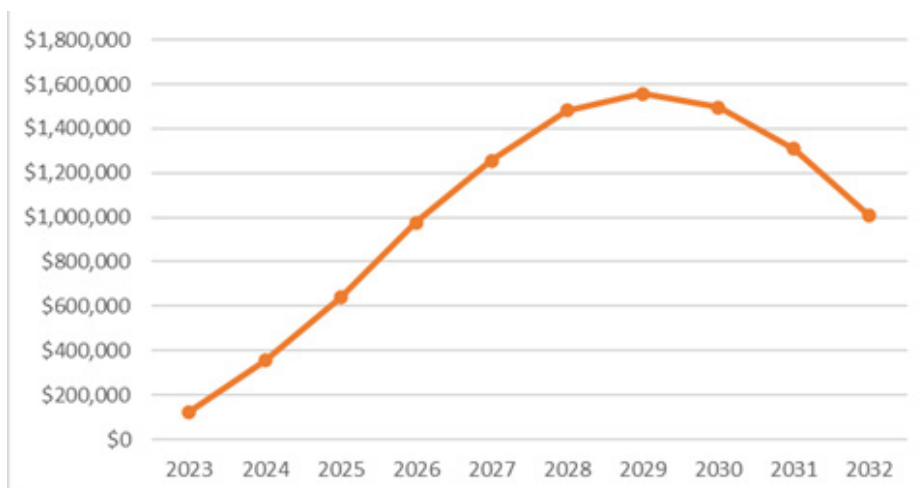
Year	Forecast Renewal	Planned Renewal Budget	Annual Forecast vs Planned Budget	Cumulative Renewal Budget Surplus
2023	\$1,856,533	\$1,981,282	\$124,749	\$124,749
2024	\$1,751,583	\$1,981,282	\$229,699	\$354,448
2025	\$1,695,010	\$1,981,282	\$286,272	\$640,720
2026	\$1,646,046	\$1,981,282	\$335,236	\$975,956
2027	\$1,702,727	\$1,981,282	\$278,555	\$1,254,511
2028	\$1,755,040	\$1,981,282	\$226,242	\$1,480,753
2029	\$1,904,273	\$1,981,282	\$77,009	\$1,557,762
2030	\$2,042,894	\$1,981,282	-\$61,612	\$1,496,150
2031	\$2,169,164	\$1,981,282	-\$187,882	\$1,308,268
2032	\$2,282,016	\$1,981,282	-\$300,734	\$1,007,534
Average	\$1,880,529	\$1,981,282	\$100,753 (*)	

(*) = Surplus

Annual Renewal Budget Shortfall



Cumulative Renewal Budget Shortfall



Long Term Financial Plan

The Long-Term Financial Plan projections for a 10-year planning period are detailed in the table below. Additional operation / maintenance expenditure to accommodate new assets has not been factored into these projections now. With the introduction of a requirement to provide lifecycle cost projections to support new and upgrade capital works proposals, the additional expenditure can and will be populated in future revisions of this plan.

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2023	\$2,261,195	\$122,592	\$251,461	\$1,856,533	\$0
2024	\$1,109,334	\$122,592	\$251,461	\$1,751,583	\$0
2025	\$1,149,258	\$122,592	\$251,461	\$1,695,010	\$0
2026	\$1,131,929	\$122,592	\$251,461	\$1,646,046	\$0
2027	\$1,244,100	\$122,592	\$251,461	\$1,702,727	\$0
2028	\$1,349,239	\$122,592	\$251,461	\$1,755,040	\$0
2029	\$1,464,071	\$122,592	\$251,461	\$1,904,273	\$0
2030	\$1,491,847	\$122,592	\$251,461	\$2,042,894	\$0
2031	\$1,730,098	\$122,592	\$251,461	\$2,169,164	\$0
2032	\$1,883,902	\$122,592	\$251,461	\$2,282,016	\$0

Key Assumptions

This section details the key assumptions made in preparing forecasts of required operating and capital expenditure and asset values, depreciation expense and carrying amount estimates. 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 plan are:

- All costs are shown in 2022/2023 financial year dollar values.
- General assumptions have been made in the replacement of assets based on the asset type's modern day equivalent standard.
- The required renewal expenditure assumes general intervention levels that do not take into account the breakdown of the condition score into components of the asset and are based on the assumption that the whole asset will be replaced as opposed to its components.
- The required renewal expenditure is based on the current level of service provided to the community.
- Operational and maintenance expenditure is estimated based on the best available data from several areas. The breakdown of this expenditure "Asset Class" has been generalised where specific allocation is not possible due to budget structures.
- 0% growth rate has been applied to financial projections
- Additional operational / maintenance expenditure to accommodate new assets has not been factored into the financial projections



Our Principles and Practices

This section identifies the principles, strategies, practices and guidelines supporting Asset Management at Mildura Rural City Council.

Asset Management System (Framework)

The Asset Management System is “the set of interacting elements of an organisation to establish Asset Management policies and objectives, and the processes to achieve those objectives” (IS 55000). Key principles in ISO 55001 relating to the AM System include:

- “The organisation shall integrate the planning to achieve AM objectives with other organisational planning activities, including human resources, financial and other support functions” ISO 55001 Cl 6.2.2. This emphasises the importance of all business functions to AM. The AM System cannot stand alone but needs to integrate effectively across the organisation.
- The need for documentation to support the AM System.
- The AM System must be well communicated within the organisation and with other stakeholders and understood by all those who have responsibilities in the AM System.
- There must be provision for Management Review and organisations must be able to demonstrate management commitment to the AM System.

Our Asset Management Documents:

- Asset Management Policy CP031 – sets guidelines for implementing consistent asset management practices across all areas of the organisation.
- Asset Management Strategy 2020 – outlines Council’s asset management principles and objectives, and provides an action plan targeting five key focus areas: Data and Information, Governance, Integrated Planning, Education and Knowledge and Service Planning.
- Asset Management Plans – there are four plans focusing on Council’s four major asset portfolios: Roads and Footpaths, Stormwater Drainage, Buildings and Public Open Space.
- Data Management Guidelines - provides a standardised approach in how Council structures, manages and maintains its asset data.
- Asset Plan - a plan that provides a strategic and financial view of how Council proposes to manage the assets it owns and controls.

Standards and Guidelines

Asset Management practices and processes are guided by several legislative requirements and assisted by developed guidelines and standards:

- Local Government Act 2020 – sets out Council's asset management responsibilities and requirement to develop asset plans.
- Australian Accounting Standard 27 Financial Reporting by Local Governments 1996 – sets out the asset accounting requirements.
- Institute of Public Works Engineering Australasia (IPWEA) International Infrastructure Management Manual, NAMS – provides guidance and direction on asset management policy and plan development.
- AS ISO 55000:2014 Asset Management Overview, principles and terminology – provides guidance around frameworks for effective asset management.

Asset Management Data System

Council utilises an asset management data system (AMDS) linked with QGIS as the Geographical Information System (GIS) to manage spatial asset data. IntraMaps is the corporate GIS platform which allows all staff to access cadastral, topographic, aerial information and asset data.

Predictive modelling is undertaken in the AMDS and Moloney's Financial Module.

Data Confidence

Data confidence for stormwater drainage are classed as B Reliable based on the IPWEA data confidence scale below.

Confidence Grade	Description
A Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Data set is complete and estimated to be accurate +/-2%
B Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Data set is complete and estimated to be accurate +/- 10%
C Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Data set is substantially complete but up to 50% is extrapolated data and accuracy estimated +/- 25%
D Very uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Data set may not be fully complete and most data is estimated or extrapolated. Accuracy +/- 40%
E Unknown	None or very little data held

Roles and Responsibilities for Asset Management

The Local Government Act 2020 requires councils develop an integrated, longer-term and transparent approach to planning, organised around a ten-year community vision.

This, along with Council's Asset Management Policy CP031, emphasises the importance of taking a whole of organisation approach to asset management in order to achieve its vision and long-term strategic objectives.

Organisational asset management responsibilities are divided into four roles:

- Management of the Service** – Responsible for a service being delivered to the community and the interface between council and the community.
Responsibilities: Service planning; service operations; asset need identification, modification, upgrade, or decommissioning / disposal
- Management of the Asset** – Responsible for how assets are managed, including overall capital works planning on an asset group through the engagement of service providers, maintenance managers and other stakeholders.
Responsibilities: Asset design; capital works delivery; renewal and performance monitoring
- Management of Maintenance** – Responsible for ensuring the asset is functioning as designed to meet defined levels of service and industry standards. This is achieved by monitoring the asset through inspection programs and undertaking maintenance/operational activities.
Responsibilities: Asset inspections and maintenance
- Governance of the Asset Management System** – Responsible for setting up frameworks, systems and processes that can be used across the organisation for asset management related activities.
Responsibilities: Asset revaluations and other state/federal reporting; asset data management; asset management framework

Category	Management of the Service	Management of the Asset	Management of Maintenance	Governance of the AM System
Stormwater Pipes	ED&D	ED&D W&I	ED&D W&I	F&A SAS
Stormwater Pits	ED&D	ED&D W&I	ED&D W&I	F&A SAS
Drainage Basins	ED&D	ED&D W&I	ED&D W&I F&A	F&A SAS

ED&D Engineering Design and Development
W&I Works and Infrastructure
F&A Facility and Assets
SAS Strategic Asset Systems



Our Improvements and Monitoring

Performance Measures

The effective performance of this plan will be measured by:

- The extent to which the long-term financial projections in this plan are incorporated into Council's long-term financial plan.
- The extent to which the long-term financial projections and trends are addressed in works programs, budgets, and business plans.
- The National Asset Management Assessment Framework's assessment on asset management plans

Monitoring and Review

The condition and financial data in this plan will be reviewed annually, with a full review in accordance with Council's deliberative engagement practices completed every four years.

Subsequent updates including the review of condition and financial data will be approved by General Manager Infrastructure & Assets if changes are deemed immaterial to the delivery of the service, standards, and specifications. If the changes materially affect the service, standards, and specifications, it must follow the process of a full review.

Improvement Plan

The following table lists the actions necessary to enhance stormwater drainage asset management within Council. The primary focus over the next four years will be to improve confidence levels in the data and information that informs the service levels and financial projections.

Task No	Task	Responsibility	2023	2024	2025	2026
1	Improve accessibility to asset information and data	F&A W&I ED&D CP		•		
2	Rolling inspection forecasted from 2023 to 2026 with an aim to cover 100% of network	ED&D F&A	•	•	•	•
3	Review and update development plans across all localities	CP W&I ED&D F&A SP	•	•	•	•

CP
ED&D
CP

Community Partnerships
Engineering Design & Development
Civic Compliance

F&A
W&I
SP

Facilities & Assets
Works & Infrastructure
Strategic Planning

Appendices

Appendix A: Planned Works 2023-2024

Project name	Asset Type
Sixteenth Street between Lethro Avenue to Main Street (PROJ/2084)	SW Pipes
Nichols Point Drainage Upgrade (PROJ/1670)	SW Pipes, SW Pits and SW Basins
Drainage Upgrade Works at Etiwanda Avenue (PROJ/1828)	SW Pipes and SW Pits
Drainage Upgrade Works at Etiwanda Avenue and Eleventh Street (PROJ/1839)	SW Pipes and SW Pits
Nichols Point Recreation Reserve Drainage Upgrade (PROJ/2177)	SW Pipes and SW Pits
Cabarita Drainage Upgrade (PROJ/1753)	SW Pipes and SW Pits

Appendix B: Identifying risks and risk ratings

Risk identification for stormwater drainage Assets can be identified from several sources such as:

- Routine inspections
- Reports and complaints from the community
- Information obtained from incidents
- Advice from professional bodies
- Safety Audits
- Experience

Risk ratings are determined using the follow risk matrix:

	Consequences				
	Negligible (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
(A) Almost Certain	Moderate	High	Extreme	Extreme	Extreme
(B) Likely	Low	Moderate	High	Extreme	Extreme
(C) Possible	Low	Low	Moderate	High	Extreme
(D) Unlikely	Low	Low	Low	Moderate	High
(E) Rare	Low	Low	Low	Moderate	High



Appendix C: Glossary

A

Asset

An item, thing or entity that has potential or actual value to an organisation. For the purpose of this strategy, assets refer to infrastructure assets which fall under the four (4) major asset portfolios.

Asset Class

Grouping of like assets within an asset portfolio.

Asset Hierarchy

Asset groups divided into classifications in order to manage the assets according to their function and use. Hierarchies are typically based on the assets function, type or a combination of both.

Asset Management

The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner.

Asset Management Plan

A plan developed for the management of an asset portfolio that combines technical and financial management techniques over the lifecycle of the asset to determine the most cost effective manner by which to provide a specific level of service.

Asset Management Policy

Mildura Rural City Council Asset Management Policy CP031.

Asset Management Framework

A set of documents, systems and processes that addresses the organisation's asset management responsibilities. In its simplest form an Asset Management Framework may just be the sum of the following documents; Asset Management Policy, Asset Management Strategy and Asset Management Plans.

Asset Management Strategy

A plan containing the long-term strategies of Council in the management of its community assets. Strategic plans have a strong focus on achieving organisational sustainability and a vision for the future.

Asset Plan

An Asset Plan is for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the life cycle of the asset in the most cost effective manner to provide a specific level of service.

Asset Portfolio

Grouping of like assets which deliver a similar service to the community.

C	Capital Expenditure	Expenditure used to create new assets, renew assets, expand or upgrade assets or to increase the capacity of existing assets beyond their original design capacity or service potential. This expenditure increases the value of asset stock.
	Condition	The physical state of the asset.
	Capacity	Often referred to as utilisation, the maximum level of output that an asset can sustain to make a product or provide a service.
F	Functionality	Suitability or 'fitness for purpose' of an asset based on the service needs for current and future purposes.
L	Level of Service or Service Levels	Description of the service output for a particular activity or service area against which performance may be measured.
	Lifecycle	The time interval that commences with the identification of the need for an asset and terminates with the decommissioning of the asset or any liabilities thereafter.
	Lifecycle Cost	The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and the disposal costs.
M	Maintenance	All actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal.
O	Operating Expenditure	Expenditure for providing a service, which is continuously required including staff salaries and wages, plant hire, materials, power, fuel, accommodation and equipment rental, on-costs and overheads. Operating expenditure excludes maintenance and depreciation.
R	Renewal	Works to replace existing assets or facilities with assets or facilities of equivalent capacity or performance capability.
	Renewal Gap	The difference between the amount of funds required for the renewal of assets and the amount of funds currently spent on renewing assets.
S	Service Planning	Process applied to support the suitability of services to meet community needs now and into the future, through better understanding the level of services required, costs, mitigating risks, understanding capacity and capability and understanding the expectation of stakeholders.
	Sustainability	The capacity to endure; in the context of AM it is about meeting the needs of the future by balancing social, economic, cultural and environmental outcomes or needs when making decisions today.

Appendix D: References

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