City of Marion Asset Management Plan 2024-2034

Stormwater

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CITY OF MARION

Contents

Executive summary

Purpose of the plan

The purpose of the Stormwater Asset Management Plan is to improve council's long-term strategic management of the stormwater assets to ensure the current and future Levels of Service are sustained. The plan defines the state of the stormwater assets and considers future requirements and risks together to inform the optimum lifecycle management and costs for the next 10 years. The Stormwater Asset Management Plan is aligned with the Council's Strategic Plan and Long-Term Financial Plan. Data used in this Asset Management Plan is current as of December 2023 with the Plan monitored annually with changes in costs informing the annual cycle of the Long Term Financial Plan (LTFP). This plan is formally reviewed and republished every four years.

State of councils' stormwater assets

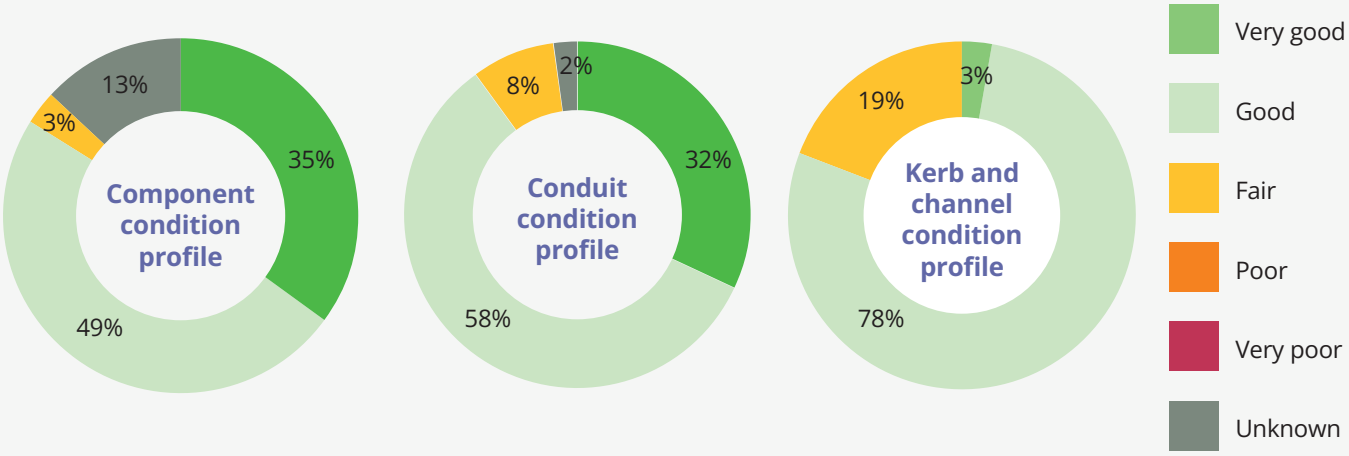
The City of Marion has a vast network of stormwater assets which can be seen in the table below which shows the quantity, useful life and financial replacement value for the different types of asset classes.

Asset parameters including quantities, useful life, and replacement value

Asset Class	Asset Sub-Class	Quantity	Useful Life	Replacement Value
Stormwater Components	Pits	6946	100 years	$34,132,090
	Gross Pollutant Traps	61	100 years	$2,424,300
	Headwalls	213	100 years	$458,735
Stormwater Conduits	Pipes	254,903 m	100 years	$190,082,562
	Culverts/Box Drains	5,622 m	100 years	$15,545,644
Kerb & Channel	Kerbs	983,070 m	70 years	$179,616,421
	Spoon Drains	24,886 m	70 years	$4,633,670
Total				$426,893,422

The condition profile of the stormwater assets are shown below. Note that condition data for Stormwater Conduits and Components is estimated by using the age of the asset and not a physical inspection and condition score. Kerb and Channel condition assessment was undertaken in 2022.

Stormwater assets condition profile



Service levels

The community levels of service are considered in terms of the quality of the asset (condition); whether it is providing the intended service (function), and whether it is over/under utilised (capacity). The table below shows the community service requirements and how we plan to deliver on that requirement.

Customer requirements and service activities

Community Service Requirement	Activities funded to sustain the service requirement	Level of Service Measure
The City of Marion's stormwater network operates efficiently and safely.	The City of Marion stormwater network is properly designed and constructed, regularly monitored, and maintained to enable infrastructure to be functional as per it's intended use.	Condition
The City of Marion's stormwater network is planned, designed, and constructed to minimise flooding of private property.	Function of the stormwater network is measured using the current network vs what is left to build, while also applying timeframes on when it needs to be built. Tracked against program priorities matrix and expected timeframes.	Function
The City of Marion's stormwater network operates effectively during rainfall events.	Strategies to address the impacts of ongoing capacity pressure as a result of infill development, land division and change in climate are captured in stormwater management plans.	Capacity
The City of Marion's stormwater network is planned, designed and constructed considering current and future demands.	The City of Marion maintains and updates Standard Drawings, Technical Specifications and Stormwater Guidelines for developers to ensure best practice is implemented. Partnerships and trials for new methods, products and techniques in stormwater design and construction and implementing Water Sensitive Urban Design techniques.	Resilience

The table below shows the performance of the asset category in relation to its condition, function and capacity. Stormwater assets are currently meeting the targets and based on this asset management plan will be maintained.

Performance of asset against condition, function, and capacity

Measure	Current Performance	Expected Trend Based on the Budget
Condition	On track	90% of assessed assets in very good to fair condition. This will be maintained in this Asset Management Plan.
Function	On track	90% of assessed assets in very good to fair function. This will be maintained in this Asset Management Plan.
Capacity	On track	90% of assessed assets in very good to fair capacity. This will be maintained in this Asset Management Plan.

Images courtesy of Beltrame Civil

Future demand

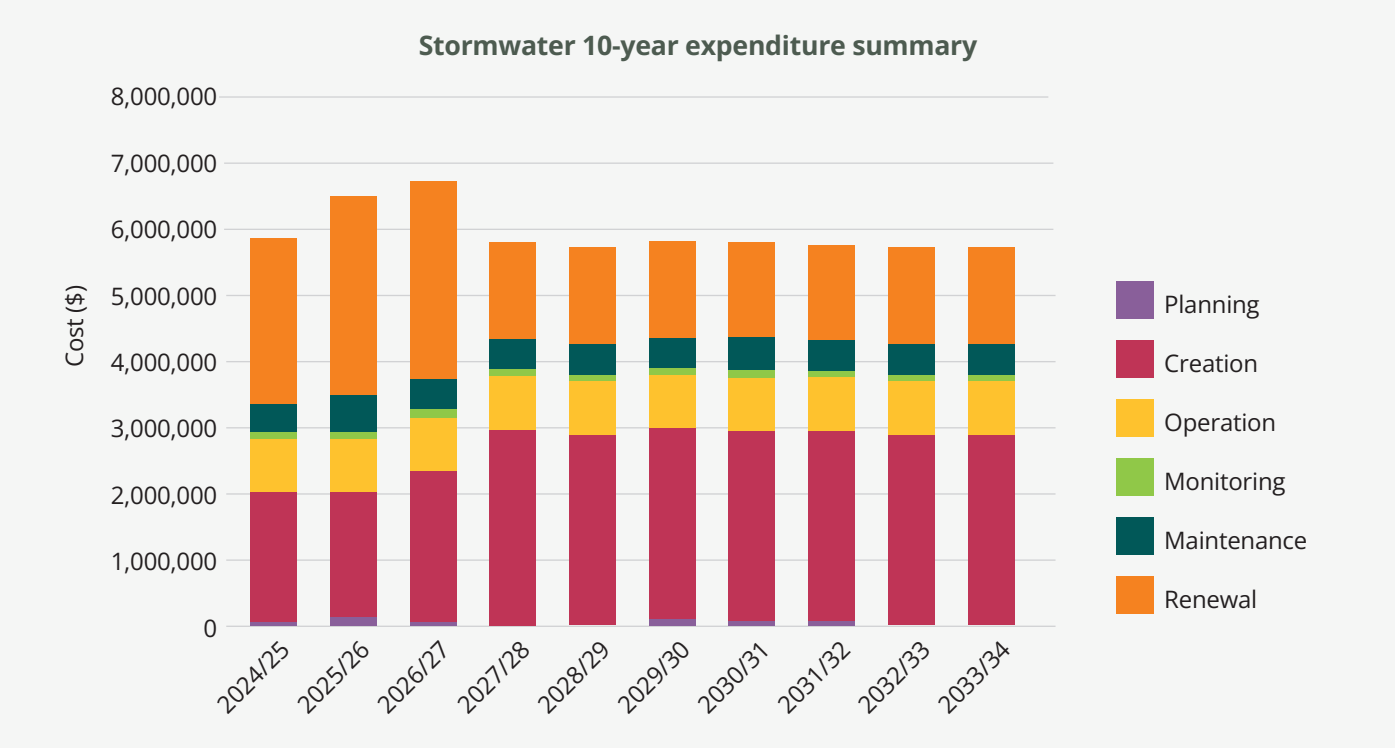
Some of the key factors expected to influence future demand and the impact this will have on the stormwater network and assets are shown in the table below and have been accounted for in this Asset Management Plan.

Demand Impact	Demand Impact Management
Urban infill resulting in more housing and increase to impermeable 'hard' surfaces.	Ensure new developments conform to City of Marion's Developer Guidelines, Technical Specifications and Standards.
Planning and design code changes resulting in reduced open space, reduced verge widths and an increase to impermeable 'hard' surfaces.	Work with developers in major sub-divisions to achieve outcomes that can improve the stormwater network in the catchment.
Community and Council Member requests.	Approved Stormwater Prioritisation Matrix and ongoing review of the Asset Management Plan. Service Level Agreement based on risk for operational and maintenance activities.

Lifecycle management

What it will cost

The forecast lifecycle costs necessary to provide the services covered by this Asset Management Plan include the activities of planning, creation, monitoring, operation, maintenance, renewal, and disposal of assets. The forecast expenditure of this plan is used to inform the Long-Term Financial Plan – see below for details.



Stormwater assets forecast 10-year expenditure for each asset lifecycle phase from 2024/25 to 2034/35

Year	Planning	Creation	Operation	Monitoring	Maintenance	Renewal	Disposal	Forecast Total
2024/25	67,000	1,948,700	817,000	95,000	435,000	2,505,000	0	$5,867,700
2025/26	150,000	1,875,000	817,000	95,000	565,000	3,020,000	0	$6,522,000
2026/27	50,000	2,290,000	817,000	130,000	470,000	3,000,000	0	$6,757,000
2027/28	0	2,975,000	817,000	95,000	470,000	1,450,000	0	$5,807,000
2028/29	0	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,732,000
2029/30	100,000	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,832,000
2030/31	50,000	2,900,000	817,000	130,000	470,000	1,450,000	0	$5,817,000
2031/32	50,000	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,782,000
2032/33	0	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,732,000
2033/34	0	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,732,000
Total	**$467,000**	**$26,488,700**	**$8,170,000**	**$1,020,000**	**$4,760,000**	**$18,675,000**	**$0**	**$59,580,700**

Operational expenditure (OpEx) are activities that are of an operational/maintenance nature, such as sweeping, cleaning, inspections and planning. Capital expenditure (CapEx) are activities that affect the asset, such as renewing, creating and disposing of the piece of infrastructure. The financial funding for the life of this plan is summarised in the table below.

Funding Allocation	10 Year	Average Annual Cost
Operational Cost (OpEx)	$14,417,000	$1,441,700
Capital Cost (CapEx)	$45,163,700	$4,516,370
Total cost of the plan	**$59,580,700**	**$5,958,070**

Forecast funding required: $59,580,700

Average annual forecast funding required: $5,958,070

Managing the risk

Risks are managed in accordance with Council's Risk Management Policy and Framework. There are no high-level risks that have been identified for stormwater assets.

Critical assets have been identified as any stormwater conduit over 600mm in diameter or height. These stormwater assets are considered trunk mains for the stormwater network and are critical for the functionality of the network. Any failure of these assets may result in significant consequences to other surrounding infrastructure assets and the stormwater network unserviceable in the regional catchment.

The forecasted budget in this asset management plan allows us to achieve all our service delivery objectives and to monitor and manage the risks accordingly.

Improvement

The Improvement Plan sets forward future activities that are required to ensure the asset management of stormwater assets are maturing.

These initiatives have been included in the forecast budget and include:

- Collecting Condition Data for Stormwater Conduits and Components
- Developing Stormwater Management Plans on the remaining catchments in City of Marion
- Updating Standard Drawings and Technical Specifications

Introduction

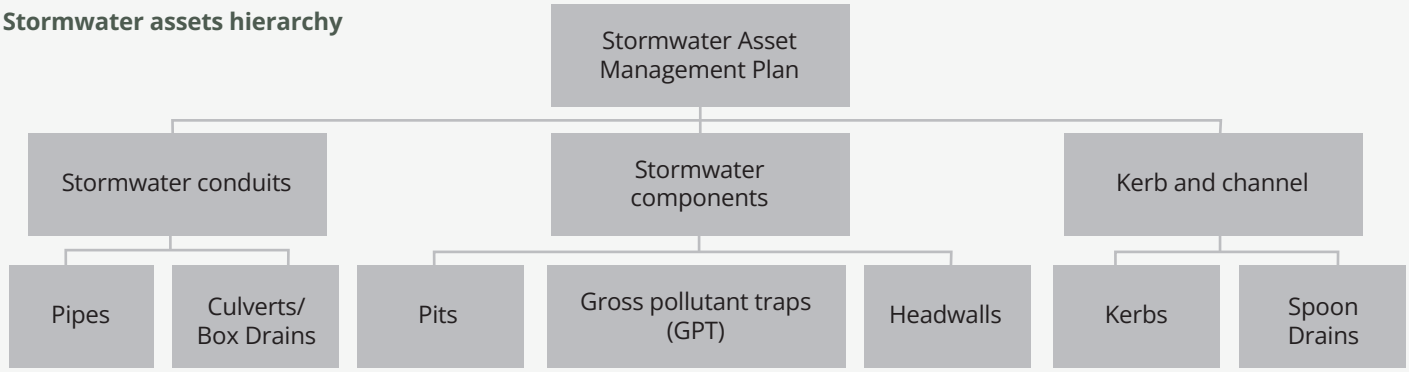
Background

The Stormwater Asset Management Plan provides information on the state of the stormwater assets and their capability to meet the levels of service and demand requirements in a safe, cost effective and sustainable manner for the following 10 years. In delivering the service, risks are identified and managed so that a balance is achieved between the desired performance of the asset, against the cost of providing the service.

This Asset Management Plan complies with the requirements of Section 122 of the *Local Government Act 1999*; and is an input for the City of Marion's Long-Term Financial Plan. Information contained in this plan is current as of December 2023.

The assets under management of the Stormwater Asset Management Plan are shown below.

Stormwater assets hierarchy



Decisions made to maintain, operate, renewal and construct new assets are based on strategic operational planning/performance and through Stormwater Management Plans.

Stormwater assets are constructed to either convey stormwater or to treat stormwater.

Stormwater assets have a purpose to prevent flooding and property damage and to improve water quality to provide enhancements to the environment.

The stormwater assets included in this plan have a total replacement value of $426,893,422.

Planning documents

Documents from the City of Marion's Strategic Management Framework together with other asset specific strategic documents were used in the development of this Asset Management Plan and are shown below.

City of Marion policies

- Environment Policy
- Climate Change Policy
- Open Space Policy
- Tree Management Policy

Streetscape Policy

- City of Mation plans, guidelines, frameworks
- Coastal Catchment Stormwater Management Plan
- Hallett Cove Creeks Stormwater Management Plan
- Open Space Framework/Plan
- Streetscape Design Guidelines
- WSUD Inspection & Maintenance Guidelines

State Government documents

- Environment Protection (Water Quality) Policy 2003
- The 30-Year Plan for Greater Adelaide (Plan SA)
- Water for Good
- Stormwater Management Authority's Strategic Plan (2015-2025)
- DIT Operational Instruction 20.1

Other documents

- Local Government Association Mutual Liability Scheme
- IPWEA NAMS+ & AMP template
- IPWEA Practise Notes
- International Infrastructure Management Manual 2015 (ISO 55000)
- Australian Standards

Key stakeholders

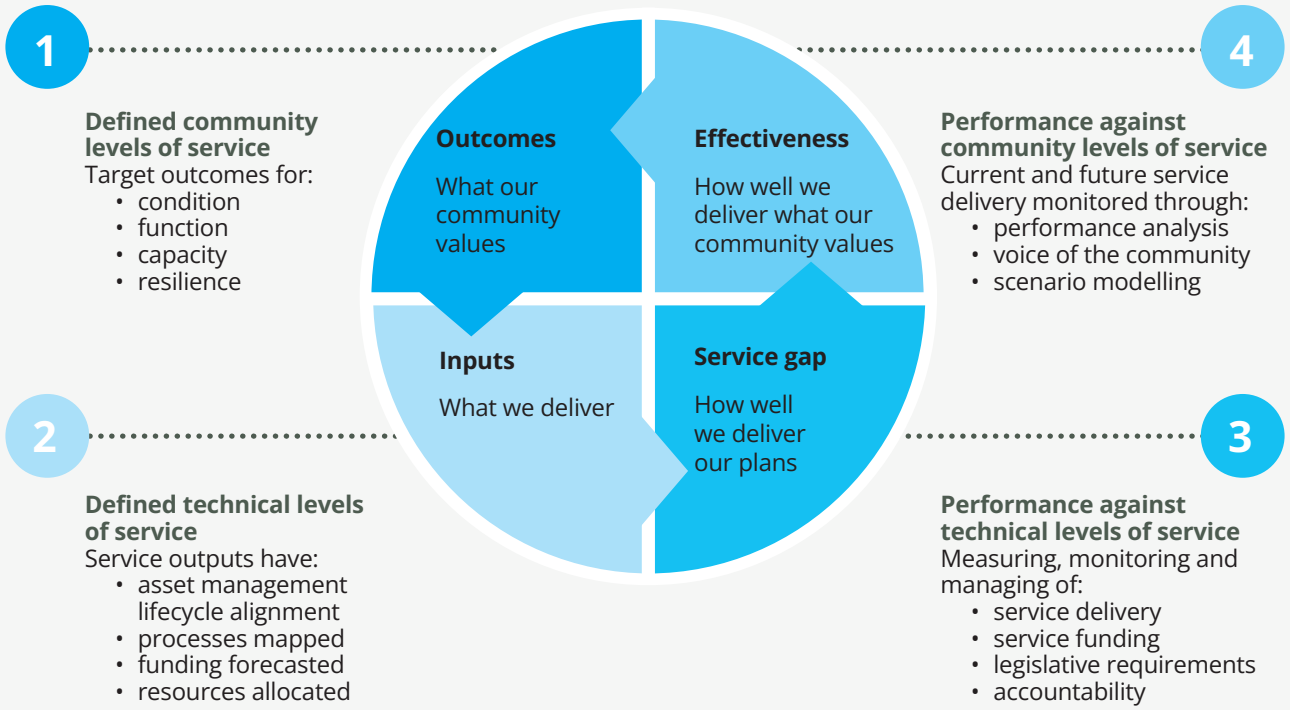
Key Stakeholder	Role in Asset Management Planning
City of Marion - Council Members	Represent community needs and endorse levels of service and Asset Management Plans.
City of Marion - Executive Leadership Team (ELT)	Allocate resources to ensure the service is sustainable. Ensure risks are managed while meeting objectives of the plan.
City of Marion - Asset Owner, Engineering, Assets, Environment Division	Provide subject matter expertise advice and guidance regarding best practice. Ensures the delivery of services to the agreed level. Ensures the improvement plan is followed and actioned. Manages the asset data and asset management system. Manages and reviews risks and future demands.
City of Marion - Operations Division	Provides maintenance activities and resources required to complete the works to achieve the desired performance.
City of Marion - Finance Division	Provides advice on budget and cost allocations. Allocate budgets according to forecasts and ensure alignment with the Long-Term Financial Plan (LTFP).
City of Marion - Risk and Strategy Division	Provides strategic advice and guidance. Risk management and future demand advice.
Community	Provide feedback on level of service and offer a source of funding through rates.
State Government	Provide strategic direction through State endorsed plans and strategies. Can be a source of funding to projects and plans within endorsed Stormwater Management Plans.

Levels of service

Levels of service ensure we meet community expectations. The primary reason assets exist is to deliver services.

Levels of service underpin asset management decisions. Defining and measuring levels of service is a key activity in developing Asset Management Plans. When levels of service are considered collectively, they provide clarity and assist with meeting council's strategic objectives.

Using levels of service to measure service delivery performance



When defining levels of service, council takes into consideration:

- the external context, including legislative requirements which may impose minimum standards.
- the internal context including strategic objectives, the availability of resources and financial constraints.
- community expectations of the quality of service, balanced against the price they are willing and able to pay for that service.

These drivers influence council's decisions about the range, quality and quantity of services provided.

Strategic and corporate goals

This Asset Management Plan is prepared under the direction of the community vision, goals and objectives.

Our purpose

To improve our resident's quality of life; continuously, smartly, and efficiently.

Our Community Vision

A community that is (L) Liveable, (VN) Valuing Nature, (E) Engaged, (P) Prosperous, (I) Innovative, and (C) Connected.

Stormwater assets aim:

To minimise the impacts of flooding to the community and to capture and treat stormwater to improve water quality for the enhancement of the environment.

Objective ID	Council strategic objective description	How the objectives are addressed in the plan
L3	We will create a series of streetscaped avenues to improve the amenity of our neighbourhoods	The renewal, upgrade or construction of new Kerb & Channel to enhance the street to manage stormwater, improve safety and provide environmental benefits. The construction of Water Sensitive Urban Design such as Tree Inlet pits to capture stormwater and treat stormwater within the verge space.
VN1	We will plan for and respond to extreme weather events through our services and urban form, managing infrastructure issues associated with flooding and stormwater.	Monitor, operate and maintain the stormwater network to ensure it functions as designed. Investigate and plan for Stormwater Infrastructure that addresses areas that are flooding or the potential of future flooding through Stormwater Management Plans.
VN2	We will build community resilience to the impacts of climate change.	Stormwater Management Plans use projections of climate change in terms of rainfall events, sea level rise and the impacts of flooding by developing maps and at-risk areas.
VN3	We will operate more efficiently and sustainably in terms of energy and water use, using the best technologies and methods to be as self-sufficient as possible	Review areas that can be utilised for Water Sensitive Urban Design devices and techniques to reduce stormwater volumes within the stormwater network/system.
VN6	We will encourage our community to be careful in their energy and water consumption	Encourage new developments to use rainwater tanks and other treatments to reduce stormwater run-off.
I1	We will use the best technology possible to improve efficiency of our operations and delivery of our services.	Data is collected within the catchment areas to understand how the Stormwater Assets are functioning and what condition they are in.
I2	We will use data to provide evidence for resource allocation relating to our services.	Operational data is measured to ensure maintenance service levels are met.

Legislation

The Legislation and industry Standards used in the preparation of this AMP are found in the table on the right.

Legislation	Relevance to Stormwater Assets
Australian Accounting Standards	Sets out the financial reporting standards relating to the (re)valuation and depreciation of infrastructure assets.
Coastal Protection Act 1972	Establishes Council's responsibility for the day-to-day maintenance of beach and coastal facilities.
Environment Protection Act 1993 (Marine and Water Quality)	Provides guidelines for protection of the environment, related areas and legal obligations relating to stormwater pollution protection.
Highways Act 1926	Sets out the legislative framework for road authorities in SA.
Local Government Act (1999)	Provision of Long-Term Financial Plans and Asset Management Plans for sustainable service delivery.
Natural Resources Management Act 2004	Establishes the Stormwater Management Authority which facilitates and coordinates stormwater management planning in councils.
Planning and Design Code	Informs on suburban infill development and subsequent Stormwater impact.
Planning, Development, and Infrastructure Act (2016)	Provides a framework for development approval requirements.
Relevant Australian Standards	Defines the natural resource management requirement to manage catchments including stormwater.
Work Health and Safety Act 2012 (SA)	Informs of obligations on parties to provide and maintain safe workplaces.

What our community values

Community feedback

A key objective of asset management planning is matching the levels of service council delivers with the levels of service expectations of our community. Council uses a range of activities to engage with the community and stakeholders such as social media, website content, community workshops and meetings, education services and via Council Members. This ensures that levels of service, funding and management practices proposed for our assets are appropriate.

A community satisfaction survey was conducted by the City of Marion in 2022. A range of channels was used to reach out to all groups in the City of Marion community, including letterbox drop, social media, email, and face-to-face approaches to ensure a wide demographic spread of survey responses. Questions relating to age, gender, and relationship to the City of Marion and suburb were also included to confirm the views were representative of a more balanced demographic spread. The measure calculation methodology remains unchanged from previous years to ensure accurate trend measurement. The 2022 City of Marion survey shows our residents believe that providing and maintaining stormwater assets are of a high importance and are satisfied with the services provided, see below.

Performance Measure	Satisfied	Importance
Providing and Maintaining Stormwater Assets	86%	95%

The relative gap between the two measures of 'Importance' and 'Satisfaction' informs Council of the need to improve our management of stormwater assets. This Asset Management Plan sets out a plan to ensure the community satisfaction of stormwater assets is maintained or improved from the current state.

Community levels of service

Community levels of service detail what is important to our community and how they receive and experience our services.

Building on the National State of the Assets reporting and emerging industry good practice, council considers the following service parameters:

Condition: Does the asset provide a safe and quality service?

Function: Is the asset fit for purpose?

Capacity: Is the service over or under used?

Resilience: Is the asset's design resilient against projected stressors and land developments..

By listening and understanding what is important to our community, we have developed Community Levels of Service. These factual measures provide a balance in comparison to the community perception (importance and satisfaction) that may be more subjective. Performance is monitored against targets, using 1-5 rating scales.

Using industry standard measures enables Council to compare our performance. This includes submitting data to the National State of the Assets benchmarking project commissioned by the Australian Local Government Association. A summary of these parameters is shown in the table below.

Summary of performance parameters and service level trends

Parameter	Community Level of Service	Achieved by	Predicted Trend
Condition	The City of Marion's stormwater network operates efficiently and safely.	The City of Marion stormwater network is properly designed and constructed, regularly monitored, and maintained to enable infrastructure to be functional as per it's intended use.	Maintain
Function	The City of Marion's stormwater network is planned, designed, and constructed to minimise suburban flooding.	Function is measured using the current network vs what is left to build, while also applying timeframes on when it needs to be built. Tracked against program priorities matrix and expected timeframes.	Maintain
Capacity	The City of Marion's stormwater network operates effectively during rainfall events.	Strategies to address the impacts of ongoing capacity pressure as a result of infill development, land division and change in climate are captured in stormwater management plans.	Maintain
Resilience	The City of Marion's stormwater network is planned, designed and constructed considering current and future demands.	Maintaining City of Marion Standards Drawings and Stormwater Guidelines for developers. Partnerships and trials for new methods, products and techniques in Stormwater design and construction. Implementing Water Sensitive Urban Design techniques.	Maintain

Council and the community is a key focus of the City of Marion's asset management transformation. Measures and targets are determined by the Assets Steering Committee. The performance of the stormwater assets against these community parameters is shown in the Asset Performance section.

Technical levels of service

Technical Levels of Services detail what we do to deliver our services. Council manages and operates assets at the agreed levels of service while managing whole-of-life costs to ensure best value. It is important to monitor the levels of service regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and community priorities will change over time.

Technical service measures are linked to the activities and annual budgets as shown in the lifecycle phase and technical levels of service below.

Lifecycle phase

Planning

The management and planning for Stormwater has multiple elements, these include:

- Stormwater Management Plans (4 major catchments)
- Field River Catchment
- Sturt River Catchment
- Coastal Catchment
- Hallett Cove Creeks Catchment
- City of Marion Flood Mapping
- Stormwater Standard Drawings and Technical Specifications for constructing Stormwater Infrastructure
- Stormwater Design Guidelines for developers

The planning of stormwater assets ensures that decisions for investments into the stormwater network is done on a prioritised basis.

The development and the review of City of Marion standards, technical specifications and guidelines are undertaken to ensure a consistent approach to Stormwater Assets by developers and the City of Marion.

Creation

The creation of Stormwater Assets is determined using the Stormwater Prioritisation Matrix which assess projects on a number of criteria and ranked.

Projects are identified through:

- Stormwater Management Plans which use catchment modelling of current and future scenarios to determine what infrastructure is required to meet the current service levels and future demand.
- Requests made by the public or staff on an issue (not identified within the Stormwater Management Plan) will be placed on the Stormwater Prioritisation Matrix and assessed against other projects.

In addition, stormwater assets are also donated to Council by developers of major sub-division or State Government major projects that include stormwater infrastructure in the local or state own roads. These donated assets must meet City of Marion Standards and Technical Specifications before it can be accepted into the City of Marion asset register.

Operation

Operation is defined as the day-to-day activities undertaken to provide service delivery to the community. The operations activity in relation to Stormwater Assets and Kerb and Channel are:

- Street Sweeping
- Pit/Pipe Cleaning
- Gross Pollutant Trap Cleaning

In addition to physical operations, non-physical operation activities include asset protection activities which include:

- Before you Dig (BYD) Membership
- Before you Dig (BYD) Response Automation

BYD is used to help City of Marion, Developers, Service Authorities and any party undertaking excavation to identify any underground assets in an area before works. This is to protect workers from injury and the underground stormwater assets from damage.

Monitoring

Monitoring of Stormwater assets include:

- CCTV condition & defect inspections of Stormwater Components & Conduits (On-going program)
- Monitoring devices measuring catchment flow rates
- Condition and defect assessment of the Kerb and Channel

Maintenance

Maintenance is split into 2 types, Reactive and Proactive Maintenance.

Reactive Maintenance is unscheduled activities in a response to community notifications or following inspections after severe weather events. The types of reactive work activities are:

- Pit lid dislodgments and replacements
- Kerb and Channel repairs (causing ponding of water)
- Pipe Failure

Proactive Maintenance involves the regular scheduled activities including proactive repairs and improvements. The types of proactive work activities are:

- Proactive Pit Lid Program

Renewal

Renewal is defined as replacing the existing stormwater asset to the modern-day equivalent. Typically, this occurs when the condition of the asset is at or beyond the intervention level for renewal. The criteria for renewal is:

- When 40% of the asset segment has defects (requires full renewal)
- When the condition of the asset is poor (IPWEA rating of 4 for Kerb & Channel and Stormwater) or above
- Streetscape Projects that may require new levels for the Kerb & Channel or implementation of WSUD treatments within the verge that require modification/renewal of the Kerb & Channel
- Kerb and Channel proactive renewal (prior to road resealing)

Service standards

Customer events system

The City of Marion City Services Department is committed to providing the highest level of community service possible and aims to be the benchmark in Engineering, Civil Maintenance and Operations in Local Government.

City of Marion captures requests from the community through its Customer Event System (Salesforce) and has the current structure of requests as listed including service level agreement in the table below.

Category	Request Reason	Request Sub-Reason	Service Level Agreement*
Stormwater / Drainage	Broken Pipes / Headwalls	Maintenance	60 Days
	Council Property	Land Division Issue	60 Days
	Drainage System Information	N/A	60 Days
	General System Advice	N/A	60 Days
	Kerb / Channel	Maintenance	60 Days
	Private Property	Council Easement / Blocked / Damaged / Pipe	60 Days
		Water Entering Private Property from Neighbour	60 Days
		Water entering private property from street	60 Days
		Council Easement / General enquiry	60 Days
		Stormwater detention tanks	60 Days
	Residential Connection to street	Damaged during construction	260 Days
		General enquiry	260 Days
		Quotation	260 Days
	Side Entry Pit	Blocked	60 Days
		Broken / Missing Cover	60 Days
		Maintenance	60 Days
	Stormwater Pollution from a Non-Development Site	N/A	60 Days
	Water Pooling in Street	N/A	60 Days
Street Sweeping	Complaint	N/A	60 Days
	Service Request	N/A	60 Days

**Service level agreement is the time to complete all actions associated of the request. In cases that the request identifies a safety risk to the community immediate action is taken to isolate and make safe.*

Customer events trends

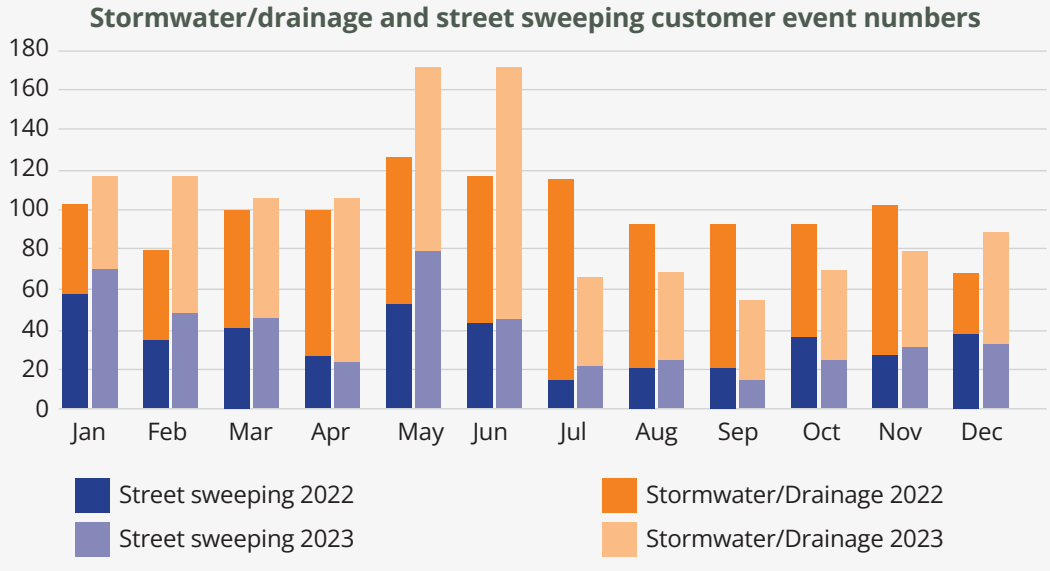
It is important to capture customer request information to determine how our community is interacting with the City of Marion and to track information regarding volumes, seasonal variations and the types of requests to understand how to best allocate resources. Data needs to be understood and analysed to identify services that can be more proactive and action items before they are reported to the City of Marion.

Customer events by category and reason	2022	2023	Total
Stormwater / Drainage			
Broken pipes / Headwall	3	22	25
Council Property	2	2	4
Drainage system information	19	31	50
General stormwater advice	22	27	49
Kerb / Channel	136	105	241
Private property	79	56	135
Residential connection to street	65	83	148
Side Entry Pit	247	226	473
Stormwater pollution from a Non-Development site	20	6	26
Water pooling in street	89	102	191
Street sweeping	415	464	879
Grand Total	**1097**	**1124**	**2221**

Data from our customer event system is shown in the table on the left and the monthly request for services is shown in the 'Stormwater/drainage and street sweeping customer event numbers table below.

It is projected that an increase in requests for maintenance and operations within the stormwater network is likely, due to the increase in tree plantings across the City of Marion in the past several years. It is anticipated that blockages from tree debris and requests for street sweeping will increase.

In addition, tree roots are a main cause of damage within the Kerb & Channel. We also anticipate an increase of damage to infrastructure over the coming years due to the maturing trees and during the tree root establishment period.



Future demand

Demand drivers are those factors which have the potential to impact stormwater function and service into the future.

Demand drivers include population, urban in-fill, planning and design code changes, political and community expectations, economic, and environmental factors.

Demand management plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

The impact of demand drivers that may affect future service delivery and use of assets including the opportunities identified to date for demand management are shown in the table below. Further opportunities will be developed in future revisions of this Asset Management Plan.

Demand Driver Group	Driver and Projection	Impact on Services	Demand Management Plan
Community Requests	Community requests.	Expectations to respond to reactive service delivery requests leads to inefficient resource planning additional cost and asset failure.	Approved Stormwater Prioritisation Matrix and ongoing review of the Asset Management Plan. Service Level Agreement based on risk for operational and maintenance activities.
Land Use	Planning and design code changes resulting in reduced open space, reduced verge widths and an increase to impermeable 'hard' surfaces. Urban infill resulting in more housing and increase to impermeable 'hard' surfaces.	Increase in stormwater volume discharge from new major developments on to City of Marion's Stormwater network.	Ensure new developments conform to City of Marion's Developer Guidelines, Technical Specifications and Standards. Work with developers in major sub-divisions to achieve outcomes that can improve the stormwater network in the catchment.
Economic	Property damage caused by Stormwater.	Increase in public liability claims. Increase emergency call outs.	Monitor network and model catchment hydrology to determine at risk areas.
Social	Increased population density.	Increased risk of exposure to flood hazards within the City of Marion.	Operations division to identify and resolve risk locations. Use permeable materials.
Technological	Smart Cities, Sensors, GIS, remote sensing, Artificial Intelligence, LiDAR mapping.	Data collection and accuracy is improved assisting with decision making and reporting.	Continue to collect and maintain stormwater asset data, aerial imagery and hydraulic data to help inform future decisions.

Climate change adaptation

Climate change is likely to affect stormwater asset life and functionality, and this is already being experienced through increase in more intense heavy rainfall events. This has had the effect of putting the stormwater system at maximum capacity and the potential of stormwater entering private property.

The Department of Environment and Water produced "Guide to Climate Projections for Risk Assessment and Planning in South Australia, 2022". This document outlines the trends, and these along with how City of Marion will manage resilience is shown in the table below.

Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience will have benefits:

- Assets will withstand the impacts of climate change.
- Services can be sustained.
- Assets that can endure and may potentially lower the lifecycle cost and reduce their carbon footprint.
- Recycled content within the infrastructure asset or backfill that will reduce the carbon footpath.

Parameter	Projected Trend	Impact on Asset and Services	Resilience Management
Temperature	• Maximum, minimum and average temperatures will increase. • Warmer spring temperatures. • Hotter and more frequent hot days.	• Increased water stress to trees. Will cause trees to drop more debris on the road and into the stormwater system.	• Monitor street sweeping services and assess SLA's. • Assess current service levels for Gross Pollutant Trap cleaning. • Consider footpath sweepers to help reduce debris getting into the stormwater network.
Rainfall	• Declining rainfall, lower spring rainfall. • More drought.	• Dust, sand and silt may be more prone to make it's way into the stormwater system. Increasing operational activities such as street sweeping and pit/GPT cleaning.	• Monitor street sweeping services and assess SLA's
Storms	• More intense heavy rainfall events and which carry intensified winds.	• Increase likelihood or branch failures and whole tree failures that will lead to blockages in the Stormwater system. • Reactive responses increased frequency • Capacity issues. • Budget impacts.	• Pre-storm event operational activities to ensure the stormwater network is operating efficiently. i.e. street sweeping, pit cleaning and GPT cleaning.
Evaporation	• Evapotranspiration increases across all seasons.	• Increased water stress to trees may cause tree roots to rise to the surface and lift Kerb & Channel infrastructure.	• Increase funding for monitoring/ maintenance programs.

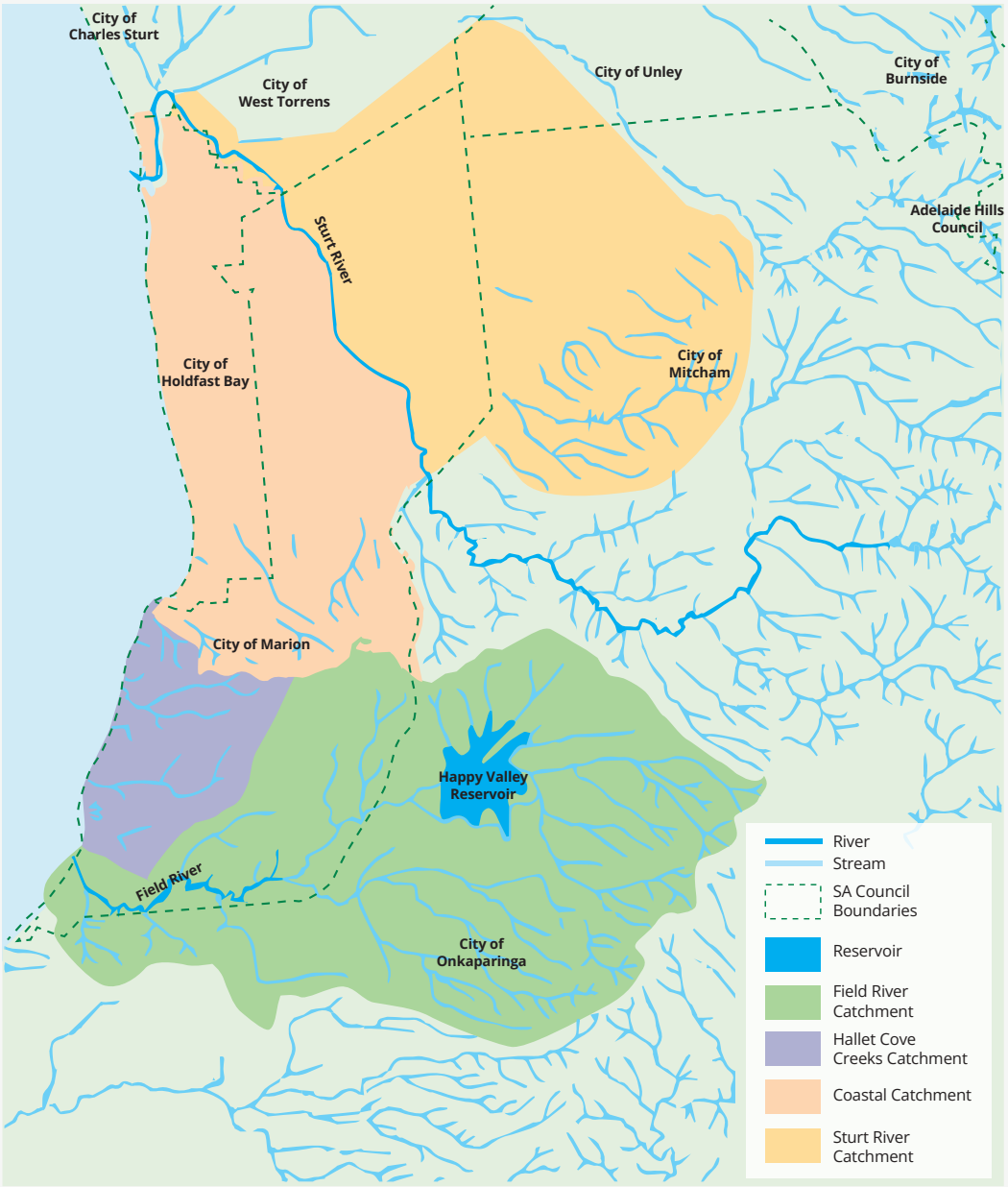
Lifecycle management

Preliminary information

City of Marion occupies 56 km^2 and has 4 major stormwater catchment areas outlined by the Stormwater Management Authority:

- Coastal Catchment
- Field River Catchment
- Hallett Cove Creeks Catchment
- Sturt River Catchment

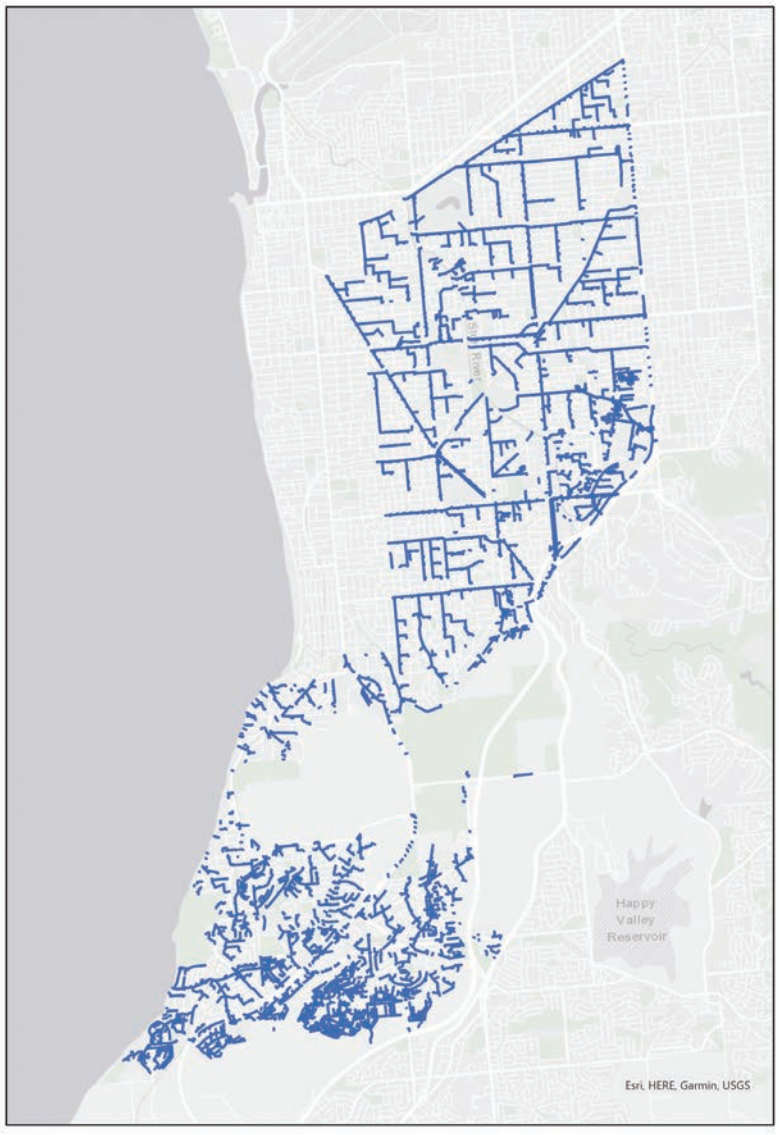
City of Marion catchments map



Physical parameters

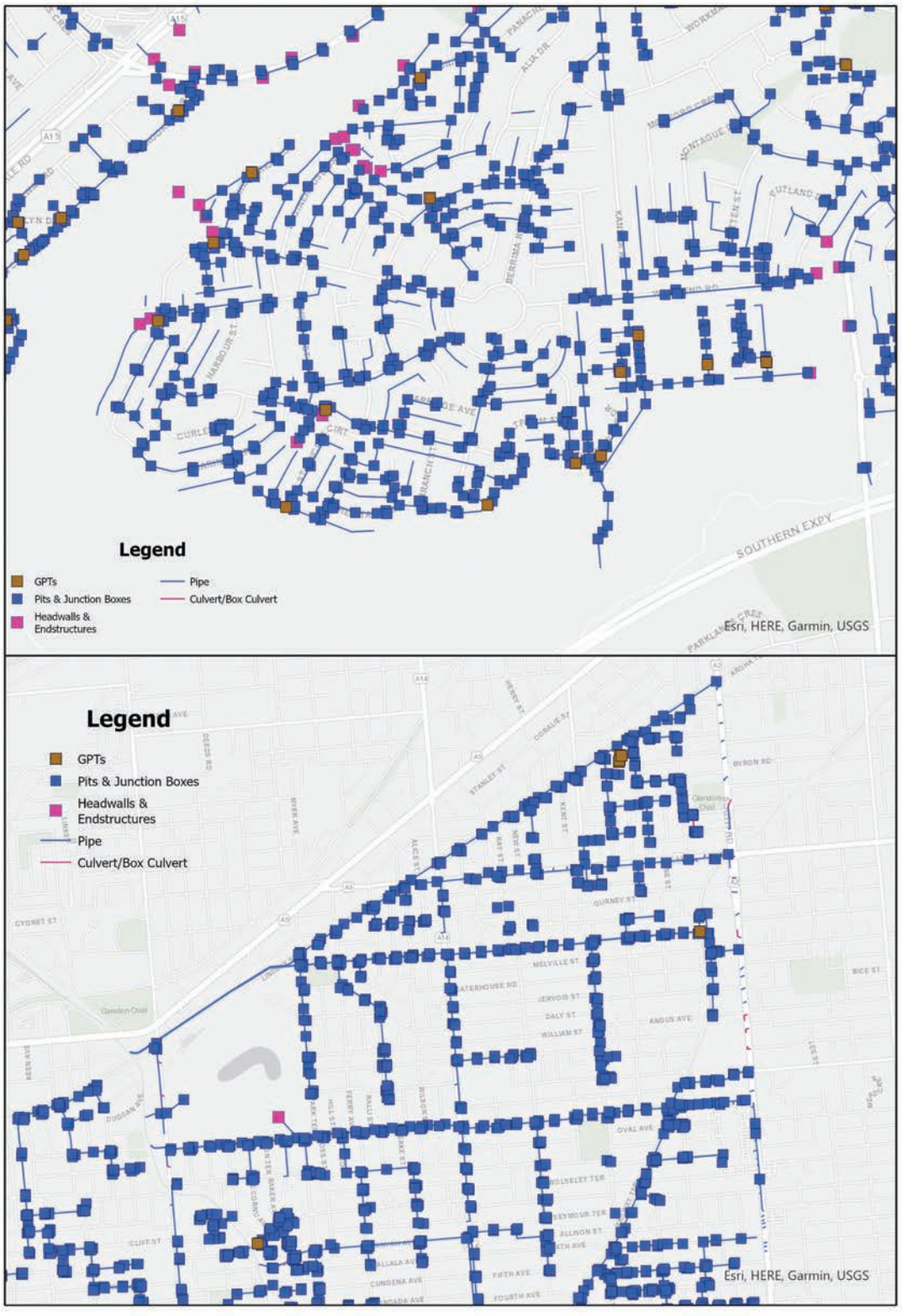
The assets covered by this Asset Management Plan are shown in the table below including the expected useful life and replacement cost.

Asset Class	Asset Sub-Class	Quantity	Useful Life	Replacement Value
Stormwater Components	Pits	6946	100 years	$34,132,090
	Gross Pollutant Traps	61	100 years	$2,424,300
	Headwalls	213	100 years	$458,735
Stormwater Conduits	Pipes	254,903 m	100 years	$190,082,562
	Culverts/Box Drains	5,622 m	100 years	$15,545,644
Kerb & Channel	Kerbs	983,070 m	70 years	$179,616,421
	Spoon Drains	24,886 m	70 years	$4,633,670
Total				**$426,893,422**



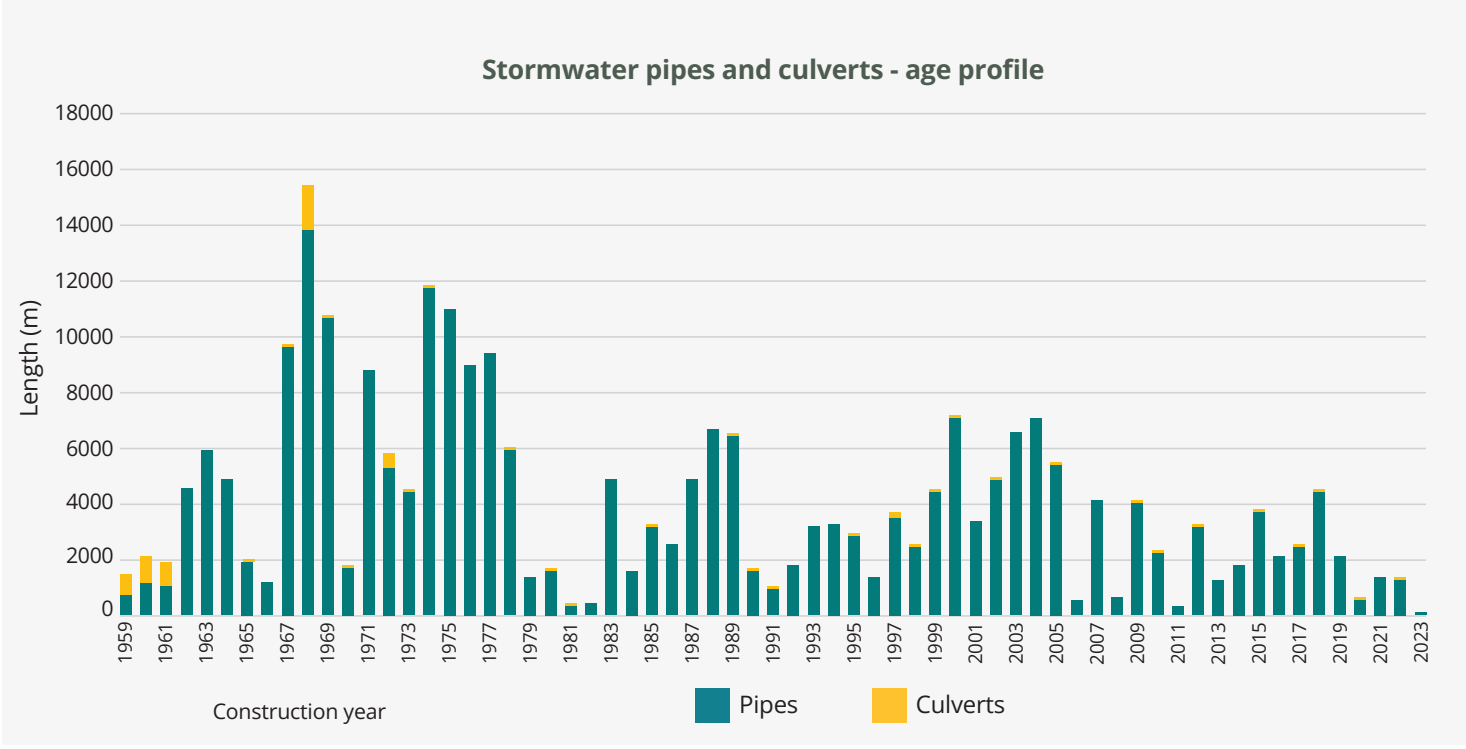
How the data is stored and represented in a Geographical Information System (GIS).

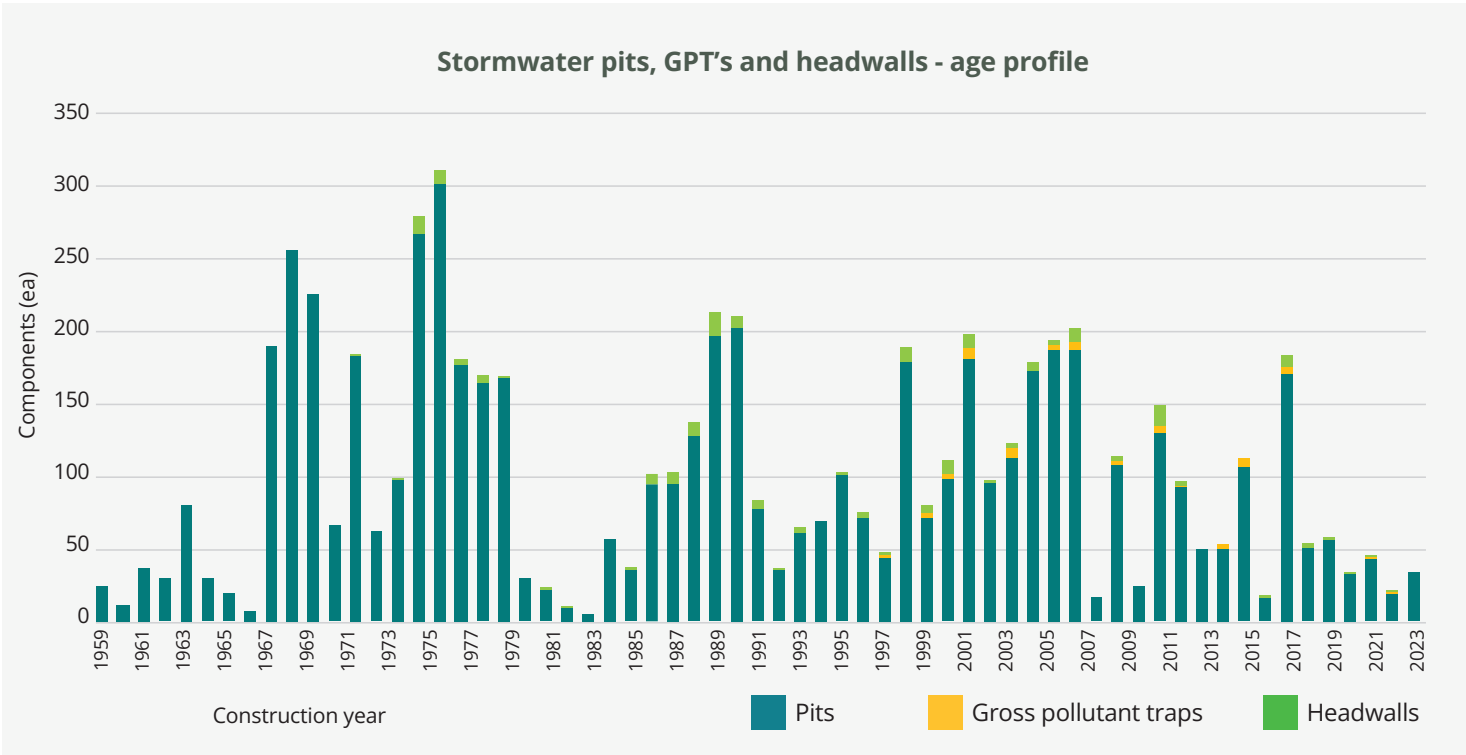
How the data is stored and represented in a Geographical Information System (GIS).



Age profile

Age profiles are used to understand how the life of an asset is progressing, it could be used as an indicator of when large peaks of assets may reach an end of life over the long term, although condition data is more appropriate driver of renewal programs. See below for age profiles for Stormwater Conduits, Components and Kerb & Channel.





Asset performance

Asset condition

The service level that the community is willing to accept for condition of its Stormwater Assets is described below.

Asset condition performance description

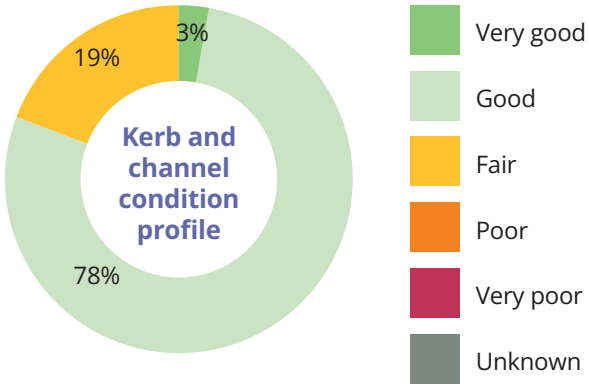
Community level of service	Achieved by	Target	Tolerance range
The City of Marion's stormwater network operates efficiently and safely.	• Frequently monitoring the network for Defects and undertaking Condition assessments. • Maintaining and renewing assets at or before condition intervention point.	90% of assessed assets in very good to fair condition.	On track - 90% to 100% Monitor - 70% - 89.9% Off track - 0% to 69.9%

Kerb and channel asset condition

Kerb and Channel condition is rated using the descriptions outlined IPWEA Practice Notes and a summary outlined below. A condition audit was undertaken in 2022 to provide an up-to-date condition assessment of the network, this can be seen in the 'Kerb and channel condition profile' chart.

	Kerb and Channel Asset Condition Rating	Assessed Assets	%
1	Very Good: Sound physical condition. Insignificant deterioration. Asset likely to perform adequately without major work for 25 years of more.	27,711 m	3%
2	Good: Acceptable physical condition. Minor deterioration / minor defects evident. Negligible short term failure but potential for deterioration in long-term (20 year or more).	749,469 m	78%
3	Fair: Moderate to significant deterioration evident. Minor components or isolated sections of the asset need replacement or repair now but not affecting short term structural integrity. Failure unlikely within the next 4 years but further deterioration likely and major replacement likely within the next 10-20 years.	190,009 m	19%
4	Poor: Serious deterioration and significant defects evident affecting structural integrity. Failure likely in short to medium term. Likely need to replace most of all of asset within the next 4 years.	1771 m	~0%
5	Very Poor: Failed or Failure imminent (less than 12 months). Immediate need to replace most or all of the asset. Major work or replacement required urgently.	20 m	~0%
Unknown	Unknown Condition or Construction Date	0m	0%

The data shows that over 99% of assets are either rated Very Good, Good or Fair. This represents that the Kerb & Channel network performance is 'On Track' and within the target range

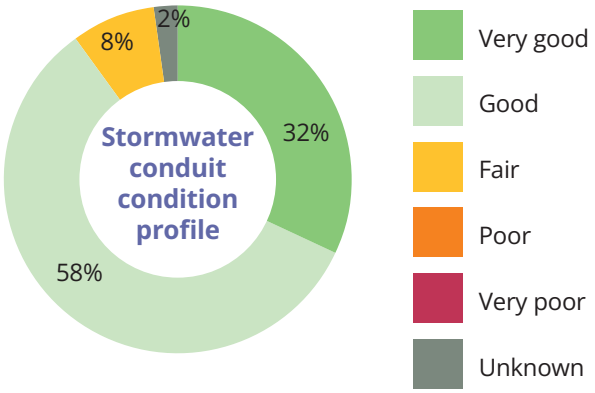


Stormwater conduits asset condition

Condition for Stormwater Conduits is currently calculated by using the age profile. Using the estimated residual useful life of the asset, it is assumed that the assets will need renewing after 100 years. It is recommended in the Improvement Plan that physical CCTV inspections on the network is required to improve the condition profiles and future renewal programs. The condition profile can be seen in below.

	Stormwater conduits asset condition rating	Assessed Assets	%
1	Very Good: Sound physical condition. Insignificant deterioration. Asset likely to perform adequately without major work for 25 years of more.	84,424 m	32%
2	Good: Acceptable physical condition. Minor deterioration / minor defects evident. Negligible short term failure but potential for deterioration in long-term (20 year or more).	150,214 m	57%
3	Fair: Moderate to significant deterioration evident. Minor components or isolated sections of the asset need replacement or repair now but not affecting short term structural integrity. Failure unlikely within the next 4 years but further deterioration likely and major replacement likely within the next 10-20 years.	20,626 m	8%
4	Poor: Serious deterioration and significant defects evident affecting structural integrity. Failure likely in short to medium term. Likely need to replace most of all of asset within the next 4 years.	0	0%
5	Very Poor: Failed or Failure imminent (less than 12 months. Immediate need to replace most or all of the asset. Major work or replacement required urgently.	0	0%
Unknown	Unknown Condition or Construction Date	7,495 m	3%

The data shows that over 97% of assets are either rated Very Good, Good or Fair. This represents that the stormwater conduit network performance is 'On Track' and within the target range.

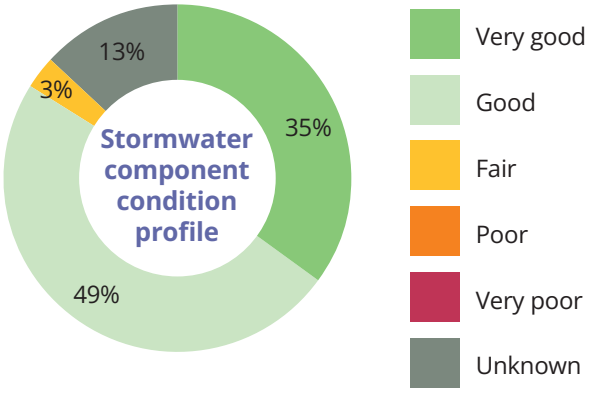


Stormwater components asset condition

Condition for Stormwater Components is currently calculated by using the age profile. Using the estimated residual useful life of the assets, it is assumed that these assets will need renewing after 100 years. It is recommended in the Improvement Plan that physical inspections on the network is required to improve the condition profiles and future renewal programs. The condition profile can be seen below.

	Stormwater components asset condition rating	Assessed Assets	%
1	Very Good: Sound physical condition. Insignificant deterioration. Asset likely to perform adequately without major work for 25 years of more.	2460	35%
2	Good: Acceptable physical condition. Minor deterioration / minor defects evident. Negligible short term failure but potential for deterioration in long-term (20 year or more).	3404	49%
3	Fair: Moderate to significant deterioration evident. Minor components or isolated sections of the asset need replacement or repair now but not affecting short term structural integrity. Failure unlikely within the next 4 years but further deterioration likely and major replacement likely within the next 10-20 years.	210	3%
4	Poor: Serious deterioration and significant defects evident affecting structural integrity. Failure likely in short to medium term. Likely need to replace most of all of asset within the next 4 years.	0	0%
5	Very Poor: Failed or Failure imminent (less than 12 months). Immediate need to replace most or all of the asset. Major work or replacement required urgently.	0	0%
Unknown	Unknown Condition or Construction Date	926	13%

The data shows that over 87% of assets are either rated Very Good, Good or Fair. This represents that the stormwater components are in the 'Monitor' range. Noting that 13% of the dataset is unknown (no construction date or condition assessment) it is recommended that these assets should have an inspection undertaken in the short term.



Asset function

The service level that the community is willing to accept for function of its Stormwater Assets is described in below.

Community level of service	Achieved by	Target	Tolerance range
The City of Marion's stormwater network is planned, designed, and constructed to minimise suburban flooding	• -Development of Stormwater Management Plans to identify where new stormwater assets are required. • Updating Stormwater Prioritisation Matrix list or future new Stormwater Projects.	90% of assessed assets are functioning 'very good'.	On track - 90% to 100% Monitor - 70% - 89.9% Off track - 0% to 69.9%

The function of the stormwater assets can be measured using a scale of 1 (Very Good) and 5 (Very Poor) and answering a statement of 'has the asset been constructed within the timeframes as outlined in the Stormwater Management Plans/Stormwater Matrix'. This is to identify how City of Marion to tracking against other plans and strategies and is within the acceptable range to minimise suburban flooding. See below for details on the function rating.

	Stormwater assets function rating	Assessed Assets
1	Very Good: Asset constructed within the timeframes listed within the Stormwater Management Plans/ Stormwater Prioritisation Matrix.	100%
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	Very Poor: Asset not constructed within the timeframes listed within the Stormwater Management Plans/ Stormwater Prioritisation Matrix.	0%

The data shows that 100% of assets are rated Very Good. This represents that the network performance is 'On Track' and within the target range.

Asset capacity

The service level that the community is willing to accept for capacity of its Stormwater Assets is shown below.

Community level of service	Achieved by	Target	Tolerance range
The City of Marion's stormwater network operates effectively during high rainfall events.	• Maintaining and updating flood modelling/mapping for the 100 year ARI (1% AEP) for both current and future states. • Undertake data collection and monitoring for stormwater catchments and pipe flow rates/ volumes. • Updating Stormwater prioritisation matrix list for future new/upgrade Stormwater Projects to increase capacity/reduce strain on the current network.	90% of assessed assets are 'very good' and 'fair' capacity.	On track - 90% to 100% Monitor - 70% - 89.9% Off track - 0% to 69.9%

The capacity of the stormwater assets can be measured using a scale of 1 (Very Good), 3 (Fair) and 5 (Very Poor) and answering a statement of 'does the existing asset have the capacity to operate effectively'. This will determine if assets may need to be upgraded to meet the service level of capacity. See below for details on the capacity rating.

	Stormwater asset capacity description	Assessed capacity
1	Very Good: No capacity concerns.	99%
2	N/A	N/A
3	Fair: At risk capacity concerns.	0%
4	N/A	N/A
5	Very Poor: Over capacity issues, network not properly functioning resulting in flooding streets/private property.	1%

The data shows that 99% of assets are rated Very Good or Fair. This represents that the network performance is 'On Track' and within the target range.

Resilience

The service level that the community is willing to accept for resilience of its Stormwater Assets is shown below. No targets have been set for the service level of resilience. This will need further consideration and assessment in future Asset Management Plans.

Community level of service	Achieved by	Target	Tolerance range
The City of Marion's stormwater network is planned, designed, and constructed considering current and future demands.	• Maintaining City of Marion Standards Drawings, Technical Specifications and Stormwater Guidelines. • Seek partnerships and trials for new methods, products and techniques in Stormwater design and construction. • Implementing Water Sensitive Urban Design techniques.	Not established.	Not established.

Operational Expenditure (OpEx)

Planning

The activities, initiatives, plans, strategies and wages required to plan the stormwater assets infrastructure over the 10 years are shown below.

Image courtesy of Beltrame Civil

Activity	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Stormwater Management Plan Field River Catchment		$150					$50			
Stormwater Management Plan Sturt River Catchment	$17					$50				
Stormwater Management Plan Coastal Catchment	$50					$50				
Stormwater Management Plan Hallett Cove Creeks Catchment			$50					$50		
Total	**$67**	**$150**	**$50**	**$0**	**$0**	**$100**	**$50**	**$50**	**$0**	**$0**

All figures are in ,000 format

Operations

The activities, initiatives and wages required to operate the stormwater assets infrastructure over the 10 years are shown below.

Activity	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Street Sweeping • Service Level = 8 week frequency every street	$445	$445	$445	$445	$445	$445	$445	$445	$445	$445
Pit Cleaning • Service Level = Approx. 300 pits cleaned per year	$66	$66	$66	$66	$66	$66	$66	$66	$66	$66
Gross Pollutant Trap (GPT) Cleaning • Service Level = 3 month frequency every GPT in City of Marion • Contribution to City of Holdfast Bay's GPT cleaning • Contribution from City of Mitcham for GPT cleaning	$241	$241	$241	$241	$241	$241	$241	$241	$241	$241
Pre/Post Storm Activities • Major storm events that trigger additional pre/post storm activities (reactive activities)	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50
Before you Dig (BYD) Membership	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
Before you Dig (BYD) Response Automation	$10	$10	$10	$10	$10	$10	$10	$10	$10	$10
Total	**$817**	**$817**	**$817**	**$817**	**$817**	**$817**	**$817**	**$817**	**$817**	**$817**

All figures are in ,000 format

Maintenance

The activities and wages required to maintain the stormwater assets infrastructure over the 10 years are shown below.

Activity	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Stormwater Pit's Reactive Maintenance • Pit lid dislodgments • Damaged Pit Lid	$60	$60	$60	$60	$60	$60	$60	$60	$60	$60
Stormwater Pit's Proactive Maintenance • Pit lid upgrade	$210	$210	$210	$210	$210	$210	$210	$210	$210	$210
Kerb and Channel Reactive Maintenance • Response to requests • Defects identified in Kerb and Channel audits	$165	$295	$200	$200	$200	$200	$200	$200	$200	$200
Total	**$435**	**$565**	**$470**	**$470**	**$470**	**$470**	**$470**	**$470**	**$470**	**$470**

All figures are in ,000 format

Monitoring

The activities and wages required to monitor the stormwater assets infrastructure over the 10 years are shown below.

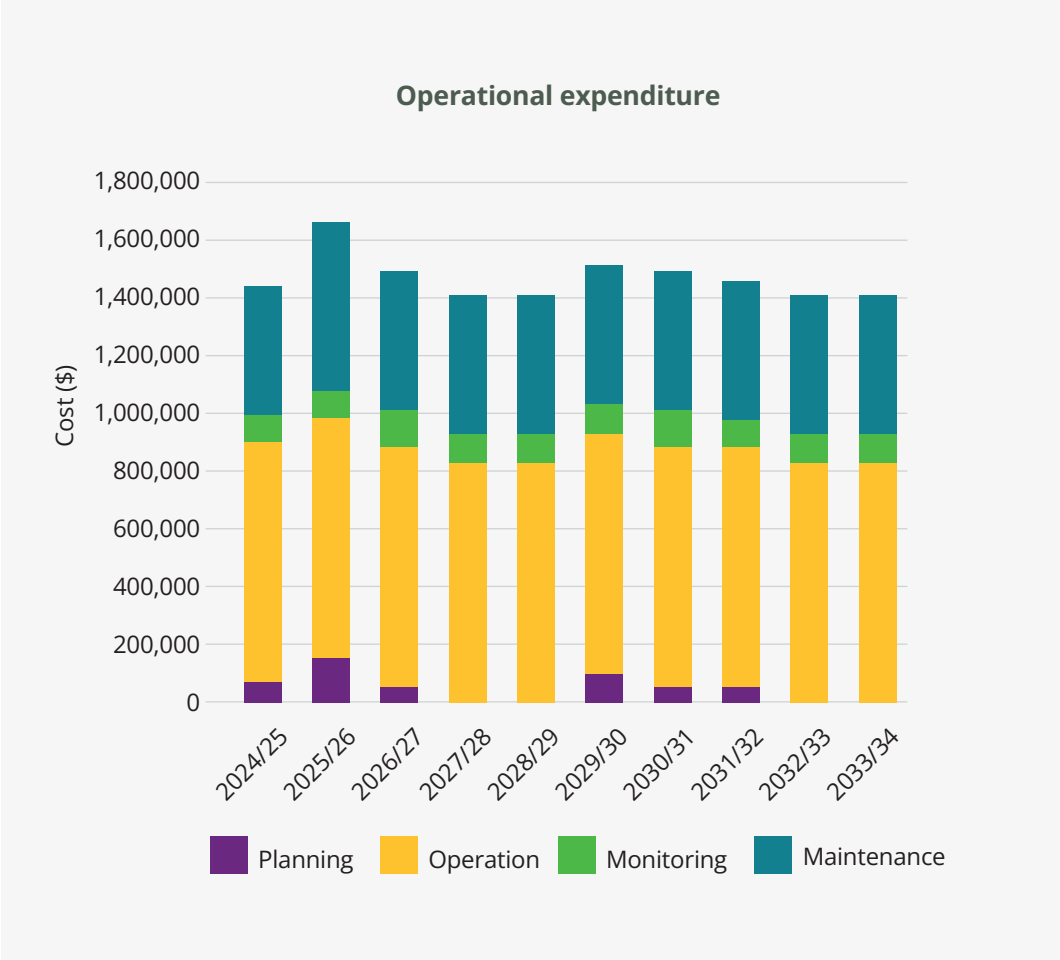
Activity	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Stormwater CCTV Inspections Program	$80	$80	$80	$80	$80	$80	$80	$80	$80	$80
Kerb and Channel Condition Audit			$35				$35			
Stormwater Catchment Data Collection	$15	$15	$15	$15	$15	$15	$15	$15	$15	$15
Total	**$95**	**$95**	**$130**	**$95**	**$95**	**$95**	**$130**	**$95**	**$95**	**$95**

All figures are in ,000 format

Operations expenditure summary

Cost Elements: The Planning, Operations, Maintenance and Monitoring costs comprise the direct costs of providing the service including council labour, contractor services, plant and equipment hire and specialist contractors for monitoring and planning activities. The chart below shows the cost per year for each category of operational expenditure.

The Operational Expenditure budget levels of this plan are sufficient to meet the current service levels.



Capital Expenditure (CapEx)

Renewal

The activities, contributions, management and wages required to renewal the stormwater assets infrastructure over the 10 years are shown below.

All figures are in ,000 format

Activity	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Kerb & Channel Renewal Program • Kerb section renewal (prior to road reseal) • Kerb full renewal additional $20k in Year 2 only	$900	$920	$900	$900	$900	$900	$900	$900	$900	$900
Kerb & Channel Streetscape Contribution • Assumes 25% of the overall Streetscape Program budget comprises kerb and channel renewal.	-	$550	$550	$550	$550	$550	$550	$550	$550	$550
Stormwater Renewal Program • Determined via CCTV monitoring program. Full asset renewal or relining when condition/defects reach intervention level	$1,605	$1,550	$1,550	-	-	-	-	-	-	-
Total	**$2,505**	**$3,020**	**$3,000**	**$1,450**	**$1,450**	**$1,450**	**$1,450**	**$1,450**	**$1,450**	**$1,450**

Renewal is defined as replacing the existing stormwater asset to the modern-day equivalent. Typically this occurs when the condition of the asset is at or beyond the intervention level for renewal. The criteria for renewal is:

- When 40% of the asset segment has defects (full renewal).
- When the condition of the asset is 4 (IPWEA rating for Kerb & Channel and Stormwater) or above.
- Streetscape Projects that may require new levels for the Kerb & Channel or implementation of WSUD treatments within the verge that require modification/renewal of the Kerb & Channel.
- Prior to road reseal program section renewal.

Creation

The activities, construction, management and wages required to create stormwater assets infrastructure over the 10 years are shown below.

All figures are in ,000 format

Activity	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Stormwater Prioritisation Matrix Creation Program	$1,949	$1,875	$2,290	$2,975	$2,900	$2,900	$2,900	$2,900	$2,900	$2,900
Donated Assets from Developers & State Government*	-	-	-	-	-	-	-	-	-	-
Total	**$1,949**	**$1,875**	**$2,290**	**$2,975**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**	**$2,900**

The creation of Stormwater Assets is determined using the Stormwater Prioritisation Matrix which assess projects on a number of criteria and ranked. Projects are identified through:

- Stormwater Management Plans which uses modelling of current and future scenarios to determine what infrastructure is required to met the current service levels.
- Requests made by the public or staff on an issue (not identified through modelling through the Stormwater Management Plan) will be placed on the Stormwater Prioritisation Matrix and assess against other projects.

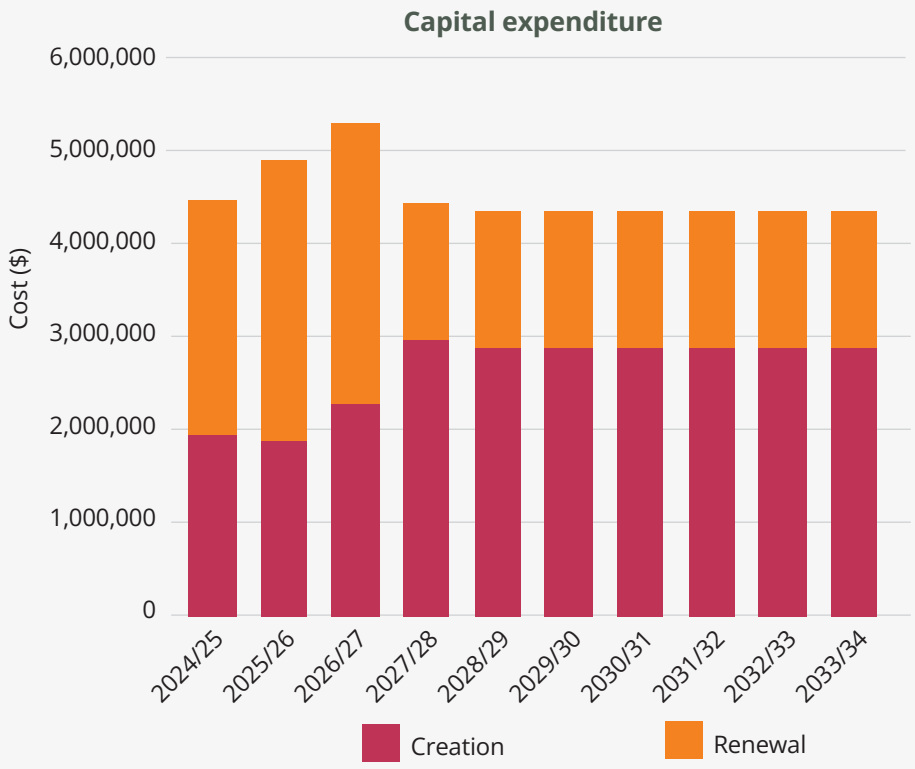
In addition, stormwater assets are also donated to Council by developers of major sub-division or State Government major projects that include stormwater infrastructure in the local or state own roads. These donated assets must meet City of Marion Standards and Technical Specifications before City of Marion can accepted into its asset register.

** Donated assets from developers through major sub-divisions or State Government through major projects are undertaken on an ad-hoc basis and difficult to project value of assets City of Marion will receive. It should be noted that City of Marion doesn't need to pay capital for stormwater infrastructure associated with developments or major projects.*

Capital expenditure summary

Cost Elements: The renewal and creation comprise the direct costs of Council labour, Plant and Equipment Hire and Contractor services. The chart on the right shows the cost per year for Renewal and Creation categories of expenditure.

The Renewal and Creation budgets levels of this plan are sufficient to meet the service levels.



Risk management

Council's Risk Management Policy sets the overall framework for addressing risk within the framework of ISO31000.

The elements of this framework are:

- Risk Management Context: Establishes the objectives, stakeholders, key issues, and criteria against which risks will be evaluated.
- Identify the Risk: Identifies what risk events are likely to impact on assets and services.
- Analyse the risk: Reviews the existing controls and then analyses the likelihood of an event occurring and the consequence of the event to determine the level of risk.
- Evaluate the Risk: Assesses and ranks the identified risks in a Risk Register.
- Treat the Risks: Identifies actions to reduce/ control the risk.

Council manages its stormwater assets in line with the *Local Government Act*, specifically Section 244 Liability for injury, damage or loss on community land. There are currently no high risk issues identified within the stormwater asset network.

Critical assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. For stormwater, critical assets include trunk mains and pipe sizes over 600mm in diameter.

City of Marion has 95 km (2351 asset segments) of critical Stormwater Conduits of this description. This represents approximately 37% of the total stormwater network.

What we cannot do

The forecast budget is matched to the planned budget which enables the outcomes of this Asset Management Plan to be achieved.

Risk Management Process from ISO 31000:2018

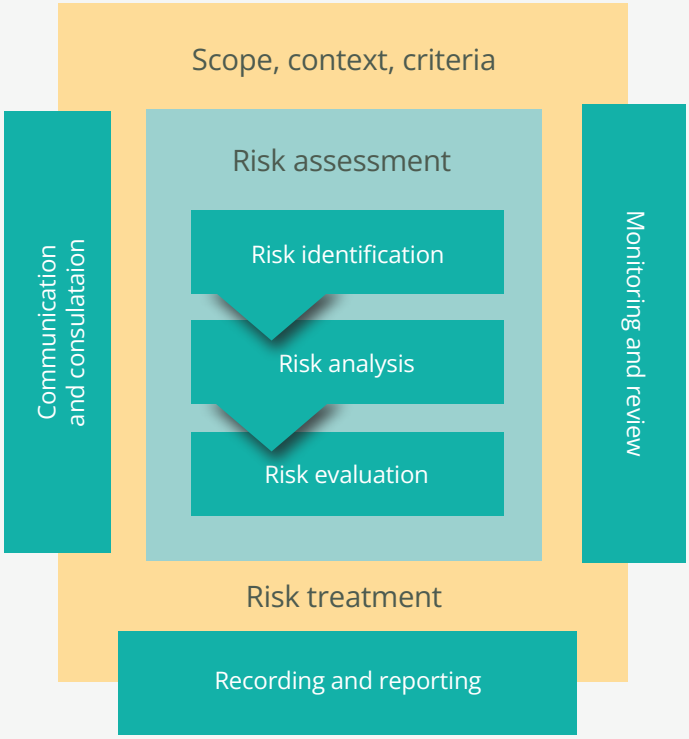


Image courtesy of Beltrame Civil

Financial summary

Financial sustainability

Sustainability of service delivery

Two key indicators of sustainable service delivery are considered in the Stormwater Asset Management Plan:

1. The forecast renewals are funded over the life of this plan to ensure the continuity of function that the asset provides. Assets are scheduled for renewal based on an estimated end of useful economic life.
2. OpEx is funded to ensure the day to day management and integrity of the asset to ensure the required levels of service are met.

This AMP is used to inform the LTFP, through an iterative process balancing cost, performance, and risk. As a part of its Annual Business Planning process, CoM undertakes a review of forecast asset management expenditures. This revised forecast annual funding requirements is incorporated into Council's currently adopted Annual Business Plan and Long-Term Financial Plan.

10-year financial planning period

This Asset Management Plan identifies the forecast OpEx and CapEx costs required to provide an agreed level of service to the community over a 10-year period.

Forecast outlays for the LTFP

Funding Allocation	10 Year	Average Annual Cost
Operational Cost (OpEx)	$14,417,000	$1,441,700
Capital Cost (CapEx)	$45,163,700	$4,516,370
Total cost of the plan	**$59,580,700**	**$5,958,070**

Stormwater assets forecast 10-year expenditure for each asset lifecycle phase from 2024/25 to 2034/35

Year	Planning	Creation	Operation	Monitoring	Maintenance	Renewal	Disposal	Forecast Total
2024/25	67,000	1,948,700	817,000	95,000	435,000	2,505,000	0	$5,867,700
2025/26	150,000	1,875,000	817,000	95,000	565,000	3,020,000	0	$6,522,000
2026/27	50,000	2,290,000	817,000	130,000	470,000	3,000,000	0	$6,757,000
2027/28	0	2,975,000	817,000	95,000	470,000	1,450,000	0	$5,807,000
2028/29	0	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,732,000
2029/30	100,000	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,832,000
2030/31	50,000	2,900,000	817,000	130,000	470,000	1,450,000	0	$5,817,000
2031/32	50,000	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,782,000
2032/33	0	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,732,000
2033/34	0	2,900,000	817,000	95,000	470,000	1,450,000	0	$5,732,000
Total	**$467,000**	**$26,488,700**	**$8,170,000**	**$1,020,000**	**$4,760,000**	**$18,675,000**	**$0**	**$59,580,700**

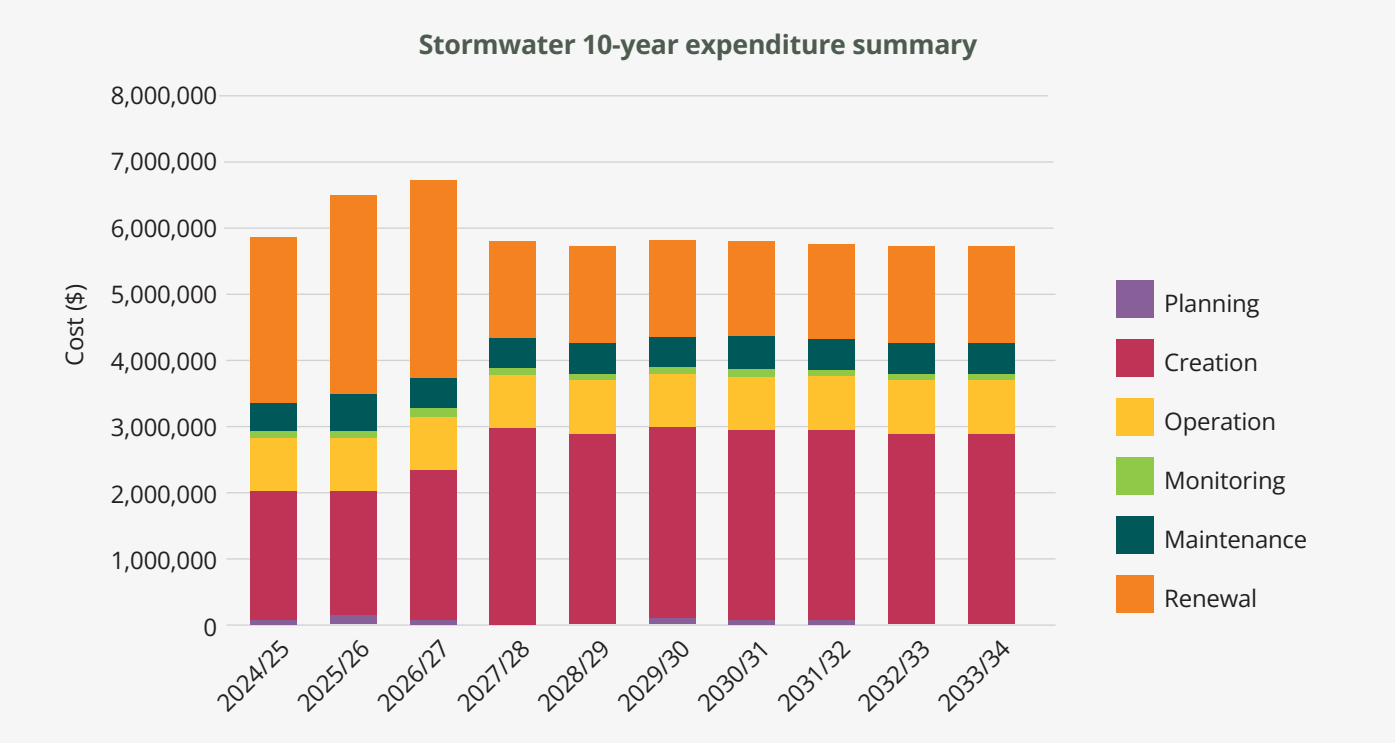


Image courtesy of Beltrame Civil


Image courtesy of Beltrame Civil

Valuation forecasts

The best available information of the value of assets included in this Asset Management Plan are shown below. The assets are valued at a fair value at cost to replace service capacity and construction costs.

Replacement Cost (Current/Gross):	**$428,285,517**
Accumulated Depreciation:	**$164,225,114**
Depreciated Replacement Cost:	**$264,060,403**
Depreciation:	**$1,561,799**

Key assumptions in financial forecasts

- All data used in this Asset Management Plan is current as of December 2023.
- The forecast 10-year expenditure profile is provided in 2024 dollars.
- Long-Term Financial Plan will be adjusted annually to account for cost index increases and utility cost anomalies.
- Stormwater Conduits and Components estimated renewal dates are driven by useful life and not condition.
- Historical trends in storm events are reliable forecast for future budget planning.
- Climate Risk Assessments are used as a guide to inform budget planning.
- Community levels of service expectations remain consistent.
- Changes in legislation do not impact the service levels.
- Resources availability is not impacted because of pandemic, or other State Emergencies.

Forecast reliability and data confidence

The forecast costs, proposed budgets, and valuation projections in this Asset Management Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified in accordance with data below.

Confidence grade	Description
A. Very high	Data based on sound records, procedures, investigations, and analysis, documented properly, and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%.
B. High	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. Dataset is complete and estimated to be accurate ± 10%.
C. Medium	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. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%.
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%.
E. Very low	None or very little data held.

The Stormwater Asset Management Plan has a level of confidence for each dataset, below for details.

Data	Confidence Assessment
Asset Condition Kerb & Channel	A
Asset Condition Conduits	C
Asset Condition Components	C
Asset Function	A
Asset Capacity	C
Asset Age Profile	B
Replacement Value	B
Service Levels	A
Demand drivers	B
Asset Creation and Renewal Forecasts	B
Operating and Maintenance Forecast	B

Monitoring and review

This Asset Management Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

Cost changes will be reviewed annually, and any changes needed to the forecasts outlay for the Long Term Financial Plan will be published separately to this plan.

The Asset Management Plan will be reviewed and updated every four years to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, creation and asset disposal costs and planned budgets.

These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

Improvement plan

The following improvement initiatives were identified as part of the development of this Asset Management Plan and show alignment with the overall Council Strategy.

Alignment	Task	Resource	Completion
I1	Update Standard Drawings and Technical Specifications relating to Stormwater Assets and construction methodology	Coordinator Survey and Design	June 2025
I1	Reallocate Wetlands and Water Sensitive Urban Design (WSUD) from Water Treatment & Resources Asset Management Plan to the Stormwater Asset Management Plan	Unit Manager Engineering	2028
I1	Review stormwater data structure and terminology	Unit Manager Engineering	June 2026
I2	Develop and implement a 4-year plan to collect and analyse asset condition data for Stormwater Conduits and Components	Infrastructure Engineer	June 2028
I2	Review and revise chart of accounts to facilitate consistent and accurate cost allocation for all asset expenditure aligned with the Asset Management Lifecycle	Unit Manager Engineering	June 2025
I2	Implement a process to update this Asset Management Plan during annual budget planning processes to show any material changes in service levels and/or resources.	Unit Manager Engineering	June 2025
E4	Sturt River Stormwater Management Plan Endorsement	Unit Manager Engineering	June 2025
E4	Field River Stormwater Management Plan Endorsement	Unit Manager Engineering	June 2027

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