

ASSET MANAGEMENT PLAN  

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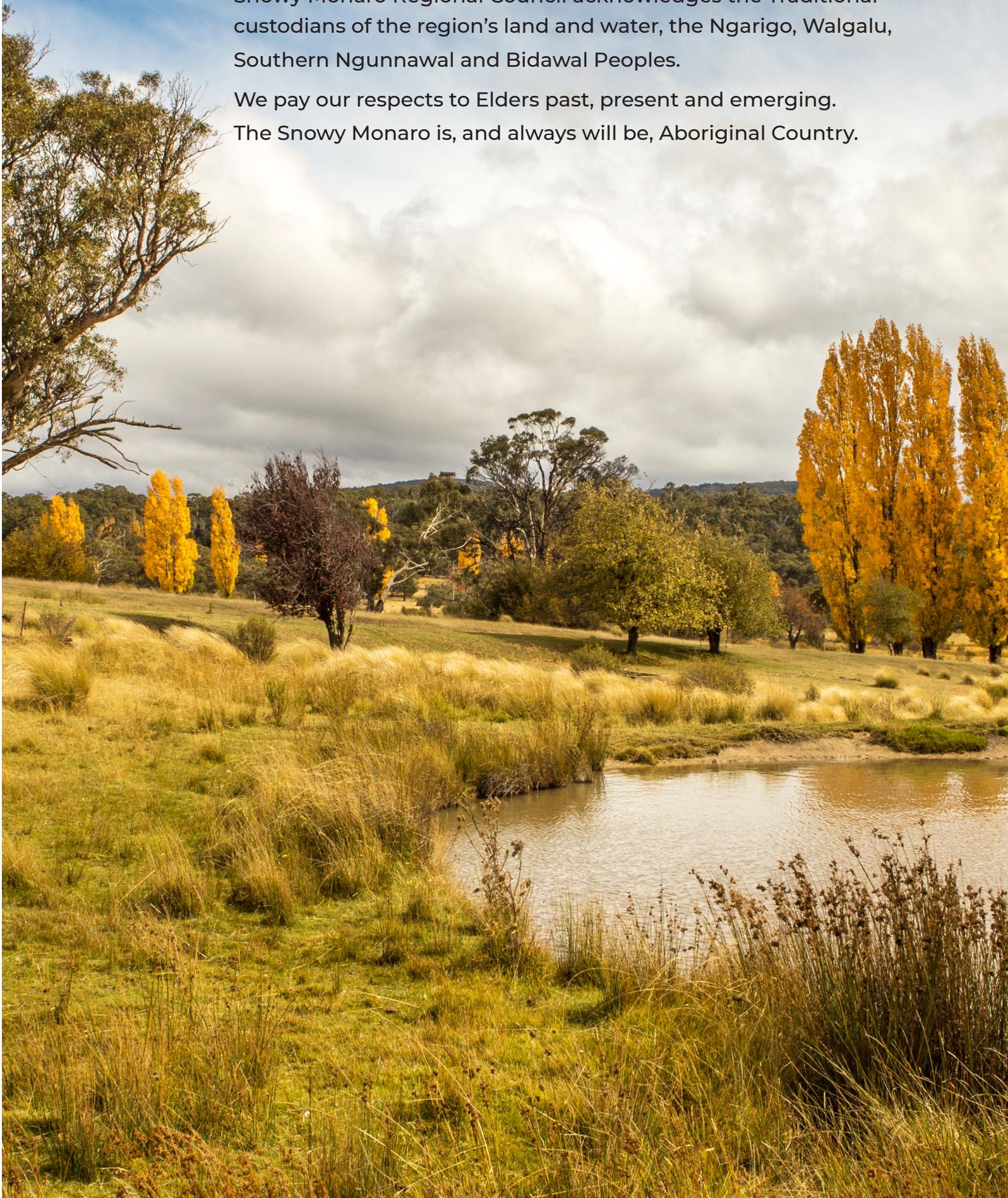
WATER  
2022 - 2032



# Acknowledgement of Country

Snowy Monaro Regional Council acknowledges the Traditional custodians of the region's land and water, the Ngarigo, Walgalu, Southern Ngunnawal and Bidawal Peoples.

We pay our respects to Elders past, present and emerging.  
The Snowy Monaro is, and always will be, Aboriginal Country.



## Record of Versions

Uncontrolled document when printed. Please refer to intranet for controlled document.

Version	Date Published	Reason for Amendments	Resolution	Author/Document Owner
1.0	23/6/2022	Final Draft for Council Meeting	170/22	Coordinator Strategy Development
1.1				
1.2				
1.4				
1.5				
1.6				
1.7				

Photography:

Cover: Coolumbooka Weir by Jessica Dunstan

MJD Photography: pg 2

# Contents

- 1.0 EXECUTIVE SUMMARY 3**
- 1.1 The Purpose of the Plan ..... 3
- 1.2 Asset Description ..... 3
- 1.3 Levels of Service..... 3
- 1.4 Future Demand ..... 3
- 1.5 Lifecycle Management Plan..... 3
- 1.6 Financial Summary ..... 4
- 1.7 Asset Management Planning Practices..... 5
- 1.8 Monitoring and Improvement Program..... 5
  
- 2.0 INTRODUCTION 6**
- 2.1 Background ..... 6
- 2.2 Goals and Objectives of Asset Ownership..... 6
  
- 3.0 LEVELS OF SERVICE 8**
- 3.1 Customer Research and Expectations ..... 8
- 3.2 Strategic and Corporate Goals ..... 8
- 3.3 Legislative Requirements ..... 8
- 3.4 Levels of Service..... 10
  
- 4.0 FUTURE DEMAND 12**
- 4.1 Demand Drivers ..... 12
- 4.2 Demand Forecasts ..... 12
- 4.3 Demand Impact and Demand Management Plan..... 12
- 4.4 Asset Programs to meet Demand ..... 12
  
- 5.0 LIFECYCLE MANAGEMENT PLAN 13**
- 5.1 Background Data..... 13
- 5.2 Operations and Maintenance Plan ..... 15
- 5.3 Renewal Plan..... 16
- 5.4 Summary of future renewal costs..... 17
- 5.5 Acquisition Plan..... 19
- 5.6 Disposal Plan ..... 20
- 5.7 Summary of asset forecast costs ..... 21
  
- 6.0 RISK MANAGEMENT PLANNING 22**
- 6.1 Critical Assets..... 22
- 6.2 Risk Assessment..... 22
- 6.3 Infrastructure Resilience Approach..... 24

<b>7.0</b>	<b>FINANCIAL SUMMARY</b>	<b>25</b>
7.1	Financial Sustainability and Projections .....	25
7.2	Funding Strategy .....	26
7.3	Valuation Forecasts .....	26
7.4	Key Assumptions Made in Financial Forecasts .....	27
7.5	Forecast Reliability and Confidence .....	27
<b>8.0</b>	<b>PLAN IMPROVEMENT AND MONITORING</b>	<b>28</b>
8.1	Status of Asset Management Practices .....	28
8.2	Improvement Plan .....	28
8.3	Monitoring and Review Procedures .....	28
8.4	Performance Measures .....	29
<b>9.0</b>	<b>REFERENCES</b>	<b>30</b>
<b>10.0</b>	<b>APPENDICES</b>	<b>31</b>
Appendix A	Acquisition Forecast .....	31
Appendix B	Operation Forecast .....	32
Appendix C	Maintenance Forecast .....	32
Appendix D	Renewal Forecast Summary .....	33
Appendix E	Disposal Summary .....	33
Appendix F	Budget Summary by Lifecycle Activity .....	34

## **1.0 EXECUTIVE SUMMARY**

### **1.1 The Purpose of the Plan**

This Asset Management Plan (AMP) details information about infrastructure assets with actions required to provide an agreed level of service in the most cost-effective manner while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required to provide over the ten year planning period. The AMP will link to a Long-Term Financial Plan which typically considers a 10 year planning period.

### **1.2 Asset Description**

This plan covers the infrastructure assets that provide Water services

The Water network comprises:

- 315km of water mains
- 9 treatment facilities
- 15 pump stations
- 34 reservoirs
- Telemetry network

The above infrastructure assets have replacement value estimated at \$138,247,000

### **1.3 Levels of Service**

The allocation in the planned budget is sufficient to continue providing existing services at current levels for the planning period.

At time of writing this plan, Council is in the process of community consultation on a number of proposed funding scenarios which will have impact on future budgets and service levels. The outcome of these consultations will be incorporated into future revisions of this plan

### **1.4 Future Demand**

The factors influencing future demand and the impacts they have on service delivery are created by:

- Increases in population
- Demographic changes such as ageing population
- Changed tourist visitation patterns

These demands will be approached using a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand. Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures.

### **1.5 Lifecycle Management Plan**

#### **1.5.1 What does it Cost?**

The forecast lifecycle costs necessary to provide the services covered by this AMP includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AMP may be prepared for a range of time periods, it typically informs a Long-Term Financial Planning period of 10 years. Therefore, a summary output from the AMP is the forecast of 10 year total outlays, which for the Water Service is estimated as \$79,560,168 or \$7,956,017 on average per year.

## 1.6 Financial Summary

### 1.6.1 What we will do

Estimated available funding for the 10 year period is \$42620000 or \$4262000 on average per year as per the Long-Term Financial plan or Planned Budget. This is 53.57% of the cost to sustain the current level of service at the lowest lifecycle cost.

The infrastructure reality is that only what is funded in the long-term financial plan can be provided. The Informed decision making depends on the AMP emphasising the consequences of Planned Budgets on the service levels provided and risks.

The anticipated Planned Budget for [Enter Asset Group] leaves a shortfall of \$-3694017 on average per year of the forecast lifecycle costs required to provide services in the AMP compared with the Planned Budget currently included in the Long-Term Financial Plan. This is shown in the figure below.

**Forecast Lifecycle Costs and Planned Budgets**

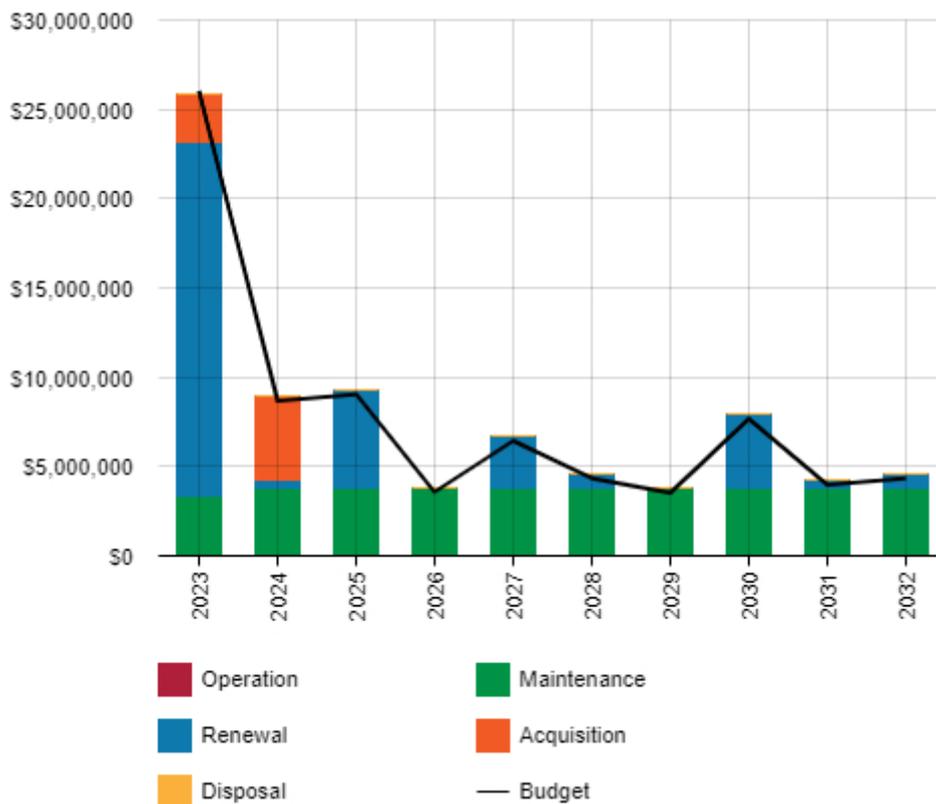


Figure Values are in current dollars.

We plan to provide water supply services for the following:

- Operation, maintenance, renewal and acquisition of water mains, reservoirs, treatment facilities and pumping stations to meet service levels set by Snowy Monaro Regional Council in annual budgets.

Renewal/replacement/upgrade of the Cooma Weir/fishway, telemetry and Snowy 1 reservoir within the 10 year planning period.

## 1.7 Asset Management Planning Practices

Key assumptions made in this AMP are:

- The assets will remain in the organisations ownership and control throughout the planning period
- Planned and reactive maintenance will take place in accordance with relevant guidelines/standards
- All expenditure is stated in 2021/22 dollar values
- Regulations and standards relating to operations will remain unchanged over the planning period

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge.

The Asset Register Method was used to forecast the renewal lifecycle costs for this AMP.

This AMP is based on a reliable level of confidence information.

## 1.8 Monitoring and Improvement Program

The next steps resulting from this AMP to improve asset management practices are:

- Develop Risk Management Plans for critical assets
- Improve the quality of asset condition data
- Progress the maturity of asset management planning from 'core' to 'advanced' level
- Separately identify and record operating costs
- Improve linking of customer requests to asset records

## 2.0 INTRODUCTION

### 2.1 Background

This AMP communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The AMP is to be read with the Snowy Monaro Regional Council planning documents. This should include the Asset Management Policy and Asset Management Strategy, where developed, along with other key planning documents:

- Asset Management Policy
- Asset Management Strategy

Comment on the current status of Asset Management in the Organisation.

The infrastructure assets covered by this AMP include water mains, reservoirs, treatment facilities and pumping stations. For a detailed summary of the assets covered in this AMP refer to Table in Section 5.

These assets are used to provide water supply services.

The infrastructure assets included in this plan have a total replacement value of \$138,246,997.

### 2.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

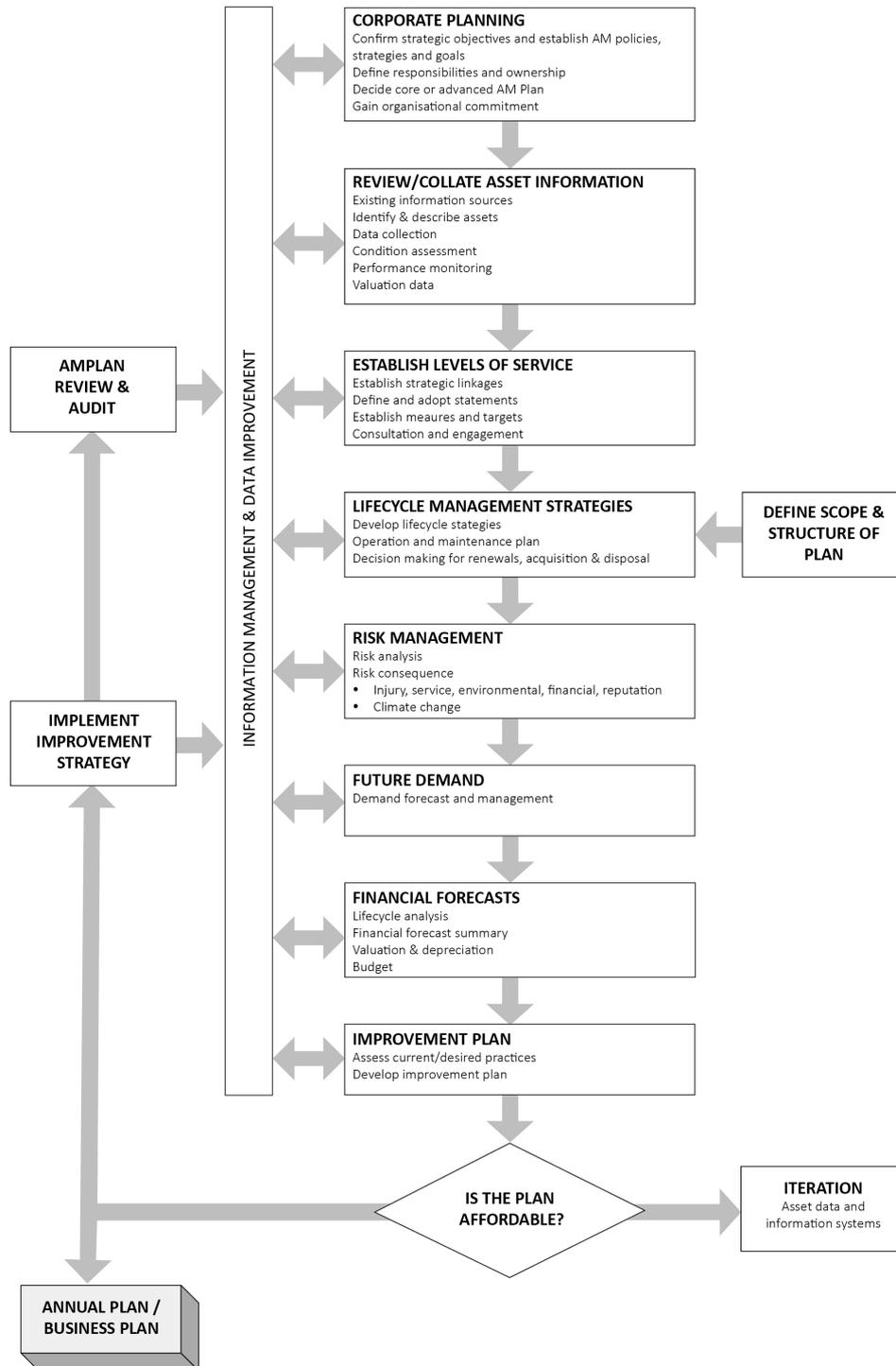
Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015<sup>1</sup>
- ISO 55000<sup>2</sup>

A road map for preparing an AMP is shown below.

### Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



<sup>1</sup> Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2 | 13

<sup>2</sup> ISO 55000 Overview, principles and terminology

## 3.0 LEVELS OF SERVICE

### 3.1 Customer Research and Expectations

This AMP is prepared to facilitate consultation prior to adoption of levels of service by the Snowy Monaro Regional Council. Future revisions of the AMP will incorporate customer consultation on service levels and costs of providing the service. This will assist the Snowy Monaro Regional Council and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

We currently have no research on customer expectations. This will be investigated for future updates of the AMP.

### 3.2 Strategic and Corporate Goals

This AMP is prepared under the direction of the Snowy Monaro Regional Council vision, mission, goals and objectives.

Our vision is:

The Snowy Monaro Region is a welcoming diverse and inclusive community where everyone can belong, participate, and work together. Our natural environment and heritage is preserved and enhanced for future generations.

The region offers a fulfilling quality lifestyle and is a place of opportunity, with education, training and economic opportunities for people of all ages and backgrounds.

Strategic goals have been set by the Snowy Monaro Regional Council. The relevant goals and objectives and how these are addressed in this AMP are summarised in Table 3.2.

**Table 3.2: Goals and how these are addressed in this Plan**

Objective	How Goal and Objectives are addressed in the AMP
4.1 Our health is supported by fit for purpose infrastructure	<ul style="list-style-type: none"><li>• By developing long term works programs and projecting expenditure required to implement these programs.</li><li>• By minimising the required physical and monetary resources through focussing on "whole-of-lifecycle" costs</li></ul>
4.4 We have in place infrastructure that supports our lifestyles	<ul style="list-style-type: none"><li>• By optimising maintenance works so that the desired outcomes are delivered at the least possible cost</li><li>• By coordinating with other departments when planning and scheduling maintenance and capital works programmes, to ensure minimum impact on visual amenity</li></ul>

### 3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the water service are outlined in Table 3.3.

**Table 3.3: Legislative Requirements**

Legislation	Requirement
<i>Local Government Act 1993</i>	<p>Sets out role, purpose, responsibilities and powers of local governments including the preparation of a long term financial plan supported by asset management plans for sustainable service delivery.</p> <p>Under S64 of the Act, in conjunction with the Water Management Act it facilitates the levying of developer charges.</p> <p>Amended in 2009 by the Local Government Amendment (Planning and Reporting) Act 2009, to incorporate the Integrated Planning &amp; Reporting framework</p>
<i>Water Management Act 2000</i>	<p>Covers issues such as water rights, licences and water allocations and mechanisms for levying developer charges.</p>
<i>Fluoridation of Public Water Supplies Act 1957</i>	<p>Under the Act the approval of the Department of Health is required in order that a Council can add fluoride to a water supply.</p>
<i>Public Health Act 1991</i>	<p>The Act provides for the prevention of the spread of disease and allows for the inspection and sampling of water supplies as well as prohibition of pollution and closure of polluted water supply.</p>
<i>Pollution Control Act 1970 and Clean Waters Act 1970</i>	<p>These Acts cover limits for monitoring and reporting of discharge from water treatment plants and environmental safeguards for the quantity and quality of waste output.</p>
<i>Environmental Offences and Penalties Act 1989</i>	<p>This Act supplements other legislation in protecting the environment from pollution and in particular creates additional offences relating to the disposal of wastes and the leaking, spillage and escape of substances from their containers. The Act requires that Council be duly diligent in undertaking operations that do or may have an adverse effect on the environment.</p> <p>The main application of this Act would be pollution arising from chlorination of the Water Supply and sludge from the treatment of the raw water.</p>
<i>Protection of the Environment Operations Act (POEO)</i>	<p>The Protection of the Environment Operations (POEO) 1997 as amended by the POEO Amendment Act 2005 is the primary piece of legislation for the control of environmental pollution in NSW.</p> <p>The POEO Act provides a key role for local councils in regulating non-scheduled industry. Authorised officers within local government are responsible for the management of all media: air, noise, water and waste for which they are the appropriate regulatory authority (ARA)</p>
<i>Environmental Planning and Assessment Act 1979</i>	<p>The Act requires that the environmental impact of projects be studied at all stages on the basis of scale, location and performance.</p> <p>This Act is applicable to approvals for subdivision and major redevelopments as well as water supply works in their own right. The Act would be applicable to major Capital works involving new construction.</p>

<i>Catchment Management Authorities Act 2003</i>	This Act establishes catchment management authorities and devolves to them certain natural resource management functions in their regions. This Act repealed the Catchment Management Act 1989.
<i>Soil Conservation Act 1938</i>	The objectives of this Act are the conservation of soil resources, farm water resources and the mitigation of erosion and land degradation.  Aspects of this Act will affect construction works, particularly where proposed works are likely to cause erosion which could be prevented and which are reported to the Secretary.
<i>Dams Safety Act 1978</i>	Under the Act the Dams Safety Committee may require the owner of a prescribed dam to make observations, take measurements and furnish the Committee with such information. Councils are required to prepare five-yearly Dam Surveillance Reports for their dams.
<i>Occupational Health and Safety Act 2000</i>	All Councils Operational activities are affected by the requirements of this Act
<i>Dangerous Goods Act 1975</i>	This Act sets down guidelines for the handling of prescribed dangerous goods (includes chlorine and caustic soda) and requires Council's facilities for the storage of such goods to be licensed if more than the prescribed quantity is kept in storage. For chlorine, the prescribed amount is 50kg in gaseous form, whilst for caustic soda the amount is 500kg or 500 litres. In addition, the chlorine shall be kept and conveyed in accordance with the Chlorine Code ED 2B 03, "Recommended Practice for the Storage and handling of Chlorine" published by the Workcover Authority.

### 3.4 Levels of Service

Council has defined service levels in two terms.

Customer Levels of Service relate to how the community receives the service in terms of safety, quality, quantity, reliability, responsiveness, cost/efficiency and legislative compliance.

Supporting the community service levels are operational or technical measures of performance developed to ensure that the minimum community levels of service are met.

At time of writing this plan, Council is in the process of community consultation on a number of proposed funding scenarios which will have impact on future budgets and service levels. The outcome of these consultations will be incorporated into future revisions of this plan

Council's current service levels are detailed in Table 3.5.

**Table 3.5: Level of Service Measures**

Key Performance Measure	Level of Service	Performance Measure	Performance Target	Current Performance
<b>CUSTOMER LEVELS OF SERVICE</b>				
Quality	Provision of clean, clear disinfected water	Customer satisfaction rating from Annual Community Satisfaction Survey	>3	
Safety	Drinking water is safe from any pollutants or contaminants	Compliance with Australian Drinking Water Guidelines	100% compliance in areas that are supplied with potable water	
<b>TECHNICAL LEVELS OF SERVICE</b>				
Availability of supply	Minimise number of water main breaks	Number of water main breaks per 100km per year	<30	
	Minimise unplanned water supply interruptions	Number of unplanned interruptions per 1000 connections per year	<50	
	Reduce response time to emergency water interruptions	Average response time to water incidents	<4 hours	

It is important to monitor the service levels 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 customer priorities will change over time.

## 4.0 FUTURE DEMAND

### 4.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

### 4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

### 4.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

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 and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this AMP.

**Table 4.3: Demand Management Plan**

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Population	21,207	1% growth per annum	Minimal impact on demand for services	NA

### 4.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit the Snowy Monaro Regional Council to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan (Refer to Section 5).

## 5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Snowy Monaro Regional Council plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

### 5.1 Background Data

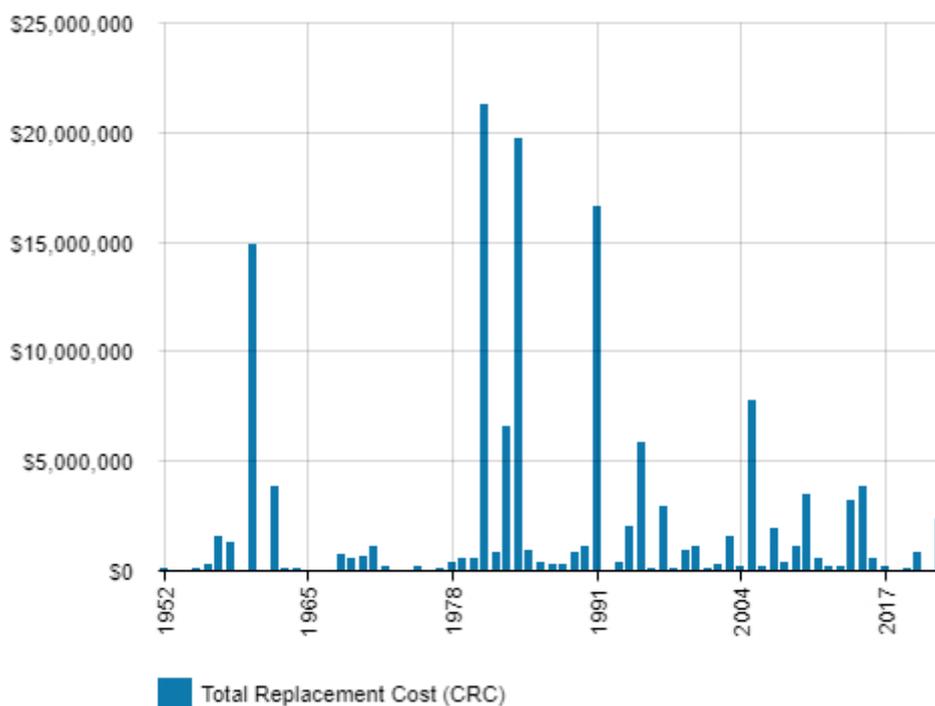
#### 5.1.1 Physical parameters

The assets covered by this AMP are shown in Table 5.1.1.

The age profile of the assets included in this AMP are shown in Figure 5.1.1.

**Table 5.1.1: Assets covered by this Plan**

Asset Category	Dimension	Replacement Value
Water mains	315km	\$48,826,228
Treatment facilities	9 nos.	\$30,436,820
Pumping stations	15 nos.	\$3,956,726
Reservoirs	34 nos.	\$23,200,914
Telemetry	-	\$527,796
Dams	1	\$5,608,374
Intakes	-	\$25,690,050
<b>TOTAL</b>		<b>\$138,246,908</b>



All figure values are shown in current day dollars.

### 5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

**Table 5.1.2: Known Service Performance Deficiencies**

Location	Service Deficiency
	None currently identified

### 5.1.3 Asset condition

Condition is measured using a 1 – 5 grading system<sup>3</sup> as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AMP results are translated to a 1 – 5 grading scale for ease of communication.

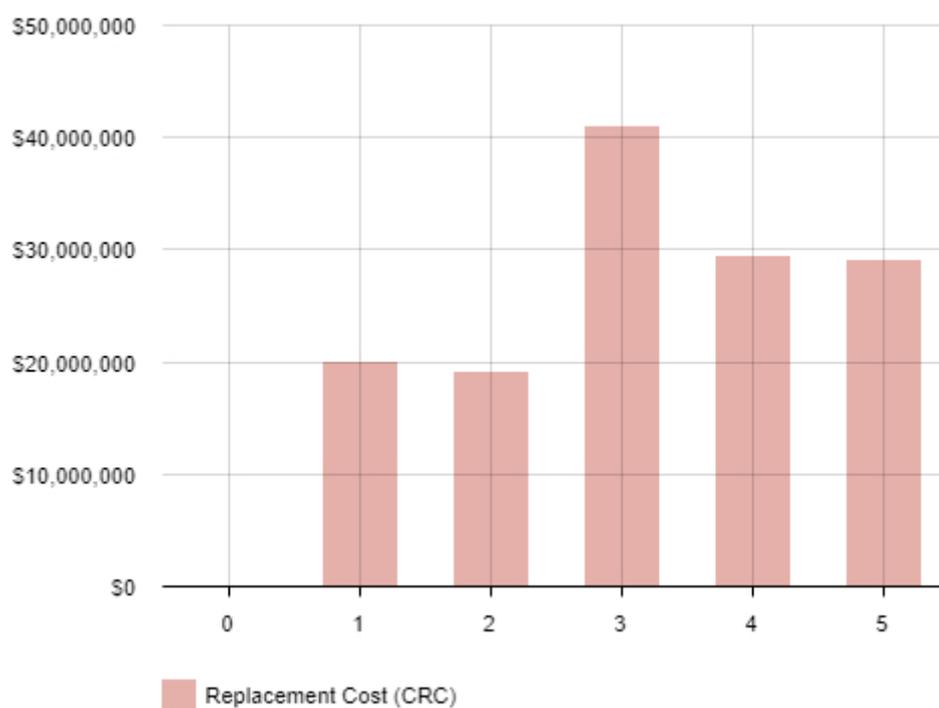
**Table 5.1.3: Condition Grading System**

Condition Grading	Description of Condition
<b>1</b>	<b>Very Good:</b> free of defects, only planned and/or routine maintenance required
<b>2</b>	<b>Good:</b> minor defects, increasing maintenance required plus planned maintenance
<b>3</b>	<b>Fair:</b> defects requiring regular and/or significant maintenance to reinstate service
<b>4</b>	<b>Poor:</b> significant defects, higher order cost intervention likely
<b>5</b>	<b>Very Poor:</b> physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of our assets is shown in Figure 5.1.3.

<sup>3</sup> IPWEA, 2015, IIMM, Sec 2.5.4, p 2 | 80.

**Figure 5.1.3: Asset Condition Profile**



All figure values are shown in current day dollars.

## 5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, street sweeping, asset inspection, and utility costs.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs.

The trend in maintenance budgets are shown in Table 5.2.1.

**Table 5.2.1: Maintenance Budget Trends**

Year	Maintenance Budget \$
2017/18	\$1,503,000
2018/19	\$1,428,000
2019/20	\$1,649,000

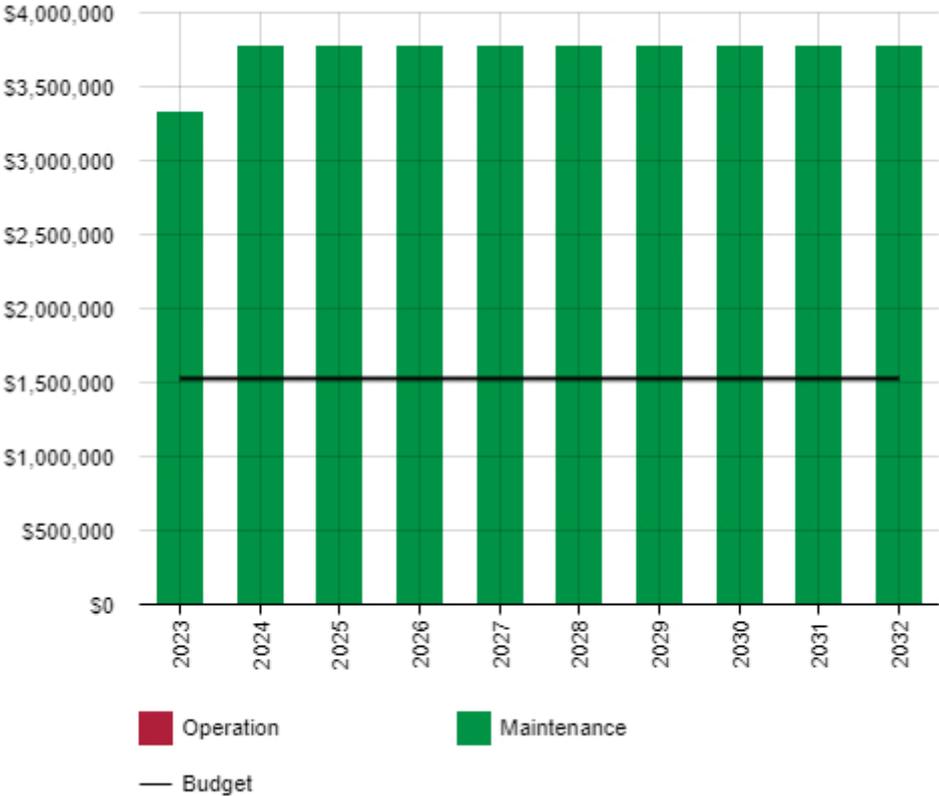
Maintenance budget levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this AMP and service risks considered in the Infrastructure Risk Management Plan.

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

**Summary of forecast operations and maintenance costs**

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

**Figure 5.2: Operations and Maintenance Summary**



All figure values are shown in current day dollars.

The forecast maintenance costs in the above chart are based on a figure of 2.4% of gross replacement cost.

**5.3 Renewal Plan**

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (current replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

The typical useful lives of assets used to develop projected asset renewal forecasts are shown in Table 5.3. Asset useful lives were last reviewed on 26 July 2021.

**Table 5.3: Useful Lives of Assets**

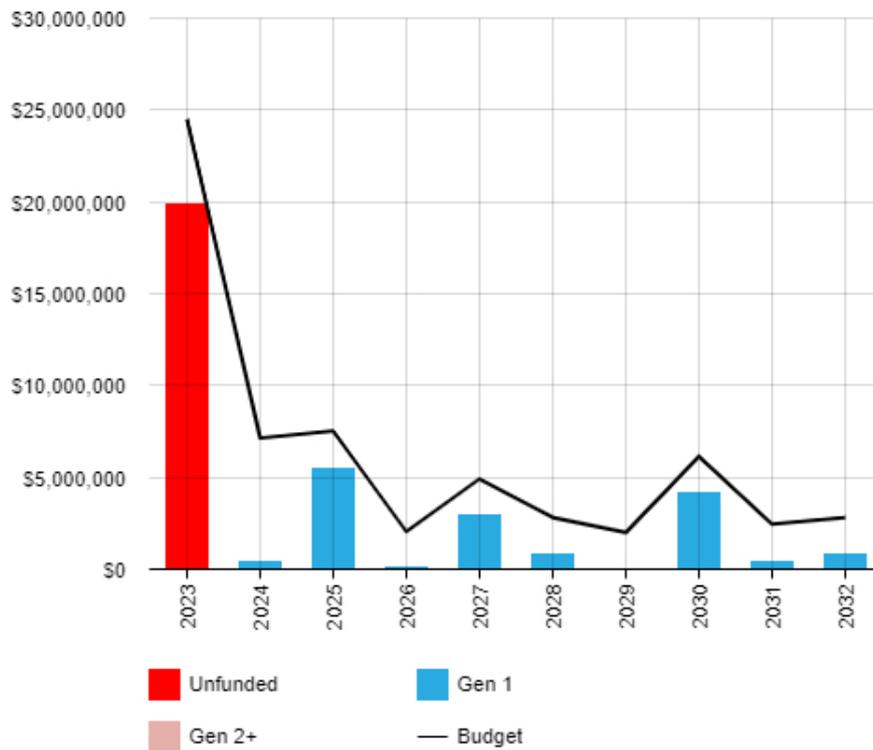
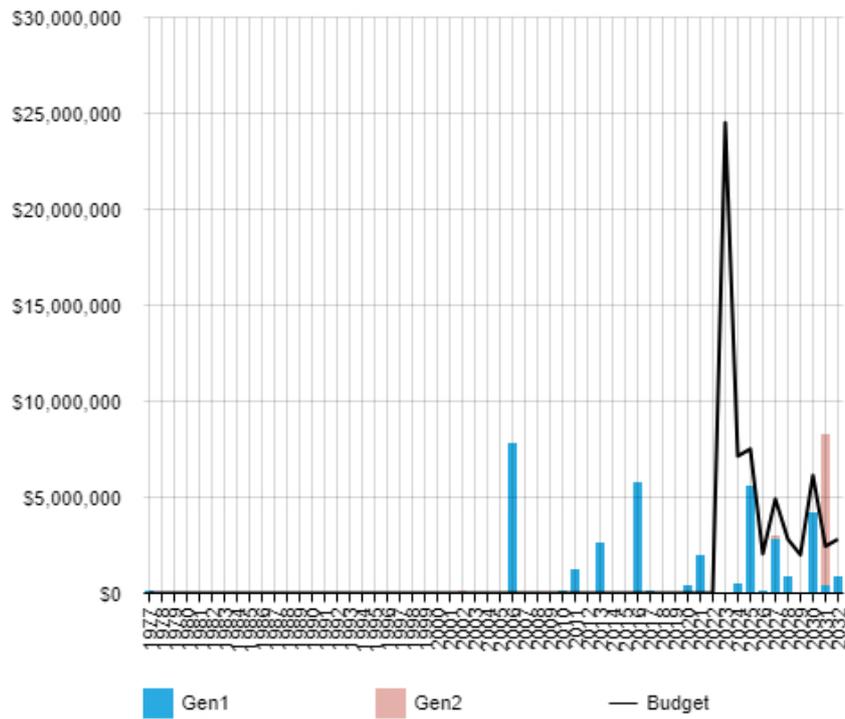
<b>Asset (Sub)Category</b>	<b>Useful life</b>
Water mains	80 years
Treatment facilities	70 years (civil), 30 years (mechanical, electrical, process), 25 years (chemical treatment)
Pump Stations	70 years (civil), 30 years (mechanical, electrical)
Reservoirs	100 years (structure), 40 years (roof)

The estimates for renewals in this AMP were based on the asset register method.

#### **5.4 Summary of future renewal costs**

Forecast renewal costs are projected to increase over time if the asset stock increases. The forecast costs associated with renewals are shown relative to the proposed renewal budget in Figure 5.4.1. A detailed summary of the forecast renewal costs is shown in Appendix D.

**Figure 5.4.1: Forecast Renewal Costs**



All figure values are shown in current day dollars.

## 5.5 Acquisition Plan

Acquisition reflects are new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to the Snowy Monaro Regional Council.

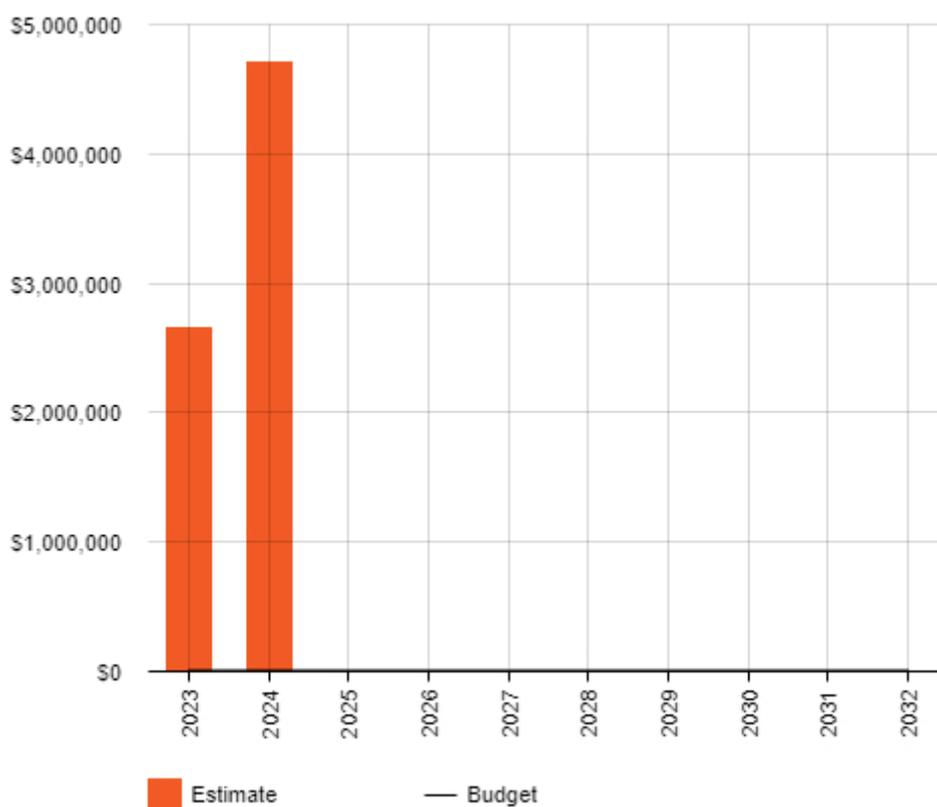
### 5.5.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to the Entities needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes.

#### Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised / summarized in Figure 5.5.1 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

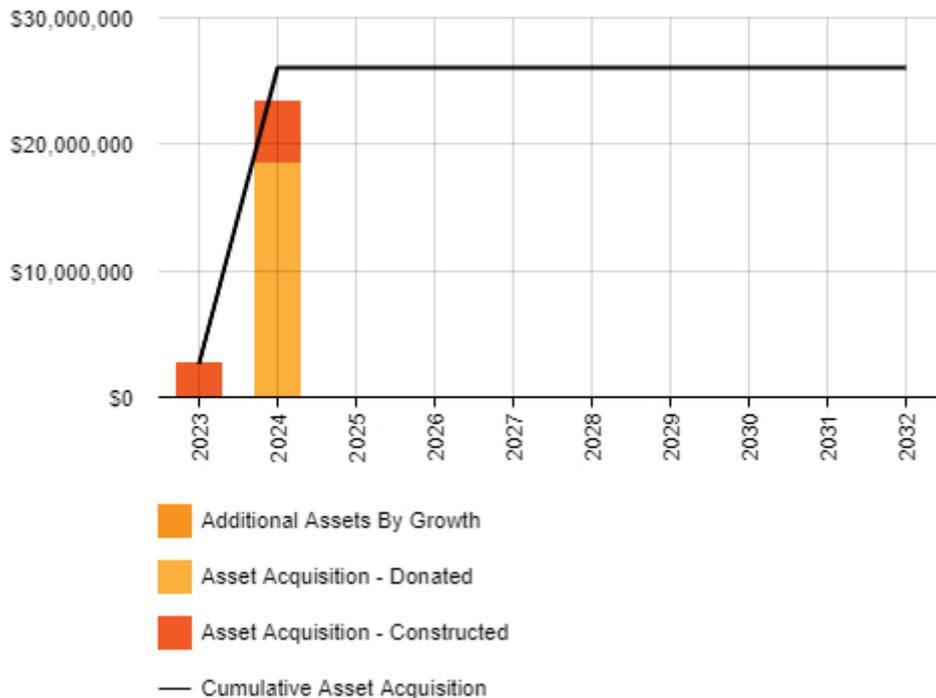
**Figure 5.5.1: Acquisition (Constructed) Summary**



All figure values are shown in current day dollars.

When an Entity commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.5.2.

**Figure 5.5.2: Acquisition Summary**



All figure values are shown in current dollars.

Expenditure on new assets and services in the capital works program will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

Acquisitions in the above chart include the Cooma Weir/fishway, telemetry and Snowy 1 reservoir, as well as the proposed upgrade of the water treatment plant in Jindabyne as part of the Special Activation Precinct (SAP).

## 5.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.6. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

**Table 5.6: Assets Identified for Disposal**

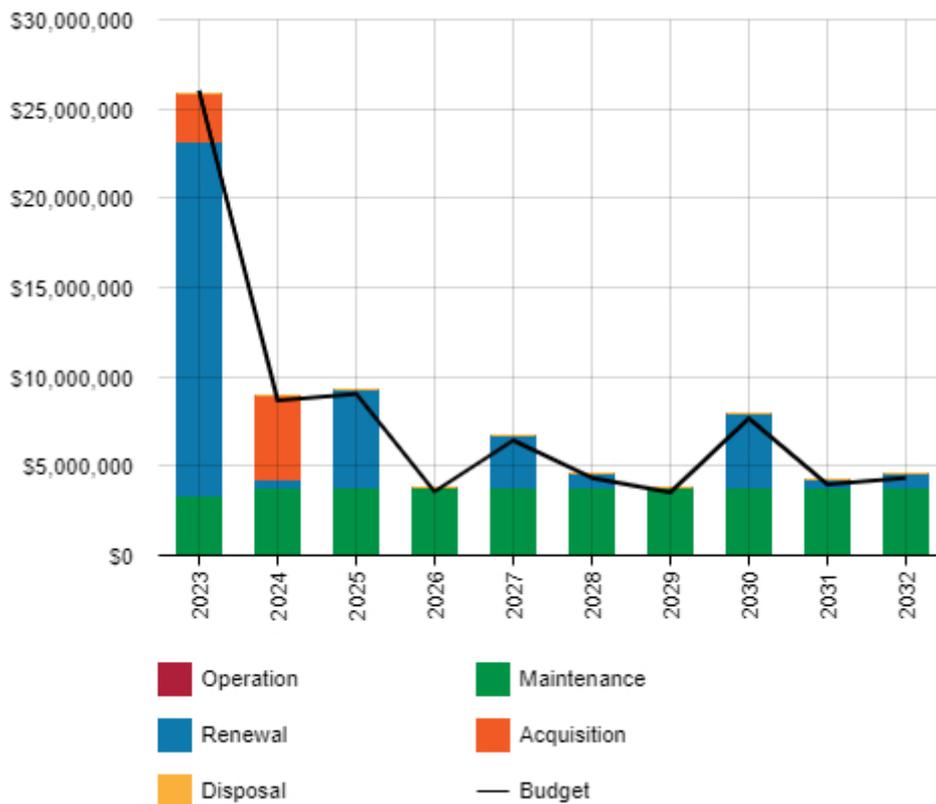
Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
No assets currently identified for disposal	NA	NA	NA	NA

### 5.7 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.7.1. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

**Figure 5.7.1: Lifecycle Summary**



All figure values are shown in current day dollars.

## 6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'<sup>4</sup>.

An assessment of risks<sup>5</sup> associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

### 6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Critical assets have been identified and along with their typical failure mode, and the impact on service delivery, are summarised in Table 6.1. Failure modes may include physical failure, collapse or essential service interruption.

**Table 6.1 Critical Assets**

Critical Asset(s)	Failure Mode	Impact
Treatment Plants	Failure of treatment process through loss of power, contamination in catchments	<ul style="list-style-type: none"> <li>• Inability to provide safe water to community</li> <li>• Impact on public health and essential community services</li> <li>• Impact of Council reputation</li> </ul>
Pump Stations	Failure of pumping	<ul style="list-style-type: none"> <li>• Inability to provide safe water to community</li> <li>• Impact on firefighting capability of community</li> <li>• Impact of Council reputation</li> </ul>

By identifying critical assets and failure modes an organisation can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at critical assets.

### 6.2 Risk Assessment

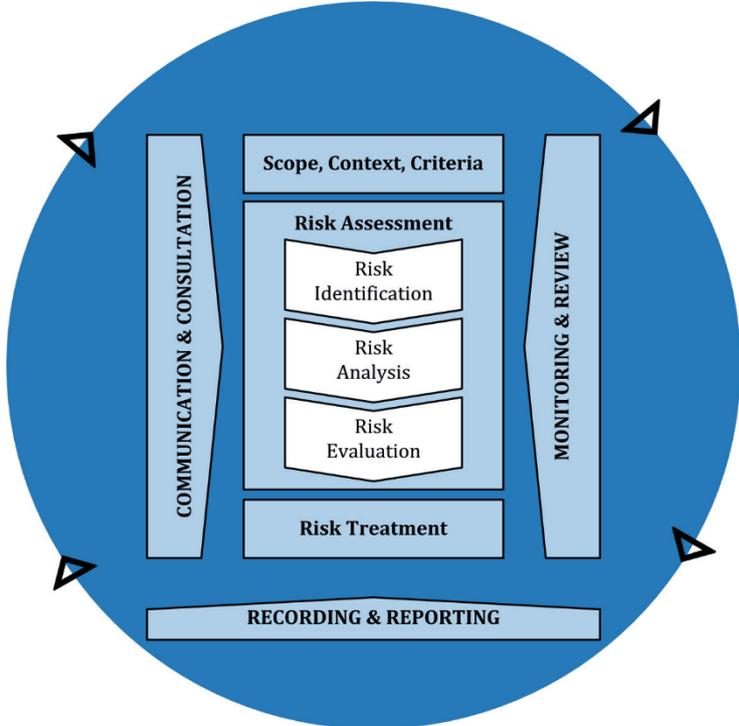
The risk management process used is shown in Figure 6.2 below.

<sup>4</sup> ISO 31000:2009, p 2

<sup>5</sup> REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.



**Fig 6.2 Risk Management Process – Abridged**  
 Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks<sup>6</sup> associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a ‘financial shock’, reputational impacts, or other consequences.

Critical risks are those assessed with ‘Very High’ (requiring immediate corrective action) and ‘High’ (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Council.

<sup>6</sup> REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

**Table 6.2: Risks and Treatment Plans**

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Will be identified in future revisions of this document	NA	NA	NA	NA	NA

Note \* The residual risk is the risk remaining after the selected risk treatment plan is implemented.

### 6.3 Infrastructure Resilience Approach

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AMP.

## 7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AMP. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

### 7.1 Financial Sustainability and Projections

#### 7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AMP for this service area. The two indicators are the:

- asset renewal funding ratio (proposed renewal budget for the next 10 years / forecast renewal costs for next 10 years), and
- medium term forecast costs/proposed budget (over 10 years of the planning period).

#### Asset Renewal Funding Ratio

Asset Renewal Funding Ratio<sup>7</sup>      78.16%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 78.16% of the funds required for the optimal renewal of assets.

The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall, is illustrated in Appendix D.

#### Medium term – 10 year financial planning period

This AMP identifies the forecast operations, maintenance and renewal costs required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is \$7,221,017 average per year.

The proposed (budget) operations, maintenance and renewal funding is \$4,262,000 on average per year giving a 10 year funding shortfall of \$-2,959,017 per year. This indicates that 59.02% of the forecast costs needed to provide the services documented in this AMP are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AMP and ideally over the 10 year life of the Long-Term Financial Plan.

#### 7.1.2 Forecast Costs (outlays) for the long-term financial plan

Table 7.1.3 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long-term financial plan.

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<sup>7</sup> AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AMP (including possibly revising the long-term financial plan).

We will manage the 'gap' by developing this AMP to provide guidance on future service levels and resources required to provide these services in consultation with the community.

Forecast costs are shown in 2022 dollar values.

**Table 7.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan**

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2023	2,650,000	0	3,318,000	19,853,484	0
2024	4,700,000	0	3,766,800	442,378	0
2025	0	0	3,766,800	5,514,470	0
2026	0	0	3,766,800	54,137	0
2027	0	0	3,766,800	2,910,858	0
2028	0	0	3,766,800	814,124	0
2029	0	0	3,766,800	0	0
2030	0	0	3,766,800	4,139,057	0
2031	0	0	3,766,800	445,773	0
2032	0	0	3,766,800	816,690	0

## 7.2 Funding Strategy

The proposed funding for assets is outlined in the Entity's budget and Long-Term financial plan.

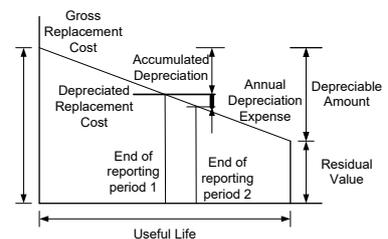
The financial strategy of the entity determines how funding will be provided, whereas the AMP communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

## 7.3 Valuation Forecasts

### 7.3.1 Asset valuations

The best available estimate of the value of assets included in this AMP are shown below. The assets are valued at fair value on a replacement cost basis.:

Replacement Cost (Current/Gross)	\$138,246,997
Depreciable Amount	\$138,246,997
Depreciated Replacement Cost <sup>8</sup>	\$56,760,764
Depreciation	\$2,596,356.95



### 7.3.2 Valuation forecast

Asset values are forecast to increase as additional assets are added.

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

At time of writing this plan, valuation of water and wastewater assets is taking place, and the above valuations will change at the end of this process.

<sup>8</sup> Also reported as Written Down Value, Carrying or Net Book Value.

## 7.4 Key Assumptions Made in Financial Forecasts

In compiling this AMP, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AMP and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AMP are:

- The assets will remain in the organisations ownership and control throughout the planning period
- Planned and reactive maintenance will take place in accordance with relevant guidelines/standards
- All expenditure is stated in 2021/22 dollar values
- Regulations and standards relating to operations will remain unchanged over the planning period

## 7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AMP 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 on a A - E level scale<sup>9</sup> in accordance with Table 7.5.1.

**Table 7.5.1: Data Confidence Grading System**

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 $\pm 2\%$
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 $\pm 10\%$
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 $\pm 25\%$
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 $\pm 40\%$
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this AMP is considered to be Medium confidence.

<sup>9</sup> IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

## 8.0 PLAN IMPROVEMENT AND MONITORING

### 8.1 Status of Asset Management Practices<sup>10</sup>

#### 8.1.1 Accounting and financial data sources

This AMP utilises accounting and financial data. The source of the data is the Civica Authority corporate system.

#### 8.1.2 Asset management data sources

This AMP also utilises asset management data. The source of the data is the Asset Module of the Civica Authority corporate system.

### 8.2 Improvement Plan

It is important that an entity recognise areas of their AMP and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this AMP is shown in Table 8.2.

**Table 8.2: Improvement Plan**

Task	Task	Responsibility	Resources Required	Timeline
1	Develop Risk Management Plans for Critical Assets	Corporate Risk Management Staff	Staff time	TBD
2	Improve the quality of asset condition data	Assets and Water teams	TBD	TBD
3	Progress the maturity of asset management planning from 'core' to 'advanced' level	Asset team	Staff time	TBD
4	Separate recording of operating and maintenance costs	Water and Finance teams	Staff time	TBD
5	Improve linking of customer requests to asset records	Assets and Water teams	Staff time	TBD

### 8.3 Monitoring and Review Procedures

This AMP 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.

The AMP will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition 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.

The AMP has a maximum life of 4 years and is due for complete revision and within one year of each Council election.

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<sup>10</sup> ISO 55000 Refers to this as the Asset Management System

## 8.4 Performance Measures

The effectiveness of this AMP can be measured in the following ways:

- The degree to which the required forecast costs identified in this AMP are incorporated into the long-term financial plan,
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AMP,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target (this target is often 90 – 100%).

## 9.0 REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/IIMM](http://www.ipwea.org/IIMM)
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/namsplus](http://www.ipwea.org/namsplus).
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, [www.ipwea.org/AIFMM](http://www.ipwea.org/AIFMM).
- IPWEA, 2020 'International Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2018, Practice Note 12.1, 'Climate Change Impacts on the Useful Life of Assets', Institute of Public Works Engineering Australasia, Sydney
- IPWEA, 2012, Practice Note 6 Long-Term Financial Planning, Institute of Public Works Engineering Australasia, Sydney, <https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn6>
- IPWEA, 2014, Practice Note 8 – Levels of Service & Community Engagement, Institute of Public Works Engineering Australasia, Sydney, <https://www.ipwea.org/publications/ipweabookshop/practicenotes/pn8>
- ISO, 2014, ISO 55000:2014, Overview, principles and terminology
- ISO, 2018, ISO 31000:2018, Risk management – Guidelines

## 10.0 APPENDICES

### Appendix A Acquisition Forecast

#### A.1 – Acquisition Forecast Assumptions and Source

The Acquisition forecasts are based the capital works programs in the Operational Plan and assets projected to be donated to Council as part of the Jindabyne SAP.

#### A.2 – Acquisition Project Summary

The projects included in the lifecycle forecast are:

Telemetry upgrade - \$150,000

Cooma weir & fishway - \$2,500,000

Snowy 1 reservoir replacement - \$4,700,000

SAP WTP upgrade - \$18,700,000 (donated asset)

#### A.3 – Acquisition Forecast Summary

**Table A3 - Acquisition Forecast Summary**

Year	Constructed	Donated	Growth
2023	265,0000	0	0
2024	4,700,000	18,700,000	0
2025	0	0	0
2026	0	0	0
2027	0	0	0
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	0	0	0

## Appendix B Operation Forecast

### B.1 – Operation Forecast Assumptions and Source

Operations costs are currently not identified separately

### B.2 – Operation Forecast Summary

Operations costs are currently not identified separately

**Table B2 - Operation Forecast Summary**

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2023	0	0	0
2024	0	0	0
2025	0	0	0
2026	0	0	0
2027	0	0	0
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	0	0	0

## Appendix C Maintenance Forecast

### C.1 – Maintenance Forecast Assumptions and Source

Maintenance spending is estimated from the average spend over the past three years as listed in Special Schedule 7

### C.2 – Maintenance Forecast Summary

The required maintenance forecast is based on a calculation of 2.4% of gross replacement cost of the assets

**Table C2 - Maintenance Forecast Summary**

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2023	1,527,000	0	3,318,000
2024	1,527,000	0	3,766,800
2025	1,527,000	0	3,766,800
2026	1,527,000	0	3,766,800
2027	1,527,000	0	3,766,800
2028	1,527,000	0	3,766,800
2029	1,527,000	0	3,766,800
2030	1,527,000	0	3,766,800
2031	1,527,000	0	3,766,800
2032	1,527,000	0	3,766,800

## Appendix D Renewal Forecast Summary

### D.1 – Renewal Forecast Assumptions and Source

Renewals are assumed to be done at end of life as projected by the asset register

### D.2 – Renewal Project Summary

Renewals projected in the 10 year planning window include the following asset types:

- Reservoirs
- Pump stations
- Treatment plants
- Raw water intakes

### D.3 – Renewal Forecast Summary

**Table D3 - Renewal Forecast Summary**

Year	Renewal Forecast	Renewal Budget
2023	19,853,484	24,503,484
2024	442,378	7,142,378
2025	5,514,470	7,514,470
2026	54,137	2,054,137
2027	2,910,858	4,910,858
2028	814,124	2,814,124
2029	0	2,000,000
2030	4,139,057	6,139,057
2031	445,773	2,445,773
2032	816,690	2,816,690

## Appendix E Disposal Summary

### E.1 – Disposal Forecast Assumptions and Source

No asset disposals are currently identified

### E.2 – Disposal Project Summary

No asset disposals are currently identified

### E.3 – Disposal Forecast Summary

No asset disposals are currently identified

**Table E3 – Disposal Activity Summary**

Year	Disposal Forecast	Disposal Budget
2023	0	0
2024	0	0
2025	0	0
2026	0	0
2027	0	0
2028	0	0
2029	0	0
2030	0	0
2031	0	0
2032	0	0

## Appendix F Budget Summary by Lifecycle Activity

**Table F1 – Budget Summary by Lifecycle Activity**

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2023	0	0	1,527,000	24,503,484	0	26,030,484
2024	0	0	1,527,000	7,142,378	0	8,669,378
2025	0	0	1,527,000	7,514,470	0	9,041,470
2026	0	0	1,527,000	2,054,137	0	3,581,137
2027	0	0	1,527,000	4,910,858	0	6,437,858
2028	0	0	1,527,000	2,814,124	0	4,341,124
2029	0	0	1,527,000	2,000,000	0	3,527,000
2030	0	0	1,527,000	6,139,057	0	7,666,057
2031	0	0	1,527,000	2,445,773	0	3,972,773
2032	0	0	1,527,000	2,816,690	0	4,343,690

#### **Further Information**

The Snowy Monaro 2042 Community Strategic Plan, 2022-26 Delivery Program, Operational Plan and Annual Reports can be viewed on Council's website.

For further information visit:

 [www.snowymonaro.nsw.gov.au](http://www.snowymonaro.nsw.gov.au)

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#### **Your Feedback**

A copy of this Plan can be obtained from Council's website: [www.snowymonaro.nsw.gov.au](http://www.snowymonaro.nsw.gov.au)

We are interested to know your thoughts about this Plan. Your comments and suggestions are valuable because they highlight opportunities for us to improve the quality of our services, plans and reports. If you would like to comment, or require additional information regarding this report please contact us.

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