

Gawler River Floodplain Management Authority

2025-2034

Asset Management Plan (Concise)



August 2025

Document Control		<div>IPWEA <small>INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA</small></div> <div>JRA</div> <div>Asset Management Plan</div>			
Document ID : NAMSPLUS Concise Asset Management Plan Template_V2_170508					
Rev No	Date	Revision Details	Author	Reviewer	Approver
	11/9/19	Prepare plan	DEH		
	25/3/22	Update Plan	VM		
	29/08/22	Update Plan	VM		
	24/2/24	Update Plan	VM		
	10/9/24	Update Plan	VM		

NAMS.PLUS Asset Management Plan Templates

NAMS.Plus offers two Asset Management Plan templates – ‘Concise’ and ‘Comprehensive’.

The Concise template is appropriate for those entities who wish to present their data and information clearly and in as few words as possible whilst complying with the ISO 55000 Standards approach and guidance contained in the International Infrastructure Management Manual.

The Comprehensive template is appropriate for those entities who wish to present their asset management plan and information in a more detailed manner.

This is the **Concise** Asset Management Plan template.

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1 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan 2025-2034

Asset management planning is a comprehensive process to ensure delivery of services from infrastructure is provided in a financially sustainable manner.

This plan covers the infrastructure assets that provide Flood Mitigation comprising of:

- Bruce Eastick North Para Flood Mitigation Dam
- Associated land

These infrastructure assets have significant value estimated at \$41,900,845

1.2 Levels of Service

Our present funding levels are insufficient to continue to provide existing services at current levels in the medium term.

The main services consequences are:

- Asset not fit for purpose
- Land in disrepair

1.4 Future Demand

The main demands for new services are created by:

- Economic and Infrastructure development in the Gawler River Catchment
- Heavy rainfall events over the catchment
- These 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 include non-asset solutions, insuring against risks and managing failures.
- Initiating recommendations of the Gawler River 2016 Flood Review, the 2016 Dam Raise Feasibility study, the Gawler River Stormwater Management Plan and the Gawler River Flood Management Business Case(DEW)

1.5 Lifecycle Management Plan

What does it cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) includes operations, maintenance, renewal and upgrade of existing assets over the 10-year planning period is \$1,189,922

Funding (cash allocation) of annual depreciation calculations is not undertaken, rather the policy is ensuring the GRFMA is provided with sufficient cash

flow to maintain the Dam at required service provision levels.

1.6 Financial Summary

What we will do

We plan to provide Flood Mitigation services for the following:

- Operation, maintenance, renewal and upgrade of the Bruce Eastick North Para Flood Mitigation Dam and associated land to meet service levels set by in annual budgets.
- Trash Rack cleaning rubbish removal from the Dam,
- General condition inspections monthly, interim condition inspections biennially (2 years), comprehensive engineering inspections every 5 years.
- Consideration of raising the height of the Dam is currently on hold. Projected cost indications of the Dam raise are in the order of \$230 Million.
- Land management including control of weeds and fire prevention measures are undertaken via land lease arrangements.

Managing the Risks

The main risk consequences are:

- Lack of capacity to fund repairs and maintenance and renewal due to not recognising depreciation (consumption of asset value).
- Insufficient fund availability to renew assets at end of estimated service life
- The considered life of the Dam as an asset is based on 80 years; however, it could be argued that it would be longer.
- We will endeavor to manage these risks within available funding by General condition inspections monthly, interim condition inspections biennially (2 years), comprehensive engineering inspections every 5 years.

1.8 Monitoring and Improvement Program

The next steps resulting from this asset management plan to improve asset management practices will be consideration by the GRFMA Board on implications and perceived risks.

2. INTRODUCTION

2.1 Background

This asset management plan communicates the actions required for the responsive management of assets (and services provided from assets), compliance with regulatory requirements, and funding needed to provide the required levels of service over a 10-year planning period.

The asset management plan is to be read with the GRFMA Strategic Plan 2021-2026 .

The infrastructure assets covered by this asset management plan are shown in Table 2.1.

These assets are used to provide flood mitigation services.

Table 2.1: Assets covered by this Plan

Asset Category	Dimension	Replacement Value
• Bruce Eastick North Para Flood Mitigation Dam	25mtr high @y 80 mtr wide	\$53,559,054
Associated land lot 62 hd Kingsford		\$477,000
TOTAL (fair value)		\$54,036,054

2.2 Goals and Objectives of Asset Management

Our goal in 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 expenditure and how it will be allocated.

2.3 Core and Advanced Asset Management

This asset management plan is prepared as a 'core' asset management plan over a 10-year planning period in accordance with the International Infrastructure Management Manual¹. It is prepared to meet minimum legislative and organizational requirements for sustainable delivery and long term financial planning and reporting. Core asset management is a 'top down' approach where analysis is applied at the system or network level. An 'advanced' asset management approach uses a 'bottom up' approach for gathering detailed asset information for individual assets.

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

GRFMA has undertaken consultation with the six constituent councils, via the GRFMA Strategic plan consultation, regarding asset management service level expectations. Future revisions of the asset management plan will incorporate further consultation on service levels and costs of providing the service. This will assist the GRFMA and

¹ IPWEA, 2015, IIMM.

constituent councils in matching the level of service required, service risks and consequences with the community's ability and willingness to pay for the service.

3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the GRFMA Charter goals and objectives.

The GRFMA was established for the following purposes:

- 1.To co-ordinate the construction, operation and maintenance of flood mitigation infrastructure in the Gawler River area ('the Floodplain');
- 2.To raise finance for the purpose of developing, managing and operating and maintaining flood mitigation works within the Floodplain;
- 3.To provide a forum for the discussion and consideration of topics relating to the Constituent Council's obligations and responsibilities in relation to management of flood mitigation within the Floodplain;
- 4.To enter into agreements with Constituent Councils for the purpose of managing and developing the Floodplain.

The GRFMA will exercise its duty of care to ensure public safety in accordance with the infrastructure risk management plan prepared in conjunction with this AM Plan. Management of infrastructure risks is covered in Section 6.

3.3 Legislative Requirements

Legislative requirements relating to the management of assets include:

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act 1999	Asset Management planning, financial plans and service delivery.
Natural Resources Management Act	Water Affecting Activities

3.4 Customer Levels of Service

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

Customer Levels of Service measure how the customer receives the service and whether value to the customer is provided.

Customer levels of service measures used in the asset management plan are:

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

The current and expected customer service levels are detailed in Tables 3.4 and 3.5. Table 3.4 shows the expected levels of service based on resource levels in the current long-term financial plan.

Organisational measures are measures of fact related to the service delivery outcome e.g. number of occasions when service is not available, condition %'s of Very Poor, Poor/Average/Good, Very good.

These Organisational/Organizational measures provide a balance in comparison to the customer perception that may be more subjective.

Table 3.4: Customer Level of Service

	Expectation	Performance Measure Used	Current Performance	Expected Position in 10 Years based on the current budget.
Service Objective: Flood Mitigation				
Quality	Flood protection for a 1 in 100 AEP event	Extent of flooding	Low	Low
	Confidence levels		Medium	Medium
Function	The Dam is a flood control dam and was built in 2007 with the design objective of providing flood protection to the township of Gawler for a 1 in 50 AEP event	Measurement of rainfall/flood event severity	High	Low
	Confidence levels		Medium	Low
Capacity and Use				
	The main dam has a crest length of approximately 226m of which 150m is the primary spillway. The main dam has a 5m wide crest with a vertical upstream face and stepped downstream face. The main dam incorporates a low level outlet pipe that is 2.1 m in diameter and twin high level outlets each 1.8m in diameter. The dam will see substantial flows over the spillway in design flood events,	Review of flood events	High - 2016 Flood	High for similar event as 2016. Low for greater ARI event
	Confidence levels		High	Low

3.5 Technical Levels of Service

The flood consequence category of the Bruce Eastick North Para Flood Mitigation Dam has been determined as High B as per the ANCOLD Guideline. This impacts on the inspection regime for the dam as inspections are in part determined based on the consequence category of the dam and also on the dam type and the value of the dam to the owner and the community.

Table 3-5.1: ANCOLD recommended inspection frequencies

Inspection type			
Comprehensive	Intermediate	Routine Visual	Special
5 yearly	Annual	Daily to tri-weekly	As required

The Bruce Eastick North Para Flood Mitigation Dam is a flood control dam that only impounds water in times of flood. This is nontypical for most dams and does alter the recommended inspection frequency predominately by reducing the need for Routine Visual inspections as the dam does not impound water for the majority of time. However, the

need for special inspections is higher after each flood. Based on this the recommended inspection frequency is contained in Table 5-2.

Table 3-5.2 (ANCOLD Dam Safety Guidelines, 2003) provides greater detail on the conduct of dam safety inspections.

Table 3-5.2

Inspection	Personnel	Purpose
Comprehensive	Dam Engineer and specialists (where relevant)	The identification of deficiencies by thorough onsite inspections; by evaluating surveillance data and by applying current criteria and prevailing knowledge. Equipment should be test operated to identify deficiencies.
Intermediate	Dams Engineer	The identification of deficiencies by visual examination of the dam and review of recent surveillance data, with recommendations for corrective actions. Equipment is inspected and, preferably, test operated.
Routine/Visual	Operations Personnel	The identification and reporting of deficiencies by visual observation of the dam by operating personnel as part of their duties at the dam.
Special/Emergency	Dams Engineer and specialists	The examination of a particular feature of a dam for some special reason (e.g. After earthquakes, heavy floods, rapid drawdown, emergency situation) to determine the need for pre-emptive or corrective actions.

4. 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 were identified and are documented in Table 4.3.

4.3 Demand Impact on Assets

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

Table 4.3: Demand Drivers, Projections and Impact on Services

Demand drivers	Present position	Projection	Impact on services
Economic and Infrastructure development in the Gawler River Catchment	Development is not co-ordinated across the floodplain.	Major developments being proposed. Eg Buckland Park, Northern Adelaide Irrigation Investments	Increases severity of flooding potential

Heavy rainfall events over the catchment	Dam works OK however the Gawler River is prone to breakaways during high rain fall events	Material flood damage to lower reaches of the Gawler river- community assets and horticulture	Demand for mitigation infrastructure
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4.4 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 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 4.4. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.4: Demand Management Plan Summary

Demand Driver	Impact on Services	Demand Management Plan
Gawler River 2016 Flood Review	New infrastructure required \$27 Million	Subject to Federal and State Government Funding
Raise Dam Feasibility Study	New infrastructure required \$230 Million	Subject to Federal and State Government Funding
Gawler River Stormwater Management Plan	Infrastructure, Planning and community awareness programs required	Subject to Federal and State Government Funding
Gawler River Flood Management Business Case (DEW)	Yet to be finalised (Dec 2026)	Subject to Federal and State Government Funding

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the GRFMA plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this asset management plan are shown in Table 2.1.

The assets are generally the Bruce Eastick North Para Flood Mitigation dam, and adjoining land.

The first asset valuation of Bruce Eastick Flood Mitigation Dam was undertaken by Entura for GRFMA in 2014/15. As the Worksheet (2011) requires the revaluation should be carried out every five years, GRFMA requested Entura to undertake the asset revaluation of Bruce Eastick Flood Mitigation Dam to determine the replacement cost of the dam at 2018/19 prices.

The 2019 report by Entura estimated replacement cost for Bruce Eastick Flood Mitigation Dam is \$25.836 million at June 2019 cost and the corresponding written down value is \$22.332million (excluding land costs) based on the most current construction rate information and relevant accounting standards for 2019.

The 2023/2024 Asset valuation was undertaken by North Projects with the report detailing an estimated replacement cost for Bruce Eastick Flood Mitigation Dam being \$53.559 million at June 2024 cost and the corresponding written

down value is \$41,424 million (excluding land costs) based on the most current construction rate information and relevant accounting standards for 2024/25.

Land is valued at \$477,000.

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available.

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
Bruce Eastick North Para Flood Mitigation Dam	Events of 50 ARI
Land	All weather access to the Dam

5.1.3 Asset condition

Condition is monitored as per item 3.5

5.2 Routine Maintenance Plan

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

Table 5.2.1 Inspection Frequency

Inspection Type	Comprehensive	Intermediate	Routine Visual	Special
Bruce Eastick North Para Flood Mitigation Dam	5 yearly	Every Second year (See Note 1)	Monthly (See Note 2)	As required (See Note 3 and 4)
Personnel	Dam engineer and specialists as required.	Dams Engineer	Operational staff	Dam engineer and specialists as required.
Site access roads, swales and culverts, gates, fencing and signage			Monthly	
Personnel			Operational staff	

Notes:

1. If a Special Inspection is required in an individual year this can include the Intermediate Inspection for that period.
2. After an event that requires a Special Inspection this inspection frequency should be increased to Daily until the Special Inspection has been undertaken.

3. The Inspection regime should be reviewed at every Special Inspection and adjusted as recommended by the Dams Engineer.
4. A Special Inspection is required after a large flood, an earthquake (of magnitude sufficient to cause shaking in the area) or any other emergency situation. For floods it is recommended that a Special Inspection be undertaken if the high-level outlets operate.

5.3 Renewal Replacement Plan

5.3.1 Maintenance plan

Field inspection sheets are to be established for the routine and annual inspections. The inspections shall include review of all monitoring data and any incidents.

An inspection report shall be prepared for each inspection other than the routine where the inspection sheet will be sufficient. A register of issues for close out shall be maintained.

Costed maintenance expenditure (and budgeted council subscription income) is shown in Table 5.3.1.

Table 5.3.1: Maintenance Expenditure Trends

Year Ended 30 June:	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
	Plan	Plan	Plan	Plan	Plan	Plan	Plan	Plan	Plan	Plan
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
INCOME										
Council Subscriptions	139,756	139,550	149,750	155,141	160,726	166,512	172,507	178,717	185,151	191,816
Total Revenues	139,756	139,550	149,750	155,141	160,726	166,512	172,507	178,717	185,151	191,816
EXPENSES										
Costed Repairs	99,550	100,270	91,016	91,789	92,589	93,419	94,278	95,168	96,090	97,046
Total Expenses	99,550	100,270	91,016	91,789	92,589	93,419	94,278	95,168	96,090	97,046
Balance	40,206	39,280	58,734	63,352	68,137	73,094	78,229	83,549	89,060	94,770

Allocated maintenance expenditure levels are adequate to meet required service levels. Future revision of this asset management plan will include linking required maintenance expenditures with required service levels.

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

5.4 Creation/Acquisition/Upgrade Plan

New works are those that create a new asset that did not previously exist, or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost. These additional assets are considered in Section 4.4.

5.4.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Candidate proposals are inspected to verify need and to develop a preliminary renewal estimate. Verified proposals are ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed below.

Table 5.4.1: New Assets Priority Ranking Criteria

Criteria	Weighting
Dam with 100 ARI capacity	30%
Low flooding incidence in Gawler River floodway	70%
Total	100%

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 of the available funds

Should these new assets be realised additional funding commitments of ongoing operations, maintenance and renewal costs will be required for the period that the service provided from the assets is required.

5.5 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 5.5, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any costs or revenue gained from asset disposals is accommodated in the long term financial plan.

Table 5.5: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
Nil				

6. RISK MANAGEMENT PLAN

The purpose of infrastructure risk management is to document the results 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 31000:2009 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2009 as: ‘coordinated activities to direct and control with regard to risk’².

An assessment of risks³ associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a ‘financial shock’. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequences.

Critical assets have been identified and their typical failure mode and the impact on service delivery are as follows:

² ISO 31000:2009, p 2

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Bruce Eastick North Para Flood Mitigation Dam	Flood Failure” - the difference between the consequences of a natural rainfall and flooding event with the consequences resulting from the failure of the dam during the same AEP flood event	High

By identifying critical assets and failure modes investigative activities, condition inspection programs, maintenance and capital expenditure plans can be targeted at the critical areas.

6.2 Risk Assessment

An assessment of risks⁴ associated with service delivery from infrastructure assets has identified the critical risks that will result in significant loss, ‘financial shock’ or a reduction in service.

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 cost after the selected treatment plan is implemented is shown in Table 6.2. These risks and costs are reported to management and GRFMA.

Two critical risk associated with the Bruce Eastick North Para Flood Mitigation Dam are failure of the structure of the Dam (Dam Break) and over topping of the Dam Crest wall in a flood event greater than 50 ARI .

Table 6.2: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Bruce Eastick North Para Flood Mitigation Dam	Sunny Day Failure (SDF); Dam Crest Flood (DCF) (with and without failure); and Probable Maximum Flood (PMF) (with and without failure)		Dam break and Consequence Assessment Annual Maintenance	Low High B (ANCOLD)	Nil Ref Table 5.3.1
Bruce Eastick North Para Flood Mitigation Dam	Flood Failure	H	Raise Dam height	Low	\$62,000,000

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

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to our customers and the services we provide. To adapt to changing conditions and grow over time we need to understand our capacity to respond to possible disruptions and be positioned to absorb disturbance and act effectively in a crisis to ensure continuity of service.

Resilience is built on aspects such as response and recovery planning, financial capacity and crisis leadership.

Our current measure of resilience is shown in Table 6.4 which includes the type of threats and hazards, resilience assessment and identified improvements and/or interventions.

Table 6.4: Resilience

Threat / Hazard	Resilience LMH	Improvements / Interventions
Earthquake	Low	Unknown
Significant flood event (40 ARI)	Low	Northern Floodways infrastructure
100 ARI Flood	Medium	Raise dam

7. FINANCIAL SUMMARY

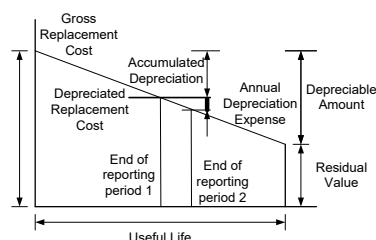
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

7.1 Financial Statements and Projections

7.1.1 Asset valuations

The best available estimate of the value of assets included in this Asset Management Plan are shown below. Assets are valued at Fair Value

Gross Replacement Cost	\$54,036,054
Depreciable Amount	\$53,559,054
Depreciated Replacement Cost ⁵	\$41,900,845
Annual Average Asset Consumption	\$706,099



7.1.1 Sustainability of service delivery

Two key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the:

- asset renewal funding ratio, and
- medium term budgeted expenditures/projected expenditure (over 10 years of the planning period).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio⁶ 0

The Asset Renewal Funding Ratio is the most important indicator and indicates that over the next 10 years of the forecasting that we expect to have 100% of the funds required for the optimal renewal and replacement of assets.

⁵ Also reported as Written Down Value, Carrying or Net Book Value.

⁶ AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service 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.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

The projected operations, maintenance and capital renewal expenditure required over the 10-year planning period is identified in Table 5.3.1.

Funding (cash allocation) of annual depreciation calculations is not undertaken, rather the policy is ensuring the GRFMA is provided with sufficient cash flow to maintain the Dam at required service provision levels.

GRFMA's target is a deficit equivalent of depreciation expense each year, net of estimated (budget) operations and maintenance outcomes

The Long-Term Financial Plan indicates that GRFMA will operate on average over the 10-year term with an operating deficit of \$6,309,540

7.2 Funding Strategy

Funding for assets is provided from the budget and long-term financial plan.

The financial strategy of the entity determines how funding will be provided, whereas the asset management plan communicates how and when this will be spent, along with the service and risk consequences of differing options.

7.3 Valuation Forecasts

Asset values are forecast to remain static unless additional assets are added.

Additional assets will generally add to the operations and maintenance needs in the longer term, as well as the need for future renewal. Additional assets will also add to future depreciation forecasts.7.4

7.4 Forecast Reliability and Confidence

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is classified on a 5-level scale⁷ in accordance with Table 7.5.

Table 7.5: Data Confidence Grading System

Confidence Grade	Description
A Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate $\pm 2\%$
B Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate $\pm 10\%$

⁷ IPWEA, 2015, IIMM, Table 2.4.6, p 2 | 71.

Confidence Grade	Description
C Uncertain	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated $\pm 25\%$
D Very Uncertain	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 Unknown	None or very little data held.

The estimated confidence level for and reliability of data used in this AM Plan is considered to be Reliable

8. PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices⁸

8.1.1 Accounting and financial data sources

2024/25 GRFMA Financial Statements

8.1.2 Asset management data sources

2024/25 GRFMA Financial Statements

8.2 Monitoring and Review Procedures

This asset management plan will be reviewed during annual budget planning processes and amended to show any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the long term financial plan.

8.3 Performance Measures

The effectiveness of the asset management plan can be measured in the following ways:

- The degree to which the required projected expenditures identified in this asset management plan are incorporated into the long term financial plan,
- The degree to which 1-5 year detailed works programs, budgets, business plans and corporate structures take into account the 'global' works program trends provided by the asset management plan,
- The degree to which the existing and projected service levels and service consequences (what we cannot do), risks and residual risks are incorporated into the Strategic Plan and associated plans,

9. REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM
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⁸ ISO 55000 Refers to this the Asset Management System

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