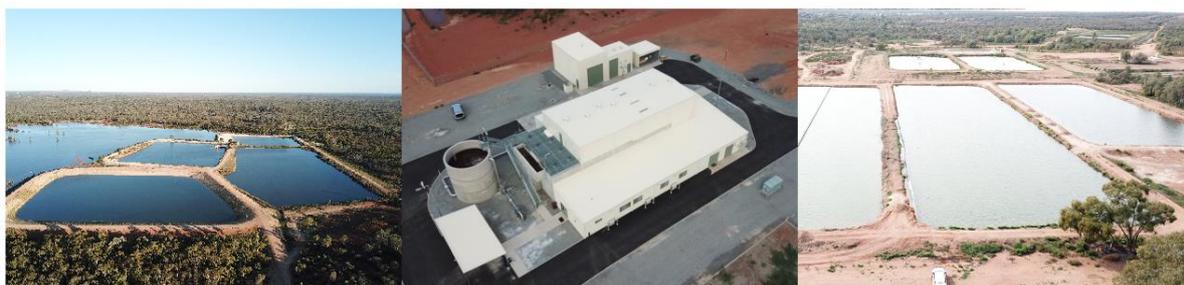




Cobar Shire Council

Water and Wastewater Department



Monthly Operational and Project Update Report

March 2023

Document Control

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1. Water Supply System

A. Burrendong Dam and Macquarie River

Burrendong Dam is currently at 95% and is no longer in flood mitigation zone as of 17 March 2023. Macquarie River is flowing with no flood alerts or restrictions.

B. Nyngan Weir Pool and Storages

Nyngan weir pool is no longer under major flood and currently at 2.3 m as of 17 March 2023. There is a current red alert for blue-green algae in the weir pool. The 700ML Nyngan storage is currently undergoing repairs, and the second storage is under construction.

C. Cobar Water Storages

The Cobar Water Board storage is currently at 62%. The water storages tracking and forecast for the financial year is provided in the graph below. The storage volume is tracking slightly below forecast due to blue-green algae mitigation measures.

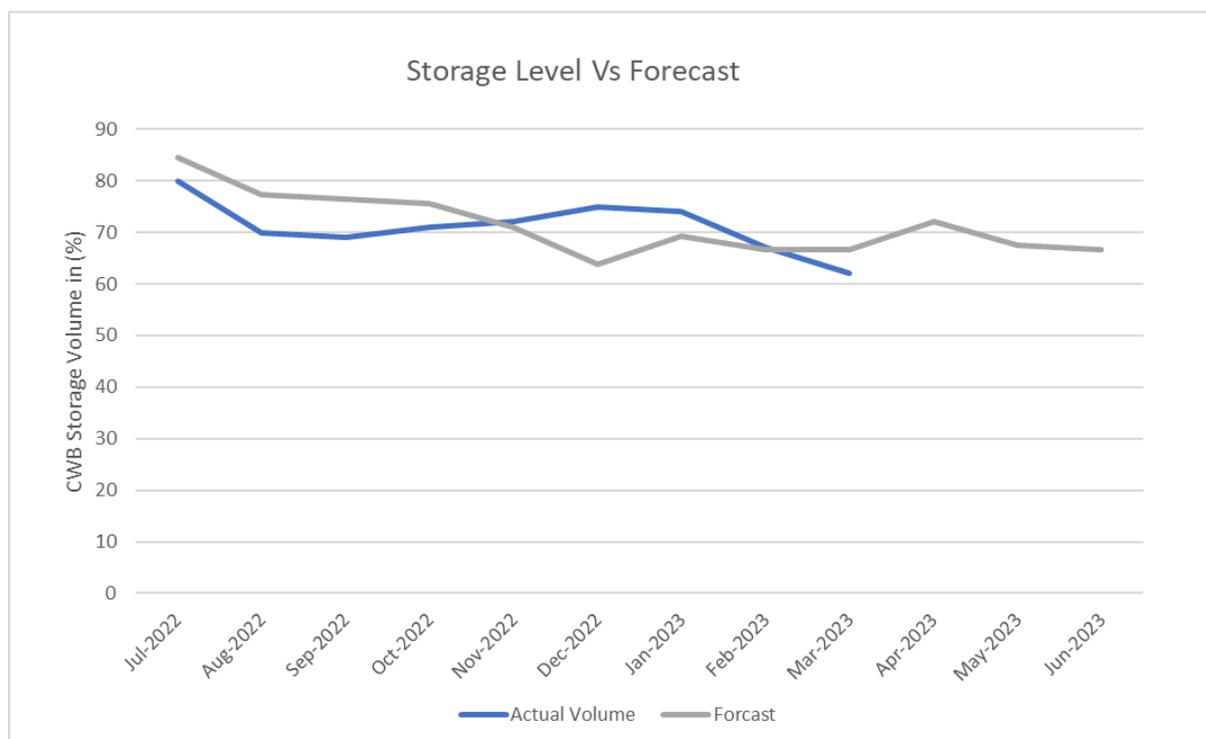


Figure 1: The actual Cobar storage volume vs Forecast

2. Town Water Supplies

A. Cobar Filtered Water Produced V Forecast for Financial Year

The following graph indicates the quantity of water produced by the filtration plant against the forecast for the current financial year. The volume produced in February 2023 is significantly more than the forecasted amount. This may be due to the dramatic increase in temperature and decreasing rainfall pattern. The total forecast volume produced this financial year is 426ML versus a greater production of 489ML.

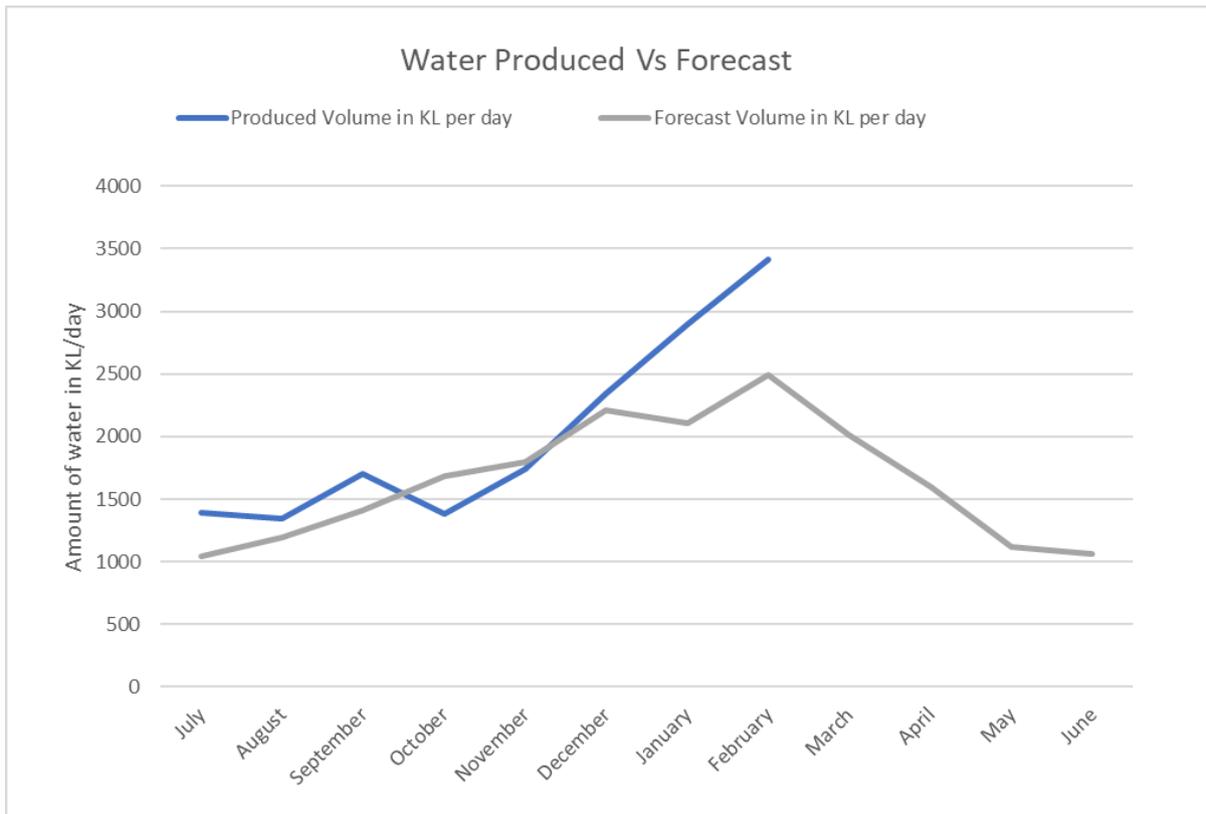


Figure 2 Average amount of water produced vs Forecast in KL per day

B. Water Quality

There was no water quality breach or incident in January 2023. The chlorine demand has increased dramatically, suspected to be due to high organic content in the Macquarie River. There is a current blue-green algae red alert for the water supply. Mitigation measures are being taken at the filtration remove and treat the algae.

C. Water Complaints and Enquiries

No complaints are recorded due to a new financial and customer management system being commissioned.

D. Outer Towns

Euabalong West is currently on water restrictions due to the water supply system failing. The Euabalong West pipework is frequently failing. A temporary diesel setup has been established at Booberoi Creek until temporary replacement pipework can be installed. Funding has recently been obtained for the water supply system and the project is in the initiation phase.

3. Wastewater

A. Sewage Inflow V Forecast

The following graph indicates the quantity of sewage inflow at Ward Oval against the forecast for the current financial year.

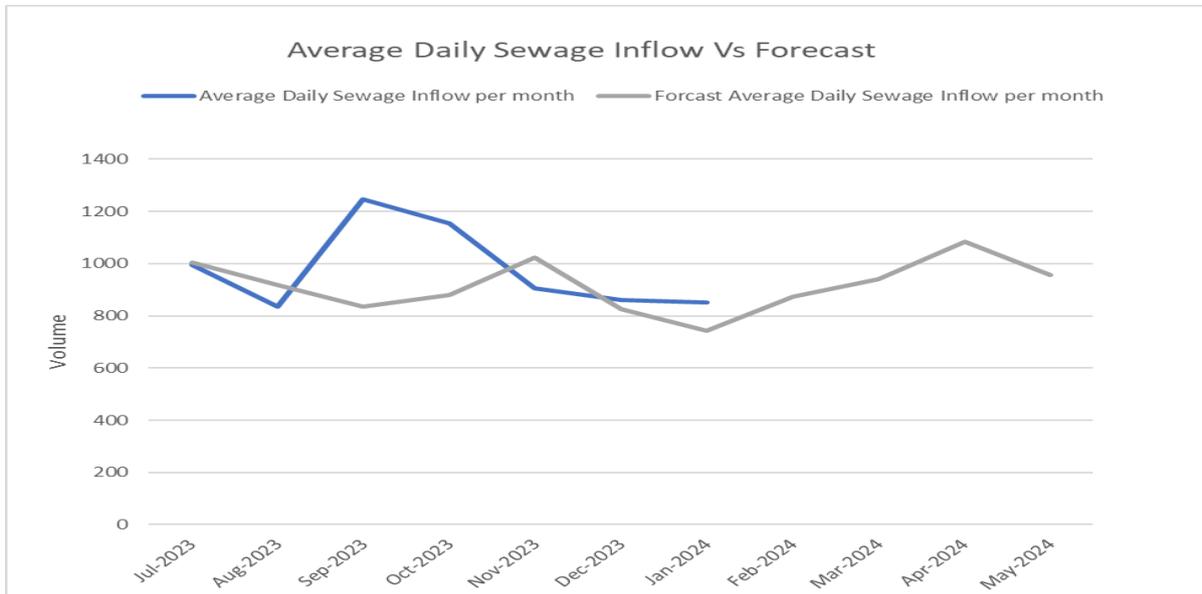


Figure 3 Volume of Sewage Treated per Month Vs Forecast

B. Effluent Reuse

The effluent reuse forecast against usage is shown below.

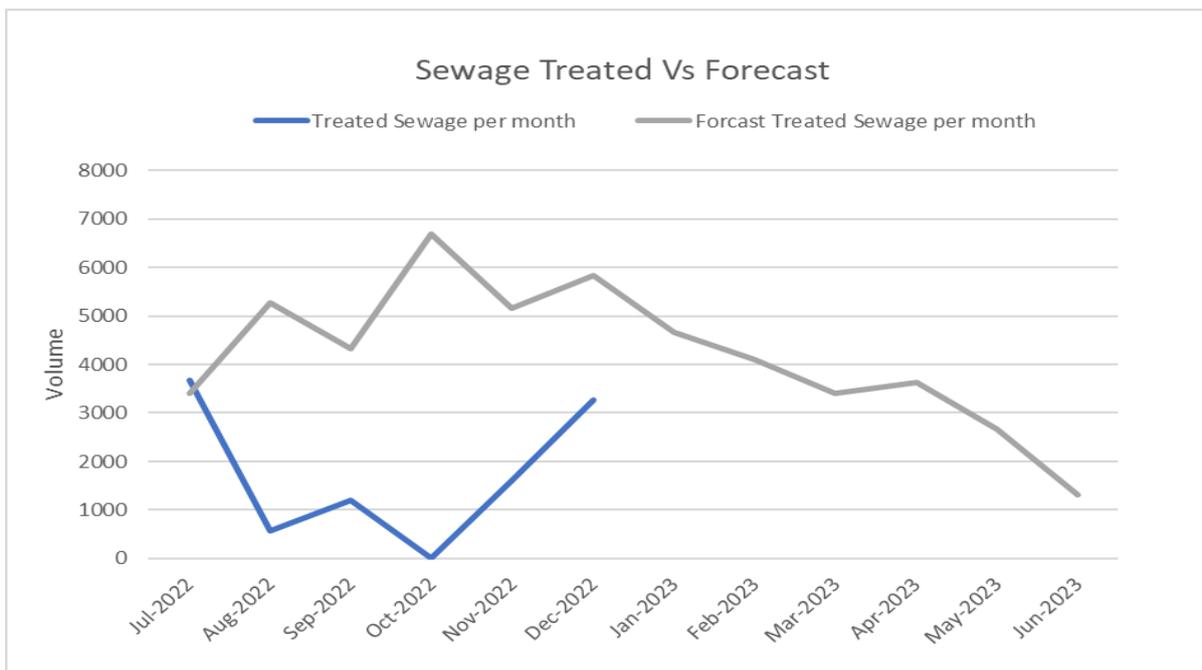


Figure 4 Volume of Sewage Reused at Golf Club

C. Wastewater Incidents

No complaints are recorded due to a new financial and customer management system being commissioned.

4. Energy Yield and Carbon Emission Reduction

The following graph shows the amount of energy harvested from the solar panels at Nyngan Pump Station and Hermidale Pump Station with the amount of Carbon emission reduction leading to an overall less carbon footprint.

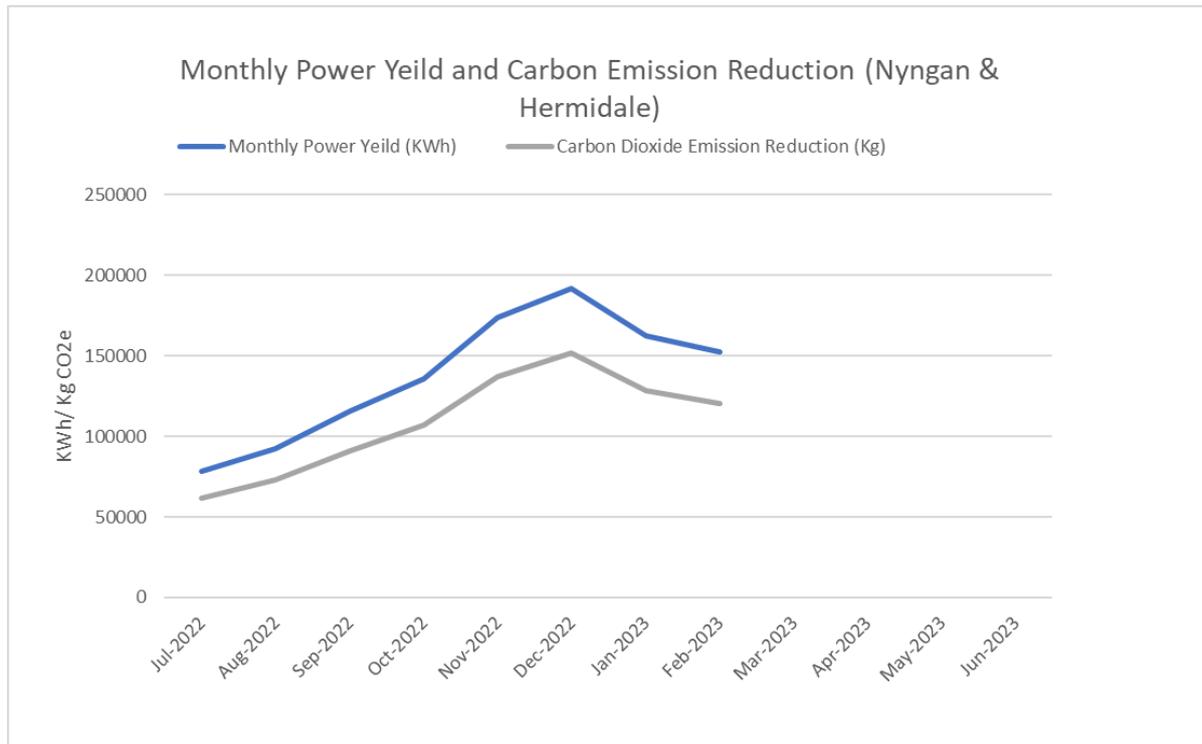


Figure 5 Monthly Power Yield and Carbon Emission Reduction (Nyngan & Hermidale Pump station)

5. Projects

A. Nyngan, Hermidale, and Cobar Pump Station Permanent Replacement

Project background:	Then 1980's Nyngan and Hermidale Pump Stations are at end of life and have failed catastrophically. Water Infrastructure NSW was successful in securing funding in conjunction with the National Water Grid for the construction of a permanent upgrade to the three pumping stations.	
Schedule overview:	Commenced:	May 2021
	Estimated completion date:	2025
Budget overview:	Grant funding:	\$46 million
Performance overview:	<ul style="list-style-type: none"> • Concept design and Geotech was awarded to SMEC late 2022. The concept design is currently underway and anticipated to be completed in June 2023. • The 50% design review will be conducted in mid-March 2023. • Review of environmental factors and environmental impact statement is planned to commence in early 2023. 	
Risk overview:	<ul style="list-style-type: none"> • Water reliability is at substantial risk for Cobar while construction is underway. This risk is being mitigated by the temporary replacement pump station project. 	

B. Nyngan and Hermidale Temporary Replacement Pump Stations

Project background:	Then 1980's Nyngan and Hermidale Pump Stations are at end of life and have failed catastrophically. Construction of an emergency temporary pump station commenced as a stop-gap measure until funding and construction of a permanent upgrade could be completed in 2025.	
Schedule overview:	Commenced:	January 2020 (Nyngan) September 2022 (Hermidale)
	Completion date:	March 2023 (Nyngan) September 2023 (Hermidale)
Budget overview:	Grant funding:	Nil
	Cobar Water Board funding:	\$3,000,000 (Hermidale)
	Expended to date:	\$1,205,670.39 (Hermidale) <i>(Current as of 20 February 2023)</i>
Performance overview:	<ul style="list-style-type: none"> • Significant delays to completion of Nyngan due to design issues, which are now resolved. • Hermidale commencement date was postponed to resolution of design issues at Nyngan due to similar design. • Nyngan temporary pump station has reached practical completion and is operating to meet Cobar Water Board water demands. Defects are expected to be resolved by March 2023. 	

	<ul style="list-style-type: none"> • Hermidale temporary pump station is progressing to final design with the safety in design workshop being conducted in March 2023.
Risk overview:	<ul style="list-style-type: none"> • The temporary pump design at Hermidale has building code compliance issues which are delaying the projects construction.

D. Nyngan to Cobar 110km Replacement Pipeline

Project background:	Then 1960's Nyngan to Cobar Water Storages 300mm pipeline has reached end of life and is in urgent need of replacement. 30km of the 140km has been replaced in 2017 with the remaining 110km requiring replacement.	
Schedule overview:	Commenced:	May 2021
	Estimated completion date:	TBC
Budget overview:	Grant funding:	TBC
Performance overview:	<ul style="list-style-type: none"> • The business case for pipeline funding is being refined and will be submitted in June 2023 for assessment. 	
Risk overview:	<ul style="list-style-type: none"> • The mild steel pipeline has reached its end of life and regular breakage is occurring. Water reliability and security for Cobar is at risk until the pipeline is replaced. 	

E. 8ML Water Treatment Plant

Project background:	Construction of a new Water Treatment Plant commenced in June 2017 and reached practical completion in July 2019. The plant can produce 8ML/day of potable water.	
Schedule overview:	Commenced:	June 2017
	Estimated completion date:	July 2023
Budget overview:	Grant funding:	\$15,750,000
	Cobar Shire funding:	\$200,000
	Expended to date:	\$13,108,989 <i>(Current as of 30 September 2022)</i>
Performance overview:	<ul style="list-style-type: none"> • The Head Contractor has undertaken repairs to the leaking supernatant tanks in September 2022. However, the repairs were not successful, and resolution of the issue continues to be discussed. • Major defect discussions continue to be discussed between the Principal, Agent, and the Head Contractor. • Increased turbidity in reservoirs and organics is being investigated. 	
Risk overview:	<ul style="list-style-type: none"> • Significant defects in the plant are outstanding. • Water quality issues are under investigation and may require plant modification. 	

F. Water Treatment Plant Shed

Project background:	Construction of a large 20m x 35m shed at the water treatment plant. Storage space to be leased to the Cobar Water Board and a 100kW solar array will be installed on its roof.	
Schedule overview:	Commenced: Completion date:	November 2022 April 2023
Budget overview:	Grant funding: Cobar Shire funding: Expended to date:	Nil \$300,000 \$9,750 <i>(Current as of 20 February 2023)</i>
Performance overview:	<ul style="list-style-type: none"> The shed is exempt from development application. However, it will require an REF and construction certification. The construction contract was executed in March 2023. 	
Risk overview:	<ul style="list-style-type: none"> Lease arrangement to be determined with Cobar Water Board. 	

G. Water and Sewage Treatment Plant Solar Arrays

Project background:	Construction of two 100kW solar arrays at the Water and Sewage Treatment Plants.	
Schedule overview:	Commenced: Estimated Completion date:	November 2022 November 2023
Budget overview:	Grant funding: Cobar Shire funding: Expended to date:	\$100,000 \$150,000 \$4,320 <i>(Current as of 20 February 2023)</i>
Performance overview:	<ul style="list-style-type: none"> The award for the solar installation tender is pending for the construction of the Water Treatment Plant shed and upgrade of the Sewage Treatment Plant switchboard. The Sewage Treatment Plant replacement switchboard concept design review was completed in March 2023. 	
Risk overview:	<ul style="list-style-type: none"> The cost of solar panels may change by tender award date. 	

H. Reticulation Replacement Stage 1 and Million Gallon Tank Refurbishment

Project background:	Stage 1 reticulation replacement of 7km of cast-iron mains was completed in December 2020. Refurbishment of the potable water Million Gallon Tank (MGT) on Fort Bourke Hill is ongoing, with the scope to replacement of the roof, support columns and internal epoxy coat.	
Schedule overview:	Commenced: Completion date:	December 2020 19 December 2022

Budget overview:	Grant funding: Cobar Shire funding:	\$6,900,000 Nil
	Expended to date:	\$6,500,637.08 <i>(Current as of 20 February 2023)</i>
Performance overview:	<ul style="list-style-type: none"> The Million Gallon Reservoir was recommissioned in March 2023. 	
Risk overview:	<ul style="list-style-type: none"> There is a leak evident at the base of the tank which is being investigated. It appears to be caused by a leaking inlet pipe underneath the tank. 	

I. Integrated Water Cycle Management Plan

Project background:	The Integrated Water Cycle Management Plan (IWCMP) is a strategic document that seeks to complete an issues paper, options assessment, asset management plan, and economic management plan for the Cobar Shire Council and Cobar Water Board.	
Schedule overview:	Commenced: Estimated Completion date:	January 2021 November 2023
Budget overview:	Grant funding: Cobar Shire funding:	\$516,363 \$172,121
	Expended to date:	\$501,670.90 <i>(Current as of 20 February 2023)</i>
Performance overview:	<ul style="list-style-type: none"> The issues paper was completed in January 2022. The options assessments are currently underway. 	
Risk overview:	<ul style="list-style-type: none"> The issues paper identified significant issues and there are variations proposed to resolve them. A total of \$392,619 of variations for the additional work has been applied for. The Council and the Water Board would be required to contribute 25% of any funding received. 	

J. Bulk Water Metering

Project background:	Bulk Water Metering installation at 7 Meg and Million Gallon Tank.	
Schedule overview:	Commenced: Estimated Completion date:	May 2022 April 2023
Budget overview:	Grant funding: Cobar Shire funding:	\$ 60,248.44 Nil
	Expended to date:	\$ 44,836.00 <i>(Current as of 31 October 2022)</i>
Performance overview:	<ul style="list-style-type: none"> The Flow meter installation at Million Gallon Tank is completed and it is online. 	

	<ul style="list-style-type: none"> • Additional procurement for the 7Meg installation is required due to scope creep. • Project has been delayed due to a recently vacated position.
Risk overview:	<ul style="list-style-type: none"> • Nil

K. Leak Detection and Pressure Monitoring

Project background:	Installation of pressure district areas, district metering areas, and associated analysis for leakage reduction.	
Schedule overview:	Commenced:	February 2023
	Estimated Completion date:	December 2023
Budget overview:	Grant funding:	\$ 150,000
	Cobar Shire funding:	\$ 32,906.25
	Other funding:	\$ 117,718.75
	Expended to date:	\$ 0 <i>(Current as of 28 February 2023)</i>
Performance overview:	<ul style="list-style-type: none"> • District pressure areas and district metering areas are being determined. • Request for quotations underway. 	
Risk overview:	<ul style="list-style-type: none"> • Nil 	

L. Euabalong Pump Station Replacement

Project background:	Construction of a new Euabalong and Euabalong West raw water supply pumping station.	
Schedule overview:	Commenced:	January 2023
	Estimated Completion date:	July 2025
Budget overview:	Grant funding:	\$ 1,016,051
	Cobar Shire funding:	Nil
	Expended to date:	\$ 0 <i>(Current as of 31 January 2023)</i>
Performance overview:	<ul style="list-style-type: none"> • Request for quotations for concept design completed. • Engaged Xylem for concept design commencing March 2023. 	
Risk overview:	<ul style="list-style-type: none"> • The water supply to Euabalong West has failed due to flooding and assets at end of life. Temporary pumping has been established. • Existing pumping stations are beyond design life and a number of critical components are/have failed. • A new pump station is going to be constructed in a flood resistant area. A new site, electricity and piping will need to be established. 	

M. Euabalong Pipeline Replacement – Phase 1

Project background:	Euabalong West pipeline has reached end of life and requires replacement. It is frequently failing, interrupting water supply to Euabalong West. The pipeline is 12km long, this project seeks to replace the first section which is in the most critical state and experiences the highest pressure.	
Schedule overview:	Commenced:	TBC
	Estimated Completion date:	TBC
Budget overview:	Grant funding:	TBC
	Cobar Shire funding:	Nil
	Expended to date:	\$ 0 <i>(Current as of 31 October 2022)</i>
Performance overview:	<ul style="list-style-type: none"> It is anticipated that a funding deed will be signed shortly. 	
Risk overview:	<ul style="list-style-type: none"> Nil 	

N. Green Tank '7ML' Refurbishment and Pressure Pump Station

Project background:	The Green Tank protective coat has deteriorated, and steel has started to corrode. The project will reline and install a pressure booster pump station to rectify the low-pressure issues associated with the operation of this tank.	
Schedule overview:	Commenced:	January 2023
	Estimated Completion date:	September 2025
Budget overview:	Grant funding:	\$ 4,031,426
	Cobar Shire funding:	Nil
	Expended to date:	\$ 19,280 <i>(Current as of 31 January 2023)</i>
Performance overview:	<ul style="list-style-type: none"> Public Works Advisory has completed an option study and the most advantageous solution has been selected. Quotations for detailed design are currently being received. 	
Risk overview:	<ul style="list-style-type: none"> Nil 	