

# Cobar Shire Council

## Water and Wastewater Department



## Monthly Operational and Project Update Report

### February 2023

#### Document Control

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## 1. Water Supply System

### A. Burrendong Dam and Macquarie River

Burrendong Dam is currently at 99% and is no longer in flood mitigation zone as of 14 February 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 2.2 m as of 22 February 2023. 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 67%. The water storages tracking and forecast for the financial year is provided in the graph below. The storage volume is tracking as forecast.

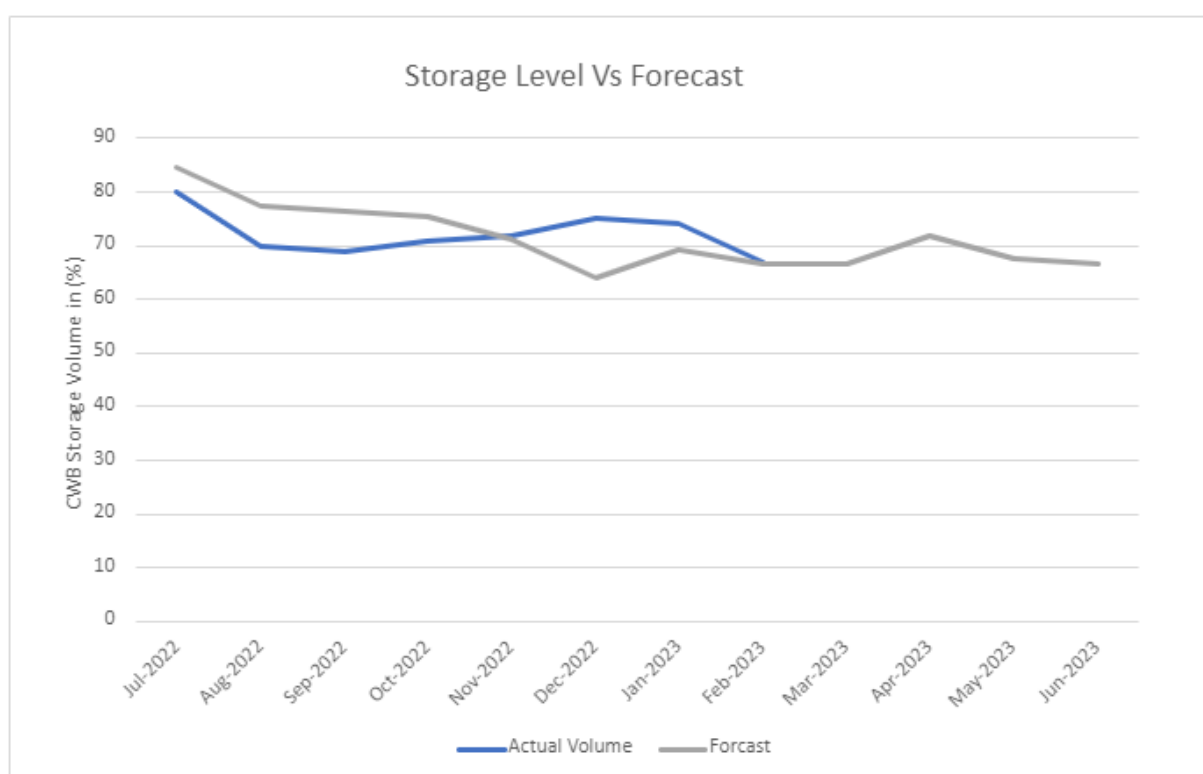


Figure 1: The actual Cobar storage volume vs Forecast

## 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 January 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 351ML versus a greater production of 393ML.

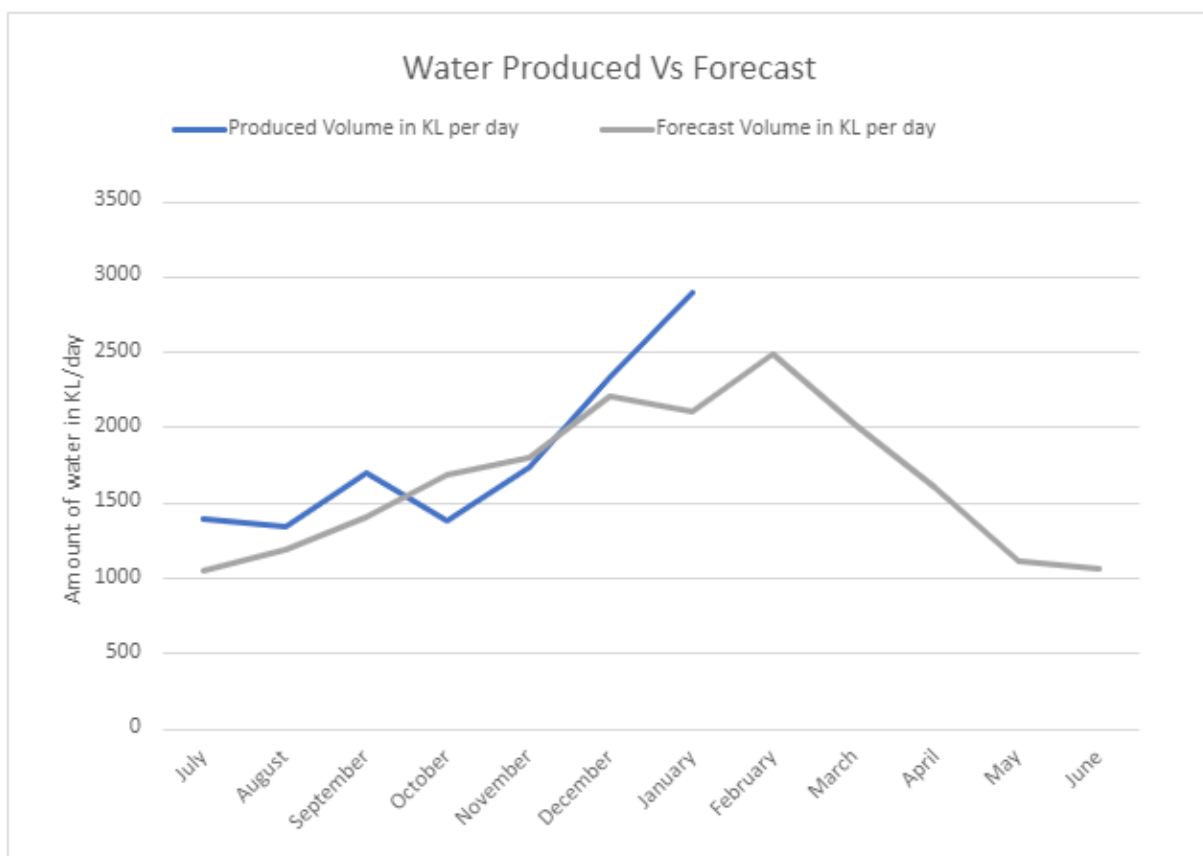


Figure 2 Average amount of water produced vs Forecast in KL per day

### 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.

### C. Water Complaints and Enquiries

The following table shows the water quality complaints and enquires with their status from November 2022 to January 2023.

Date	Incident	Location	Status
2 November 2022	Special water meter read	Bourke Rd	Complete
9 November 2022	Water leaking on the road at ward Oval	Cornish St	Complete
10 November 2022	leaking tap	-	Complete
11 November 2022	Burst Main	Marshal St	Complete
14 November 2022	Burst Main	Marshal St	Complete
16 November 2022	Special water meter read	Bradely St	Complete
18 November 2022	Broken Water Meter	Wilga Cres	Complete
22 November 2022	Works in Progress and Access to Yard	Railway Pde	Complete
25 November 2022	Tap on Water meter is seized	Belagoy St	Complete

25 November 2022	Water leak on the meter shire side	-	Complete
25 November 2022	Leaking water pipe on nature strip across road	Duffy Dr	Complete
29 November 2022	Leaking Water meter on Council Side Dalton Rebecca	Woodiwiss Ave	Complete
5 December 2022	Meters Leaking	-	Complete
6 December 2022	Muddy Water smell coming up through the pipes	Elizabeth Cr	Complete
9 December 2022	Faulty Meter	-	Complete
12 December 2022	Slow water leak	Louth Rd	Complete
21 December 2022	Water spurting out of tap on meter	Becker St	Complete
21 December 2022	No meter	Wilga Cres	Complete
11 January 2023	Water everywhere near Bannister Court	Bannister Court	Complete
12 January 2023	Incorrect meter read and request a meter test	Snelson Street	Complete
12 January 2023	Leaking isolation tap	Becker Street	Complete
16 January 2023	Water leak on nature strip	Bradley Street	Complete
16 January 2023	Leak on block next door	Clifton Place	Complete
16 January 2023	Leaking valve	Denman Street	Complete
16 January 2023	Water flowing fast down past shop	Marshall Street	Complete
17 January 2023	Water spraying out of bubbler in skate park	Harcourt Street	Complete
30 January 2023	Special water read	Madden Street	Complete

#### 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. Updated information for sewage inflow is unavailable due to a SCADA failure.

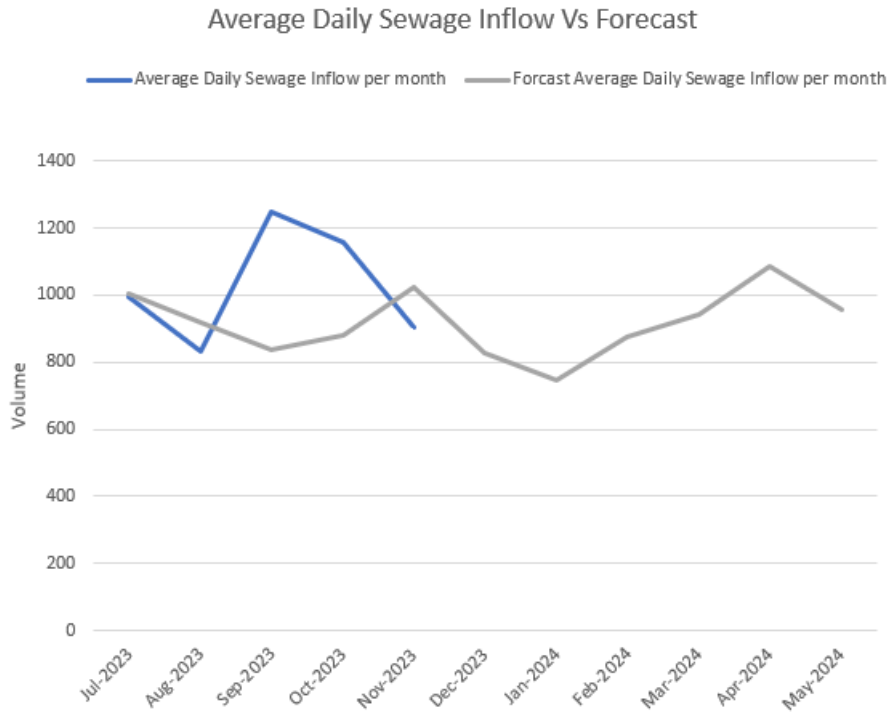


Figure 3 Volume of Sewage Treated per Month Vs Forecast

### B. Effluent Reuse

The effluent reuse forecast against usage is shown below. Updated information for effluent reuse is unavailable due to a SCADA failure.

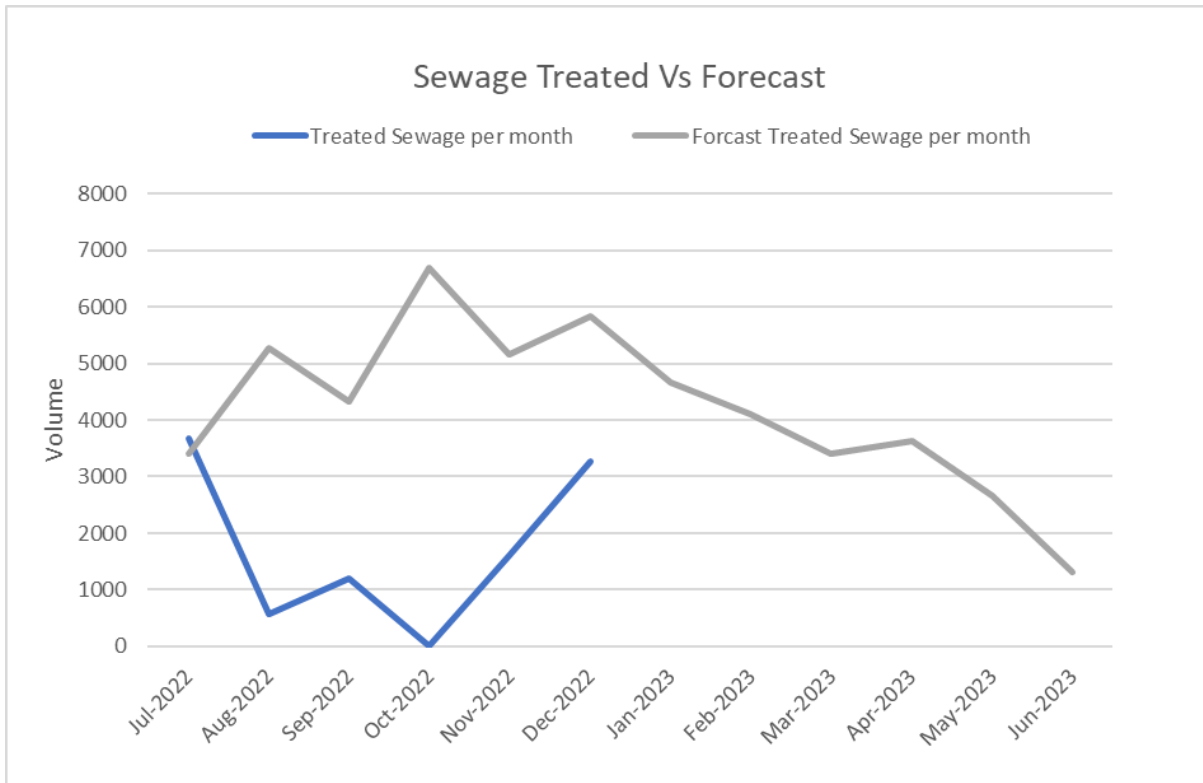


Figure 4 Volume of Sewage Reused at Golf Club

### C. Wastewater Incidents

The following table shows the wastewater quality complaints and incidents for November and December 2022. No complaints were recorded for January 2023.

Date	Incident/Complaints	Location	Cause
Friday, 11 November 2022	Blocked Drain in Sewer	Bathrust St	Complete
Wednesday, 14 December 2022	Pest control Drains	5 Elizabeth Crescent	Complete

## 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. Updated information for energy data is unavailable due to a SCADA failure.

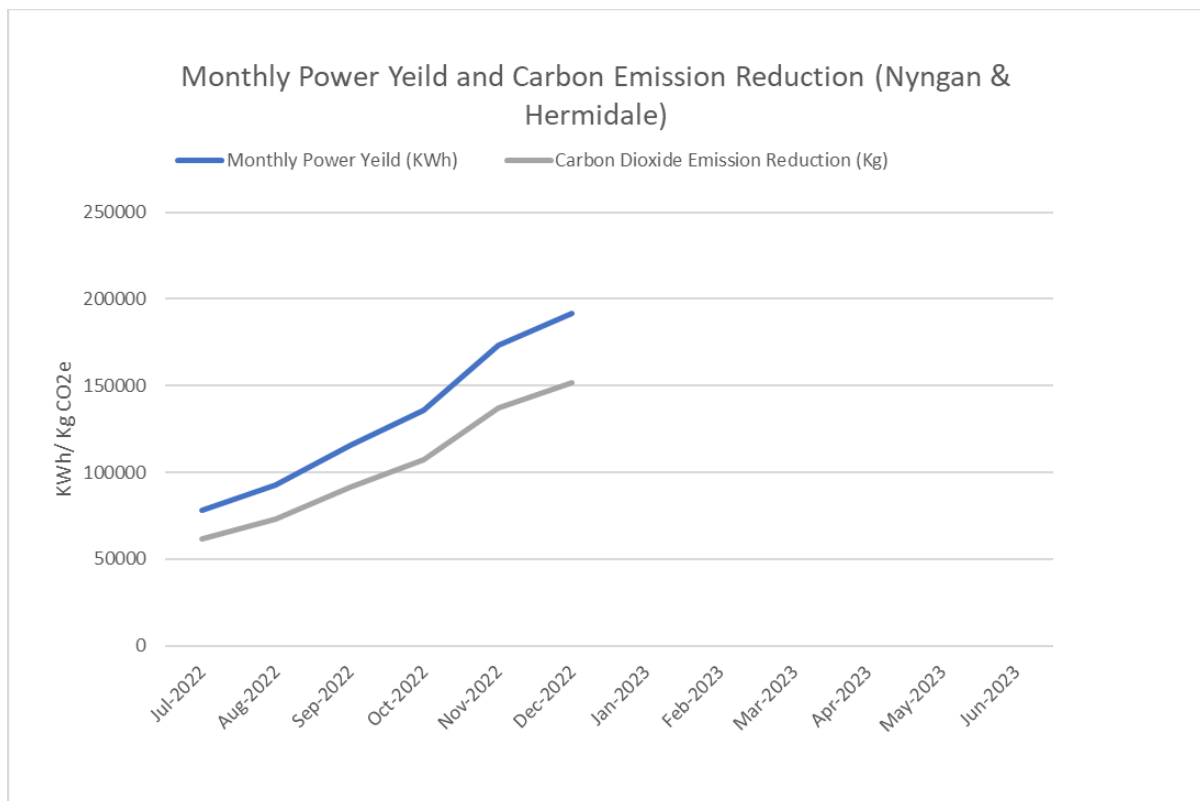


Figure 5 Monthly Power Yield and Carbon Emission Reduction (Nyngan & Hermidale Pump station)

## 5. Projects

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

<b>Project background:</b>	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.	
<b>Schedule overview:</b>	Commenced:	May 2021
	Estimated completion date:	2025
<b>Budget overview:</b>	Grant funding:	\$46 million
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>• Concept design and Geotech was awarded to SMEC late 2022. The concept design is currently underway and anticipated to be completed in June 2023.</li> <li>• Review of environmental factors and environmental impact statement is planned to commence in early 2023.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>• Water reliability is at substantial risk for Cobar while construction is underway. This risk is being mitigated by the temporary replacement pump station project.</li> </ul>	

### B. Nyngan and Hermidale Temporary Replacement Pump Stations

<b>Project background:</b>	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.	
<b>Schedule overview:</b>	Commenced:	January 2020 (Nyngan) September 2022 (Hermidale)
	Completion date:	March 2023 (Nyngan) September 2023 (Hermidale)
<b>Budget overview:</b>	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>
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>• Significant delays to completion of Nyngan due to design issues, which are now resolved.</li> <li>• Hermidale commencement date was postponed to resolution of design issues at Nyngan due to similar design.</li> <li>• 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.</li> <li>• Hermidale temporary pump station is progressing to final design with the HAZOP study completed in October 2022.</li> </ul>	



<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>• Nyngan weir pool is out of major flood. The discharge pipelines were damaged by the high flood level. This damage was repaired in February 2023.</li> <li>• The second pontoon at Nyngan has an unresolved vibration issue that is under investigation.</li> <li>• The temporary pump design at Hermidale has building code compliance issues which are delaying the projects construction.</li> </ul>
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#### D. Nyngan to Cobar 110km Replacement Pipeline

<b>Project background:</b>	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.	
<b>Schedule overview:</b>	Commenced: Estimated completion date:	May 2021 TBC
<b>Budget overview:</b>	Grant funding:	TBC
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>• The business case for pipeline funding is being refined and will be submitted in June 2023 for assessment.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	

#### E. 8ML Water Treatment Plant

<b>Project background:</b>	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.	
<b>Schedule overview:</b>	Commenced: Estimated completion date:	June 2017 July 2023
<b>Budget overview:</b>	Grant funding: Cobar Shire funding:  Expended to date:	\$15,750,000 \$200,000  \$13,108,989 <i>(Current as of 30 September 2022)</i>
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>• The access road to the plant was completed in November 2022.</li> <li>• 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.</li> <li>• Major defect discussions continue to be discussed between the Principal, Agent, and the Head Contractor.</li> <li>• Increased turbidity in reservoirs and organics is being investigated.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>• Significant defects in the plant are outstanding.</li> </ul>	

	<ul style="list-style-type: none"> <li>Water quality issues are under investigation and may require plant modification.</li> </ul>
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#### F. Water Treatment Plant Shed

<b>Project background:</b>	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.	
<b>Schedule overview:</b>	Commenced: Completion date:	November 2022 April 2023
<b>Budget overview:</b>	Grant funding: Cobar Shire funding:  Expended to date:	Nil \$300,000  \$9,750 <i>(Current as of 20 February 2023)</i>
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>The shed is exempt from development application. However, it will require an REF and construction certification.</li> <li>The earthwork and base preparations were completed in November 2022.</li> <li>The construction contract was delayed and is expected to be awarded in March 2023.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>Lease arrangement to be determined with Cobar Water Board.</li> </ul>	

#### G. Water and Sewage Treatment Plant Solar Arrays

<b>Project background:</b>	Construction of two 100kW solar arrays at the Water and Sewage Treatment Plants.	
<b>Schedule overview:</b>	Commenced: Estimated Completion date:	November 2022 November 2023
<b>Budget overview:</b>	Grant funding: Cobar Shire funding:  Expended to date:	\$100,000 \$150,000  \$4,320 <i>(Current as of 20 February 2023)</i>
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>The cost of solar panels may change by tender award date.</li> </ul>	

#### H. Reticulation Replacement Stage 1 and Million Gallon Tank Refurbishment

<b>Project background:</b>	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.
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<b>Schedule overview:</b>	Commenced: Completion date:	December 2020 19 December 2022
<b>Budget overview:</b>	Grant funding: Cobar Shire funding:  Expended to date:	\$6,900,000 Nil  \$6,500,637.08 <i>(Current as of 20 February 2023)</i>
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>• The roof and columns have been replaced. Minor defective work relating to dissimilar metal contact was resolved in December 2022.</li> <li>• The epoxy coating of the MGT was postponed due to Covid and temporary reservoir issues; both are now resolved.</li> <li>• The epoxy coating was completed in early December 2022.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>• Peak summer weather increasing water demands on system and old water treatment plant clarifier is being utilised as a temporary reservoir.</li> <li>• The Million Gallon Reservoir recommissioning has been delayed due to the recently completed scope creep requiring replacement of surrounding pipework. It is anticipated to be recommissioned at the end of February.</li> <li>• 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.</li> </ul>	

#### I. Reticulation Replacement Stage 2

<b>Project background:</b>	Stage 2 reticulation replacement primarily focuses on the construction of an additional 5.5km of pipework to address firefighting flow requirements and construct ring-mains.	
<b>Schedule overview:</b>	Commenced: Estimated Completion date:	July 2020 30 November 2022
<b>Budget overview:</b>	Grant funding: Cobar Shire funding:  Expended to date:	\$3,026,100 Nil  \$2,409,114.70 <i>(Current as of 20 February 2023)</i>
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>• The project has reached substantial completion and will no longer be reported on in future reports.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>• Nil</li> </ul>	

#### J. Integrated Water Cycle Management Plan

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

#### K. Bulk Water Metering

<b>Project background:</b>	Bulk Water Metering installation at 7 Meg and Million Gallon Tank.	
<b>Schedule overview:</b>	Commenced: Estimated Completion date:	May 2022 April 2023
<b>Budget overview:</b>	Grant funding: Cobar Shire funding:  Expended to date:	\$ 60,248.44 Nil  \$ 44,836.00 <i>(Current as of 31 October 2022)</i>
<b>Performance overview:</b>	<ul style="list-style-type: none"> <li>• The Flow meter installation at Million Gallon Tank is completed and it is online.</li> <li>• Procurement of the parts for the Flow Meter installation at 7Meg is completed.</li> <li>• Project has been delayed due to a recently vacated position.</li> </ul>	
<b>Risk overview:</b>	<ul style="list-style-type: none"> <li>• Nil</li> </ul>	