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REPORT

QUARTERLY ENVIRONMENTAL WATER REPORT JUNE 2025 – AUGUST 2025

S2-ENV-WA-GEN-REP-FGJV0146

REV B

APRIL , 2026

This Report has been prepared to satisfy the reporting requirements in the Main Works – Water Management Plan (WMP) and to meet Condition of Approval (CoA) 31(c)(d) of the Infrastructure Approval Schedule which requires publicly available reporting of the outcomes of the WMP. The Report provides commentary on the performance of the monitoring programs as part of the WMP.

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ABBREVIATIONS AND DEFINITIONS

Acronym	Definition
AWS	Automatic weather stations
BoM	Bureau of Meteorology
CoA	Condition of Approval
ECVT	Emergency Cable and Ventilation Tunnel
EPL	Environmental Protection Licence
FGJV	Future Generation Joint Venture
MAT	Main Access Tunnel
MDB	Murray Darling Basin
NEM	National Electricity Market
SHL	Snowy Hydro Limited
Snowy Scheme	Snowy Mountains Hydro-electric Scheme
SWMP	Surface Water Management Plan
TARP	Trigger Action Response Plan
TBM	Tunnel Boring Machine
WMP	Water Management Plan
WQO	Water Quality Objectives

1. INTRODUCTION

Snowy Hydro Limited (SHL) is constructing a pumped hydro-electric expansion of the Snowy Mountains Hydro-electric Scheme (Snowy Scheme), called Snowy 2.0. Snowy 2.0 will be built by the delivery of two projects: Exploratory Works and Snowy 2.0 Main Works (which is ongoing).

Snowy 2.0 is a pumped hydro-electric project that will link the existing Tantangara and Talbingo reservoirs through a series of new underground tunnels and a hydro-electric power station. Most of the project’s facilities will be built underground, with approximately 27 kilometres of concrete-lined tunnels constructed to link the two reservoirs and a further 20 kilometres of tunnels required to support the facility. Intake and outlet structures will be built at both Tantangara and Talbingo Reservoirs.

Snowy 2.0 will increase the generation capacity of the Snowy Scheme by an additional 2,200 MW, and at full capacity will provide approximately 350,000 MWh of large-scale energy storage to the National Electricity Market (NEM). This will be enough to ensure the stability and reliability of the NEM, even during prolonged periods of adverse weather conditions.

Webuild, Clough and Lane have formed the Future Generation Joint Venture (FGJV) and have been engaged to deliver both Stage 2 of Exploratory Works and Snowy 2.0 Main Works.

2. PURPOSE

This Environmental Water Report has been prepared to satisfy the reporting requirements in the Main Works – Water Management Plan (WMP) and to meet Infrastructure Approval CSSI 9687 (CoA) Schedule 3, Condition 31(c)(d) which requires publicly available reporting of the outcomes of the WMP. This Environmental Water Report is intended to provide commentary on the performance of the monitoring programs as part of the WMP (identified in).

Table 2-1: Monitoring Overview

Aspect	Objective
Surface Water Monitoring Program	
Routine receiving surface water quality monitoring	• Inform and assess the performance of management processes/measures that seek to minimise the Project’s impact on surface water quality • Help determine source and extent of any water quality changes • Collect baseline data to characterise water quality and determine site specific values
Event based wet weather overtopping water quality monitoring	
Groundwater Monitoring Program	
Groundwater level monitoring	• Inform and assess the performance of management • Processes/measures that seek to minimise the Project’s impact on regional and local (including alluvial) aquifers and GDEs
Groundwater quality monitoring	
Water extraction monitoring	• Inform and assess water consumption, site water balance and compliance with water access licences

3. OVERVIEW

3.1. Reporting Period

This Environmental Water Report covers the monitoring period from 1st June to 31st August 2025.

3.2. Construction Progress

Table 3-1 summarises the key construction activities which have been undertaken during the reporting period.

Table 3-1: Key Construction Activities

Location	Key Construction Activities
Lobs Hole	ECVT / MAT Portal - Scaffold access/egress from cable trench - Final excavation plan - GAS insulated switchgear building - fence alignment - Drain for additional filter at the GIS building. This is a temporary work required for the earthing installation. - Technical office presented a solution for the North-East corner details of the GIS building trench excavation. - CT01 – Sequence installation process - TBM 1 has installed 19 IPS rings in the reporting period. Main Office - OFFICE EXTENSION, the construction of the buildings has been completed. Main Yard - BATCHING PLANT, the footings for the two additional silos were cast - INSTALLATIONS FOR THE HYDROMECHANICAL SUBCONTRACTOR ATB, the warehouse has been constructed, and the office building is in progress - INSTALLATIONS OF THE LABORATORY, the extension and adjustments of the installations of the laboratory are in progress. - Lobs Hole pad 1C, modifications on the shelters for the concrete pumps. - Main Yard - Works to enlarge Basin 10.5. GF01 - GF01 is at final design capacity, which currently holds approximately 850,000 BCM of material. Accommodation Camps - Lobs Hole Main Camp Pad E, new access road and additional gymnasium extension. Talbingo - Counterweight Design for Invert Traveler. - Dismantling chamber concrete works - slab verification. - Review of anchor bolts for Talbingo transition works. - Temporary Placing Booms, modification of their foundations. - Transition C1 Invert slab CS02, CS03, CS04, CS05 completed. Gate closure base slab 02 concrete completed & BS03 reinforcement installation ongoing. Ravine Bay - engineered fill in cell 4. - Spoil placement ongoing from Intake and D&B tunnel.

Location	Key Construction Activities
Marica	• Platform design for Additional Refuge Chamber for TBM#3 • USS excavation works ongoing. • Excavation continues within the Marica USS which continues to be excavated using D&B methods, with spoil stockpiled in the lined area adjacent to the USS. Excavation at the Marica Adit Pads also continues with the Pad 1 / Adit Portal approach almost complete.
Rock Forest	• SHL advised that lease conditions have been finalized with the Rock Forest landowner and the works on the PSE can commence.
Tantangara	• Batching Plant Area, Shed for Chiller ongoing. • Gate Shaft - Gate Shaft Workshop Dome Shelters Cladding • USS Construction waste water treatment drain updated and completed. • Works ongoing on Loading analysis for 2 x Tower cranes Marica HSS. • Excavation from the Tantangara TBM is ongoing. • Excavation from Tantangara TBM3 is ongoing and minor amounts of D&B have been excavated from the Y-Junctions Connection Tunnel.

4. WEATHER CONDITIONS

There are several weather stations along the alignment of the project that report real-time data. These include:

- “Lobs Hole” - which is an Automatic Weather Station managed by FGJV in Lobs Hole construction site.
- “Cabramurra” - an Automatic Weather Station located near the lookout in the Cabramurra township managed by the Bureau of Meteorology
- “Tantangara” - an Automatic Weather Station managed by FGJV in Tantangara construction site.

The Tantangara and Cabramurra gauges are in sub-alpine environments, with elevations of approximately 1220 m and 1475 m, respectively. Cabramurra records substantially higher annual rainfall amount than the lower-elevation gauges at Lobs Hole and Tantangara. Tantangara and Lobs Hole weather stations record actual onsite conditions at the respective construction sites, while Cabramurra weather station, at 1470 m is representative of conditions at Marica – which has an elevation of 1480 m and is approximately 15 km north of the Cabramurra Station.

A summary of climate data for the ravine and plateau areas is provided in Table 4-1

Table 4-1: Weather Conditions Within the Reporting Period

Parameter	Lobs Hole ¹			Marica (Cabramurra)			Tantangara ²		
	June	July	August	June	July	August	June	July	August
Temperature									
Mean maximum (°C)	16.5	14.6	17.7	11.5	8.6	14.2	16.8	12.2	17.9
Mean minimum (°C)	-5.3	-2.6	-3.8	-5.7	-2.7	-3.6	-7.5	-6.5	-5.8
Rainfall									
Monthly	120.4	142.2	76.2	98.4	213.8	96.2	121.8	168	115.4
Long Term Average	94.26	102.46	61.73	124.73	151.13	82.26	108.53	112.73	86.2

1. Lobs Hole long term average rainfall is taken from the Tumbarumba weather station.
2. Tantangara long term average rainfall is taken from the Adaminaby Alpine Tourist Park weather station.

During June–August 2025 reporting period, climatic conditions across Lobs Hole, Marica (Cabramurra), and Tantangara were consistent with typical winter patterns, with mean maximum temperatures ranging from 8.6°C to 17.9°C and minimums consistently below zero, indicating persistent frost risk. Rainfall levels were generally above long-term averages in June and July, particularly at Marica (213.8 mm in July), before declining in August. Snowfall was observed at Marica and Tantangara, contributing to colder conditions at higher elevations. Overall, the period was marked by cold weather, widespread frosts, and elevated precipitation early in the season, followed by a gradual warming trend and reduced rainfall towards the end of winter.

5. SURFACE WATER MONITORING PROGRAM

5.1. Routine Surface Water Quality Monitoring

Routine surface water quality monitoring is undertaken in accordance with CoA Condition 31 and Environmental Protection Licence 21266 (EPL - 21266) to determine if project activities may be promoting negative impacts to receiving water quality and the Water Quality Objectives (WQO). Publicly available surface water quality monitoring results undertaken in accordance with EPL - 21266 can be accessed [here](#).

All relevant NATA accredited laboratory analytical results have been included in Appendix B.

For this reporting period, it is important to highlight that this period was characterized by high rainfall and snowfall, which caused a considerable increase in water flow and turbulence in the water bodies across the project site. This was likely a factor influencing the variability with water quality during this period, specifically during June and July, pH concentrations at sampling points in the Yarrangobilly River, Kellys Plain Creek, Nungar Creek, and Murrumbidgee River ranged between 7.00 and 8.5. According to the Surface Water Management Plan and the Baseline water quality results summary for surface water referred in this MP, these water bodies are highly impacted by runoff during wet periods, which can likely affect water quality. It is important to note that this variability is likely not attributed to construction activities.

While TN levels for monitoring locations within the Yarrangobilly River remain below the WQO, minor exceedances for NO_x were recorded at EPL9 and EPL16 in July (30 µg/L). However, subsequent monitoring showed that these concentrations have since decreased to within the WQO. A similar trend was observed for filtered Aluminium and Chromium, which also showed slight exceedances in July. These results are likely attributed to the significant precipitation recorded at Lobs Hole in July (142.2 mm). The subsequent reduction in rainfall during August correlates with the stabilization of these levels, suggesting the July spikes were a direct result of increased catchment runoff.

In contrast, TN at EPL33 showed an upward trend during July, reaching 600 µg/L. However, concentrations stabilized in August, dropping to 300 µg/L. This behaviour was observed across the wider project area and correlates directly with the high precipitation recorded at Tantangara in July (168 mm), suggesting that the spike was driven by increased catchment runoff.

The significant increase in runoff and flow volumes during this period resulted in elevated Turbidity levels and subsequent WQO exceedances. Total Phosphorus concentrations (ranging between 20 µg/L and 40 µg/L) and elevated Aluminium and Iron levels are directly associated with these mobilized sediments. Importantly, these results align with historical winter ranges (2022–2025), where Phosphorus, Aluminium, and Iron have consistently fluctuated within these same margins during high-flow periods. These transient exceedances are therefore attributed to natural, non-anthropogenic catchment processes rather than project related activities. During the winter season, concentrations for dissolved oxygen are expected to be outside the WQOs, with levels varying between 60% and 122%. Total Nitrogen concentrations are also expected to be between 200 µg/L and 700 µg/L, which aligns with the case of Camerons Creek, located at the Rock Forest site outside of Kosciuszko National Park. Ammonia levels are expected to range from 20 µg/L to 180 µg/L. These concentrations are consistent with the reference data expected for seasonal changes throughout the project.

While some parameters are expected to be outside water quality parameters across the project, Camerons Creek, displays a distinct water quality profile compared to other sites across the project. This is primarily attributed to its low-flow regime and smaller stream volume, which are further influenced by local animal activity. This creek shows low dissolved oxygen levels and a pH that remains within the WQO range; however, it also exhibits elevated turbidity and suspended solids, along with exceedances in nutrients - particularly, phosphorus, and several dissolved metals.

5.2. Event-Based Monitoring

Event based wet weather overtopping water quality monitoring is undertaken in accordance with the SWMP Trigger Action Response Plan (TARP 2) to monitor stormwater overtopping sediment basin discharges. Sediment basins for the Project have been designed to meet the design rainfall depths identified in Table 5-1.

Table 5-1: Design Rainfall Depths (SWMP Section 5.1.1)

Catchment	Description	85 th percentile, 5-day rainfall (mm)	90 th percentile, 5-day rainfall (mm)	95 th percentile, 5-day rainfall (mm)
Yarrangobilly River	Surface works at Lobs Hole and Marica	28.1	35.6	49.0
Upper Eucumbene River	Surface works between Marica and the Snowy Mountain Highway	35.2	43.4	56.9
Tantangara construction compound	Surface works adjacent to the southern portion of Tantangara Reservoir	30.5	37.0	51.0
Goorudee Rivulet	Surface works at Rock Forest	20.0	25.7	36.1

During the reporting period, occurrences of rainfall exceeding site design capacities of the 85th percentile 5-day rainfall depths resulting in environmental incidents are listed in Table 5-2 (Lobs Hole), Table 5-3 (Marica) and Table 5-4 (Tantangara).

Table 5-2: Incidents Recorded within Lobs Hole

Description	Location	Event Date	Incident Number	Rainfall (mm)	Event Category
Sediment-laden water reporting to Talbingo Reservoir	F13 Sediment Basin	08/06/2025	118191	28.2	Basin overtopping
Sediment-laden water seepage below F8 Leachate Basin	Rock face down-gradient of F8 Leachate Basin	08/06/2025	118196	29.2	Sediment laden water release – not related to basin overtopping
Sediment-Laden water entering watercourse	Site-Wide	24/06/2025	118306	74.8	Basin overtopping
Sediment-Laden water entering watercourse	Middle Creek	24/06/2025	118308	49	Sediment release – not related to basin overtopping
Treated process and sediment-laden water entering watercourse	Pad 2 Basin	26/06/2025	118321	74.8	Basin overtopping
Leachate/Sediment-Laden water entering watercourse	Ravine Bay SB1	28/06/2025	118346	80.2	Basin overtopping

Description	Location	Event Date	Incident Number	Rainfall (mm)	Event Category
Sediment-Laden water entering watercourse	Ravine Bay SB1	11/07/2025	118446	46	Basin overtopping
Sediment-Laden water entering watercourse	R16 Sediment Basin	13/07/2025	118466	47.2	Basin overtopping
Sediment-Laden water entering watercourse	F5A Sediment Basin	22/07/2025	118525	29	Basin overtopping
Sediment-Laden water entering watercourse	F11.5	24/07/2025	118539	31.8	Basin overtopping
Sediment-Laden water entering watercourse	Site-Wide	26/07/2025	118550	70.6	Basin overtopping
Sediment-Laden water entering watercourse	Middle Creek Bridge	26/07/2025	118551	48.2	Sediment laden water release – not related to basin overtopping
Treated process and sediment-laden water entering watercourse	Pad 2 Basin	28/07/2025	118555	87.6	Basin overtopping
Leachate/Sediment-Laden water entering watercourse	MYLS	29/07/2025	118565	90	Basin overtopping
Treated process and sediment-laden water entering watercourse	Pad 2 Basin	29/07/2025	118566	90	Basin overtopping
Sediment-Laden water entering watercourse	Samp A	27/08/2025	118694	30.4	Basin overtopping
Sediment-Laden water entering watercourse	Talbingo Boat Ramp	27/08/2025	118695	35.4	Basin overtopping
Sediment-Laden water entering watercourse	F11.5 and F13 Sediment Basin	28/08/2025	118706	33.2	Basin overtopping
Sediment-Laden water entering watercourse	Talbingo Reservoir	28/08/2025	118708	35.4	Sediment laden water release – not related to basin overtopping
Sediment-Laden water entering watercourse	Site-Wide	29/08/2025	118731	45.8	Basin overtopping
Sediment-Laden water entering watercourse	Site-Wide	30/08/2025	118736	63	Basin overtopping
Leachate/Sediment-Laden water entering watercourse	Ravine Bay SB1 Basin	31/08/2025	118740	64.2	Basin overtopping

Table 5-3: Incidents Recorded within Marica

Description	Location	Event Date	Incident Number	Rainfall (mm)	Event Category
Sediment-Laden water entering watercourse	MC01, MC02 and MC03 sediment basins	24/06/2025	118304	42	Basin overtopping
Sediment-Laden water entering watercourse	MC03 Basin	28/07/2025	118562	65	Basin overtopping

Table 5-4: Incidents Recorded within Tantangara

Description	Location	Event Date	Incident Number	Rainfall (mm)	Event Category
Sediment-Laden water entering watercourse	Batch Plant Sediment Basin	26/06/2025	118323	53	Basin overtopping

6. GROUNDWATER MONITORING PROGRAM

6.1. Groundwater Quality

As previously noted in past reports, high nitrogen concentrations have been reported downstream of the spoil emplacement areas at GF01, Main Yard, and Tantangara spoil emplacement area. To address this, a Nitrogen Management Plan (S2-FGJV-ENV-PLN-0367) has been developed in consultation with the EPA, currently under revision. The plan outlines reasonable measures to manage the risk of nitrogen contamination from construction activities related to D&B operations at Mat Portal, Talbingo, ECVT, and intake excavations at Tantangara. This document remains subject to revision to ensure continued alignment with agency requirements.

As mentioned in previous reports, the locations with the highest Total Nitrogen concentrations in Lobs Hole are EPL58 and EPL95 which are near the GFO1 emplacement. Due to their proximity to each other and depth, these locations exhibit similar trends, with pH concentrations below 6.0. This is in contrast to the GFO1 emplacement upgradient locations which maintained a pH range of 7.0 to 8.5. Meanwhile, locations such as EPL91, EPL92, EPL93, and EPL94 met the Snowy 2.0 groundwater guidelines for this period.

In the Main Yard spoil emplacement area, locations EPL83 and EPL87 maintain elevated trends for parameters such as Nitrogen, Nitrite + Nitrate as N (NO_x), Total Phosphorus, and some metals including arsenic, iron, and manganese. Although these monitoring points are located downstream of the Main Yard PSE, and as previously noted in both monthly and quarterly reports, these two locations consistently record the highest concentrations for specific analytes. Monitoring at EPL83 commenced in late 2023, while EPL87 began in early 2024. Both sites maintain trends exceeding WQO for TN, with concentrations ranging from 3600–13000 µg/L at EPL87 and 1000–2100 µg/L at EPL83. Similar behaviour has been observed for Total Phosphorus and NO_x. In response to these elevated levels, mitigation activities have been implemented, including the installation of groundwater extraction pumps and comprehensive monitoring of these boreholes.

Additionally, as mentioned throughout this report, this period was characterized by high rainfall and snowfall, which led to a significant change in water levels at groundwater sampling points across the project. Due to heavy rainfall and snowmelt within the surrounding area, there has been a significant increase in turbidity and suspended solids across the groundwater sampling network. These conditions have likely impacted water quality and contributed to elevated nutrient concentrations, particularly within the Tantangara and Marica monitoring zones. Specifically, at the EPL72 sampling point, trends showed an increase but aligned with historical data for seasonal changes and wet periods.

6.2. Groundwater Levels

Groundwater level monitoring is undertaken in accordance with the Groundwater monitoring program to determine groundwater drawdown as a result from the Project.

6.3. Groundwater Inflows

Groundwater inflow into the tunnels is monitored during construction. This data is required to monitor the volume of extracted groundwater against water access licence limits (Table).

Table 6-1: Water Access Licence

Water Access Licence	Project	Water Source	Share (ML)
WAL42407 – Specific Purpose Access Licence	Exploratory Works	Upper Tumut water source	227
WAL42408 – Groundwater Licence	Exploratory Works	Lachlan Fold Belt MDB	0
WAL42960 – Groundwater Licence	Exploratory Works	Lachlan Fold Belt MDB	354
RO13-19-093 – via Controlled Allocation	Main Works	Lachlan Fold Belt MDB	3,375
RO1-19-092 – via Controlled Allocation	Main Works	Lachlan Fold Belt South Coast	1,722
Specific Purpose Access Licence	Main Works	Tantangara Water Source	532

7. CONCLUSION

During this period, the project experienced significant rainfall and snowfall, particularly at the Marica and Tantangara sites. These climatic changes have impacted water quality at various sampling points throughout the project, particularly affecting surface waters, where observed notable increases in flow and turbulence were identified. Such fluctuations have correlated with variations in both in-situ and physicochemical parameters.

In contrast, groundwater wells, especially EPL105 at Tantangara PSE indicated a decrease in ranges for some analytes, such as Ammonia, Nox and TN for this reporting period compared to the previous one, while other locations maintained consistent trends for these analytes. Although sediment levels increased at some sampling points, they remained within expected concentrations and aligned with historical data. Regarding the nitrogen exceedances identified at GF01, Main Yard, and Tantangara, the Environmental and Construction teams continue to implement corrective actions as previously communicated to the SHL and EPA, such as continuous monitoring and the deployment of water extraction infrastructure, in addition to the remediation strategy for GF01 to ensure environmental compliance and impact reduction.

This period has been characterized by significant construction progress to strengthen environmental controls. Specifically, the upgrade of several erosion and sediment control structures, including desilting and lining work of several leachate basins, which played a crucial role in mitigating negative impacts downstream of the construction areas. The environmental team conducted continuous and

thorough monitoring of all sampling points. Despite the additional challenges of multiple basin overtopping events, environmental risk has been managed in consultation with the EPA and Employer throughout the reporting period.

APPENDIX A – BACKGROUND CONDITIONS

SURFACE WATER

	PLATEAU	RAVINE
Major watercourses ¹ (Dry weather)	• pH generally ranged between 6.2 and 8.5, with occasional lower and upper bound exceedances. • Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn than winter/spring. • Low concentrations of suspended solids and low turbidity. • Total nitrogen and phosphorus concentrations exceeded WQO values on occasion. • Aluminium concentrations exceeded the WQO value on a frequent basis. Some exceedances were more than 4 x WQO values. • Copper, iron, lead and zinc concentrations exceeded WQO values on an occasional basis. Other metals are generally below WQO values • The variability in water quality during wet weather conditions is not fully understood. However, due to an increase in runoff into the watercourses following a substantial rainfall event, it would likely lead to an increase in concentrations for suspended solids and some metals, compared to dry weather concentrations.	• pH ranged between 6.2 to 8.5, with occasional lower and upper bound exceedances. • Low concentrations of suspended solids and low turbidity. • Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn than winter/spring. • Total nitrogen and phosphorus concentrations exceeded WQO values on occasion. • Aluminium concentrations in the Yarrangobilly River exceeded WQO values frequently in winter/spring and occasionally in summer/autumn. Some exceedances were more than 4 x WQO values. • Copper, chromium and zinc concentrations exceeded WQO values on occasion. Other metals are generally below WQO values. • ater quality during wet weather conditions has been informed by monitoring undertaken in March and May 2019 following moderate rainfall events. The available data indicates that receiving water quality during wet weather is generally poorer than dry conditions, characterised by higher turbidity, lower pH, and elevated nutrient concentrations and metals such as copper and zinc. The median copper concentration (based on five samples) was six times the applicable WQO value.
Minor watercourses (near proposed surface infrastructure)	The water quality of minor watercourses near the Tantangara construction site is generally of poorer quality than major watercourses, with total phosphorus, total nitrogen and	The water quality of minor watercourses in Lobs Hole is generally of poorer quality than major watercourses, with turbidity, total phosphorus, copper and zinc exceeding WQO values on a

	aluminium all exceeding WQO values on a frequent basis. Turbidity, copper and iron exceeded WQO values on an occasional basis.	frequent basis. Total nitrogen, arsenic and aluminium exceeded WQO values on an occasional basis.
Runoff from existing disturbed areas	No sampling from existing disturbed areas has been undertaken on the plateau.	Runoff samples were collected from existing disturbed areas in Lobs Hole such as access tracks and remnant copper mining areas in May and March 2019. Disturbed area runoff is characterised as being mildly acidic, having very high suspended sediment and turbidity levels, high total nitrogen and total phosphorous, and very high aluminium and copper concentrations. Monitoring results indicate that during wet weather events, this runoff significantly alters the Yarrangobilly River's chemistry, leading to increases in turbidity and metals loading as the river passes through the project area in Lobs Hole.

Notes: 1. Major watercourses in plateau refer to the Murrumbidgee and Eucumbene rivers, Tantangara, Gooandra, Nungar and Kellys Plain creeks. Major watercourses in ravine refers to the Yarrangobilly River and Wallaces Creek.

2. General note: exceedances are described in the WCR as:

- frequent if the WQO value was exceeded in 20% or more of samples; and

- occasional if the WQO value was exceeded in at least one sample, but in less than 20% of samples.

TALBINGO RESERVOIR

Water quality characteristics are described as follows:

- pH ranges between 6.3 and 8.2, with occasional lower and upper bound exceedances.
- Low concentrations of suspended solids and low turbidity.
- Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn, correlating with the higher salinity of streamflow during these months.
- Oxidised nitrogen concentrations exceeded WQO values frequently in winter/spring and occasionally in summer/autumn. This trend is opposite to the Yarrangobilly River, where exceedances are more common in summer/autumn.
- Ammonia concentrations frequently exceed WQO values during winter/spring, correlating with elevated oxidised nitrogen.
- Total phosphorus concentrations exceed WQO values in all summer/autumn samples and in approximately 25% of winter/spring samples.
- All dissolved metal concentrations were below WQO values except for:
 - Copper and zinc concentrations, which exceeded WQO values frequently in summer/autumn and occasionally in winter/spring.
 - Chromium (total) and lead concentrations, which occasionally exceeded WQO values in summer/autumn.

It is noted that all but one of the copper and zinc exceedances occurred during March 2018 sampling, where 80% of samples exceeded the WQO values. Different analysis methods (consistent with those applied more broadly to EIS sampling) were used for subsequent sampling (post-March 2018).

Reservoir water quality during and following wet weather conditions is not fully understood. There is potential for turbidity, nutrients, and some metals to fluctuate within watercourse inflow areas for several weeks following a substantial runoff event.

TANTANGARA

Water quality characteristics are described as follows:

- pH ranges between 6.6 and 8.0, with one lower and one upper bound exceedance recorded.
- Low levels of suspended solids and low turbidity.
- Carbonate and salinity vary seasonally, with higher levels occurring in summer/autumn.
- Oxidised nitrogen and ammonia occasionally exceeded WQO values in summer/autumn.
- Total phosphorus frequently exceeded WQO values in both summer/autumn and winter/spring, while reactive phosphorus occasionally exceeded WQO values.
- All dissolved metal concentrations were below WQO values except for:
 - Aluminium concentrations, which exceeded WQO values frequently.
 - Copper, iron, and zinc, which exceeded WQO values frequently during summer/autumn.
 - Chromium (total), cobalt, and lead, which exceeded WQO values on an occasional basis during summer/autumn.

It is noted that all copper and zinc exceedances occurred during March 2018 sampling, where 100% of samples exceeded WQO values. Different analysis methods (consistent with those applied more broadly to EIS sampling) were used for subsequent sampling (post-March 2018).

Reservoir water quality during and following wet weather conditions is poorly understood. There is potential for elevated turbidity, nutrients, and some metals to occur near watercourse inflow locations for several weeks following a substantial runoff event.

APPENDIX B – EPL RESULTS

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring June 2025

Table 1 - Surface Water Quality Data

River and Minor Watercourses

1 - Surface Water Quality Data												
River and Minor Watercourses			Water Quality Objectives (see note 1)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
2/6/2025, 11:29 AM	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	5.91	97.5	12.16	136	88	8.27	246	0.71	Regular flow, clear water, fresh smell, cloudy cool morning.	These results are consistent with previous samples taken for this location.
2/6/2025, 11:05 AM	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	5.18	78.5	9.97	132	86	8.21	253	0.29	Regular flow, clear water, no odour, no prev rain, cloudy cool morning.	These results are consistent with our previous samples taken for this location.
2/6/2025, 9:50 AM	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	5.45	109.8	13.87	154	100	7.97	240	0.80	Regular flow and level, no odours, no colours, clear water. No rain.	These results are consistent with our previous samples taken for this location.
8/6/2025, 8:35 AM	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Talbingo Reservoir	7.52	68.4	8.19	58.0	38	7.03	170	8.70	High flow, bubbly foam near sample point, fast flowing. Raining and snowing in previous 24hrs >25mm. Clear water, no odours.	These results are consistent with our previous samples taken. The DO results are in line with previously recorded data.
2/6/2025, 11:51 AM	EPL12	Yarrangobilly River, immediately downstream of portal pad	6.05	104.6	13.00	134	87	8.32	250	0.85	Very clear running water, overcast cool morning. No rainfall in previous 24 hrs. No odours, no sheen.	These results are consistent with our previous samples taken for this location.
2/6/2025, 10:41 AM	EPL14	Yarrangobilly River, downstream of road construction areas	5.36	92.4	11.69	133	87	8.17	246	5.00	Water level and flow fast and steady, clear water, no odours, no rain in previous 24hrs, cool overcast morning.	These results are consistent with our previous samples taken for this location.
2/6/2025, 10:20 AM	EPL15	Yarrangobilly River, downstream of road construction areas	5.96	88.0	10.96	136	88	8.14	246	1.24	Clear water no smell, no rainfall in previous 24 hrs, regular flow and level.	These results are consistent with our previous samples taken for this location.
2/6/2025, 12:30 PM	EPL16	Yarrangobilly River, downstream of road construction areas	6.38	101.3	12.34	141	92	8.35	251	1.24	Regular flow and level, clear water, no odours, no rain in previous 24hrs, overcast cool morning.	These results are consistent with our previous samples taken for this location.
2/6/2025, 9:15 AM	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	12.86	121.9	12.85	1,010	647	7.07	242	5.57	A little bit more water than usual, steady flow, clear water. No odour. No colour. Lots of vegetation growth around banks. QA TAKEN HERE	Elevated DO% and EC consistent for this location and is in range of data recorded in previous sample rounds.
13/6/2025, 9:33 AM	EPL26	Eucumbene River downstream of Marica Road	4.62	71.7	9.25	45.0	29	7.37	218	1.50	Sunny and cold, slow flow, clear water, snow placed around the stream, no odour.	The results are consistent with our previous samples taken for this location.
13/6/2025, 9:22 AM	EPL27	Eucumbene River upstream of Marica Road	5.62	63.1	81.00	124	81	7.42	216	10.40	Sunny and cold, slow flow, clear water, snow placed around the stream, no odour.	Lower levels of DO% are common to see in this location.
14/6/2025, 10:26 AM	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	3.05	68.3	9.18	40.0	26	7.44	216	3.70	Sunny and cold day, clear water, snow fell in the past few days, no odour, slow flow.	Lower levels of DO% are common to see in this location.
14/6/2025, 10:12 AM	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	2.85	70.2	9.48	27.0	17	7.45	241	4.40	Sunny and cold day, clear water, snow fell in the past few days, no odour, slow flow.	These results are consistent with previous samples recorded for this location.
14/6/2025, 9:37 AM	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	4.30	79.7	10.36	32.0	21	7.59	250	6.40	Sunny and cold day, clear water, snow fell in the past few days, no odour, high flow, a bit turbulent flow, ice in the surface.	These results are consistent with the previous samples collected.
14/6/2025, 8:37 AM	EPL34	Nungar Creek, upstream of Tantangara Road	2.59	105.6	14.36	23.0	15	7.52	177	4.80	Sunny and cold day, clear water, snow fell in the past few days, no odour, high flow, a bit turbid, ice in the surface.	These results are consistent with results previously recorded for this location.
14/6/2025, 8:47 AM	EPL35	Nungar Creek, downstream of Tantangara Road	1.80	68.9	9.58	18.0	12	7.46	190	4.70	Sunny and cold day, clear water, snow fell in the past few days, no odour, high flow, a bit turbulent flow, ice in the surface.	These results are consistent with results previously recorded for this location, low DO and EC is commonly recorded here.
6/6/2025, 11:13 AM	EPL36	Cameron's Creek, upstream of works in Rock Forest	5.12	107.8	13.73	40.0	26	7.79	242	9.70	Clear water, fast running, regular level, evidence of horse activity, cold overcast morning.	These results are consistent with previous samples recorded for this location.
3/6/2025, 8:30 AM	EPL37	Cameron's Creek, downstream of works in Rock Forest	5.79	95.6	11.97	51.0	33	7.58	257	11.00	Sunny day, clear water, very slow flow, no odour, cows around the watercourse.	These results are consistent with previous samples recorded for this location.
-	EPL52	GF01 leachate basin	-	-	-	-	-	-	-	-	DRY	Location dry.
-	EPL53	GF01 surface water upstream east	-	-	-	-	-	-	-	-	DRY	Location dry.
-	EPL54	GF01 surface water upstream west	-	-	-	-	-	-	-	-	DRY	Location dry.
-	EPL55	GF01 surface water downstream	-	-	-	-	-	-	-	-	DRY	Location dry.
-	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	-	-	-	-	-	-	-	-	DRY	Location dry.
6/6/2025, 2:27 PM	EPL71	Surface water downstream of Marica emplacement	6.54	61.9	7.60	81.0	53	6.87	286	29.10	Low level low flow, algae growth, lots of surrounding vegetation, works ongoing nearby.	Lower levels of DO% are common to see in this location and is consistent with lower level flows and higher levels of algae.
6/6/2025, 9:19 AM	EPL84	FR Basin	6.11	81.7	10.12	754	483	7.35	186	209.00	Visibly high turbidity. Low water level in basin. Birds present. No foam. Some ice in the basin due to low temperature.	Lower DO% and higher EC levels have been recorded previously in this location.
6/6/2025, 10:58 AM	EPL85	MY07 Basin	9.45	92.3	10.53	608	389	8.91	52	389.00	Very turbid water. Lots of silt present. Basin 80% full. Birds present. No foam or sheen or odour.	Low DO, elevated EC and pH have been recorded in previous sample rounds in this location; therefore these results are not outside of range recorded previously.
13/6/2025, 12:06 PM	EPL86	LHG01 Basin	8.23	72.1	8.46	1,080	691	8.15	157	94.70	Turbid water, no rainfall in last 24 hours, no odour, sunny weather.	Low DO, elevated EC and pH have been recorded in previous sample rounds in this location; therefore these results are not outside of range recorded previously.
12/5/2025, 10:29 AM	EPL98	Rock blanket diversion monitoring under GF01 liner	-	-	-	-	-	-	-	-	DRY	Location is dry.
13/6/2025, 12:51 PM	EPL99	Marica Leachate Basin- Turkey's Nest	7.88	71.4	8.47	441	286	7.19	130	10.50	Sunny and cold day, turbid water, snow fell in the past few days, no odour, a little oil in the surface.	Low DO, elevated EC are consistent with samples taken previously.
6/6/2025, 11:51 AM	EPL100	Marica Lower Leachate Basin USS Shaft	5.73	122.2	15.29	621	398	8.18	259	21.90	Strong smell of diesel, oily sheen on surface. Thicker than last time. Brown green water. Turbid. Cold cloudy morning.	The elevated DO% is slightly out of range for this locations data previously recorded by our samples. The EC and pH is in line with our data input from previous samples.
13/6/2025, 1:00 PM	EPL101	Marica Leachate Basin Spoil Pad	5.75	64.8	8.08	1740	1120	7.04	143	10.80	Sunny and cold day, turbid water, snow fell in the past few days, no odour, ice in the surface.	Elevated EC has been recorded previously in our sampling history.

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6/6/2025, 10:37 AM	EPL106	Ravine Bay Leachate basin 1	9.10	57.4	6.60	1,140	728	8.37	127	5.80	Duplicate and triplicate sample from this location, overcast day, no odour, clear.	Elevated EC and pH have been recorded in previous sample rounds in this location. Low levels of DO% have also been recorded previously in our sampling data.
14/6/2025, 10:14 AM	EPL110	Upstream monitoring of Ravine Bay emplacement area	8.31	57.5	6.76	56.0	36	8.20	133	0.00	Clear day, low clear flow, no odour.	Lower recorded levels of DO% and higher pH has been previously been entered by us in previous sampling rounds for this location.
-	EPL118	Ravine Bay Leachate basin 2	-	-	-	-	-	-	-	-	DRY	Location dry.
-	EPL120	Ravine Bay Leachate basin 4	-	-	-	-	-	-	-	-	DRY	Location dry.
8/6/2025, 10:50 AM	EPL122	GFO1 Drainage Line (Formerly EPL 558)	10.18	71.2	7.99	486	316	7.70	113	245.00	Recent rainfall >25mm, water level is much higher than May and the flow is faster. No odours. Water colour is grey/brown.	These results have been previously recorded in times of higher flow levels during rainfall events and are consistent with previously recorded data.

Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

Table 2 - Reservoir Water Quality Data Talbingo and Tantangara Reservoirs			Water Quality Objectives (see note 2)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
22/6/2025, 9:27 AM	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	8.22	73.0	8.60	39.0	25	7.98	284	2.90	Freezing morning, clear water, no odour, the surface is very clear.	Lower levels of DO% have been previously recorded in this location in previously recorded sampling data.
22/6/2025, 9:12 AM	EPL11	Talbingo Reservoir, downstream of outlet	8.66	95.7	11.16	36.0	24	7.97	285	3.80	Freezing morning, clear water, no odour, the surface is very clear.	These results are consistent with previous samples recorded for this location .
29/6/2025, 9:58 AM	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River	3.37	79.0	10.53	27.0	18	7.62	171	1.80	Foggy, cold morning, clear water, no odours, no sheen.	Lower levels of DO% and pH are consistent with data from previous sampling results in this location.
29/6/2025, 9:21 AM	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	5.55	68.3	8.60	37.0	24	8.02	131	0.00	Cold foggy morning, water brown, no odours, no sheen.	Lower levels of DO% and pH are consistent with data from previous sampling results in this location.
29/6/2025, 9:27 AM	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	4.96	65.9	8.43	35.0	23	7.87	142	0.00	Foggy, cold morning. No sheen, no odours, brownish water, clear.	Lower levels of DO% are consistent with data from previous sampling results in this location.
14/6/2025, 11:16 AM	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	6.41	72.8	8.97	33.0	21	7.66	240	5.10	Sunny and clear morning, clear water, no odour.	Lower levels of DO% are consistent with data from previous sampling results in this location.
14/6/2025, 12:42 PM	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works	6.96	81.3	9.87	20.0	13	7.61	266	5.10	Sunny and clear day, clear water, no odour.	Slightly lower DO% and EC results have been previously recorded within our sampled data in this location.
29/6/2025, 10:05 AM	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works	3.14	73.0	9.79	26.0	17	7.37	182	2.10	Water frozen over, cold, foggy morning. Clear water, no odours, no sheen.	DO levels consistent with previously recorded data
29/6/2025, 10:55 AM	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	3.80	89.2	11.75	31.0	20	7.20	203	1.90	Cold foggy morning, animal debris in water. Clear, no odours, no sheen.	DO levels consistent with previously recorded data
29/6/2025, 9:16 AM	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	6.58	71.3	8.74	62.0	40	8.46	109	0.50	Foggy morning. Recent snowfall. Greenish grey water. No odour.	DO levels consistent with previously recorded data
22/6/2025, 8:52 AM	EPL107	Upstream monitoring of Ravine Bay emplacement area within Yarragobilly River	9.13	98.6	11.36	33.0	21	7.95	281	3.40	Cold morning, clear water, no odour.	These results are consistent with previous samples recorded for this location .
22/6/2025, 8:43 AM	EPL108	Monitoring of Ravine Bay emplacement area (centre of PSE) within Yarragobilly River	9.17	99.9	11.5	29.0	19	7.96	273	2.80	Cold morning, clear water, no odour.	These results are consistent with previous samples recorded for this location .
22/6/2025, 8:34 AM	EPL109	Upstream monitoring of Ravine Bay emplacement area within Yarragobilly River	9.36	104.3	11.95	31.0	20	8.05	255	3.20	Cold morning, clear water, no odour.	These results are consistent with previous samples recorded for this location .

Table 3 - Treated Water Quality Data
Talbingo

Table 3 - Treated Water Quality Data												
Talbingo			Water Quality Objectives (see note 3)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	700	-	6.5 - 8.0	-	25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
15/6/2025, 10:04 AM	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	12.49	97.0	10.34	4.00	3	8.58	216	1.30	Clear water, no odour.	These results are consistent with previous samples recorded for this location. No discharge recorded on day of sample collection.

Table 4 - Treated Water Quality Data
Tantangara

Table 4 - Treated Water Quality Data Tantangara			Water Quality Objectives (see note 3)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	200	-	6.5 - 8.0	-	25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
29/6/2025, 12:40 PM	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	7.86	68.2	8.11	51.0	33	6.85	313	0.00	Sample taken from tap. No odour, very clear, no colour.	Results meet water quality criteria. Discharge recorded on day of sampling.

Table 5 - Groundwater Quality Data
GFO1 Surface Water and Groundwater

Table 5 - Groundwater Quality Data GFO1 Surface Water and Groundwater			Water Quality Objectives (see note 1)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
						20 - 350		6.5 - 8.0				
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
2/6/2025, 9:25 AM	EPL56	GFO1 Upstream east groundwater well	13.14	15.9	1.67	163	106	7.86	195	22.90	Sunny day, works ongoing around the well, clear water, no odour, spoil has placed close to the monitoring area	This location is upstream of works
2/6/2025, 9:05 AM	EPL57	GFO1 upstream west groundwater well	15.79	34.8	3.45	168	109	8.13	180	95.80	Sunny day, works ongoing around the well, clear water, no odour	Elevated pH levels can be attributed to spoil material placed near the groundwater borehole and surface water impact.
2/6/2025, 11:17 AM	EPL58	GFO1 Downstream Groundwater well	16.12	19.3	1.9	684	438	5.99	213	80.60	Sunny day, clear water, no odour, works ongoing upstream	Exceedances in pH and EC met the historical ranges that have been reported in the previous reports.
14/6/2025, 1:10 PM	EPL68	Leachate detection BH downstream East	11.87	66	7.13	21.0	13	7.68	307	4.40	Sunny and cold day, clear water, snow fell in the past few days, no odour	Results within the WQO's

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14/6/2025, 12:54 PM	EPL69	Tantangara groundwater downstream East	9.88	41.9	4.75	50.0	32	7.15	300	9.00	Sunny and cold day, clear water, snow fell in the past few days, no odour	Results within the WQO's
14/6/2025, 11:32 AM	EPL70	Tantangara groundwater upstream	9.86	49.1	5.56	95.0	62	7.45	285	25.10	Sunny and cold day, turbid water, snow fell in the past few days, no odour, sediment placed at the bottom of the sleeve	Results within the WQO's
6/6/2025, 12:23 PM	EPL72	Marica groundwater upstream	8.5	52.3	6.12	54.0	35	6.73	309	144.00	Orange tinge, low turbidity, no odours, cold morning. No prev rain.	Results within the WQO's
-	EPL73	Marica groundwater downstream	-	-	-	-	-	-	-	-	-	This site has been decommissioned.
21/6/2025, 2:28 PM	EPL80	LHG groundwater upstream	15.11	18.4	1.85	709	453	8.01	123	29.20	Clear water, no odour.	Location upstream of works, representative of background conditions.
21/6/2025, 12:10 PM	EPL81	LHG groundwater downstream	13.84	15	1.54	784	502	8.02	-32	1000.00	A slightly turbid but clear water with sediments at the bottom of the hydrosleeve. But while trying to get samples for the Horiba, the sediments stirred up in the process and we had a turbid water.	Elevated pH and EC are consistent with historical ranges and align with the upgradient conditions.
21/6/2025, 2:51 PM	EPL82	MY groundwater upstream	16.57	21.1	2.04	2380	1530	7.71	-2	43.80	Clear odorless water.	Location upstream of works, representative of background conditions.
21/6/2025, 11:48 AM	EPL83	MY groundwater downstream	14.57	12.2	1.34	683	437	8.24	105	44.50	Clear water. No smell	Elevated pH and EC are consistent with historical ranges and align with the upgradient conditions.
21/6/2025, 2:08 PM	EPL87	MY groundwater downstream	15.44	20	1.99	650	416	8.08	159	177.00	Little cloudy water with no smell.	Elevated pH and EC are consistent with historical ranges and align with the upgradient conditions.
21/6/2025, 11:27 AM	EPL88	MY groundwater downstream	14.49	86.1	8.76	684	438	8.14	55	0.00	Clean water with Strong rotten egg smell	Elevated pH and EC are consistent with historical ranges and align with the upgradient conditions.
21/6/2025, 1:39 PM	EPL89	LHG groundwater downstream	13.96	27.5	2.83	259	168	8.27	148	305.00	Slightly turbid water. No smell	Elevated pH and EC are consistent with historical ranges and align with the upgradient conditions.
8/6/2025, 11:30 AM	EPL90	GF01 groundwater downstream	12.87	90.4	9.55	301	196	5.96	109	599.00	Very turbid, orange colour, purged for 2 min. No odour. >25mm rain in previous 24hrs. Irrigation of roads up gradient occurring.	Low pH is consistent with the historical ranges for this location.
2/6/2025, 11:29 AM	EPL91	GF01 groundwater downstream	14.62	16.0	1.63	162	105	6.76	80	21.10	Sunny day, sulfuric acid odour, clear water	Results within the WQO's
8/6/2025, 9:31 AM	EPL92	GF01 groundwater downstream	14.12	70.5	7.24	341	222	6.66	126	365.00	Sunny day, turbid water, no odour, works ongoing upstream the bore	Results within the WQO's
8/6/2025, 9:41 AM	EPL93	GF01 groundwater downstream	14.23	97.1	9.95	192	125	7.08	109	97.10	Rain in previous 24 hrs, no odours, no colour. Not raining at time of sampling. No works ongoing up gradient.	Results within the WQO's
2/6/2025, 10:27 AM	EPL94	GF01 groundwater downstream	13.29	47.7	4.99	113	74	6.85	57	120.00	Sunny day, turbid water, no odour, works ongoing upstream	Results within the WQO's
2/6/2025, 11:10 AM	EPL95	GF01 groundwater downstream	15.08	29.1	2.92	566	362	5.96	211	70.10	Sunny day, clear water, no odour, works ongoing upstream	Results within previously recorded range.
2/6/2025, 9:49 AM	EPL96	GF01 groundwater downstream	13.64	21.8	2.26	263	171	7.01	215	1000.00	Sunny day, turbid water, works ongoing upstream the location, no odours	Results within the WQO's
2/6/2025, 12:12 PM	EPL97	GF01 groundwater downstream	14.50	13.2	1.34	317	206	6.70	144	33.10	Sunny day, clear water, no odour	Results within the WQO's
-	EPL102	Groundwater monitoring associated with the Marica emplacement area on Marica Trail	-	-	-	-	-	-	-	-	EPL Point Decommissioned	Results within the WQO's
14/6/2025, 12:05 PM	EPL103	Upstream groundwater monitoring west of the Tantangara emplacement area	11.28	89.7	9.83	157	102	7.58	216	13.60	Sunny and cold day, clear water, snow fell in the past few days, no odour	Results within the WQO's
14/6/2025, 12:24 PM	EPL104	Downslope groundwater monitoring east of the Tantangara emplacement area	12.37	49.5	5.28	64.0	42	7.49	344	11.50	Sunny and cold day, clear water, snow fell in the past few days, no odour	Results within the WQO's
14/6/2025, 11:55 AM	EPL105	Downslope groundwater monitoring east of the Tantangara emplacement area	11.81	88.8	9.60	217	141	7.37	316	8.50	Sunny and cold day, clear water, snow fell in the past few days, no odour	Results within the WQO's
14/6/2025, 10:37 AM	EPL113	Upstream east monitoring of Ravine Bay emplacement area	7.71	34.9	4.16	102	66	8.11	205	107.00	Clear day, turbid water, no odour	This location is upstream of works.
14/6/2025, 12:22 PM	EPL114	Upstream west monitoring of Ravine Bay emplacement area	11.33	28.9	3.15	302	196	7.72	52	0.00	Sunny day, clear water, no odour	Results within the WQO's
14/6/2025, 10:54 AM	EPL115	Downstream east monitoring of Ravine Bay emplacement area	9.89	74.5	8.43	287	186	7.92	137	123.00	Sunny day, water turbid, no odour	Results within the WQO's
14/6/2025, 11:24 AM	EPL116	Downstream west monitoring of Ravine Bay emplacement area	10.63	68.9	7.66	112	73	8.36	150	149.00	Sunny day, turbid water, no odour	Elevated pH aligns with the previously recorded ranges reported for this location and consistent with the upgradient conditions.
14/6/2025, 11:52 AM	EPL117	Downstream monitoring of Ravine Bay emplacement area	11.49	28.7	3.13	107	69	8.34	26	64.00	Sunny day, clear, no odour	Elevated pH aligns with the previously recorded ranges reported for this location and consistent with the upgradient conditions.

Note 1: Water Quality Objective values for the Yarragobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Tabbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

Snowy Hydro 2.0 Main Works EPL Sampling: 01 - 30 June 2025

Environmental Protection Licence No:	21266
Licensee:	Snowy Hydro Limited
Licensee address:	PO Box 332, Cooma, NSW 2630
Premises:	Snowy 2.0 Pumped Hydro Power Station Talbingo and Tantangara, Kosciuszko National Park and Rock Forest, Kosciuszko NSW 2642
EPA Public Register:	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21266&id=21266&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Issued
Monthly water sampling and analysis is performed as part of the Snowy 2.0 Approval Conditions, Environmental Protection Licence No 21266 - Variation 20 December 2024, and the approved Water Management Plan to ensure that works are not impacting on nearby receiving waters.	
A map showing the location of each of the EPL named sampling points is provided after the results tables.	
<u>Groundwater Results:</u> Results for groundwater bores surrounding Lick Hole Gully have reported elevated concentrations of nutrients and select dissolved heavy metals. These heavy metals have been reported previously as being above adopted WQO's. Increasing levels of nutrients have been reported at EPL56 and EPL57, similar to results reported down gradient of GF01. This may indicate that these bores are no longer representative of up gradient water quality. Investigations are underway to redrill EPL56 and EPL57 in more suitable locations. <u>Reservoir Results:</u> Increases in nutrients (particularly ammonia) in Tantangara Reservoir observed this month (EPL28, 29, 32, 38, 40, 46, 51) are likely associated with decomposition of algal biomass generated during the summer months, exacerbated by low water levels. Detection of thermotolerant coliforms in in Talbingo Reservoir (51 CFU/100mL at EPL11) is within the 90th percentile concentration limits and likely attributable to wildlife. <u>Surface Water Results:</u> Exceedances in nutrients and conductivity have been reported at EPL24 and EPL122, consistent with previously recorded data. These sites have low flow and water level which contributes to the high concentrations. Increases in nutrients at EPL33 was also observed, consistent with increases in nutrients at the upstream locations in the Tantangara reservoir. As expected, exceedances were noted in leachate storage infrastructure. <u>Discharge Results:</u> Results for the discharge locations met the adopted WQO's for the periods of discharge. A minor exceedance in pH was detected on the day of testing (15/06/2025) at EPL41, with no recorded discharge occurring on this day.	

The publication of this pollution monitoring data is carried out in accordance with section 66 (6) of the Protection of the Environment Operations Act 1997 (NSW).

Snowy Hydro Limited gives no warranty or representation regarding the data suitability for any particular purpose.

Snowy Hydro Limited excludes all liability to any person for loss or damage of any kind (however caused, including but not limited to by negligence) arising whether directly or indirectly from or relating in any way to the use of this data, whether in whole or in part.

Snowy Hydro 2.0 Main Works Monthly EPL Sampling: 01-30 June 2025 – Groundwater																																					
Analyte	Unit	Level of Reporting	Water Quality Objective Value*	EPL06	EPL07	EPL08	EPL09	EPL10	EPL11	EPL12	EPL13	EPL14	EPL15	EPL16	EPL17	EPL18	EPL19	EPL20	EPL21	EPL22	EPL23	EPL24	EPL25	EPL26	EPL27	EPL28 (Discommissioned)	EPL29	EPL30	EPL31	EPL32	EPL33	EPL34	EPL35	EPL36	EPL37		
Physicochemical	pH	µpH	5.5-8	7.06	6.77	6.76	7.48	7.15	6.71	6.76	6.98	6.71	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76	6.76		
	Electrical Conductivity	µS/cm	3000	155	158	489	21	30	36	34	103	684	239	301	362	341	151	133	666	263	217	127	64	217	359	352	267	112	107	118	119	119	119	119	119	119	
	Chloride Respective Percentage	mg/L	No Water Quality Objective Value	7.86	8.13	5.09	7.08	7.75	7.43	6.71																											
	Temperature	°C	No Water Quality Objective Value	15.14	15.78	15.12	11.87	9.86	9.86	8.5																											
	Dissolved Oxygen	% saturation	No Water Quality Objective Value	13.9	14.2	15.1	16	14.9	15.1	15.1																											
Nutrients	Turbidity	NTU	No Water Quality Objective Value	22.9	25.8	80.6	4.4	9	21.1	144																											
	Salinity	mg/L	No Water Quality Objective Value	<5	40	<5	<5	<5	54	10																											
Heavy Metals	Sulphate as CaCO3	mg/L	No Water Quality Objective Value	120	120	150	<5	7	20	11																											
	Aluminium (Aluminium)	mg/L	10	50	<10	10	30	30	30	30																											
Asbestos (Asbestos)	Aluminium (Aluminium)	mg/L	10	110	1,100	400	200	700	80																												
	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
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Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
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	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
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	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
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Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
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Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
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Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
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	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80																												
Trace Elements	Asbestos (Asbestos)	mg/L	100	1,000	11,000	700	200	800	200																												
	Asbestos (Asbestos)	mg/L	10	110	1,100	400	200	700	80					</																							

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical elements in south-east Australia (adapted from) for the protection of PWS of aquatic species (ANZECC/ARMCANZ 2000). They are not pollutant limits required by EPA 12006.
Sample not reported at this location.

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-30 June 2025 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Field			
pH	pH Unit	-	6.5-8
Electrical Conductivity	µS/cm	-	20-30
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	No Water Quality Objective Value
Dissolved Oxygen	% saturation	-	90-110
Turbidity	NTU	-	1-20
Laboratory analytes			
Total suspended solids	mg/L	5	No Water Quality Objective Value
Hardness as CaCO ₃	mg/L	1	No Water Quality Objective Value
Nutrients			
Ammonia as N	µg/L	10	10
Nitrite + Nitrate as N (NO _x)	µg/L	10	10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value
Nitrogen (Total)	µg/L	100	350
Reactive Phosphorus	µg/L	1	5
Phosphorus (Total)	µg/L	10	10
Inorganics			
Cyanide Total	µg/L	4	7
Hydrocarbons			
Oil and Grease	mg/L	1	5
Metals			
Aluminium (dissolved)	µg/L	5	55
Arsenic (dissolved)	µg/L	0.2	13
Chromium (III+VI) (dissolved)	µg/L	0.2	1
Copper (dissolved)	µg/L	0.5	14
Iron (dissolved)	µg/L	2	300
Lead (dissolved)	µg/L	0.1	3.4
Manganese (dissolved)	µg/L	0.5	1,900
Nickel (dissolved)	µg/L	0.5	11
Silver (dissolved)	µg/L	0.01	0.05
Zinc (dissolved)	µg/L	1	8
Biological			
Faecal Coliforms	CFU/100ml	1	10/100 ^h
Biochemical Oxygen Demand	mg/L	2	1/5 ^h

EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51	EPL107	EPL108	EPL109
22/06/2025	22/06/2025	29/06/2025	29/06/2025	29/06/2025	14/06/2025	14/06/2025	29/06/2025	29/06/2025	29/06/2025	22/06/2025	22/06/2025	22/06/2025
7.98	7.97	7.62	8.02	7.87	7.66	7.61	7.37	7.2	8.46	7.95	7.96	8.05
39	36	27	37	35	33	20	26	31	62	33	29	31
284	285	171	131	142	240	266	182	203	109	281	273	255
8.22	8.66	3.37	5.55	4.96	6.41	6.96	3.14	3.8	6.58	9.13	9.17	9.36
73	95.7	79	68.3	65.9	72.8	81.3	73	89.2	71.3	98.6	99.9	104.3
2.9	3.8	1.8	0	0	5.1	5.1	2.1	1.9	0.5	3.4	2.8	3.2
<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
14	14	5	5	5	2	<1	5	9	9	12	12	12
80	10	70	160	150	170	<10	70	170	310	30	10	50
30	20	60	60	40	30	50	70	40	40	30	20	30
200	200	500	700	1,000	500	100	400	600	700	200	100	300
200	200	600	800	1,000	500	200	500	600	700	200	100	300
<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
20	40	<10	<10	10	20	<10	10	40	30	<10	<10	30
<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<5	<5	47	39	38	39	32	54	36	38	<5	<5	<5
0.3	0.3	<0.2	0.3	0.3	0.4	<0.2	<0.2	0.4	0.4	0.2	0.2	0.2
<0.2	<0.2	0.2	<0.2	0.3	<0.2	<0.2	<0.2	0.2	0.2	<0.2	<0.2	<0.2
<0.5	<0.5	0.9	0.6	1.0	<0.5	<0.5	0.8	0.6	0.8	<0.5	<0.5	<0.5
14	11	93	112	119	115	52	96	111	114	10	10	5
<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3.3	1.0	13.6	19.1	20.1	12.1	3.8	13.2	20.4	20.4	0.7	0.7	<0.5
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	51**	4	-	-	-	-	-	-	<1	-	-	-
2	<2	<2	-	-	-	-	-	-	<2	-	-	-

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as faecal coliforms

^h 90th percentile concentration limits / 100 percentile concentration limits

- Sample not required at this location.

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2018), they are not pollutant limits imposed by EPA 21266.

Monthly EPL Sampling: 01-30 June 2025 - Discharge Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Flow Rate			
Inflow ^a	ML/day	-	-
Outflow ^a	ML/day	-	4.32 (EPL 43 / 50)
Field			
pH	pH Unit	-	6.5-8.5
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	15
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value
Turbidity	NTU	-	<25
Laboratory analytes			
Total suspended solids	mg/L	5	5/10
Hardness as CaCO ₃	mg/L	1	No Water Quality Objective Value
Nutrients			
Ammonia as N	µg/L	10	200/2000 [^]
Nitrite + Nitrate as N (NO _x)	µg/L	10	10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value
Nitrogen (Total)	µg/L	100	350/- [^]
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value
Phosphorus (Total)	µg/L	10	100/300 [^]
Inorganics			
Cyanide Total	µg/L	4	No Water Quality Objective Value
Hydrocarbons			
Oil and Grease	mg/L	1	2/5 [^]
Metals			
Aluminium (dissolved)	µg/L	5	55
Arsenic (dissolved)	µg/L	0.2	13
Chromium (III+VI) (dissolved)	µg/L	0.2	1
Copper (dissolved)	µg/L	0.5	14
Iron (dissolved)	µg/L	2	300
Lead (dissolved)	µg/L	0.1	3.4
Manganese (dissolved)	µg/L	0.5	1,900
Nickel (dissolved)	µg/L	0.5	11
Silver (dissolved)	µg/L	0.01	0.05
Zinc (dissolved)	µg/L	1	8
Biological			
Faecal Coliforms	CFU/100mL	1	10/100 [^]
Biological Oxygen Demand	mg/L	2	5

Note: Treated water was not being discharged at Talbingo Reservoir at the time of EPL sampling.

There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

- Samples not required

[^] 90 Percentile concentration limit/100 Percentile limit

^a Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
15/06/2025							29/06/2025
-	0.0000	0.2339	0.0643	0.2230	0.0793	0.2703	-
-	-	-	-	-	-	-	-
8.58	-	-	-	-	-	-	6.85
4	-	-	-	-	-	-	51
216	-	-	-	-	-	-	313
12.49	-	-	-	-	-	-	7.86
97	-	-	-	-	-	-	68.2
1.3	-	-	-	-	-	-	0
<5	-	-	-	-	-	-	<5
<1	-	-	-	-	-	-	<1
<10	-	-	-	-	-	-	50
90	-	-	-	-	-	-	<10
<100	-	-	-	-	-	-	400
<100	-	-	-	-	-	-	400
<10	-	-	-	-	-	-	<10
<10	-	-	-	-	-	-	<10
<4	-	-	-	-	-	-	26
<1.0	-	-	-	-	-	-	<1.0
<5	-	-	-	-	-	-	<5
<0.2	-	*	-	-	-	-	<0.2
<0.2	-	*	-	-	-	-	0.8
<0.5	-	*	-	-	-	-	<0.5
<2	-	*	-	-	-	-	<2
<0.1	-	*	-	-	-	-	<0.1
<0.5	-	*	-	-	-	-	<0.5
<0.5	-	*	-	-	-	-	<0.5
<0.01	-	*	-	-	-	-	<0.01
<1	-	-	-	-	-	-	<1
<1	-	-	-	-	-	-	<1
<2	-	-	-	-	-	-	<2

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-30 June 2025 - Volumes

Date
1/06/2025
2/06/2025
3/06/2025
4/06/2025
5/06/2025
6/06/2025
7/06/2025
8/06/2025
9/06/2025
10/06/2025
11/06/2025
12/06/2025
13/06/2025
14/06/2025
15/06/2025
16/06/2025
17/06/2025
18/06/2025
19/06/2025
20/06/2025
21/06/2025
22/06/2025
23/06/2025
24/06/2025
25/06/2025
26/06/2025
27/06/2025
28/06/2025
29/06/2025
30/06/2025

EPL 43 *	EPL 50 ^
Discharge volume (Megalitres)	
-	-
-	-
-	-
0.76	-
-	-
-	0.53
-	0.08
-	0.11
-	0.31
-	0.50
1.32	-
-	-
-	0.39
-	0.92
-	0.18
-	0.34
-	0.26
-	0.05
1.65	0.08
-	-
-	0.35
-	-
-	0.52
0.39	0.76
-	0.66
-	0.63
0.59	1.00
-	0.60
0.40	0.40
0.23	0.89

EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
Discharge volume (Megalitres)				
0.29	0.04	0.23	0.04	0.75
0.51	0.05	0.19	0.13	0.71
0.42	0.05	0.17	0.09	0.69
0.40	0.04	0.16	0.09	0.63
0.20	0.02	0.20	0.06	0.09
0.01	0.06	0.30	0.10	0.29
0.67	0.06	0.17	0.10	0.73
0.48	0.07	0.27	0.08	0.61
0.41	0.06	0.23	0.07	0.48
0.36	0.10	0.23	0.08	0.32
0.12	0.07	0.25	0.08	0.63
0.14	0.10	0.32	0.11	0.66
0.13	0.03	0.10	0.04	0.31
0.24	0.07	0.25	0.09	0.46
0.03	0.06	0.21	0.07	0.16
0.04	0.06	0.20	0.06	0.08
0.04	0.07	0.23	0.08	0.11
0.03	0.07	0.38	0.07	0.11
0.02	0.07	0.06	0.07	0.03
0.01	0.07	0.23	0.08	0.02
0.04	0.08	0.24	0.08	0.09
0.16	0.07	0.22	0.08	0.06
0.29	0.11	0.21	0.05	0.01
0.25	0.07	0.21	0.08	0.02
0.39	0.08	0.23	0.08	0.03
0.39	0.07	0.32	0.08	0.002
0.20	0.07	0.18	0.08	0.001
0.03	0.07	0.26	0.09	0.0004
0.30	0.06	0.24	0.09	0.001
0.39	0.06	0.22	0.07	0.002

Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.

- * The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 7.75 L/s
- ^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 7.63 L/s
- Water not discharged on this day

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Table 1 - Surface Water Quality Data

River and Minor Watercourses

Table 1 - Surface Water Quality Data River and Minor Watercourses			Water Quality Objectives (see note 1)									
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)					
-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25					
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
7/15/2025, 7:50 AM	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	9.51	86.5	9.88	90	60	8.5	223	16.7	High fast flow, clear water no odors, no sheen. Overcast day, no prev rainfall <24hrs. Ph taken with pH probe.	The slightly lower DO% and slightly elevated pH is within range from previous sample periods, the results are within range for this location.
7/15/2025, 8:45 AM	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	7.32	82.3	9.91	47	31	8.3	253	19.8	High flow, fast flow, clear water. No odors. No sheen. Overcast cool morning. No prev rainfall within 24hrs.	The slightly lower DO% and slightly elevated pH is within range from previous sample periods, the results are within range for this location.
7/15/2025, 9:32 AM	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	6.86	82.3	10.02	131	85	7.8	278	16.7	High flow, fast flowing water. Clear, no odors, no sheen. No prev rainfall, overcast cold morning. pH probe measuring pH.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
7/15/2025, 10:12 AM	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Tabbingo Reservoir	7.34	83.1	10	63	41	8	258	15.2	High and fast flow, no odors, clear water, no sheen. No prev rainfall.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
7/15/2025, 8:29 AM	EPL12	Yarrangobilly River, immediately downstream of portal pad	7.78	106.2	12.65	60	39	8.5	241	19.3	High flow, high level, clear water, no odors, no sheen. Overcast cold morning. No prev rainfall within 24hrs.	These results are consistent and within the range of previously recorded data in previous sample periods taken at this location. The slightly elevated pH is within range of previous data
7/15/2025, 9:02 AM	EPL14	Yarrangobilly River, downstream of road construction areas	6.87	74.7	9.1	56	37	8.2	266	12.1	High flow, clear water, fast flow. No odors, no sheen. Cool overcast morning, no prev rainfall. pH taken from pH probe.	These result, including the below WQO's for DO% and above WQO's for pH, are consistent and within the range of previously recorded data in previous sample periods taken at this location.
7/15/2025, 9:20 AM	EPL15	Yarrangobilly River, downstream of road construction areas	6.81	75.6	9.22	59	38	7.9	268	11.2	High flow, fast flow, clear water, no odors, no sheen. Overcast morning, no prev rainfall within 24hrs. pH probe measured the pH.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
7/15/2025, 10:28 AM	EPL16	Yarrangobilly River, downstream of road construction areas	7.1	70.5	8.53	65	42	7.9	270	10.7	High level water, fast flow, clear water, no odors, no sheen. No prev rainfall.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
7/8/2025, 3:09 PM	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	10.3	103.3	11.58	625.00	400	7.6	189	9.2	Flowing consistently, clear, no odour,	The elevated results for EC are within the lower end of the recorded range of data collected in previous sample periods for this locatin.
7/25/2025, 2:00 PM	EPL26	Eucumbene River downstream of Marica Road	6.2	86.3	10.7	16.4	17	7.17	164.7	1.05	Overcast day. No odour or sheen. Recent rain event. Signs of horse activity near sample location.	These results are consistent and within the range of previously recorded data in previous sample periods taken at this location.
7/25/2025, 2:09 PM	EPL27	Eucumbene River upstream of Marica Road	5.5	83.6	10.54	14.7	15	7.05	170.5	0.59	Recent rain eve t. Overcast day. Water running clear. Steady flow. Signs of horse activity near sample location.	These results are consistent and within the range of previously recorded data in previous sample periods taken at this location.
7/5/2025, 10:46 AM	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	5.19	71.7	9.11	25	16	7.28	271	5.7	Clear day. Fast flow. No odour.	The slightly lower DO% and EC are consistent with the historical data for this location, recorded from previous sample periods for this location.
7/5/2025, 10:28 AM	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	4.57	64.5	8.33	18	12	7.28	295	16.0	Clear day. Fast flow. No odour.	The slightly lower DO% and EC are consistent with the historical data for this location, recorded from previous sample periods for this location.
7/5/2025, 9:38 AM	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	3.78	61.7	8.13	31	20	7.17	301	10.1	Clear day. Fast flow. No odour. Heavy frost. Large inflow from dam.	The lower DO% is consistent across the previously recorded data for this location recorded from previous sample periods.
7/5/2025, 8:41 AM	EPL34	Nungar Creek, upstream of Tantangara Road	3.6	67.1	8.88	12	8	8.12	231	3.9	Heavy frost. Fast flow. Clear day. No odour.	These lower DO% and EC, and elevated pH results are within range of previously recorded data from previous sampling periods for this location.
7/5/2025, 8:56 AM	EPL35	Nungar Creek, downstream of Tantangara Road	2.93	62.2	8.39	11.0	7	7.37	300	3.9	Heavy frost. Clear day. No odour. Fast flow.	The slightly lower DO% and EC are consistent with the historical data for this location, recorded from previous sample periods for this location.
7/29/2025, 11:54 AM	EPL 36	Cameron's Creek, upstream of works in Rock Forest	8.08	79.3	9.38	34	22	6.75	177	22.0	Water clear. Medium flow. Signs of stock near water course. No odour or sheen. Slightly overcast day. Recent rain event.	The lower DO% is consistent across the previously recorded data for this location recorded from previous sample periods.
7/29/2025, 12:41 PM	EPL 37	Cameron's Creek, downstream of works in Rock Forest	8.14	61	7.2	39	25	7.07	180	25	Slightly overcast day. Recent rain event. Signs of stock near sample point. No odour or sheen. Medium flow.	The lower DO% is consistent across the previously recorded data for this location recorded from previous sample periods.

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7/22/2025, 9:30 AM	EPL52	GFO1 leachate basin	10.5	100.9	11.49	880.00	813	7.38	129	57	Oil slick on top of the basin, green colour. No odor. Heavy rain current.!!	These results are in range of previously recorded data from previous sampling periods, they are inline for its environmental factors and design threshold.
-	EPL53	GFO1 surface water upstream east	-	-	-	-	-	-	-	-	Dry	Dry
-	EPL54	GFO1 surface water upstream west	-	-	-	-	-	-	-	-	Dry	Dry
7/22/2025, 10:09 AM	EPL55	GFO1 surface water downstream	10.5	87.6	9.74	851	765	7.28	149	1.28	Slower flow, less water, lots of algae at sample point. Lots of rain in morning.!!	This location has begun flow recently and has remained consistent, with these results falling within the range that was previously recorded from prior sample rounds for this location.
-	EPL67	Nungar Creek surface water downstream west from Tintangara emplacement area	-	-	-	-	-	-	-	-	Dry	Dry
7/25/2025, 11:37 AM	EPL71	Surface water downstream of Marica emplacement	5.3	82.8	10.49	86.1	90	7.11	96.9	84.44	Overcast day. Recent rain event. Slightly turbid. No odour or sheen.	The lower DO% is consistent for the previously recorded data for this location recorded from previous sample periods.
7/19/2025, 10:29 AM	EPL84	F8 Basin	8.22	101.3	11.91	396.00	257	7.67	197	248	Cold sunny morning. Water is very brown turbid. No sheen, no odour. pH tested using pH probe.!!	These results are consistent with previously recorded data from prior sampling periods.
7/19/2025, 10:44 AM	EPL85	MYD7 Basin	8.46	65.3	7.63	491	319	6.95	244	83.00	Cold sunny morning. Water is clear, no sheen, no odour. Works ongoing with spillway. pH taken using pH probe.!!	These results are consistent with previously recorded data from prior sampling periods.
7/19/2025, 10:56 AM	EPL86	LHG01 Basin	8.79	73.7	8.53	1,090.00	700	7.99	217	30.5	Cold sunny morning. Water is clear, no sheen, no odour. Water level is high. pH taken using pH probe. QA_LOB_1 sample taken at this location.!!	These results are consistent with previously recorded data from prior sampling periods.
7/31/2025, 3:08 PM	EPL98	Rock blanket diversion monitoring under GFO1 liner	14.07	61.8	6.33	138	882	6.5	127	17.8	Recent rain event. Water flowing strongly. No odour. Water clear.!!	Results are consistent with previously recorded data from prior sampling periods, and remain within WQO's.
7/25/2025, 2:32 PM	EPL99	Marica Leachate Basin-Turkey's Nest	6.2	87.8	10.85	435.3	442	8.68	169.2	97.39	Recent rain event. No odour or sheen. Greyish colour. Water flowing into basin. Overcast day.	These results are consistent with previously recorded data from prior sampling periods.
-	EPL100	Marica Lower Leachate Basin USS Shaft	-	-	-	-	-	-	-	-	Dry	Dry
-	EPL101	Marica Leachate Basin Spill Pad	-	-	-	-	-	-	-	-	Dry	Dry
7/4/2025, 10:02 AM	EPL106	Ravine Bay Leachate basin 1	10.13	89.4	10.01	1,650.00	1,060.00	8.8	193	28.8	Cold sunny morning. Leachate line inflow is high. Sub surface drainage lines have been diverted. Basin capacity is 99.6%. Water is clear, no odour, no sheen. pH read using pH probe.!!	These results are consistent with previously recorded data from prior sampling periods.
7/9/2025, 11:52 AM	EPL110	Upstream monitoring of Ravine Bay emplacement area	8.77	100.6	11.69	58	37	7.1	219	2.5	Low flow, high clarity, no odours, recent rain.	Results are consistent with previously recorded data from prior sampling periods, and remain within WQO's.
7/18/2025, 1:57 PM	EPL118	Ravine Bay Leachate basin 2	12.6	74.6	8.11	194	126	7.21	159	474	Turbid, 583, no odour, dewatering in progress.!!	Results are consistent with previously recorded data from prior sampling periods, and remain within WQO's.
-	EPL120	Ravine Bay Leachate basin 4	-	-	-	-	-	-	-	-	Dry	Dry
7/22/2025, 7:56 AM	EPL122	GFO1 Drainage Line (Formerly EPL 55b)	9.3	94	10.77	515	479	7.91	151	60	Very clearwater, slight organic odor potentially from the mud as we walked through. Raining at time of sampling. No sheens.!!	These results, higher EC and turbidity are within the range recorded from prior sampling periods for this location.

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Table 2 - Reservoir Water Quality Data
Talbingo and Tantangara Reservoirs

Table 2 - Reservoir Water Quality Data Talbingo and Tantangara Reservoirs			Water Quality Objectives (see note 2)																
		Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)										
		-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20										
Date and Time	EPL Site ID	Location Description								Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
7/27/2025, 8:30 AM	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point								8.11	93.3	11.02	37	24	8.38	116	3.4	Rainy day. Heavy rain last few days. Very turbid. Greenish brown water. No odor.	Slightly elevated pH for this location has been previously recorded from previous sampling periods.
7/27/2025, 8:48 AM	EPL11	Talbingo Reservoir, downstream of outlet								8.63	115.5	13.47	30	20	7.83	133	2.2	Rainy day. Heavy recent rain. High turbidity closer to boat ramp. Greenish water. No odor.	Slightly elevated DO% is recorded from data input of previous sampling periods for this location.
7/20/2025, 10:48 AM	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River								4.1	83.9	10.97	11.4	12	7.09	113	2.86	Clear day. Greenish water. No visible algae. No odor. Reservoir levels higher than last month. Turb measured with Hach.	Slightly lower DO% and EC results have been previously recorded within our sampled data in this location.
7/20/2025, 11:31 AM	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River								5.7	86.9	10.89	17.9	18	7.19	173.1	3.76	Clear day. Greenish water colour. Increased water levels. Ducks nearby. No odor. Turb measured with Hach.	Slightly lower DO% and EC results have been previously recorded within our sampled data in this location.
7/20/2025, 11:22 AM	EPL32	Tantangara Reservoir, Tantangara intake. Downstream of construction works								5.5	86.6	10.92	18	19	7.13	171	3.9	Clear day. Greenish water colour. No visible algae. Water level higher than last month. Ducks nearby. Turb measured with Hach.	Slightly lower DO% and EC results have been previously recorded within our sampled data in this location.
7/5/2025, 12:14 PM	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities								6.77	64	7.81	29	19	7.4	285	10.5	Clear day. No odour. Organic matter on surface. Water silt.	Slightly lower DO% and EC results have been previously recorded and are consistent with data from previous sample periods in this location.
7/5/2025, 1:49 PM	EPL39	Confluence of Nungar Creek and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of Tantangara construction works								6.47	69.4	8.53	13	8	6.69	299	5.2	Overcast day. Fast flow. No odour.	Slightly lower DO% and EC results have been previously recorded and are consistent with data from previous sample periods in this location.
7/20/2025, 10:42 AM	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependent on tide and reservoir levels. Upstream of works								3.7	85.5	11.33	10.7	12	7.29	177.6	2.14	Clear day. Greenish colouration. No odor. Lots of ducks. Sample taken from boat. Turb measured with Hach.	Lower DO% results are consistent with the data range recorded for this location from previous sampling periods.
7/20/2025, 11:50 AM	EPL46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP								5.2	85.9	10.9	18.7	20	7.28	118	4.01	Greenish water colour. Clear day. Ducks nearby. Increased water levels. Turb measured with Hach.	Lower DO% results are consistent with the data range recorded for this location from previous sampling periods.
7/20/2025, 11:38 AM	EPL51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet								5.5	86.5	10.89	18.2	19	7.2	144	4.28	Clear day. Greenish water colour. No odor. Ducks nearby. Water level higher than last month. Turb measured with Hach.	Lower DO% results are consistent with the data range recorded for this location from previous sampling periods.
7/22/2025, 2:46 PM	EPL107	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River								9.4	92.1	10.55	21	20	7.32	169	0.85	Water very clear, no odors. No sheens. Very rainy morning, raining currently.	The results recorded for a lower EC and turbidity are within the range recorded for this location from previous sample periods. They are also in line with ambient conditions.
7/22/2025, 2:23 PM	EPL108	Monitoring of Ravine Bay emplacement area (center of PSE) within Yarrangobilly River								9.3	91	10.43	21	20	7.38	175	1.04	Clear water, green overall colour, rainy cold morning. No sheens. No odor.	The results recorded for a lower EC and turbidity are within the range recorded for this location from previous sample periods. They are also in line with ambient conditions.
7/22/2025, 2:18 PM	EPL109	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River								9.6	91.5	10.43	21	20	7.58	166	0.8	Very windy, very cold, rainy day. Water green. No odors. No sheen.	The results recorded for a lower EC and turbidity are within the range recorded for this location from previous sample periods. They are also in line with ambient conditions.

Table 3 - Treated Water Quality Data
Talbingo

Table 3 - Treated Water Quality Data Talbingo			Water Quality Objectives (see note 3)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	700	-	6.5 - 8.0	-	25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
7/6/2025, 9:16 AM	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	12.87	70.8	7.48	7	5	7.55	221	0.09	Water taken from tap. Tap cleaned with alcohol wipes. Water clear. No odour. No sheen.	These results are consistent with previous samples recorded for this location.

Table 4 - Treated Water Quality Data
Tantangara

Table 4. Treated Water Quality Data Tantangara			Water Quality Objectives (see note 3)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	200	-	6.5 - 8.0	-	25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
7/20/2025, 7:48 AM	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	6.4	87.3	10.75	47.7	48	7.31	115.6	0.14	INX Out, final point prior to reservoir. No odour or sheen. Clear, flowing water from tap.!!	The results are within the water quality objectives.

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Table 5 - Groundwater Quality Data
GF01 Surface Water and Groundwater

Table 5 - Groundwater Quality Data GF01 Surface Water and Groundwater			Water Quality Objectives (see note 1)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	30 - 350	-	6.5 - 8.0	-	-		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
7/1/2025, 9:32 AM	EPL56	GF01 Upstream east groundwater well	11.73	48.1	5.21	289	28.5	8.17	111	28.5	No prev rainfall, cool morning. Stock pile pushed to within 5m of bore entrance. Clear water, no odors, no sheems.	The slightly elevated pH is nt outside the recorded range for this location from previous sampling periods.
7/1/2025, 9:48 AM	EPL57	GF01 upstream west groundwater well	12.32	19.8	2.12	263	171	8.12	125	30.5	Clear no odors, clear water. Rock placement within 5m of borehole. No prev rainfall. No works nearby.	The slightly elevated pH is nt outside the recorded range for this location from previous sampling periods.
7/22/2025, 10:03 AM	EPL58	GF01 Downstream Groundwater well	16.3	43	4.29	814	636	5.83	188	0.96	Very clear water, no odors. Heavy rain in morning.	The low pH and the elevated EC are within the recorded range from previous sampling periods for this location.
7/5/2025, 2:34 PM	EPL68	Leachate detection BH downstream East	9.95	66.8	7.55	28	18	5.55	350	26.1	Overcast day. Bore pump used. Clear water. No odour.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
7/5/2025, 2:14 PM	EPL69	Tantangara groundwater downstream East	9.18	37	4.26	50	32	5.75	352	30.8	Overcast day. Clear water.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
7/26/2025, 10:54 AM	EPL70	Tantangara groundwater upstream	5.65	64.6	7.35	65.3	60	6.1	168.5	92.77	Overcast day. Recent rain and snow fall. Orange colour at bottom of hydrasleeve. No odor.	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
7/25/2025, 12:46 PM	EPL72	Marica groundwater upstream	9.9	61.9	7	34.6	32	5.48	186.7	83.13	Overcast day. No odour or sheen. Water clear.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
-	EPL73	Marica groundwater downstream	-	-	-	-	-	-	-	-	-	This site has been decommissioned.
7/27/2025, 3:20 PM	EPL80	LHG groundwater upstream	15	47.4	4.76	686	551	6.83	103	146	Recent heavy rain, turbid water slight brown colour. No foam,sheen or odour. No works nearby.	Elevated EC has been previously recorded for this location from previous sampling periods.
7/19/2025, 11:19 AM	EPL81	LHG groundwater downstream	14.47	18.3	1.86	984	630	6.67	57	614	Cold sunny morning. Bore pump still not functional. Water is slightly turbid. No odour. pH taken using pH probe.	Elevated EC has been previously recorded for this location from previous sampling periods.
7/27/2025, 3:49 PM	EPL82	MY groundwater upstream	16	25.5	2.52	2264	1783	6.59	15.6	70.03	Recent heavy rain, slightly turbid slght brown colour. Sulfur odour. No foam or sheen no nearby works.	Elevated EC has been previously recorded for this location from previous sampling periods.
7/27/2025, 1:01 PM	EPL83	MY groundwater downstream	10.2	64.1	7.14	399.3	359	7.14	120.9	82.67	Recent heavy rainfall, slightly turbid and slight brown colour no odour or works nearby.	The EC levels although elevated above the WQO are toward the lower end of the range previously recorded for this location in previous sampling rounds.
7/19/2025, 10:07 AM	EPL87	MY groundwater downstream	12.47	47	5.01	644	412	6.77	493	659	Cold, sunny morning. No ground disturbance nearby. Bore purged with pump for 5 minutes prior to sample. Water was turbid but now less. No odour or sheen. pH measured using probe.	The elevated EC is within the range recorded for this location from previous sampling periods.
7/19/2025, 1:08 PM	EPL88	MY groundwater downstream	15.43	47.8	3.92	863	552	6.98	230	23.9	Sunny day. Water is very clear, no odours. pH read using pH probe. 2L hydrasleeve reinstalled.	The elevated EC is within the range recorded for this location from previous sampling periods.
7/27/2025, 1:22 PM	EPL89	LHG groundwater downstream	11.6	36.2	3.95	226.6	198	6.6	138.9	68.71	Recent heavy rain, slight turbid and brown colour no sediment in sleeve, no odour sheen or foam. No nearby works.	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
7/31/2025, 2:17 PM	EPL90	GF01 groundwater downstream	13.29	54.6	5.71	135	87	6.05	141	163	Recent rain event. Sunny day. No odour or sheen.	The slightly lower pH has been recorded previously at this location from previous sampling periods.
7/22/2025, 8:08 AM	EPL91	GF01 groundwater downstream	14.5	25.8	2.64	190	155	6.61	42	54	Raining at time of sample, smells of sulphuric acid is strong. Clear water.	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
7/22/2025, 8:54 AM	EPL92	GF01 groundwater downstream	12.9	63	6.67	50	43	6.56	161	182	Borehole open at the entrance, heavy rainfall this morning, possible ingress of rainwater. Slightly turbid water, orange colour. No odors.	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
7/31/2025, 2:39 PM	EPL93	GF01 groundwater downstream	12.62	37.3	3.96	240	156	7.24	137	544	Water turbid orange colour. No odour. Recent rain event. Slightly overcast day.	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
7/1/2025, 10:22 AM	EPL94	GF01 groundwater downstream	13.17	19.6	2.05	171	111	6.81	19	97.3	Purged for a minute, orange sediment. Clear after. No odors. No works. No rain.	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
7/1/2025, 10:58 AM	EPL95	GF01 groundwater downstream	15.02	24.1	2.43	803	514	6.15	190	27.8	Water started running out. Clear water, no odors, no prev rainfall, no works o going.	The slightly lower pH has been recorded previously at this location from previous sampling periods.
7/1/2025, 10:38 AM	EPL96	GF01 groundwater downstream	13.11	73.3	7.65	2280	1.46	7.67	82	485	No prev rainfall, no works ongoing upgradient. Orange colour, no odors. Open borehole not secure.	The elevated EC is within the range recorded for this location from previous sampling periods.
7/1/2025, 12:41 PM	EPL97	GF01 groundwater downstream	13	58.7	1.56	512	328	6.66	204	14.3	No odors, taken the hose out to put the telemetered system back in. Water is clear. No prev rainfall.	The elevated EC is within the range recorded for this location from previous sampling periods.
-	EPL102	Groundwater monitoring associated with the Marica emplacement area on Marica Trail	-	-	-	-	-	-	-	-	Decomissioned	Decomissioned
7/5/2025, 1:03 PM	EPL103	Upstream groundwater monitoring west of the Tantangara emplacement area	10.89	37.7	4.17	49	32	5.89	327	25.1	Overcast day. Clear water. No odour.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
7/5/2025, 1:25 PM	EPL104	Downslope groundwater monitoring east of the Tantangara emplacement area	10.59	53.7	5.97	48	31	6.06	330	21.3	Overcast day. No odour. Water clear.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
7/5/2025, 12:52 PM	EPL105	Downslope groundwater monitoring east of the Tantangara emplacement area	10.15	59.7	6.66	131	85	5.86	341	20.2	Overcast day. Clear water. No odour. Water remove via bore pump.	The pH is within the recorded range for this location from previous sampling periods.
7/27/2025, 2:35 PM	EPL113	Upstream east monitoring of Ravine Bay emplacement area	11.01	36.7	4.04	101	66	6.09	297	407	Rainy day, rain over last few days, a bit turbid water, sediment at the bottom of the sleeve.	The pH is within the recorded range for this location from previous sampling periods.
7/27/2025, 2:07 PM	EPL114	Upstream west monitoring of Ravine Bay emplacement area	6.39	39.8	4.35	390	254	6.91	279	27.7	Rainy day, rain over last few days, clear water, no smell, nt sediment.	The EC is slightly above th WQO and is within the range that has been recorded for this location from previous sampling rounds.

EPL 21266 In Situ Water Quality Measurements

EPL Monthly Monitoring July 2025

7/27/2025, 3:06 PM	EPL115	Downstream east monitoring of Ravine Bay emplacement area	11.8	78.3	8.46	358	233	7.05	79	132	Rainy day, rain over last few days, clear water, no sediments	The EC is slightly above th WQO and is within the range that has been recorded for this location from previous sampling rounds.
7/18/2025, 12:52 PM	EPL116	Downstream west monitoring of Ravine Bay emplacement area	11.2	54.5	5.87	164	107	6.14	289	75	Turbid at bottom of hydrosleeve, no odour.	Elevated pH aligns with the previously recorded ranges reported for this location and consistet with the upgradient conditions.
7/18/2025, 1:34 PM	EPL117	Downstream monitoring of Ravine Bay emplacement area	11.3	15.7	1.66	144	93	5.94	87	21.6	Clear, no odour, ph probe to be checked.	Elevated pH aligns with the previously recorded ranges reported for this location and consistet with the upgradient conditions.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

Snowy Hydro 2.0 Main Works EPL Sampling: 01 - 31 July 2025

Environmental Protection Licence No:	21266
Licensee:	Snowy Hydro Limited
Licensee address:	PO Box 332, Cooma, NSW 2630
Premises:	Snowy 2.0 Pumped Hydro Power Station Talbingo and Tantangara, Kosciuszko National Park and Rock Forest, Kosciuszko NSW 2642
EPA Public Register:	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21266&id=21266&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=issued
Monthly water sampling and analysis is performed as part of the Snowy 2.0 Approval Conditions, Environmental Protection Licence No 21266 - Variation 23 July 2025, and the approved Water Management Plan to ensure that works are not impacting on nearby receiving waters.	
A map showing the location of each of the EPL named sampling points is provided after the results tables.	
Groundwater Results: EPL56 has elevated concentrations of total nitrogen (TN) at 400ug/L, but the downgradient locations recorded increased concentrations of EPL57 of 2080ug/L, and EPL58 at 53,400 ug/L. EPL57 and EPL58 have increased significantly, and it is evident in the results that the TN has risen as we get further down the watercourse. The phosphorus has not increased in the same trends seen for TN, although they are above the WQO's, they are not linear in their values. EPL95 which is measured at similar depths to EPL58 slightly lower exceedances but similar concentrations for TN. The results for TN within Tantangara groundwater sampling locations (EPL68, 69, 103, 104, 105) are all exceeding with differing levels, none of which are linear or displaying obvious trends displaying correlation between upgradient and down gradient locations. The reported elevated concentrations for ground water locations within Lickhole Gully have previously been recorded above the WQO's for TN. Select heavy metals have been reported for multiple sites as above WQO's. More specifically, GF01 (Nickel, Zinc, Copper, Iron, and Arsenic – all dissolved), Lickhole Gully (Arsenic, Chromium, Copper, Iron, Nickel, and Zinc), Ravine Bay (Aluminium, Chromium, Copper, Zinc). Reservoir Results: The results for Talbingo reservoir returned concentrations that indicate the environmental conditions are consistent with the ambient conditions. Although Ammonia has indicated an exceedance at EPL107, it is within the objectives for the other locations up and down stream for the reservoir. All other parameters have been recorded within the WQO's, other than the Nitrite and Nitrates which are slightly above, although the Total Nitrogen is below the objectives. For Tantangara Reservoir there are more nutrient levels exceeding our WQO's for most locations sampled within the area. Ammonia is slightly exceeding for all locations but EPL39 and EPL40, which is upstream of construction. Total Nitrogen, Reactive and Total Phosphorus have exceeded for most of the locations on the reservoir. Aluminium is the only metal that has returned concentrations above the WQO's for the locations on the reservoir. These concentration levels for parameters exceeding the WQO's have been recorded from previous sample periods for these locations. Surface Water Results: EPL24 has returned elevated concentrations of TN although all other parameters except for Zinc have identified all other parameters have met the WQO's for this location. Locations along the natural water ways of the Murrumbidgee River, Nungar creek, and Eucumbene River have returned slight exceedances for TN, Phosphorus, and some select heavy metals. EPL52 and EPL55 located within the GF01 area have returned exceedances for TN at levels that have been recorded and reported on from previous sampling periods. There are a few select heavy metals that are also exceeding for these locations, however EPL55 is below EPL52 in location, and as such is showing lesser concentration volumes than EPL52. Discharge Results: Results for the discharge locations met the adopted Water Quality Objectives (WQOs) during the discharge periods.	

The publication of this pollution monitoring data is carried out in accordance with section 66 (6) of the Protection of the Environment Operations Act 1997 (NSW).
Snowy Hydro Limited gives no warranty or representation regarding the data suitability for any particular purpose.

Snowy Hydro Limited excludes all liability to any person for loss or damage of any kind (however caused, including but not limited to by negligence) arising whether directly or indirectly from or relating in any way to the use of this data, whether in whole or in part.

* Water Quality Objective values for groundwater refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2000); they are not pollutant limits imposed by EPL 21266

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 July 2025 - Talbingo and Tantangara Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Field			
pH	pH Unit	-	6.5-8
Electrical Conductivity	µS/cm	-	20-30
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	No Water Quality Objective Value
Dissolved Oxygen	% saturation	-	90-110
Turbidity	NTU	-	1-20
Laboratory analytes			
Total suspended solids	mg/L	5	No Water Quality Objective Value
Hardness as CaCO ₃	mg/L	1	No Water Quality Objective Value
Nutrients			
Ammonia as N	µg/L	10	10
Nitrite + Nitrate as N (NO _x)	µg/L	10	10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value
Nitrogen (Total)	µg/L	100	350
Reactive Phosphorus	µg/L	1	5
Phosphorus (Total)	µg/L	10	10
Inorganics			
Cyanide Total	µg/L	4	7
Hydrocarbons			
Oil and Grease	mg/L	1	5
Metals			
Aluminium (dissolved)	µg/L	5	55
Arsenic (dissolved)	µg/L	0.2	13
Chromium (III+VI) (dissolved)	µg/L	0.2	1
Copper (dissolved)	µg/L	0.5	14
Iron (dissolved)	µg/L	2	300
Lead (dissolved)	µg/L	0.1	3.4
Manganese (dissolved)	µg/L	0.5	1,900
Nickel (dissolved)	µg/L	0.5	11
Silver (dissolved)	µg/L	0.01	0.05
Zinc (dissolved)	µg/L	1	8
Biological			
Faecal Coliforms	CFU/100mL	1	10/100 ^a
Biochemical Oxygen Demand	mg/L	2	1/5 ^a

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as faecal coliforms

^a 90th percentile concentration limits / 100 percentile concentration limits

- Sample not required at this location.

EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51	EPL107	EPL108	EPL109
7/27/2025	7/27/2025	7/20/2025	7/20/2025	7/20/2025	5/07/2025	5/07/2025	7/20/2025	7/20/2025	7/20/2025	7/22/2025	7/22/2025	7/22/2025
8.38	7.83	7.09	7.19	7.13	7.4	6.69	7.29	7.28	7.2	7.32	7.38	7.58
37	30	11.4	17.9	18	29	13	10.7	18.7	18.2	21	21	21
116	133	113	173.1	171	285	299	177.6	118	144	169	175	166
8.11	8.63	4.1	5.7	5.5	6.77	6.47	3.7	5.2	5.5	9.4	9.3	9.6
93.3	115.5	83.9	86.9	86.6	64	69.4	85.5	85.9	86.5	92.1	91	91.5
3.4	2.2	2.86	3.76	3.9	10.5	5.2	2.14	4.01	4.28	0.85	1.04	0.8
<5	<5	<5	<5	<5	14	<5	<5	<5	<5	<5	<5	<5
12	12	2	5	5	5	<1	2	5	5	5	5	5
<10	<10	30	110	90	120	<10	<10	160	120	50	10	<10
50	30	30	60	60	80	30	20	60	60	30	30	30
200	200	100	300	300	400	200	<100	400	300	200	100	200
200	200	100	400	400	500	200	<100	500	400	200	100	200
<10	<10	<10	<10	<10	10	10	<10	<10	<10	<10	<10	<10
<10	20	10	<10	<10	50	40	<10	30	30	<10	<10	20
<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
12	11	49	58	62	45	41	24	56	60	<5	<5	7
0.2	<0.2	<0.2	0.2	0.2	0.2	<0.2	<0.2	0.2	0.2	0.2	0.2	<0.2
0.7	<0.2	0.2	0.3	0.3	<0.2	<0.2	0.3	0.3	<0.2	<0.2	<0.2	<0.2
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
17	12	60	130	130	119	40	24	128	131	6	4	4
<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2
1.6	0.7	6.7	18.9	19.9	36.2	4.3	1.8	20.3	19.8	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2	<1	<1	<1	<1	3	2	<1	<1	<1	<1	<1	<1
6	2	<1	-	-	-	-	-	-	<1	-	-	-
<2	<2	3	-	-	-	-	-	-	<2	-	-	-

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia protecting 95% of aquatic species ANZECC / ARMCANZ (2018). They are not pollutant levels imposed by EPA 2020b.

Once printed this document becomes uncontrolled

Monthly EPL Sampling: 01-31 July 2025 - Discharge Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Flow Rate			
Inflow [#]	ML/day	-	-
Outflow [#]	ML/day	-	4.32 (EPL 43 / 50)
Field			
pH	pH Unit	-	6.5-8.5
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	15
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value
Turbidity	NTU	-	<25
Laboratory analyses			
Total suspended solids	mg/L	5	5/10
Hardness as CaCO ₃	mg/L	1	No Water Quality Objective Value
Nutrients			
Ammonia as N	µg/L	10	200/2000 [^]
Nitrite + Nitrate as N (NO _x)	µg/L	10	10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value
Nitrogen (Total)	µg/L	100	350/- [^]
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value
Phosphorus (Total)	µg/L	10	100/300 [^]
Inorganics			
Cyanide Total	µg/L	4	No Water Quality Objective Value
Hydrocarbons			
Oil and Grease	mg/L	1	2/5 [^]
Metals			
Aluminium (dissolved)	µg/L	5	55
Arsenic (dissolved)	µg/L	0.2	13
Chromium (III+VI) (dissolved)	µg/L	0.2	1
Copper (dissolved)	µg/L	0.5	14
Iron (dissolved)	µg/L	2	300
Lead (dissolved)	µg/L	0.1	3.4
Manganese (dissolved)	µg/L	0.5	1,900
Nickel (dissolved)	µg/L	0.5	11
Silver (dissolved)	µg/L	0.01	0.05
Zinc (dissolved)	µg/L	1	8
Biological			
Faecal Coliforms	CFU/100mL	1	10/100 [^]
Biological Oxygen Demand	mg/L	2	5

EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
6/07/2025							20/07/2025
-	0.0000	0.3320	0.0647	0.2330	0.0817	0.0271	-
-	-	-	-	-	-	-	-
7.55	-	-	-	-	-	-	7.31
7	-	-	-	-	-	-	47.7
221	-	-	-	-	-	-	115.6
12.87	-	-	-	-	-	-	6.4
70.8	-	-	-	-	-	-	87.3
0.09	-	-	-	-	-	-	0.14
<5	-	-	-	-	-	-	<5
<1	-	-	-	-	-	-	<1
20	-	-	-	-	-	-	20
60	-	-	-	-	-	-	<10
<100	-	-	-	-	-	-	<100
<100	-	-	-	-	-	-	<100
<10	-	-	-	-	-	-	<10
<10	-	-	-	-	-	-	<10
<4	-	-	-	-	-	-	<4
<1.0	-	-	-	-	-	-	<1.0
<5	-	-	-	-	-	-	<5
<0.2	-	-	-	-	-	-	<0.2
<0.2	-	-	-	-	-	-	0.7
<0.5	-	-	-	-	-	-	<0.5
<2	-	-	-	-	-	-	<2
<0.1	-	-	-	-	-	-	<0.1
<0.5	-	-	-	-	-	-	<0.5
<0.5	-	-	-	-	-	-	<0.5
<0.01	-	-	-	-	-	-	<0.01
<1	-	-	-	-	-	-	<1
<1	-	-	-	-	-	-	<1
<2	-	-	-	-	-	-	<2

Note: Treated water was not being discharged at Talbingo Reservoir at the time of EPL sampling.

There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

- Samples not required

[^] 90 Percentile concentration limit/100 Percentile limit

[#] Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 July 2025 - Volumes

Date
1/07/2025
2/07/2025
3/07/2025
4/07/2025
5/07/2025
6/07/2025
7/07/2025
8/07/2025
9/07/2025
10/07/2025
11/07/2025
12/07/2025
13/07/2025
14/07/2025
15/07/2025
16/07/2025
17/07/2025
18/07/2025
19/07/2025
20/07/2025
21/07/2025
22/07/2025
23/07/2025
24/07/2025
25/07/2025
26/07/2025
27/07/2025
28/07/2025
29/07/2025
30/07/2025
31/07/2025

EPL 43 *	EPL 50 ^
Discharge volume (Megalitres)	
0.34	-
-	-
0.87	0.62
-	0.72
-	0.68
-	0.30
2.11	0.92
-	-
-	-
0.57	-
0.32	-
0.67	-
0.70	-
0.37	0.87
-	0.46
-	0.58
0.44	0.81
-	0.55
-	-
0.58	0.20
-	0.10
0.83	0.16
0.46	0.84
0.99	0.50
-	0.53
-	0.73
-	0.93
1.00	1.17
-	1.13
1.02	0.76
-	0.44

EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
Discharge volume (Megalitres)				
0.01	0.06	0.23	0.07	0.002
0.01	0.06	0.18	0.01	0.002
0.01	0.06	0.16	0.01	0.002
0.61	0.06	0.15	0.01	0.002
0.14	0.04	0.26	0.30	0.03
0.30	0.06	0.26	0.08	0.03
0.41	0.06	0.20	0.14	0.05
0.35	0.06	0.28	0.07	0.01
0.28	0.07	0.22	0.06	0.003
0.57	0.10	0.24	0.03	0.02
0.15	0.05	0.22	0.10	0.23
0.24	0.06	0.27	0.06	0.001
0.60	0.02	0.27	0.08	0.002
0.26	0.05	0.13	0.07	0.004
0.38	0.05	0.19	0.08	0.01
0.34	0.05	0.19	0.08	0.03
0.43	0.06	0.24	0.08	0.02
0.24	0.06	0.37	0.09	0.01
0.58	0.07	0.10	0.08	0.03
0.47	0.08	0.26	0.08	0.004
0.34	0.06	0.25	0.07	0.02
0.53	0.09	0.24	0.08	0.16
0.43	0.12	0.24	0.07	0.08
0.23	0.07	0.26	0.09	0.03
0.52	0.09	0.26	0.13	0.004
0.01	0.07	0.34	0.03	0.019
0.39	0.08	0.19	0.14	0.004
0.26	0.07	0.26	0.08	0.006
0.40	0.08	0.22	0.09	0.007
0.48	0.09	0.31	0.09	0.002
0.56	0.07	0.29	0.09	0.06

- Water not discharged on this day

Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.

* The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 6.94 L/s

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 3.47 L/s

-- Water not discharged on this day

EPL 21266 In Situ Water Quality Measurements
EPL Monthly Monitoring August 2025

Table 1 - Surface Water Quality Data
River and Minor Watercourses

Table 1 - Surface Water Quality Data River and Minor Watercourses			Water Quality Objectives (see note 1)									
			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	90 - 110	-	30 - 350	-	6.5 - 8.0	-	2 - 25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
4 Aug 2025, 12:52 PM	EPL5	Yarrangobilly River, upstream of the exploratory tunnel and construction pad	10.48	95.4	10.64	69	45	8.13	166	3.3	Regular level, fast flow. Clear water, no odor, no sheen. Sunny, warm day.	The slightly elevated pH is within range from previous sample periods, the data is within range for this location.
4 Aug 2025, 1:50 PM	EPL6	Wallaces Creek, upstream of Yarrangobilly River and Wallaces Creek confluence	11.3	103.6	11.35	45	29	7.85	193	9.2	Regular flow and height of water level, clear water, no odor, no sheen. Dry and warm day.	The results are within WQO's and within the range recorded from previous sampling periods.
5 Aug 2025, 1:19 PM	EPL8	Yarrangobilly River, downstream of Lick Hole Gully	10.07	70.5	7.94	74	48	7.71	186	3.6	Regular volume, fast flow. Clear water, no odor, no sheen. Rain within 24hrs.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
5 Aug 2025, 1:32 PM	EPL9	Yarrangobilly River, downstream of the accommodation camp and upstream of Tabbingo Reservoir	10.26	69.8	7.82	69	45	7.67	190	7.4	Fast flow, regular volume. No odor, clear water, no sheens. Rain within 24hrs.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
4 Aug 2025, 1:08 PM	EPL12	Yarrangobilly River, immediately downstream of portal pad	10.84	70.9	7.84	47	32	7.93	185	11.5	Regular flow, fast flow. Clear water, no odors, no sheen.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
5 Aug 2025, 12:48 PM	EPL14	Yarrangobilly River, downstream of road construction areas	11.18	95.8	10.52	65	42	7.75	161	4.8	Clear water, regular volume, fast flow. No odor, no sheen.	The results are within WQO's and within the range recorded from previous sampling periods.
5 Aug 2025, 1:04 PM	EPL15	Yarrangobilly River, downstream of road construction areas	10.09	75.5	8.5	64	42	7.79	176	3.2	Regular volume, fast flow. Clear water, no odor, no sheen. Rain within 24hrs.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
5 Aug 2025, 1:41 PM	EPL16	Yarrangobilly River, downstream of road construction areas	10.19	75.9	8.55	71	46	7.56	194	4.7	QA 3+4 done here. Regular volume, fast flow. Clear water, no odors, no sheens. Rain within 24hrs.	The DO% is within the range of previously recorded data for this location based on review from previous sample periods.
5 Aug 2025, 8:43 AM	EPL24	Yarrangobilly River tributary (Watercourse 2), directly downstream of road	11.85	109.9	11.87	394.00	256	7.4	206	4.9	Fast flow, regular volume. Very clear, no odors, no sheen. No milky colour this time. Rain within 24hrs.	The elevated results for EC are within the lower end of the recorded range of data collected in previous sample periods for this location.
1 Aug 2025, 8:31 AM	EPL26	Eucumbene River downstream of Marica Road	0.7	102.5	14.69	32	21	7.61	137	3.1	Frost on ground. Sunny day. Recent rain event. No odour or sheen. Medium flow.	These results are consistent and within the range of previously recorded data in previous sample periods taken at this location.
1 Aug 2025, 8:41 AM	EPL27	Eucumbene River upstream of Marica Road	1.97	60.5	8.37	23	15	7.14	156	1.4	Sunny day. Recent rain event. No odour or sheen. Medium flow. Frost on ground.	The slightly lower DO% and EC are consistent with the historical data for this location, recorded from previous sample periods for this location.
2 Aug 2025, 12:10 PM	EPL30	Kellys Plain Creek, downstream of accommodation camp and laydown areas	6.3	199	24.59	24	15	8.18	207	6.9	Very fast flowing, clear, no odor, no sheen. Rain ongoing. Very high level water.	The elevated DO% is recorded above the data previous sampling rounds have recorded. The slightly lower EC and slightly elevated pH is within the range recorded for this location.
2 Aug 2025, 12:20 PM	EPL31	Kellys Plain Creek, upstream of accommodation camp and laydown areas	6.4	92	11.44	16	10	8.15	205	6.0	Very high level water, fast flow. Clear water, no odors, no sheen. Rain ongoing.	The slightly lower EC are consistent with the historical data for this location, recorded from previous sample periods for this location.
2 Aug 2025, 7:57 AM	EPL33	Murrumbidgee River, downstream of Tantangara reservoir outlet	3.03	84.1	11.32	41	26	8.16	174	6.2	Very little flow, very low level of water, the dam wall is closed. Water is clear still, no odors, no sheen.	The lower DO% and slightly higher pH is consistent across the previously recorded data for this location recorded from previous sample periods.
2 Aug 2025, 7:31 AM	EPL34	Nungar Creek, upstream of Tantangara Road	2.15	148.2	20.41	34	22	8.04	145	11.1	Very high and fast flow, overcast rainy morning. Very clear, no odors, no sheen.	The elevated DO% is recorded above the data previous sampling rounds have recorded. The slightly elevated pH is within the range recorded for this location.
2 Aug 2025, 7:37 AM	EPL35	Nungar Creek, downstream of Tantangara Road	2.71	100.7	13.67	15.0	9	7.99	140	5.6	Very high and fast flowing water, clear, no odors, no sheen.	The slightly lower EC are consistent with the historical data for this location, recorded from previous sample periods for this location.
22 Aug 2025, 12:33 PM	EPL 36	Cameron's Creek, upstream of works in Rock Forest	14.65	84.9	8.63	38	25	7.42	222	27.7	Clear day. No recent rain. Medium flow. Signs of stock near sample point. Water clear.	The lower DO% is consistent across the previously recorded data for this location recorded from previous sample periods.
22 Aug 2025, 1:19 PM	EPL 37	Cameron's Creek, downstream of works in Rock Forest	14.65	61.3	6.23	48	31	7.61	232	12.7	Medium flow. Water clear. Stock near sample point.	The lower DO% is consistent across the previously recorded data for this location recorded from previous sample periods.
5 Aug 2025, 11:06 AM	EPL52	GFO1 leachate basin	13.6	79.2	8.2	1,170.00	746	7.1	151	28.8	Green colour, very full, no odor, no sheen. Water sets taking from basin. Rain within 24hrs.	These results are in range of previously recorded data from previous sampling periods, they are inline for its environmental factors and design threshold.
-	EPL53	GFO1 surface water upstream east	-	-	-	-	-	-	-	-	-	Dry
-	EPL54	GFO1 surface water upstream west	-	-	-	-	-	-	-	-	-	Dry
5 Aug 2025, 11:26 AM	EPL55	GFO1 surface water downstream	13.35	74.5	7.76	1030	661	6.91	179	5.1	Very clear water, no odors, no sheen. Lots of algae, has grown since last time.	This location has begun flow recently and has remained consistent, with these results falling within the range that was previously recorded from prior sample rounds for this location.
-	EPL67	Nungar Creek surface water downstream west from Tantangara emplacement area	-	-	-	-	-	-	-	-	-	Dry

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1 Aug 2025, 10:37 AM	EPL71	Surface water downstream of Marica emplacement	5.36	52.2	6.6	120	78	7.12	209	45.9	Sunny day. Recent rain event. No odour or sheen. Upstream works in progress.	The lower DO% is consistent for the previously recorded data for this location recorded from previous sample periods.
9 Aug 2025, 9:39 AM	EPL84	F8 Basin	7.94	192.1	15.65	507.00	324	8.46	106	76.5	Basin 20% full. Very turbid and silty water. No odour or sheen.	These results are in range of previously recorded data from previous sampling periods, they are inline for its environmental factors and design threshold.
7 Aug 2025, 10:30 AM	EPL85	MY07 Basin	10.02	117.5	13.21	417	271	7.55	186	35.70	Slightly turbid, no odours, sunny day.	These results are in range of previously recorded data from previous sampling periods, they are inline for its environmental factors and design threshold.
7 Aug 2025, 10:15 AM	EPL86	LHG01 Basin	10.53	99.1	11.01	1,070.00	686	8.2	171	36.5	Visually turbid, no smell, sunny day, no algae.	These results are in range of previously recorded data from previous sampling periods, they are inline for its environmental factors and design threshold.
5 Aug 2025, 11:02 AM	EPL98	Rock blanket diversion monitoring under GFO1 liner	15.02	65.6	6.58	1610	1030	6.65	147	14	Very clear water, constant flow, no odors. Rainfall within 24hrs.	These results are in range of previously recorded data from previous sampling periods, they are inline for its environmental factors and design threshold.
1 Aug 2025, 11:48 AM	EPL99	Marica Leachete Basin-Turkey's Nest	7.08	50.1	6.07	361	235	10.82	126	85.2	Sunny day. Recent rain event. No odour or sheen. Water green colour.	These results are in range of previously recorded data from previous sampling periods, they are inline for its environmental factors and design threshold.
1 Aug 2025, 11:59 AM	EPL100	Marica Lower Leachate Basin USS Shaft	-	-	-	-	-	-	-	-	Sample not taken due to water level.	Dry
1 Aug 2025, 11:57 AM	EPL101	Marica Leachate Basin Spoil Pad	-	-	-	-	-	-	-	-	Sample not taken due to water level.	Dry
15 Aug 2025, 10:39 AM	EPL106	Ravine Bay Leachate basin 1	10.35	98.9	11.02	1,550.00	990.00	8.31	158	19	Overcast day, inflows from PST pipes, slightly turbid, no odour.	The EC and pH results are consistent with previously recorded data from prior sampling periods.
22 Aug 2025, 11:45 AM	EPL110	Upstream monitoring of Ravine Bay emplacement area	9.24	94.8	10.9	57	37	7.97	192	3.2	Clear, no turbidity, no algae present, no odour, no recent rainfall, running consistently.	Results are consistent with previously recorded data from prior sampling periods, and remain within WQO's.
-	EPL118	Ravine Bay Leachate basin 2	-	-	-	-	-	-	-	-	-	Dry
-	EPL120	Ravine Bay Leachate basin 4	-	-	-	-	-	-	-	-	-	Dry
5 Aug 2025, 9:16 AM	EPL122	GFO1 Drainage Line (Formerly EPL 55b)	10.17	95.7	8.36	717	459	7.57	69	122	Wide spread of constant semi fast flow, algae growth occurring on ground. Plant growth is healthy. Clear water. No odor, no sheen.	These results, higher EC and turbidity are within the range recorded from prior sampling periods for this location.

Table 2 - Reservoir Water Quality Data

Talbingo and Tantangara Reservoirs												
Water Quality Objectives (see note 2)												
Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)					
-	90 - 110	-	20 - 30	-	6.5 - 8.0	-	1 - 20					
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
20 Aug 2025, 9:18 AM	EPL10	Talbingo Reservoir, downstream of road works and upstream of water intake point	8.37	61	7.16	50	32	7.74	227	2.7	Clam sunny morning. Plenty of organic matter on the surface of the reservoir (see photos) Reservoir level is extremely low. Water is non turbid. No sheen, no odour.	Slightly lower DO% for this location has been previously recorded from previous sampling periods.
20 Aug 2025, 9:01 AM	EPL11	Talbingo Reservoir, downstream of outlet	7.77	66.3	7.89	41	27	7.9	207	0.3	Calm sunny day. Surface has organic material floating, see photos. Reservoir level is very low. BOAB conducting silt curtain maintenance nearby. Water is clear, no sheen, no odour. QA1&2 taken from this location.	Slightly lower DO% is recorded from data input of previous sampling periods for this location.
6 Aug 2025, 9:37 AM	EPL28	Tantangara Reservoir, upstream of works in the mouth of the Murrumbidgee River	5.73	92.9	11.64	22	14	7.29	205	12.8	Overcast day. Light breeze. Water level up 30% . No odour or sheen. Surface clear.	Slightly lower EC results have been previously recorded within our sampled data in this location.
6 Aug 2025, 10:30 AM	EPL29	Tantangara Reservoir, downstream of works area and upstream of lower Murrumbidgee River	4.93	91.4	11.7	21	14	6.93	239	7.2	Overcast day. Light breeze, clear water, clear surface, no odors.	Slightly lower EC results have been previously recorded within our sampled data in this location.
6 Aug 2025, 10:19 AM	EPL32	Tantangara Reservoir, Tantangara Intake. Downstream of construction works	4.89	72.5	9.29	22	14	6.9	239	6.1	Overcast day. Light breeze. No odour or sheen. Surface clear.	Slightly lower DO% and EC results have been previously recorded and are consistent with data from previous sample periods in this location.
6 Aug 2025, 10:06 AM	EPL38	Tantangara Reservoir, variable location dependant on tide and reservoir levels. Between the emplacement area and the ancillary facilities for emplacement activities	4.98	68.1	8.7	20	13	6.91	233	6.8	Overcast day. Light breeze. No odour or sheen. Surface clear.	Slightly lower DO% and EC results have been previously recorded and are consistent with data from previous sample periods in this location.
2 Aug 2025, 9:41 AM	EPL39	Confluence of Nungah Creek and Tantangara Reservoir, variable location dependant on tide and reservoir levels. Upstream of Tantangara construction works	5.16	86.2	10.97	19	12	7.66	233	3.7	Very high water level, not an obvious flow rate. Rain ongoing. No odors, no sheens, clear water.	Slightly lower DO% and EC results have been previously recorded and are consistent with data from previous sample periods in this location.
6 Aug 2025, 9:55 AM	EPL40	Confluence of the upper Murrumbidgee River and Tantangara Reservoir, variable location dependant on tide and reservoir levels. Upstream of works	5.54	77.2	9.72	16	10	6.97	222	4.9	Overcast day. Light breeze. No odour or sheen. Surface clear.	Lower DO% results are consistent with the data recorded for this location from previous sampling periods.
6 Aug 2025, 10:44 AM	EPL 46	Tantangara Reservoir, diffuser outlet discharging into Tantangara Reservoir from Tantangara STP/PWTP	4.89	86.1	11.02	23	15	6.9	243	6.3	Overcast day. Surface clear. No odour or sheen.	Lower DO% results are consistent with the data recorded for this location from previous sampling periods.

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6 Aug 2025, 10:35 AM	EPL 51	Tantangara Reservoir, downstream of Tantangara STP/PWTP diffuser outlet	4.86	91.3	11.7	22	14	6.93	239	7	Overcast day. Light breeze. Surface clear. No odour or sheen.	Lower DO% results are consistent with the data range recorded for this location from previous sampling periods.
20 Aug 2025, 8:19 AM	EPL107	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	6.9	83.2	10.12	70	46	8.25	141	17.9	Clear day. No odour or sheen. Minimal wind.	The results recorded for a lower EC is within the range recorded for this location from previous sample periods. They are also in line with ambient conditions.
20 Aug 2025, 8:41 AM	EPL108	Monitoring of Ravine Bay emplacement area (center of PSE) within Yarrangobilly River	6.94	74.9	9.11	44	28	8.16	175	6	Still day. No odour or sheen. Calm conditions.	The results recorded for a lower EC is within the range recorded for this location from previous sample periods. They are also in line with ambient conditions.
20 Aug 2025, 8:49 AM	EPL109	Upstream monitoring of Ravine Bay emplacement area within Yarrangobilly River	7.53	72	8.62	36	24	7.96	192	6.7	Still day. No odour or sheen.	The results recorded for a lower EC is within the range recorded for this location from previous sample periods. They are also in line with ambient conditions.
Table 3 - Treated Water Quality Data			Water Quality Objectives (see note 3)									
Talbingo			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	700	-	6.5 - 8.0	-	25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
13 Aug 2025, 9:07 AM	EPL41	Lobs Hole STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Talbingo Reservoir.	12.38	98.5	10.53	14	9	7.48	186	0.08	Water is very clear, no odour. Tap has been wiped with alcoholic swabs (see last image) and purged for 5 minutes before taking samples. QA1/QA2 samples taken from here, sampling conducted per bottle not per bag.	These results are consistent with previous samples recorded for this location and are within WQO's.
Table 4 - Treated Water Quality Data			Water Quality Objectives (see note 3)									
Tantangara			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	200	-	6.5 - 8.0	-	25		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
6 Aug 2025, 8:16 AM	EPL50	Tantangara STP/PWTP Final Effluent Quality Monitoring Point. Downstream of final treatment, prior to discharge to Tantangara Reservoir.	9.04	60.1	6.93	192	125	6.96	224	3.4	Clear water, the plant was running before collection of the sample, no odour.	The results are within the water quality objectives.
Table 5 - Groundwater Quality Data			Water Quality Objectives (see note 3)									
GFO1 Surface Water and Groundwater			Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)		
			-	-	-	30 - 350	-	6.5 - 8.0	-	-		
Date and Time	EPL Site ID	Location Description	Temp (°C)	DO (%)	DO (mg/L)	EC (µS/cm)	TDS (mg/L)	pH	Redox (mV)	Turbidity (NTU)	Field Comments	Context
21 Aug 2025, 1:18 PM	EPL1	Wallace Creek Bridge, west of ECVT portal	15.93	35.4	3.5	506	324	7.44	191	41.4	Sunny day, clear water, no odours.	The data is within the WQO's and within the data range recorded from previous sample periods for this location.
-	EPL2	Wallace Creek Bridge, west of ECVT portal	-	-	-	-	-	-	-	-	Site unable to be sampled due to surface water ingress	-
-	EPL4	Lobs Hole Portal Access, west of MAT portal	-	-	-	-	-	-	-	-	Monitoring point under water no representative for sampling	-
-	EPL25	Lobs Hole Portal Access, west of MAT portal	-	-	-	-	-	-	-	-	Site not sampled due to surface water pooling and ingress to bore.	-
5 Aug 2025, 9:42 AM	EPL56	GFO1 Upstream east groundwater well	13.05	96.7	10.17	248	161	7.25	112	20.1	Clear water, no odors. Rock bund still surrounding the bore, which is above the ground level of the borehole. Rain within 24 hrs.	The data is within the WQO's and within the data range recorded from previous sample periods for this location.
5 Aug 2025, 9:55 AM	EPL57	GFO1 upstream west groundwater well	13.38	96.1	10.04	259	169	8.09	76	115	Water clear, no odors, rain within 24hr. Rock bund within area and above ground level height of bore.	The slightly elevated pH is within the recorded range for this location from previous sampling periods.
5 Aug 2025, 11:21 AM	EPL58	GFO1 Downstream Groundwater well	16.49	92.9	9.05	845	541	5.84	201	4.6	Very clear, no odors, rain within 24hrs. Pump working.	The low pH and the elevated EC are within the recorded range from previous sampling periods for this location.
16 Aug 2025, 10:11 AM	EPL68	Leachate detection BH downstream East	10.32	57.8	6.47	28	18	6.14	297	8.2	A bit showers in the morning, clear water, no odours, water taken from the pump.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
16 Aug 2025, 10:28 AM	EPL69	Tantangara groundwater downstream East	8.78	28.9	3.36	49	32	6.15	311	20.6	A bit showers in the morning, clear water, no sediments, no odour.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
16 Aug 2025, 9:07 AM	EPL70	Tantangara groundwater upstream	9.82	69.8	7.91	104	68	6.75	259	61.8	Rainy day, sediment at the bottom of the sleeve, no odours, bit turbid water.	The results are within the water quality objectives, other than turbidity although this is within the range recorded from previous sampling periods.
22 Aug 2025, 8:16 AM	EPL72	Marica groundwater upstream	8.82	44.4	5.15	57	37	6.7	268	9.8	Clear day. No odour or sheen. No recent rainfall.	The slightly lower pH is within the recorded range for this location from previous sampling periods.
2 Aug 2025, 3:48 PM	EPL80	LHG groundwater upstream	13.84	32.1	3.31	835	534	7.42	130	118	Turbid water. No smell.	Elevated EC has been previously recorded for this location from previous sampling periods.
9 Aug 2025, 12:40 PM	EPL81	LHG groundwater downstream	13.27	13.8	1.44	1010	648	6.87	179	385	Visibly turbid water. No odour or sheen or foam.	Elevated EC has been previously recorded for this location from previous sampling periods.
9 Aug 2025, 3:24 PM	EPL82	MY groundwater upstream	16.24	22.3	2.17	2790	1790	6.69	75	49.5	Visibly clear water. No odour or foam or sheen present. LOBS_QA1 sample taken at this location.	Elevated EC has been previously recorded for this location from previous sampling periods.
9 Aug 2025, 2:59 PM	EPL83	MY groundwater downstream	13.93	32.2	3.32	602	385	6.88	188	64.1	Very clear water. No odour or odour or sheen.	The EC levels although elevated above the WQO are toward the lower end of the range previously recorded for this location in previous sampling rounds.
9 Aug 2025, 9:15 AM	EPL87	MY groundwater downstream	11.93	69	7.43	783	501	6.57	59	1000	Very turbid water, no odour or sheen.	The elevated EC is within the range recorded for this location from previous sampling periods.

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16 Aug 2025, 2:29 PM ¹	EPL88	MY groundwater downstream	14.27	59.4	6.07	916	586	7.08	177	17.2	Approx 5mm of rain in prev 24 hrs, no odour, no sheen, no foam. Visibly low turbidity. ²	The elevated EC is within the range recorded for this location from previous sampling periods.
2 Aug 2025, 3:14 PM ¹	EPL89	LHG groundwater downstream	12.35	43.1	4.61	284	184	7.64	247	91.3	A cloudy water. No smell ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
5 Aug 2025, 9:30 AM ¹	EPL 90	GF01 groundwater downstream	13.47	65.8	6.85	152	99	5.91	160	126	No odor, no colour or turbidity in purge or after purge. Flora is healthy in surrounding area. Rain in prev 24 hrs. ²	The slightly lower pH has been recorded previously at this location from previous sampling periods.
5 Aug 2025, 9:03 AM ¹	EPL 91	GF01 groundwater downstream	14	25.2	2.59	243	158	6.64	66	25.7	Strong sulfuric acid smell, very clear water. Rain within 24hrs. Nothing else out of ordinary. ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
5 Aug 2025, 10:11 AM ¹	EPL 92	GF01 groundwater downstream	13.3	47.2	4.94	145	94	6.59	152	106	Chunks of mud came up with the hose as we were purging - could be because I hit the floor when measuring depth. No colour, no odors. Rain within 24hrs. ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
5 Aug 2025, 10:19 AM ¹	EPL 93	GF01 groundwater downstream	14.06	34.9	3.58	242	157	7.15	148	594	Orange heavily turbid water was purged, but still remained fairly orange after. No odors. Rain within 24hrs. ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
5 Aug 2025, 10:26 AM ¹	EPL 94	GF01 groundwater downstream	13.82	37	3.83	172	112	6.92	108	135	No colour, didn't purge any sediment. No odors. Rain within 24hrs. ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
5 Aug 2025, 11:15 AM ¹	EPL 95	GF01 groundwater downstream	15.84	38.4	3.79	761	487	6.04	187	7.3	Pump working. Water clear, no odors. Rain within 24hrs. ²	The slightly lower pH has been recorded previously at this location from previous sampling periods.
5 Aug 2025, 10:49 AM ¹	EPL 96	GF01 groundwater downstream	14.24	60.3	6.14	1960	1250	7.83	107	439	Rain within 24hrs, borehole open - allowing ingress of surface water. No odors. Purging water came out turbid. Clear orange water. ²	The elevated EC is within the range recorded for this location from previous sampling periods.
5 Aug 2025, 11:36 AM ¹	EPL 97	GF01 groundwater downstream	14.92	94.7	9.55	521	333	6.54	188	67.3	Clear water, no odors, nothing out of ordinary. Rain within 24hrs. ²	The elevated EC is within the range recorded for this location from previous sampling periods.
9 Aug 2025, 10:19 AM ¹	EPL103	Upstream groundwater monitoring west of the Tantangara emplacement area	9.69	55.2	6.27	117	76	6.7	222	113	Clear water in hydra sleeve. No odors. No rain. Nothing out of ordinary. ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
16 Aug 2025, 10:46 AM ¹	EPL104	Downslope groundwater monitoring east of the Tantangara emplacement area	8.2	42.8	5.05	54	35	6.49	302	467	A bit showers, turbid water, no odours ²	The slightly lower pH is within the recorded range for this location from previous sampling periods.
9 Aug 2025, 10:44 AM ¹	EPL105	Downslope groundwater monitoring east of the Tantangara emplacement area	9.17	86.1	9.9	222	144	6.04	275	12.6	Clear water, no odors, no sheen, no rainfall prev. Made sure to fill from the end of pipe, not tap. ²	The pH is within the recorded range for this location from previous sampling periods.
1 Aug 2025, 2:03 PM ¹	EPL113	Upstream east monitoring of Ravine Bay emplacement area	11.5	32.1	3.5	80	52	6.1	296	316	Turbid, no odours, recent rain ²	The pH is within the recorded range for this location from previous sampling periods.
15 Aug 2025, 11:52 AM ¹	EPL114	Upstream west monitoring of Ravine Bay emplacement area	13.08	98.4	10.34	390	253	7.29	70	18.7	Overcast day, clear, no odour ²	The EC is slightly above the WQO and is within the range that has been recorded for this location from previous sampling rounds.
1 Aug 2025, 2:30 PM ¹	EPL115	Downstream east monitoring of Ravine Bay emplacement area	12.48	16.6	1.77	348	227	7.4	254	18.7	High clarity, no odours, recent rain ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
2 Aug 2025, 11:36 AM ¹	EPL116	Downstream west monitoring of Ravine Bay emplacement area	12.12	60.1	6.45	149	97	6.6	292	66	Turbid, no odours, recent heavy rain ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.
2 Aug 2025, 11:59 AM ¹	EPL117	Downstream monitoring of Ravine Bay emplacement area	12.22	31.5	1.66	145	94	6.5	62	26.1	Slightly turbid, no odours, recent rain ²	The results are within the water quality objectives. The results are within the range recorded from previous sampling periods.

Note 1: Water Quality Objective values for the Yarrangobilly River and Minor Watercourses refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 2: Water Quality Objective values for Talbingo Reservoir are the default trigger values for physical and chemical stressors in south-east Australia (freshwater lakes and reservoirs) that are reported in Tables 3.3.2 and 3.3.3 of ANZECC/ ARMCANZ (2000).

Note 3: Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

Note 4: Water Quality Objective values for groundwater reference the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for pH and electrical conductivity.

Snowy Hydro 2.0 Main Works EPL Sampling: 01 - 31 August 2025

Webuild • Clough •

Environmental Protection Licence No:	21266
Licensee:	Snowy Hydro Limited
Licensee address:	PO Box 332, Cooma, NSW 2630
Premises:	Snowy 2.0 Pumped Hydro Power Station Talbingo and Tantangara, Kosciuszko National Park and Rock Forest, Kosciuszko NSW 2642
EPA Public Register:	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21266&id=21266&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=issued
Monthly water sampling and analysis is performed as part of the Snowy 2.0 Approval Conditions, Environmental Protection Licence No 21266 - Variation 23 July 2025, and the approved Water Management Plan to ensure that works are not impacting on nearby receiving waters.	
A map showing the location of each of the EPL named sampling points is provided after the results tables.	
Groundwater Results: In August, we were unable to sample locations EPL2, EPL4, and EPL25 due to flooding in their surrounding areas, which compromised the accurate representation of conditions in these locations. At EPL1, we observed an increase in Total Nitrogen and Nitrite + Nitrate as N concentrations, alongside a significant decrease in total phosphorus levels during this previous quarter period. In contrast, locations for sites such as GFO1, LHG, and Ravine Bay in Lobs Hole exhibited stable concentrations consistent with previous reports. Meanwhile, EPL58 and EPL95, located downstream of GFO1, continue to show the highest concentrations in the area. In the LHG region, locations including EPL81, EPL83, EPL87, and EPL89 reported Total Kjeldahl Nitrogen concentrations ranging from 500 µg/L to 1000 µg/L. Sampling points in Tantangara maintained stable pH levels between 6.1 and 6.7, although we noted an increase in NTU, likely due to the 115.4 mm of precipitation that fell in the area. Notably, EPL105 recorded the highest Total Nitrogen concentration of 4200 µg/L. Reservoir Results: For this period, sampling points within the Talbingo Reservoir showed a slight increase in Ammonia concentrations for EPL10, with a concentration of 30 µg/L, compared to EPL11, which met its WQO. However, for Nitrite + Nitrate as N (NOx), concentrations were reported between 40 µg/L and 50 µg/L, which is also the case for locations within the Tantangara Reservoir. While the majority of sampling points remained within the acceptable limits for Total Nitrogen, some, such as EPL32, showed a slight uptick, registering a concentration of 400 µg/L. Additionally, several sites, including EPL11, EPL39, and EPL51, recorded a slight increase in Total Phosphorus, with concentrations ranging from 20 µg/L to 40 µg/L. However, these values are consistent with historical data and align with baseline water quality results, indicating stability in the overall water quality within the Reservoirs. Surface Water Results: In August, some locations, including EPL5, EPL30, EPL31, EPL33, and EPL34, recorded high pH concentrations, which are within their historical ranges, fluctuating between 8.0 and 8.16. Meanwhile, EPL24, EPL55, and EPL122 continue to show the highest surface water concentrations in Lobs Hole. This is likely attributed to their location downstream of the GFO1 leachate area. These locations remain under TARP conditions and are monitored weekly. Kellys Plain Creek locations, such as EPL30 and EPL31, recorded a slight increase in Dissolved Aluminium concentrations. Additionally, Total Nitrogen concentrations at locations like EPL33, EPL34, EPL36, and EPL37, which were between 200 µg/L and 500 µg/L, were influenced by Total Kjeldahl Nitrogen, which recorded similar concentration levels. As for the leachate storage locations, they maintain their conditions and are continuously monitored for water reuse once they meet the criteria. Discharge Results: Results for the discharge locations met the adopted Water Quality Objectives (WQOs) during the discharge periods.	

The publication of this pollution monitoring data is carried out in accordance with section 66 (6) of the Protection of the Environment Operations Act 1997 (NSW).

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Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 August 2025 - Talbingo and Tantangara
Reservoir

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Field			
pH	pH Unit	-	6.5-8
Electrical Conductivity	µS/cm	-	20-30
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	No Water Quality Objective Value
Dissolved Oxygen	% saturation	-	90-110
Turbidity	NTU	-	1-20
Laboratory analytes			
Total suspended solids	mg/L	5	No Water Quality Objective Value
Hardness as CaCO ₃	mg/L	1	No Water Quality Objective Value
Nutrients			
Ammonia as N	µg/L	10	10
Nitrite + Nitrate as N (NO _x)	µg/L	10	10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value
Nitrogen (Total)	µg/L	100	350
Reactive Phosphorus	µg/L	1	5
Phosphorus (Total)	µg/L	10	10
Inorganics			
Cyanide Total	µg/L	4	7
Hydrocarbons			
Oil and Grease	mg/L	1	5
Metals			
Aluminium (dissolved)	µg/L	5	55
Arsenic (dissolved)	µg/L	0.2	13
Chromium (III+VI) (dissolved)	µg/L	0.2	1
Copper (dissolved)	µg/L	0.5	14
Iron (dissolved)	µg/L	2	300
Lead (dissolved)	µg/L	0.1	3.4
Manganese (dissolved)	µg/L	0.5	1,900
Nickel (dissolved)	µg/L	0.5	11
Silver (dissolved)	µg/L	0.01	0.05
Zinc (dissolved)	µg/L	1	8
Biological			
Faecal Coliforms	CFU/100mL	1	10/100 [^]
Biochemical Oxygen Demand	mg/L	2	1/5 [^]

EPL10	EPL11	EPL28	EPL29	EPL32	EPL38	EPL39	EPL40	EPL46	EPL51	EPL107	EPL108	EPL109
20/08/2025	20/08/2025	6/08/2025	6/08/2025	6/08/2025	6/08/2025	2/08/2025	6/08/2025	6/08/2025	6/08/2025	20/08/2025	20/08/2025	20/08/2025
7.74	7.9	7.29	6.93	6.9	6.91	7.66	6.97	6.9	6.93	8.25	8.16	7.96
50	41	22	21	22	20	19	16	23	22	70	44	36
227	207	205	239	239	233	233	222	243	239	141	175	192
8.37	7.77	5.73	4.93	4.89	4.98	5.16	5.54	4.89	4.86	6.9	6.94	7.53
61	66.3	92.9	91.4	72.5	68.1	86.2	77.2	86.1	91.3	83.2	74.9	72
2.7	0.3	12.8	7.2	6.1	6.8	3.7	4.9	6.3	7	17.9	6	6.7
<5	<5	<5	<5	<5	<5	<5	<5	7	<5	<5	<5	<5
19	14	2	2	2	2	<1	<1	2	2	12	12	12
30	<10	20	30	30	20	<10	<10	30	30	<10	<10	<10
50	50	40	40	50	40	10	10	40	40	40	40	40
200	<100	200	200	300	200	200	100	200	200	100	<100	<100
200	<100	200	200	400	200	200	100	200	200	100	<100	<100
<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
10	20	<10	<10	<10	10	40	<10	10	20	<10	<10	<10
<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
10	9	50	54	55	50	40	27	52	55	8	7	6
0.3	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.2	<0.2
<0.2	<0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	<0.2	<0.2	<0.2
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
50	15	63	69	81	71	25	30	84	83	11	10	8
<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
47.6	3.2	7.1	7.6	9.5	8.4	3.5	4.5	10.5	10.3	1.3	0.8	<0.5
<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	2	<1	-	-	-	-	-	-	23	-	-	-
<2	<2	2	-	-	-	-	-	-	3	-	-	-

* Water Quality Objective values for Talbingo and Tantangara Reservoir refer to the default trigger values for physical and chemical stressors in south-east Australia (fresh lakes and reservoirs) for the protection of 95% of aquatic species ANZECC / ARMCANZ (2000), they are not pollutant limits imposed by EPL 21266.

** Algal blooms can present as faecal coliforms

[^] 90th percentile concentration limits / 100 percentile concentration limits

- Sample not required at this location.

* Water Quality Objective values for surface water refer to the default trigger values for physical and chemical stressors in south-east Australia (upland rivers) for the protection of 99% of aquatic species ANZECC / ARMCANZ (2018), they are not pollutant limits imposed by EPA 21286.



Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 August 2025 - Discharge Water

Analyte	Unit	Limit of Reporting	Water Quality Objective Value*
Flow Rate			
Inflow ^a	ML/day	-	-
Outflow ^a	ML/day	-	4.32 (EPL 43 / 50)
Field			
pH	pH Unit	-	6.5-8.5
Electrical Conductivity	µS/cm	-	700 (EPL 41) / 200 (EPL 50)
Oxidation Reduction Potential	mV	-	No Water Quality Objective Value
Temperature	°C	-	15
Dissolved Oxygen	% saturation	-	No Water Quality Objective Value
Turbidity	NTU	-	<25
Laboratory analytes			
Total suspended solids	mg/L	5	5/10
Hardness as CaCO ₃	mg/L	1	No Water Quality Objective Value
Nutrients			
Ammonia as N	µg/L	10	200/2000 ^a
Nitrite + Nitrate as N (NO _x)	µg/L	10	10
Kjeldahl Nitrogen Total	µg/L	100	No Water Quality Objective Value
Nitrogen (Total)	µg/L	100	350/- ^a
Reactive Phosphorus	µg/L	1	No Water Quality Objective Value
Phosphorus (Total)	µg/L	10	100/300 ^a
Inorganics			
Cyanide Total	µg/L	4	No Water Quality Objective Value
Hydrocarbons			
Oil and Grease	mg/L	1	2/5 ^a
Metals			
Aluminium (dissolved)	µg/L	5	55
Arsenic (dissolved)	µg/L	0.2	13
Chromium (III+VI) (dissolved)	µg/L	0.2	1
Copper (dissolved)	µg/L	0.5	14
Iron (dissolved)	µg/L	2	300
Lead (dissolved)	µg/L	0.1	3.4
Manganese (dissolved)	µg/L	0.5	1,900
Nickel (dissolved)	µg/L	0.5	11
Silver (dissolved)	µg/L	0.01	0.05
Zinc (dissolved)	µg/L	1	8
Biological			
Faecal Coliforms	CFU/100mL	1	10/100 ^a
Biological Oxygen Demand	mg/L	2	5

Note: Treated water was not being discharged at Talbingo Reservoir at the time of EPL sampling.

There is no 100th percentile limit for Nitrogen (Total).

* Water Quality Objective values Treated Water reference the predicted values for physical and chemical stressors from the treatment plant as presented in the Main Works EIS.

- Samples not required

^a 90 Percentile concentration limit/100 Percentile limit

^a Inflows to STP and CWTP do not directly correspond to outflow at RO as much of the water is reused on site

EPL 41	EPL 43	EPL 44	EPL 45	EPL 47	EPL 48	EPL 49	EPL 50
13/08/2025							6/08/2025
-	0.0000	0.3754	0.0706	0.1472	0.0837	0.4190	-
-	-	-	-	-	-	-	-
7.48	-	-	-	-	-	-	6.96
14	-	-	-	-	-	-	192
186	-	-	-	-	-	-	224
12.38	-	-	-	-	-	-	9.04
98.5	-	-	-	-	-	-	60.1
0.08	-	-	-	-	-	-	3.4
<5	-	-	-	-	-	-	<5
<1	-	-	-	-	-	-	17
<10	-	-	-	-	-	-	20
110	-	-	-	-	-	-	90
200	-	-	-	-	-	-	200
300	-	-	-	-	-	-	300
<10	-	-	-	-	-	-	10
<10	-	-	-	-	-	-	<10
<4	-	-	-	-	-	-	<4
<1.0	-	-	-	-	-	-	<1.0
<5	-	-	-	-	-	-	<5
<0.2	-	-	-	-	-	-	<0.2
<0.2	-	-	-	-	-	-	1.0
<0.5	-	-	-	-	-	-	<0.5
<2	-	-	-	-	-	-	<2
<0.1	-	-	-	-	-	-	<0.1
<0.5	-	-	-	-	-	-	0.5
<0.5	-	-	-	-	-	-	<0.5
<0.01	-	-	-	-	-	-	<0.01
<1	-	-	-	-	-	-	<1
<1	-	-	-	-	-	-	<1
<2	-	-	-	-	-	-	<2

Snowy Hydro 2.0 Main Works
Monthly EPL Sampling: 01-31 August 2025 - Volumes

Date
1/08/2025
2/08/2025
3/08/2025
4/08/2025
5/08/2025
6/08/2025
7/08/2025
8/08/2025
9/08/2025
10/08/2025
11/08/2025
12/08/2025
13/08/2025
14/08/2025
15/08/2025
16/08/2025
17/08/2025
18/08/2025
19/08/2025
20/08/2025
21/08/2025
22/08/2025
23/08/2025
24/08/2025
25/08/2025
26/08/2025
27/08/2025
28/08/2025
29/08/2025
30/08/2025
31/08/2025

EPL 43 *	EPL 50 ^
Discharge volume (Megalitres)	
1.99	0.82
-	0.18
-	0.35
-	0.64
-	0.58
-	-
-	0.84
-	0.48
-	0.44
1.40	1.19
-	0.77
-	0.75
1.18	0.70
-	1.08
-	1.04
-	0.98
-	1.00
-	0.86
1.54	1.10
-	1.11
-	0.81
-	0.18
1.53	-
1.45	0.35
-	0.57
-	-
-	-
-	-
-	-
-	-
-	-

EPL 44	EPL 45	EPL 47	EPL 48	EPL 49
Discharge volume (Megalitres)				
0.56	0.08	0.20	0.09	0.058
0.45	0.09	0.16	0.08	0.001
0.31	0.07	0.17	0.09	0.0004
0.37	0.08	0.24	0.08	0.43
0.16	0.04	0.00	0.10	0.61
0.36	0.09	0.11	0.08	0.56
0.38	0.09	0.11	0.09	0.69
0.36	0.07	0.11	0.09	0.43
0.24	0.10	0.09	0.08	0.20
0.38	0.13	0.11	0.09	0.39
0.34	0.09	0.15	0.10	0.46
0.16	0.08	0.15	0.07	0.71
0.43	0.08	0.15	0.08	0.15
0.44	0.09	0.14	0.08	0.17
0.15	0.07	0.12	0.08	0.66
0.56	0.08	0.14	0.09	0.59
0.47	0.07	0.12	0.07	0.46
0.35	0.07	0.10	0.08	0.68
0.34	0.08	0.10	0.09	0.51
0.33	0.08	0.13	0.06	0.23
0.30	0.07	0.16	0.09	0.47
0.45	0.06	0.21	0.09	0.41
0.66	0.06	0.17	0.06	0.39
0.49	0.04	0.14	0.08	0.28
0.47	0.04	0.15	0.19	0.55
0.39	0.04	0.19	0.07	0.39
0.30	0.06	0.19	0.09	0.73
0.32	0.04	0.18	0.10	0.63
0.29	0.05	0.19	0.04	0.28
0.44	0.05	0.23	0.04	0.439
0.33	0.08	0.19	0.03	0.58

- Water not discharged on this day

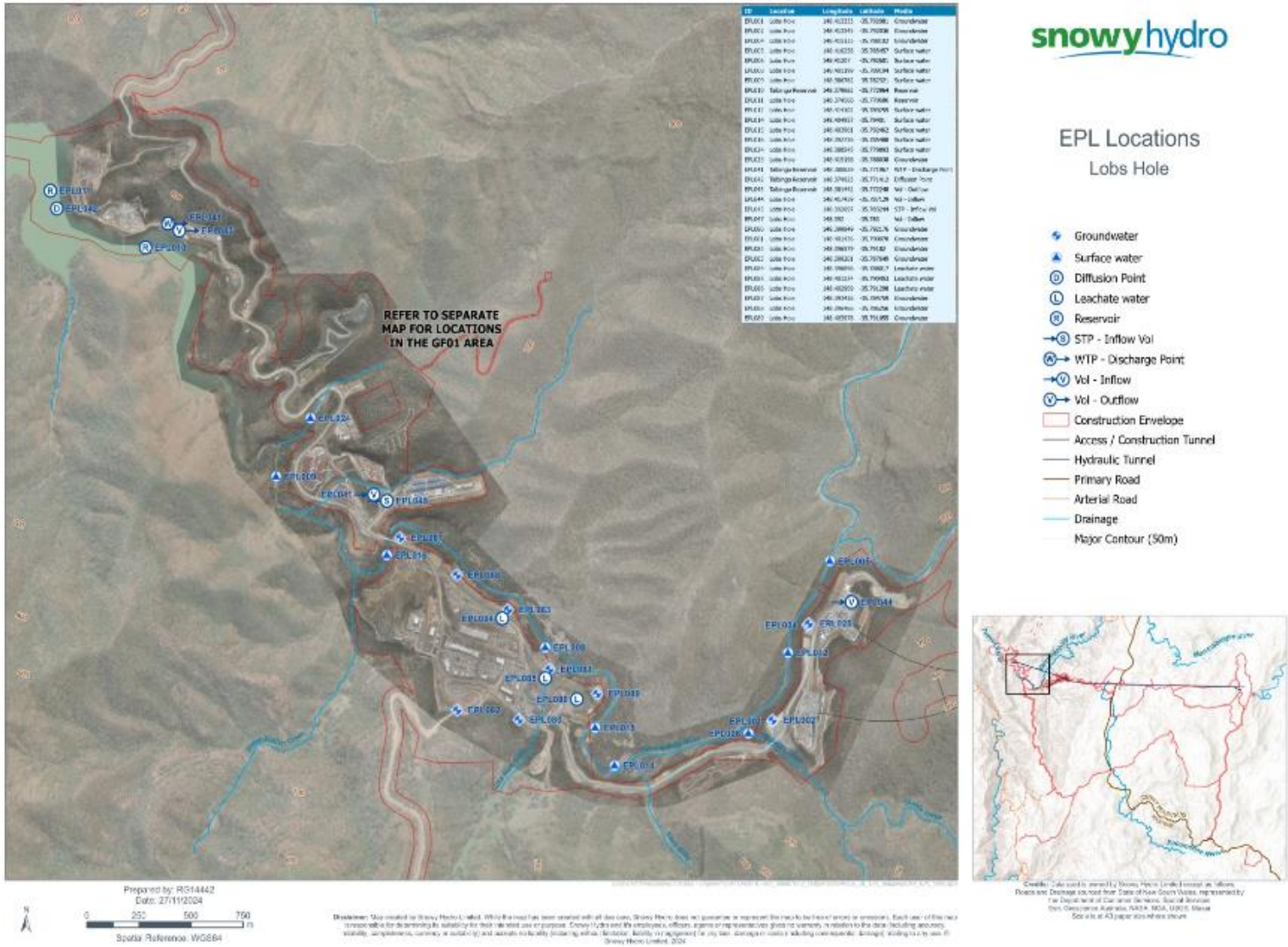
Note: The EPL discharge volume limit for EPL 43 and 50 is 4.32 megalitres per day. Compliance with this criteria was met during the reporting month.

* The maximum flow rate capacity for Lobs Hole STP/PWTP during the reporting month was 6.48 L/s

^ The maximum flow rate capacity for Tantangara STP/PWTP during the reporting month was 7.87 L/s

-- Water not discharged on this day

APPENDIX C – EPL LOCATION MAPS





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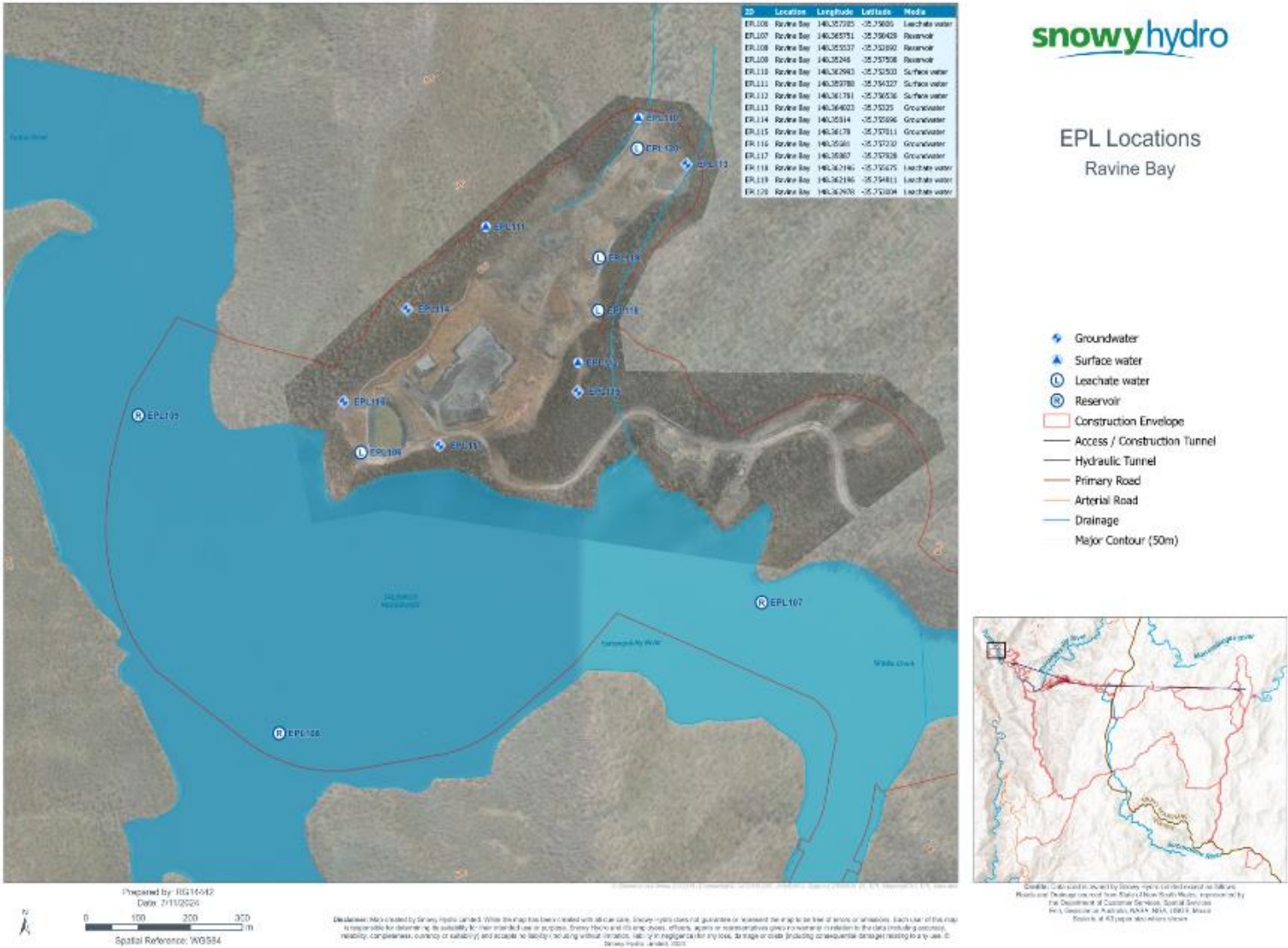
EPL Locations
GF01

- Construction Envelope
- Groundwater
- Surface water
- Leachate water
- Access / Construction Tunnel
- Hydraulic Tunnel
- Primary Road
- Arterial Road
- Drainage
- Major Contour (50m)

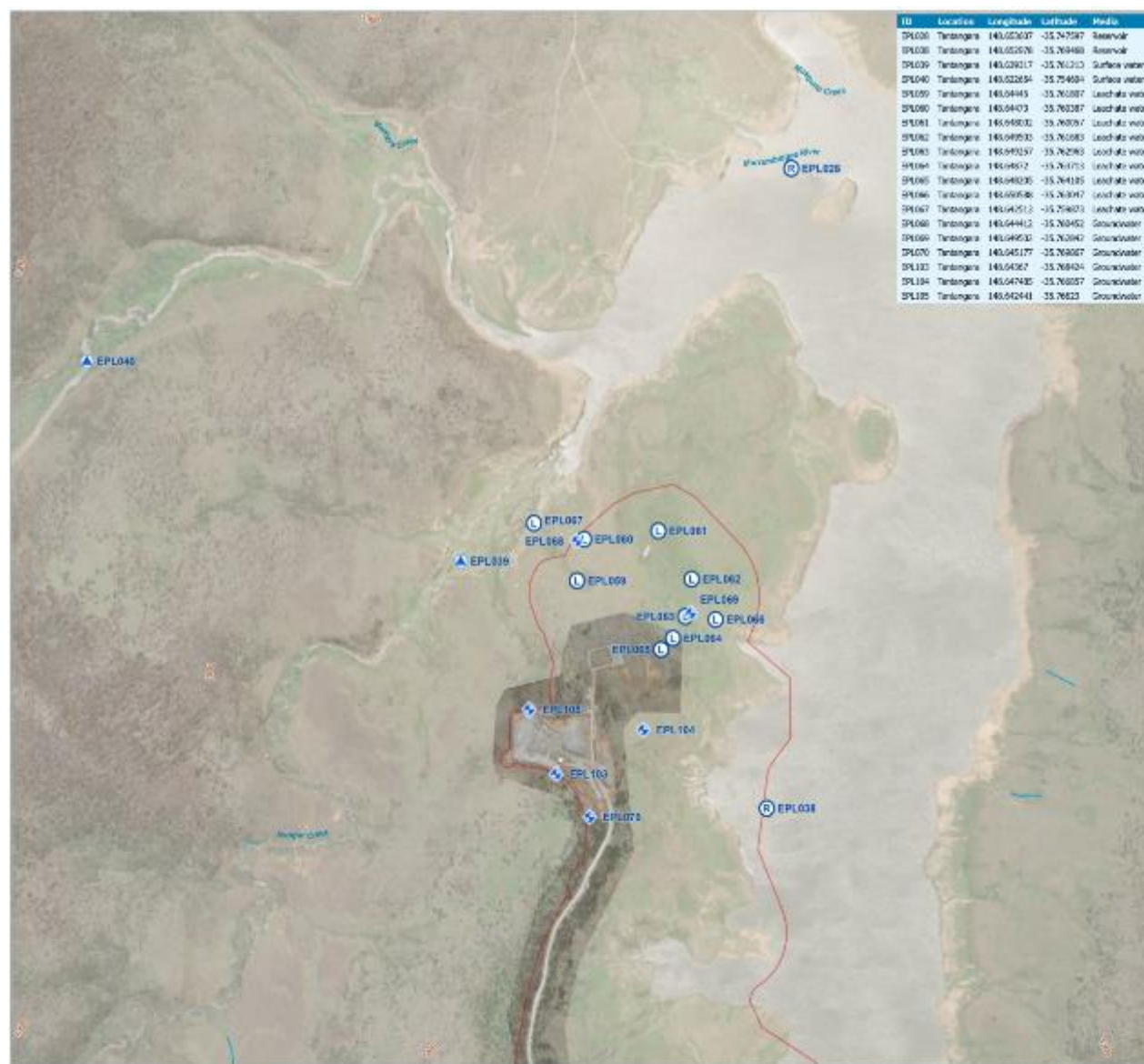


Prepared by: R/S14442
Date: 27/11/2024
Scale: 1:5000
Spatial Information: WGS84

Disclaimer: This map is provided by Snowy Hydro Limited as a service. Snowy Hydro does not warrant or guarantee the accuracy or completeness of the map. The map is provided for information only and should not be used for any other purpose. The map is provided for information only and should not be used for any other purpose. The map is provided for information only and should not be used for any other purpose.







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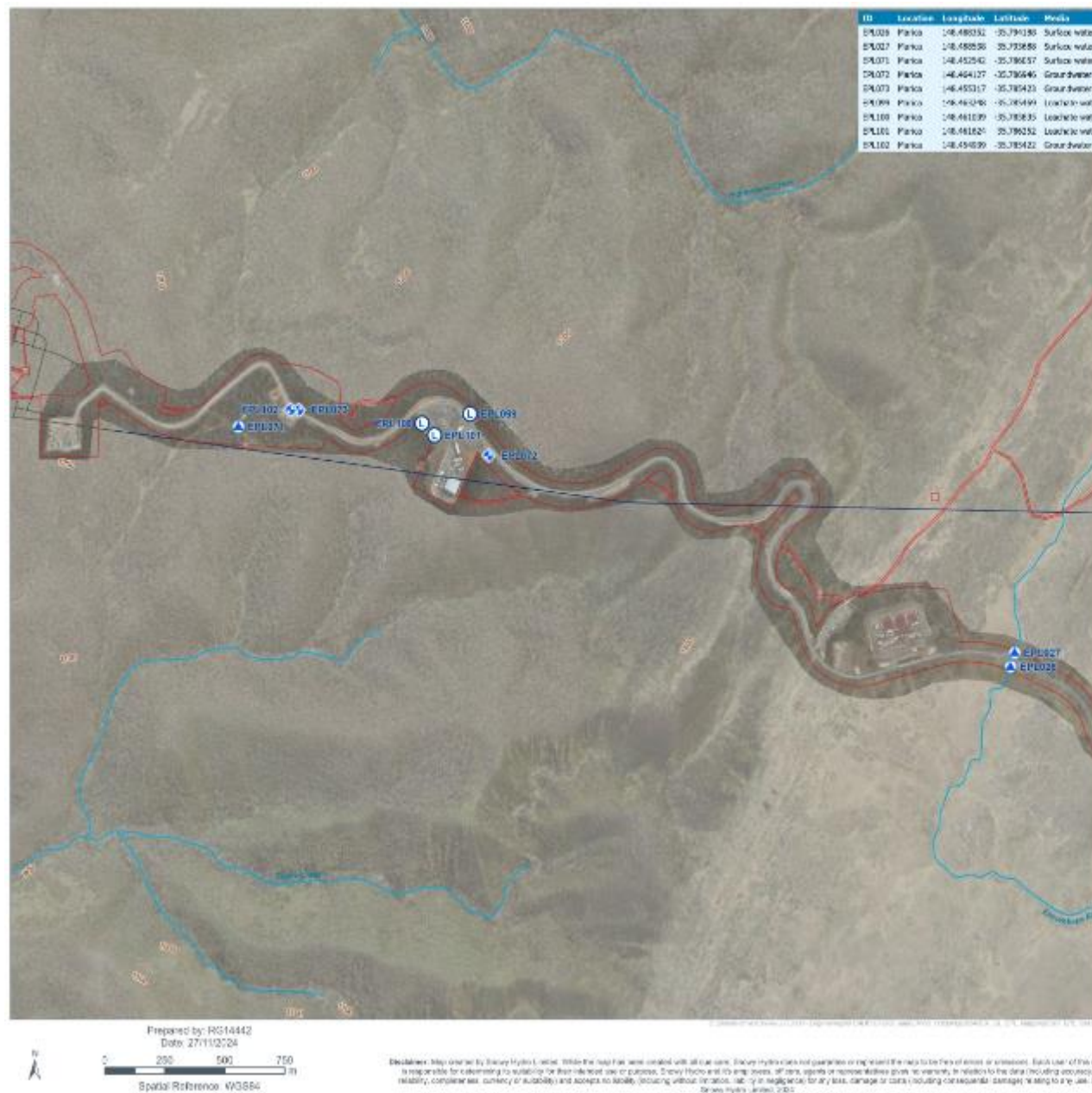
EPL Locations Tantangara Emplacement

- Groundwater
- Surface water
- Leachate water
- Reservoir
- Construction Envelope
- Access / Construction Tunnel
- Hydraulic Tunnel
- Primary Road
- Arterial Road
- Drainage
- Major Contour (50m)



Prepared by: 10214442
Date: 11/15/2024
Scale: 0 250 500 750 m
Spatial Reference: NGS84

Disclaimer: Map created by Snowy Hydro Limited. While the map has been created with all due care, Snowy Hydro does not guarantee or represent that the map is free of errors or omissions. Each user of this map is responsible for verifying the accuracy of the data and for their own use of the map. Snowy Hydro is not liable for any errors or omissions. Snowy Hydro is not responsible for any damage or loss resulting from the use of this map. Snowy Hydro Limited, 2024.



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EPL Locations

Marica

- Groundwater
- Surface water
- Leachate water
- Construction Envelope
- Access / Construction Tunnel
- Hydraulic Tunnel
- Primary Road
- Arterial Road
- Drainage
- Major Contour (50m)





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EPL Locations

Nungar Creek

- ▲ Surface water
- Construction Envelope
- Access / Construction Tunnel
- Hydraulic Tunnel
- Primary Road
- Arterial Road
- Drainage
- Major Contour (50m)



Prepared by: R214442
Date: 27/11/2024

Scale: 1:250,000 (1:250,000)

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Scale: 1:250,000 (1:250,000)

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