JULY 2025

MONTHLY CONSTRUCTION WATER QUALITY MONITORING REPORT

July 2025
Project No.: 3200-0645
Project: Transgrid Maragle 500/330 kV Substation
Private & Confidential

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ABBREVIATIONS

Acronym	Full Form
℃	degrees Celsius
µS/cm	micro Siemens per centimetre
%	percent
4WD	Four wheel drive
Ag	Silver
Al	Aluminium
ALS	ALS Limited
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZG	Australian and New Zealand Guidelines
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
As	Arsenic
Baseline Report	'Baseline Water Quality Report' (NGH, 2024)
$CaCO_3$	Total Hardness
Cd	Cadmium
COA	'Certificate of Analysis' (ALS, 2025a)
COC	Chain of Custody
Cr	Chromium
Cu	Copper
DGV	Default Guideline Values
DO	Dissolved Oxygen
EC	Electrical Conductivity
EIS	Environmental Impact Statement
EPL	Environmental Protection Licence
Fe	Iron
Field Sheet	'Water Quality Monitoring Field Data Sheet' (UGL, 2025)
Hg	Mercury
km	kilometres
KNP	Kosciuszko National Park
kV	kilovolt
LOR	limit of reporting
mg/L	milligram per litre
mm	millimetre
Mn	Manganese
mV	millivolt
NATA	National Association of Testing Authorities, Australia

ABBREVIATIONS

Acronym	Full Form
NEM	National Energy Market
NGH	NGH Pty Ltd
Ni	Nickel
NSW	New South Wales
NTU	Nephelometric Turbidity Unit
Pb	Lead
ppm	parts per million
Pty Ltd	Proprietary Limited
QA/QC Assessment	'QA/QC Compliance Assessment to assist with Quality Review' (ALS, 2025b)
QCR	'Quality Control Report' (ALS, 2025c)
RP	reactive phosphorus
RS	Reference Site
Snowy 2.0	Snowy Scheme expansion project (EPBC 2018/8322)
Snowy Hydro	Snowy Hydro Limited
Snowy Scheme	Snowy Mountains Hydro-electric Scheme
SPC	specific conductance
SSGV	Site Specific Guideline Values
SW	surface water
SWQ	surface water quality
TDS	Total Dissolved Solids
The Methodology	'Pre-construction Water Quality Monitoring Program and Methodology' (NGH, 2022)
The Project	Construction of a 330 kV substation and overhead transmission lines between Nurenmerenmong, NSW and Cabramurra, NSW
TKN	Total Kjeldahl Nitrogen
TN	Total Nitrogen
TP	Total Phosphorus
Transgrid	The Trustee for the NSW Electricity Operations Trust
TSS	Total Suspended Solids
UGL	UGL Limited
WQO	water quality objectives
Zn	Zinc

1 BACKGROUND

In 2020 Snowy Hydro Limited (Snowy Hydro) obtained approval (EPBC 2018/8322) to expand the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme), by linking the existing Tantangara and Talbingo reservoirs through a series of underground tunnels and constructing a new underground hydro-electric power station (Snowy 2.0).

To connect Snowy 2.0 to the National Energy Market (NEM), a new transmission connection was required. The Trustee for the New South Wales (NSW) Electricity Operations Trust (TransGrid) is constructing a 330 kilovolt (kV) substation and overhead transmission lines (the Project) to facilitate the connection of Snowy 2.0 to the existing electrical transmission network. The Project is located within Kosciuszko National Park (KNP) between Nurenmerenmong and Cabramurra, NSW, approximately 27 kilometres (km) east of Tumbarumba, NSW (FIGURE 1). UGL Limited (UGL) has been engaged on behalf of Transgrid to undertake the Project.

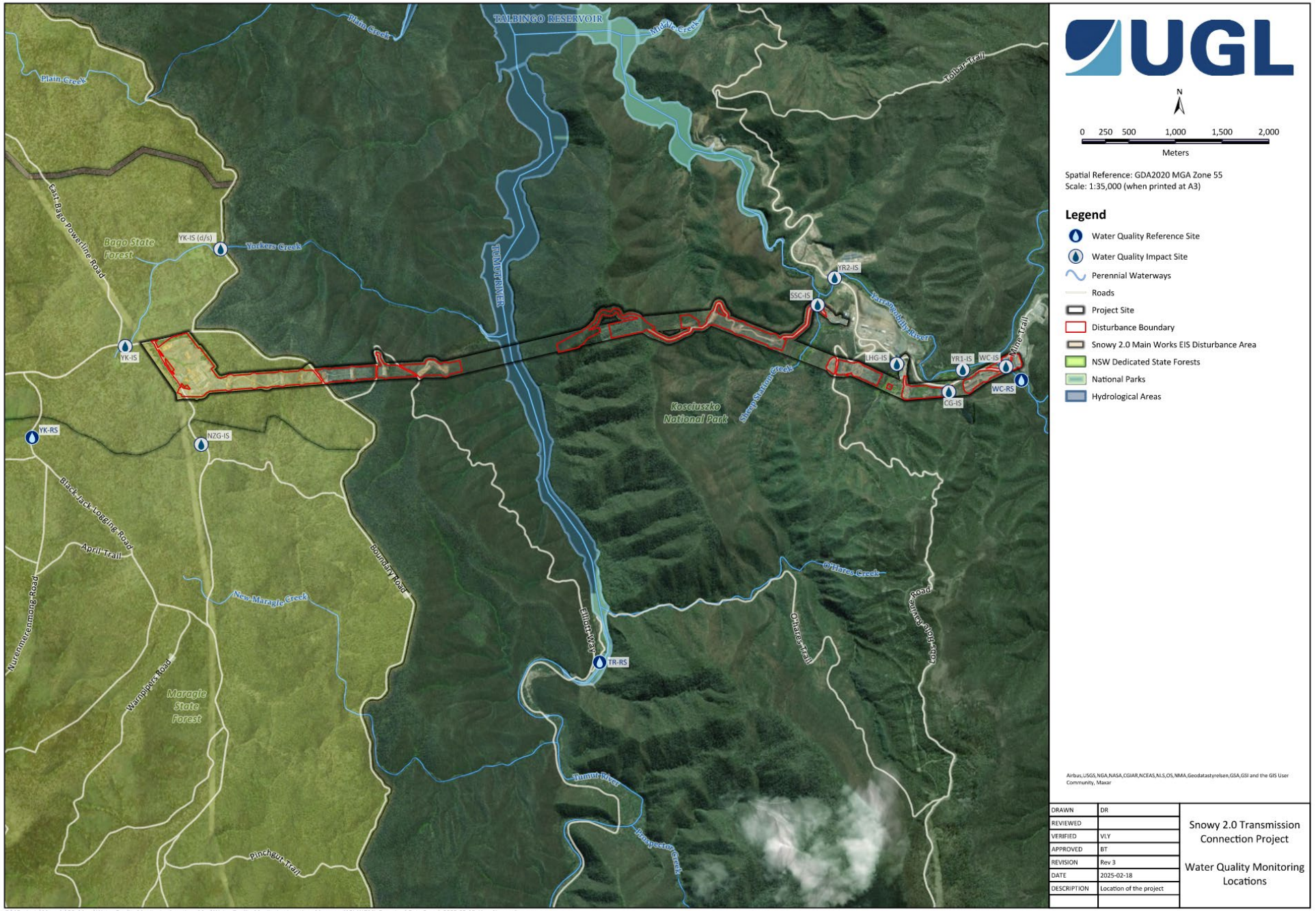

FIGURE 1 LOCALITY OF THE PROJECT AND SWQ MONITORING LOCATIONS

2 INTRODUCTION

The Project is adjacent to, and forms part of, the Snowy 2.0 project area and is located within KNP, an area of high conservation value. A total of 22 mapped waterways, tributaries of Yarrangobilly River and Tumut River, transect the Project Boundary (FIGURE 1).

One of the conditions of approval to meet the requirements outlined in the 'Environmental Impact Statement' (EIS) (Jacobs, 2020) and the Project's Environmental Protection Licence (EPL 21753) is to undertake regular surface water quality (SWQ) monitoring to mitigate environmental impacts on SWQ.

Pre-construction SWQ monitoring was undertaken by NGH Pty Ltd (NGH) between March 2022 and February 2024 to determine site specific baseline values for SWQ parameters prior to Project construction works. The pre-construction SWQ monitoring was undertaken using the 'Pre-construction Water Quality Monitoring Program and Methodology' (the Methodology) developed by NGH in 2022 (refer Section 3). Two years of pre-construction SWQ monitoring was analysed and summarised in the 'Baseline Water Quality Report' (Baseline Report) (NGH, 2024). The results were used to determine seasonal Site Specific Guideline Values (SSGV) for ongoing SWQ monitoring during the construction phase.

Construction for the Project commenced in March 2024. Construction SWQ monitoring will be undertaken by UGL on a monthly basis as per the revised methodology outlined in Section 3 to identify potential changes to SWQ that may be associated with the Project. SW samples from the construction SWQ monitoring would be analysed and presented in monthly Construction Water Quality Monitoring Reports.

3 METHODOLOGY

The Methodology was prepared by NGH in 2022 to support the pre-construction SWQ monitoring for the Project. The Methodology detailed the water quality objectives (WQO) for the Project, identified the monitoring locations and outlined the methodology for surface water (SW) sampling during the pre-construction phase. The Methodology (NGH, 2022) took into account the Project location within an area of high conservation value where the WQO for physical and chemical stressors, as outlined in the 'Australian and New Zealand Guidelines for Fresh and Marine Water Quality' (ANZG) (ANZG, 2018), includes no change in biodiversity beyond natural variability and where possible, there should also be no change in water/sediment chemical and physical properties, including toxicants.

Monitoring locations are outlined in Table 1. FIGURE 2 and FIGURE 3 show the water quality monitoring locations in relation to the Project and Snowy 2.0.

The Methodology (NGH, 2022) has been revised for construction SWQ monitoring by taking into account the seasonal SSGV set out in the Baseline Report (NGH, 2024) (refer to Section 4.2).

Construction SWQ monitoring would be analysed against the seasonal SSGV where available and appropriate. The Default Guideline Values (DGV) for Upland Rivers (ANZG, 2018) would be applied to water quality parameters that were not assessed in the Baseline Report (NGH, 2024) or where a guideline range is more appropriate. Table 2 outlines the seasonal SSGV and DGV used to compare construction SWQ to pre-construction SWQ.

Table 1 SWQ monitoring locations outlined in the Methodology (NGH, 2022)

WATER QUALITY MONITORING LOCATIONS					
ID	**Waterway**	**Site Type**	**Catchment**	**Latitude**	**Longitude**
WC-RS	Wallace Creek	Reference	Yarrangobilly River	-35.794258	148.415253
WC-IS	Wallace Creek	Impact		-35.792982	148.413404
CG-IS	Cave Gully	Impact		-35.795495	148.406665
YR1-IS	Yarrangobilly River	Impact		-35.793358	148.408277
LHG-IS	Lick Hole Gully	Impact		-35.792890	148.400445
YR2-IS	Yarrangobilly River	Impact		-35.784656	148.392921
SSC-IS	Sheep Station Creek	Impact		-35.793243	148.391046
TR-RS	Talbingo Reservoir	Reference	Talbingo Reservoir	-35.822094	148.365690
YK-RS	Yorkers Creek	Reference	Yorkers Creek	-35.801126	148.297979
YK-IS (D/S)	Yorkers Creek	Impact		-35.782684	148.320040
NZG-IS	New Zealand Gully	Impact		-35.801575	148.318051
YK-IS	Yorkers Creek	Impact		-35.792209	148.308878

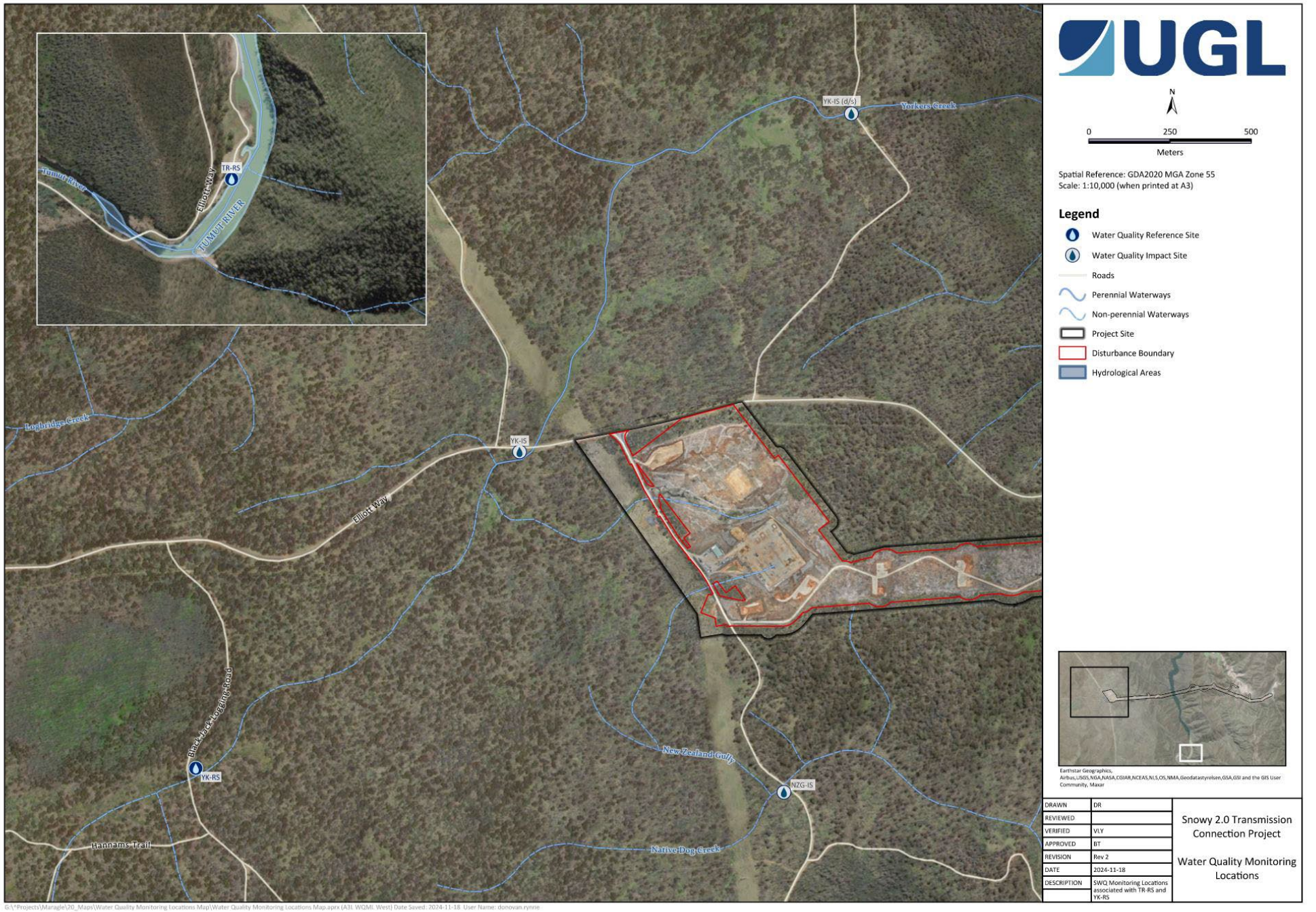

FIGURE 2 WATER QUALITY MONITORING LOCATIONS ASSOCIATED WITH REFERENCE SITE YR-RS AND TR-RS IN RELATION TO THE PROJECT

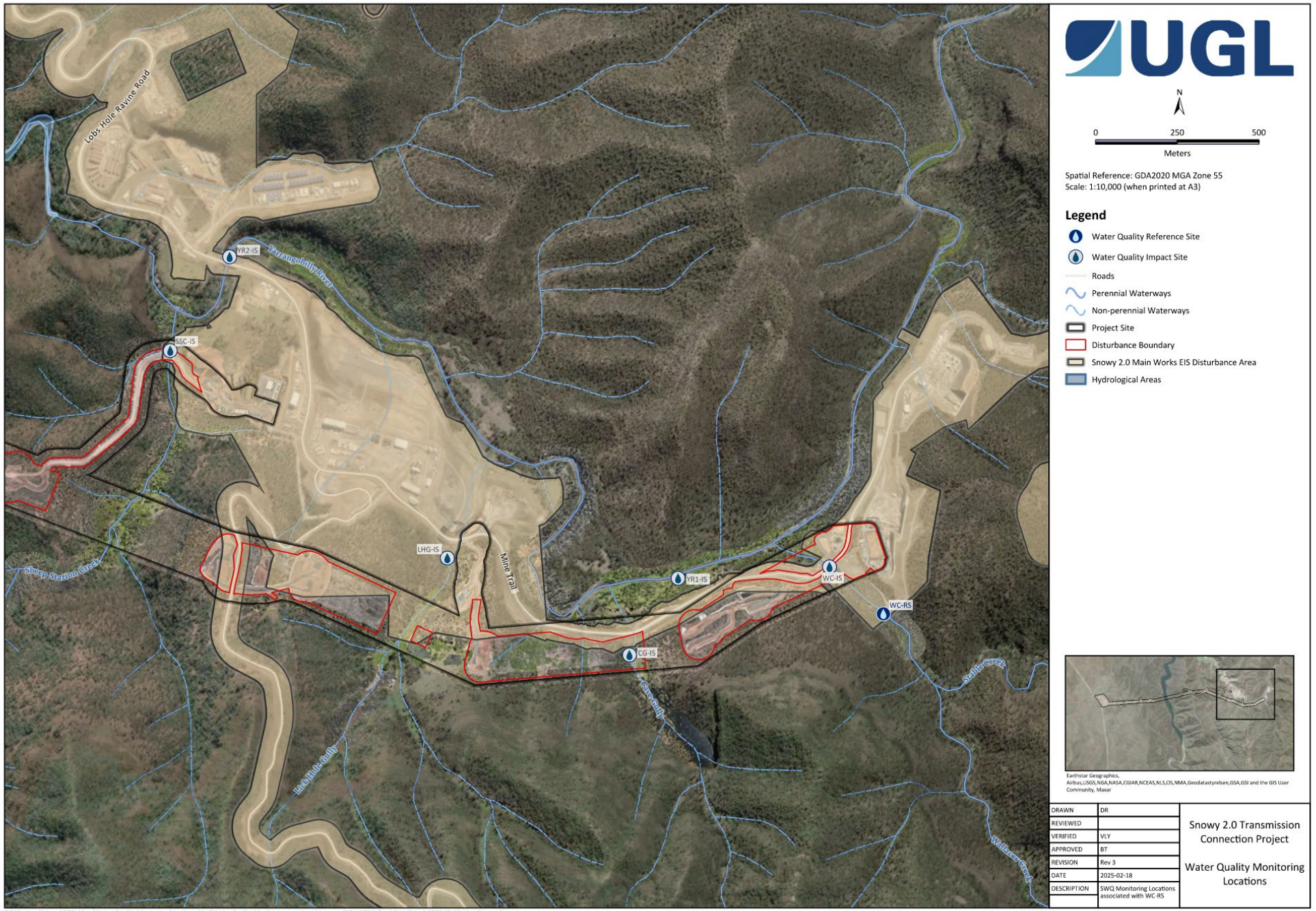

FIGURE 3 WATER QUALITY MONITORING LOCATIONS ASSOCIATED WITH REFERENCE SITE WC-RS IN RELATION TO THE PROJECT

Table 2 Seasonal SSGV (NGH, 2024) and DGV (ANZG, 2018) for water quality parameters

SURFACE WATER QUALITY GUIDELINE VALUES								
Parameter	**Unit**	**WC-RS**		**TR-RS**		**YK-RS**		**DGV**
		SSGV (Summer/Autumn)	**SSGV (Winter/Spring)**	**SSGV (Summer/Autumn)**	**SSGV (Winter/Spring)**	**SSGV (Summer/Autumn)**	**SSGV (Winter/Spring)**	
Temperature	°C*	-	-	-	-	-	-	-
Dissolved Oxygen (DO) ***	%#	96.2	89.7	91.3	95.5	89.6	88.7	90-110
DO	ppm+	9.08	10.28	8.79	11.53	8.35	10.2	-
Specific Electrical Conductivity (EC)***	SPC^ µS/cm^^	115	88	24	38.7	31	27.9	30-350
EC***	µS/cm	93.2	60.85	20.3	26.2	24	20.5	30-350
pH***	-	7.85	7.62	7.59	7.59	6.79	6.61	6.5-8
Redox	mV##	79.1	98.4	91.2	95.4	94.6	106.1	-
Turbidity***	NTU**	0.37	5.12	0.09	1.56	9	7.87	2-25
Dissolved Aluminium (Al)	mg/L++	0.03	0.04	0.03	0.015	0.36	0.32	0.027
Dissolved Arsenic (As)	mg/L	0.003	0.0003	0.003	0.0003	0.003	0.0003	0.0008
Dissolved Cadmium (Cd)	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0006
Dissolved Chromium (Cr)	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Dissolved Copper (Cu)	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.001
Cyanide	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.004
Dissolved Iron (Fe)	mg/L	0.03	0.02	0.04	0.02	0.41	0.23	0.3
Dissolved Lead (Pb)	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Dissolved Manganese (Mn)	mg/L	0.002	0.002	0.003	0.002	0.005	0.003	1.2
Dissolved Mercury (Hg)	mg/L	0.00003	0.00003	0.00003	0.00003	0.00003	0.00003	0.00006

SURFACE WATER QUALITY GUIDELINE VALUES

Parameter	Unit	WC-RS		TR-RS		YK-RS		DGV
		SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	
Dissolved Nickel (Ni)	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.008
Total Nitrogen (TN)	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.25
Total Phosphorus (TP)	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Dissolved Silver (Ag)	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Dissolved Zinc (Zn)	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.0024
Ammonia	mg/L	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Nitrogen Oxides	mg/L	0.015	0.015	0.015	0.015	0.015	0.015	0.015
Reactive Phosphorus (RP)	mg/L	0.02	0.015	0.02	0.015	0.02	0.02	0.015
Total Hardness ($CaCO_3$)	mg/L	47	30	7.5	8	1	7	-
Total Kjeldahl Nitrogen (TKN)	mg/L	0.2	0.2	0.1	0.2	0.1	0.2	-
Total Dissolved Solids (TDS)	mg/L	52	39	12.5	15	30	10	-
Total Suspended Solids (TSS)	mg/L	0.2	1	0.2	0.2	3	0.2	0.2
Total Al[@]	mg/L	-	-	-	-	-	-	0.027
Total As[@]	mg/L	-	-	-	-	-	-	0.0008
Total Cd[@]	mg/L	-	-	-	-	-	-	0.0006
Total Cr[@]	mg/L	-	-	-	-	-	-	0.00001
Total Cu[@]	mg/L	-	-	-	-	-	-	0.001
Total Pb[@]	mg/L	-	-	-	-	-	-	0.001
Total Mn[@]	mg/L	-	-	-	-	-	-	1.2
Total Ni[@]	mg/L	-	-	-	-	-	-	0.008

SURFACE WATER QUALITY GUIDELINE VALUES

Parameter	Unit	WC-RS		TR-RS		YK-RS		DGV
		SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	SSGV (Summer/Autumn)	SSGV (Winter/Spring)	
Total Ag[@]	mg/L	-	-	-	-	-	-	0.00002
Total Zn[@]	mg/L	-	-	-	-	-	-	0.0024
Total Fe[@]	mg/L	-	-	-	-	-	-	0.3
Total Hg[@]	mg/L	-	-	-	-	-	-	0.00006

** ℃ = degrees Celsius* *[#] % = percent* *[##] mV = millivolt* *[+] ppm = parts per million* *[^] SPC = specific conductance* *[++] mg/L = milligram per litre*

*** NTU = Nephelometric Turbidity Unit* *[^^] µS/cm = micro Siemens per centimetre* *[@] parameter not analysed by NGH* **** assessed against DGV where guideline range is more appropriate for the parameter*

4 BASELINE WATER QUALITY

4.1 Water Quality Objectives

Water quality objectives are outlined in Section 2.1 of the Baseline Report (NGH, 2024).

4.2 Site Specific Guideline Values

In accordance with the ANZG (ANZG, 2018), SSGV for the three Reference Sites (RS) (WC-RS, TR-RS and YK-RS) were derived from the results collected during the 24-month pre-construction SWQ monitoring period. The SSGV reflect the seasonality observed in the baseline data and are characterised by the drier months of Summer/Autumn (December to May) and wetter months of Winter/Spring (June to November) in accordance with the 'Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) (2000) methodology and derivatives developed to 2018 of the ANZG (ANZG, 2018).

Table 2 outlines the seasonal SSGV provided in the Baseline Report (NGH, 2024).

5 JULY 2025 MONITORING

SW sampling was undertaken at 10 monitoring locations on the 26 and 29 July 2025. One monitoring location (YK-RS) was dry at the time of sampling (Section 5.1: Table 3).

In accordance with the methodology outlined in Section 3, SW samples were either measured in situ using a calibrated YSI ProDSS Sonde Multiparameter Digital Water Quality Meter (refer to Appendix D) or analysed by National Association of Testing Authorities, Australia (NATA) accredited ALS Limited (ALS) laboratory.

The 'Water Quality Monitoring Field Data Sheet' (Field Sheet) (UGL, 2025) is provided in Appendix A. The 'Certificate of Analysis' (COA) (ALS, 2025a), 'QA/QC Compliance Assessment to assist with Quality Review' (QA/QC Assessment) (ALS, 2025b) and 'Quality Control Report' (QCR) (ALS, 2025c) are attached in Appendix B.

5.1 Observations

Field observations during sampling are summarised in Table 3.

Table 3 Field observations during sampling

FIELD OBSERVATIONS		
Date	26-29 July 2025	
Weather	The weather forecast for 26 July was 3 degrees Celsius (°C) with 5 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 7.2mm of rainfall across 25 to 24 July. At the time of sampling, the weather was overcast with showers. The weather forecast for 29 July was 2 degrees Celsius (°C) with 50 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 51mm of rainfall across 28 to 27 July. At the time of sampling, the weather was overcast.	
ID	**Observations**	**Photo**
WC-RS	• High water volume with a high flow rate. • Rocky and eroded banks, with exposed roots from a large tree. • Presence of aquatic vegetation, including algae and moss. • Presence of vegetative detritus within the channel. • Water exhibiting a slight yellow tinge. • Riparian vegetation consisted of groundcover, shrubs and trees. • Moderate weed density, including of Blackberry (*Rubus fruticosus*).	

FIELD OBSERVATIONS

Date	26-29 July 2025	
Weather	The weather forecast for 26 July was 3 degrees Celsius (°C) with 5 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 7.2mm of rainfall across 25 to 24 July. At the time of sampling, the weather was overcast with showers. The weather forecast for 29 July was 2 degrees Celsius (°C) with 50 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 51mm of rainfall across 28 to 27 July. At the time of sampling, the weather was overcast.	
ID	**Observations**	**Photo**
WC-IS	• High water volume with a high flow rate. • Presence of vegetative detritus within the channel. • Presence of aquatic invertebrates and vegetation. • Water exhibiting a slight yellow tinge. • Riparian vegetation comprised of trees and grasses. • High weed density, including the presence of Blackberry (*Rubus fruticosus*) • Rocky banks and undercut banks observed. • Monitoring location situated adjacent to bridge and Mine Trail Road, which is frequently used by Snowy 2.0 vehicles, plant and machinery. • Visible discharge observed from the Track 8 FGJV landslip and clean water rock drain at the time of sampling.	
CG-IS	• High water volume with a high flow rate. • Presence of vegetative detritus within the channel. • Presence of aquatic invertebrates and vegetation. • Eroded banks and sandy bed.	

FIELD OBSERVATIONS

Date	26-29 July 2025
Weather	The weather forecast for 26 July was 3 degrees Celsius (°C) with 5 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 7.2mm of rainfall across 25 to 24 July. At the time of sampling, the weather was overcast with showers. The weather forecast for 29 July was 2 degrees Celsius (°C) with 50 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 51mm of rainfall across 28 to 27 July. At the time of sampling, the weather was overcast.

ID	Observations	Photo
YR1-IS	• Water exhibited a slight yellow tinge. • High water volume with a high flow rate. • Presence of vegetative detritus within the channel. • White foam observed accumulating on debris at the water surface. • Moderate weed density, including the presence of thistle (*Cirsium sp.*) and Blackberry (*Rubus fruticosus*) • Riparian vegetation consisted of groundcover, shrubs and trees • Rocky banks with sections of exposed soil higher along the bank profile. • Presence of aquatic vegetation, including algae. • FGJV observed pumping water from their sediment basin at the time of sampling.	
LHG-IS	• Monitoring location is situated adjacent to Mine Trail Road, which is frequently used by Snowy 2.0 vehicles, plant and machinery. • Moderate level with moderate flow rate. • Rocky bed with no defined banks. • Water exhibiting a Brown-milky tinge. • Overgrown vegetation dominated by groundcover species. • Presence of silt and grass seed husks on the streambed. • Presence of aquatic vegetation, including algae	

FIELD OBSERVATIONS

Date	26-29 July 2025
Weather	The weather forecast for 26 July was 3 degrees Celsius (℃) with 5 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 7.2mm of rainfall across 25 to 24 July. At the time of sampling, the weather was overcast with showers. The weather forecast for 29 July was 2 degrees Celsius (℃) with 50 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 51mm of rainfall across 28 to 27 July. At the time of sampling, the weather was overcast.

ID	Observations	Photo
YR2-IS	• Presence of aquatic invertebrates. • Rocky bed and banks. • High volume with a high flow rate. • Riparian vegetation dominated by groundcover species. • Moderate weed density, including Blackberry (*Rubus fruticosus*) • Presence of vegetative detritus within the channel. • Monitoring location is situated adjacent to bridge and electrical transmission tower positioned atop a rocky cliff, near the Snowy 2.0 laydown area.	
SSC-IS	• High water volume with a high flow rate. • White foam accumulating on debris at water's surface. • Turbid water exhibited milky-brown tinge. • Presence of overhanging vegetation adjacent to bank. • Monitoring location situated under SSC construction bridge.	

FIELD OBSERVATIONS

Date	26-29 July 2025
Weather	The weather forecast for 26 July was 3 degrees Celsius (°C) with 5 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 7.2mm of rainfall across 25 to 24 July. At the time of sampling, the weather was overcast with showers. The weather forecast for 29 July was 2 degrees Celsius (°C) with 50 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 51mm of rainfall across 28 to 27 July. At the time of sampling, the weather was overcast.

ID	Observations	Photo
TR-RS	• Stream banks composed of rocky substrate with a sandy bed. • Monitoring location situated adjacent to publicly accessible O'Hares Campground and Talbingo Reservoir ancillary infrastructure. • Presence of aquatic invertebrates and vegetation observed. • Water was clear with moderate volume and a moderate flow rate. • Presence of vegetative detritus identified within the channel. • Riparian vegetation comprised a mix of groundcover species and trees. • Evidence of recent landslips noted along the banks.	
YK-RS	• No flow; dry at the time of sampling.	

FIELD OBSERVATIONS

Date	26-29 July 2025
Weather	The weather forecast for 26 July was 3 degrees Celsius (°C) with 5 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 7.2mm of rainfall across 25 to 24 July. At the time of sampling, the weather was overcast with showers. The weather forecast for 29 July was 2 degrees Celsius (°C) with 50 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 51mm of rainfall across 28 to 27 July. At the time of sampling, the weather was overcast.

ID	Observations	Photo
YK-IS (D/S)	• Presence of aquatic vegetation. • Water exhibited a yellow to brown tinge. • Vegetative detritus observed within the water channel. • Riparian vegetation comprised of groundcover species and trees. • Low weed density observed, including Blackberry (*Rubus fruticosus*). • High water volume with a high flow rate. • Undermined banks and rocky and sandy bed containing mica. • Monitoring location situated adjacent to publicly accessible 4WD track.	

FIELD OBSERVATIONS

Date	26-29 July 2025
Weather	The weather forecast for 26 July was 3 degrees Celsius (°C) with 5 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 7.2mm of rainfall across 25 to 24 July. At the time of sampling, the weather was overcast with showers. The weather forecast for 29 July was 2 degrees Celsius (°C) with 50 percent of <1 millimetres (mm) of rain. The previous 48 hours was cloudy and experienced a total of 51mm of rainfall across 28 to 27 July. At the time of sampling, the weather was overcast.

ID	Observations	Photo
NZG-IS	• Presence of aquatic vegetation within the channel. • Organic detritus observed throughout the channel. • Overhanging vegetation present along the banks. • Clear water exhibited a slight yellow tinge. • High weed density observed, including Blackberry (*Rubus fruticosus*). • Monitoring location situated adjacent to publicly accessible 4WD track. • High water volume with a high flow rate. • Banks exhibited signs of erosion and undercutting, with a pebbly-bed composition. • Riparian vegetation comprised groundcover species and trees.	
YK-IS	• Water was turbid and cloudy, exhibiting a slight yellow tinge. • High presence of aquatic vegetation. • High water volume with a high flow rate. • Banks exhibited signs of erosion, with bed material containing visible mica. • Overhanging vegetation present along the banks. • Presence of vegetative detritus located within the water channel. • Riparian vegetation comprised groundcover species, shrubs and trees. • Low weed density recorded. • Monitoring location situated adjacent to Elliott Way, leading towards culvert.	

5.2 Results

The results from the construction SWQ monitoring program have been reported for each respective catchment: Yarrangobilly River, Talbingo Reservoir, and Yorkers Creek.

- **Yarrangobilly River catchment** monitoring includes the reference site at Wallace Creek and impact sites at Yarrangobilly River, Wallace Creek, Cave Gully, Lick Hole Gully, and Sheep Station Creek.
- **Yorkers Creek catchment** monitoring includes the reference site at Yorkers Creek and impact sites at Yorkers Creek and New Zealand Gully.
- **Talbingo Reservoir** features a reference site located upstream within the reservoir, serving as an overall reference for monitoring sites in the Yarrangobilly River and Yorkers Creek catchments.

This reference site provides a baseline for the SWQ monitoring program.

The SWQ monitoring results for key physical and chemical parameters, along with site-specific trigger values, are detailed in Section 5.2.1. Results for dissolved and total metals, including site-specific trigger values, are covered in Sections 5.2.2 and 5.2.3. Upon review of the data, observations were noted between the reference and impact sites.

The complete table of results is attached in Appendix C.

5.2.1 Key Physical and Chemical Parameters

See below for results of key physical and chemical parameters.

5.2.1.1 Temperature

Between June 2025 and July 2025, temperatures (°C) in the Yarrangobilly catchment remained relatively stable, showing only minor variation across monitoring sites, ranging between approximately 6°C and 9°C (FIGURE 4). Similarly, the Talbingo Reservoir exhibited a modest temperature decrease from 10.5°C in June 2025 to 8.2°C in July 2025 (FIGURE 5). The Yorkers Creek Catchment recorded consistent temperatures across sites with minimal change observed between months, maintaining values between approximately 5.5°C and 6.5°C (FIGURE 6).

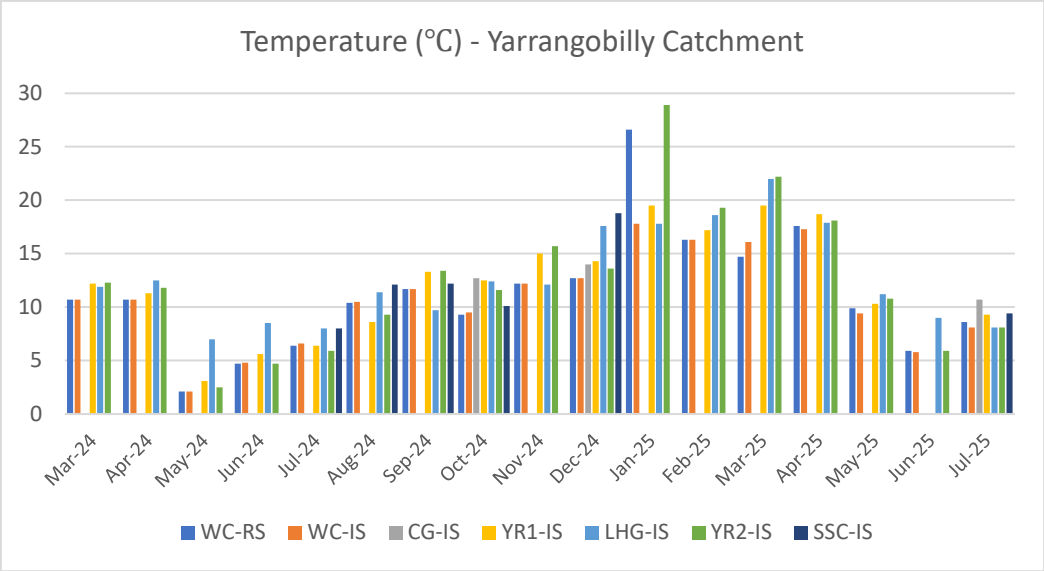

FIGURE 4 : TEMPERATURE FOR YARRANGOBILLY RIVER CATCHMENT

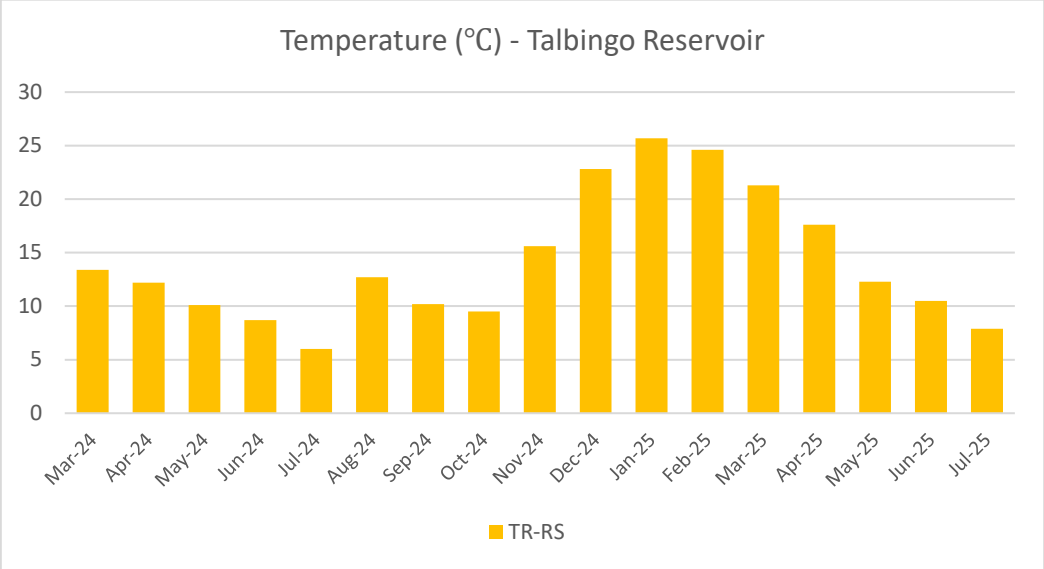

FIGURE 5: TEMPERATURE FOR TALBINGO RESERVOIR

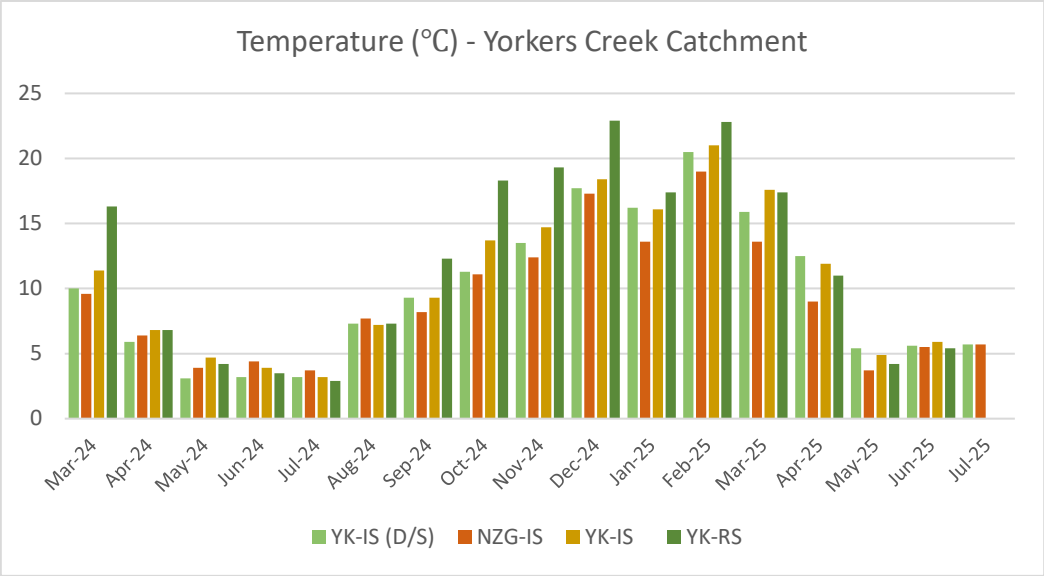

FIGURE 6: TEMPERATURE FOR YORKERS CREEK CATCHMENT

5.2.1.2 pH

In July 2025, pH in the Yarrangobilly River Catchment generally increased compared to June (≈+0.2 — 0.6 pH units across most sites) and exceeded the June — November SSGV across nearly all sites (refer to FIGURE 7). The Talbingo Reservoir provided evidence of the opposite pattern, with pH decreasing from ≈8.3 pH in June 2025 to ≈7.8 pH in July 2025, moving closer to the SSGV (FIGURE 8). Within the Yorkers Creek Catchment, pH eased marginally from June 2025 to July 2025 but remained above the June — November SSGV.

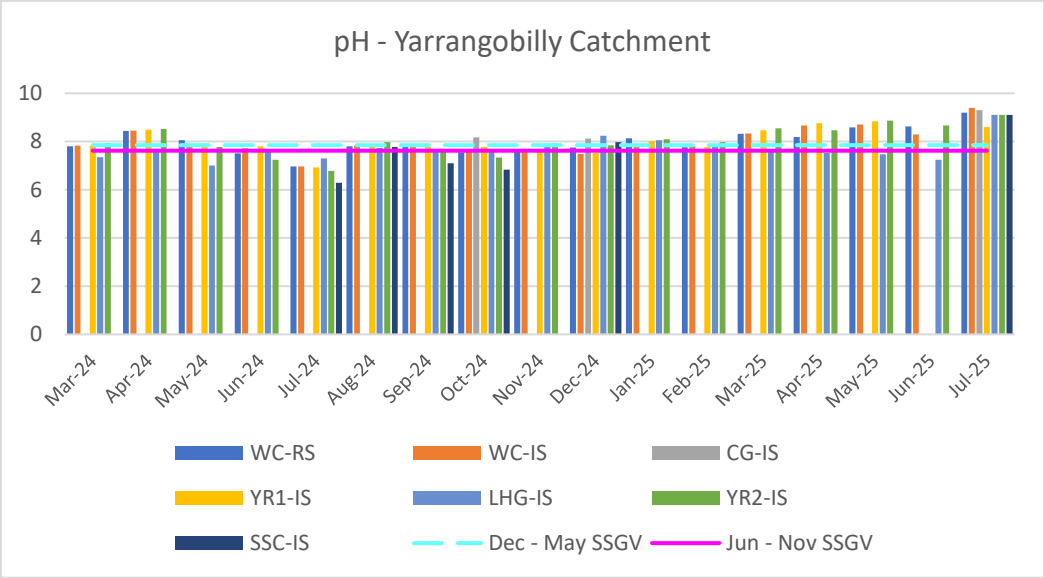

FIGURE 7: PH FOR YARRANGOBILLY RIVER CATCHMENT

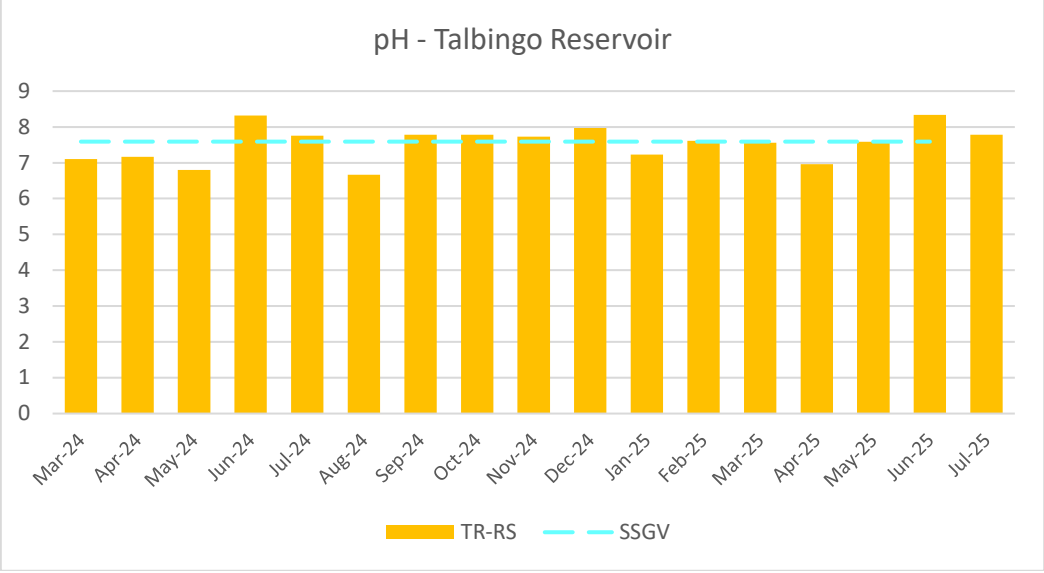

FIGURE 8: PH FOR TALBINGO RESERVOIR

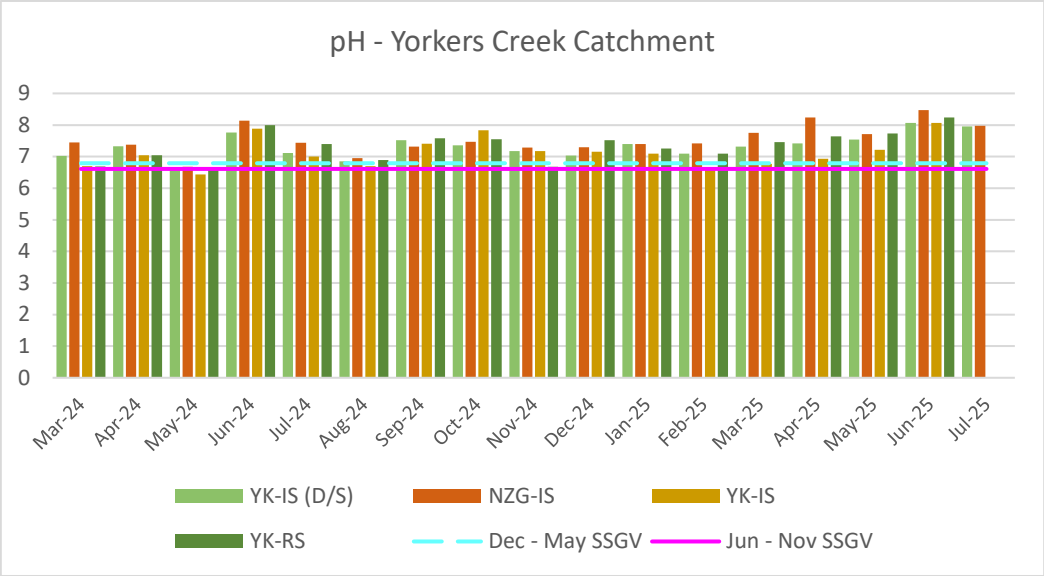

FIGURE 9: PH FOR YORKERS CREEK CATCHMENT

5.2.1.3 Dissolved Oxygen

In July 2025, dissolved oxygen (DO %) remained relatively aligned across the Yarrangobilly River Catchment and comparable to YR2-IS in June 2025. No sites exceeded the June — November SSGV referenced in FIGURE 10. In the Talbingo Reservoir, DO % increased slightly from June 2025 to July 2025 but remained below the June — November SSGV, as shown in FIGURE 11. Yorkers Creek Catchment sites recorded slightly lower DO % values from June 2025 to July 2025, as shown in FIGURE 12.

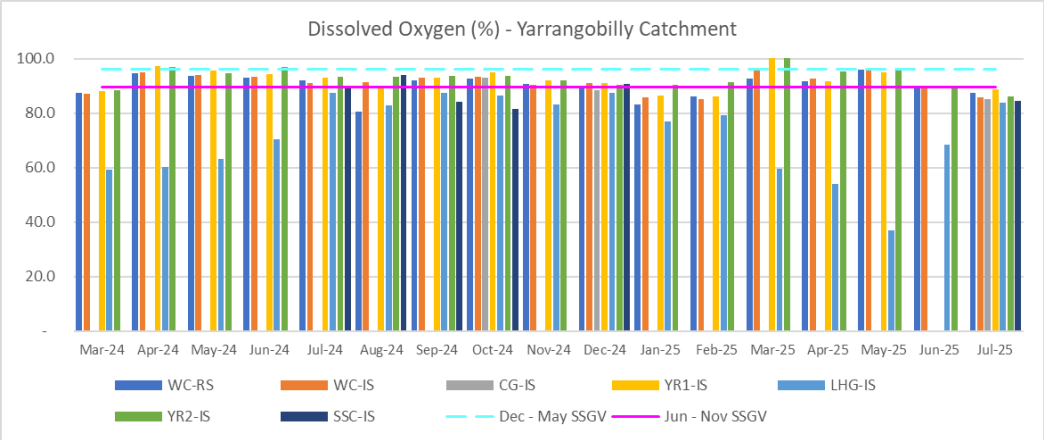

FIGURE 10: DO FOR YARRANGOBILLY RIVER CATCHMENT

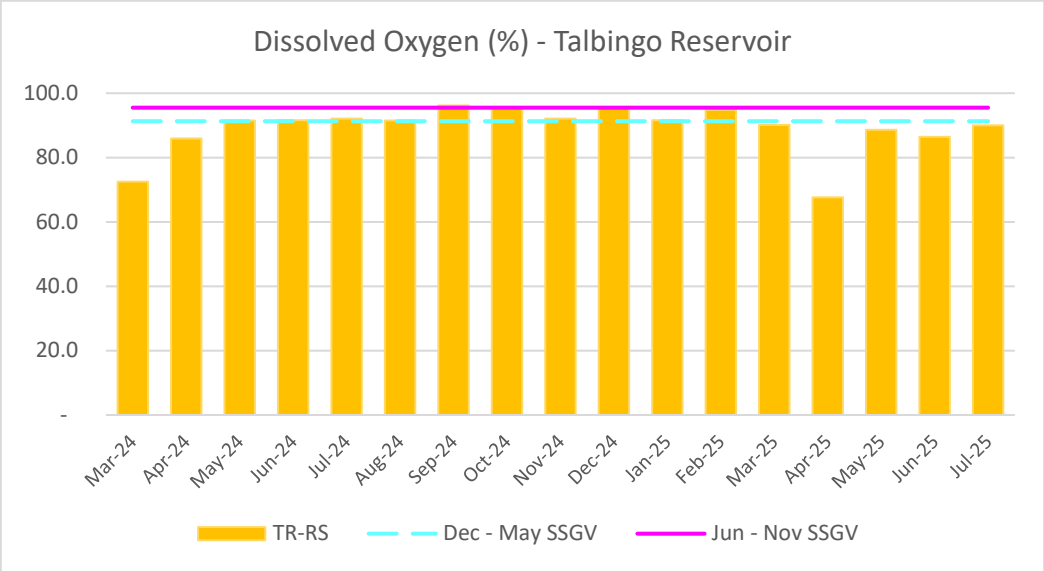

FIGURE 11: DO FOR TALBINGO RESERVOIR

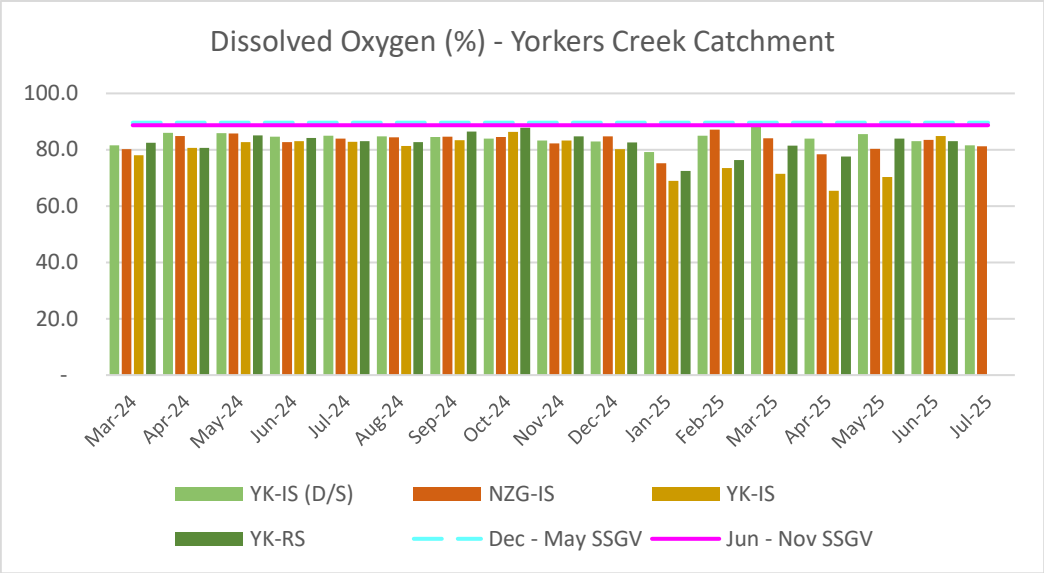

FIGURE 12: DO FOR YORKERS CREEK CATCHMENT

5.2.1.4 Specific Conductance

In July 2025, SPC (µS/cm) levels across the Yarrangobilly River Catchment remained consistent with June 2025, noting LHG-IS reduced in SPC (µS/cm) from June 2025, (refer to FIGURE 13). Talbingo Reservoir SPC levels remained stable and well below the June — November SSGV as evidenced in FIGURE 14. Yorkers Creek Catchment SPC levels reduced slightly from June 2025 and remain well below the June — November SSGV (FIGURE 15)

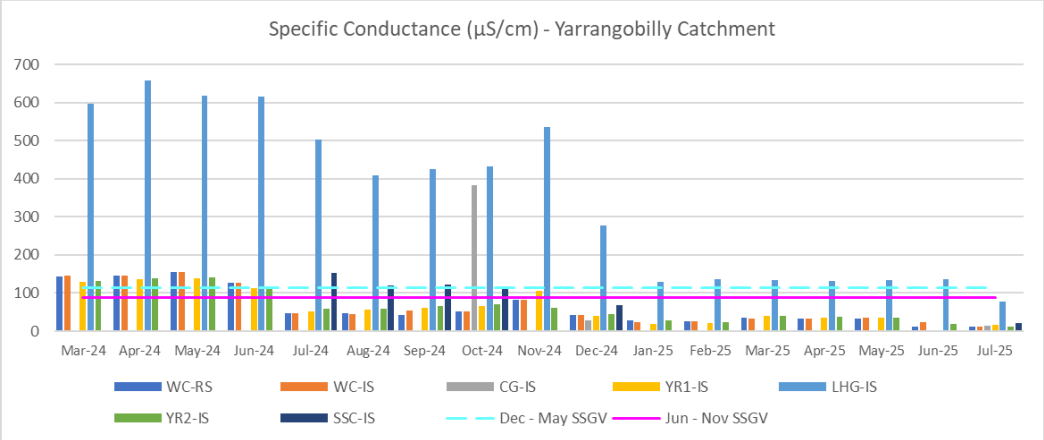

FIGURE 13: SPC FOR YARRANGOBILLY RIVER CATCHMENT

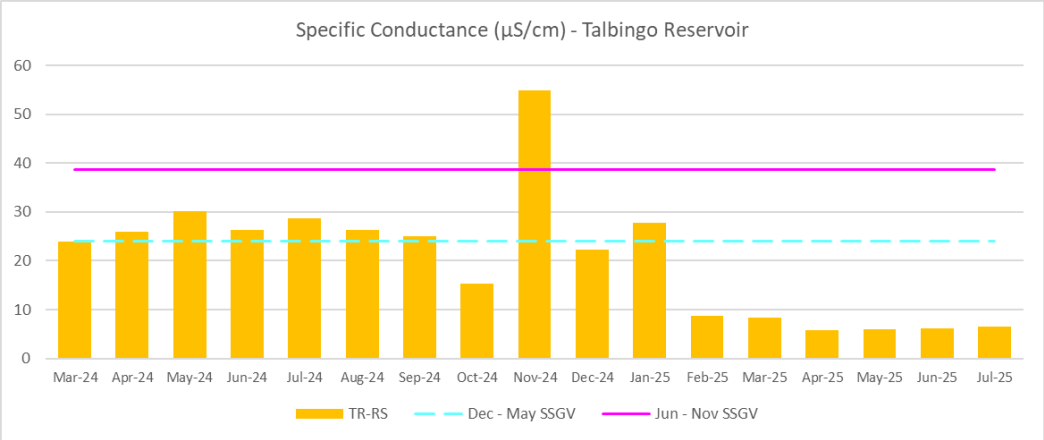

FIGURE 14: SPC for Talbingo Reservoir

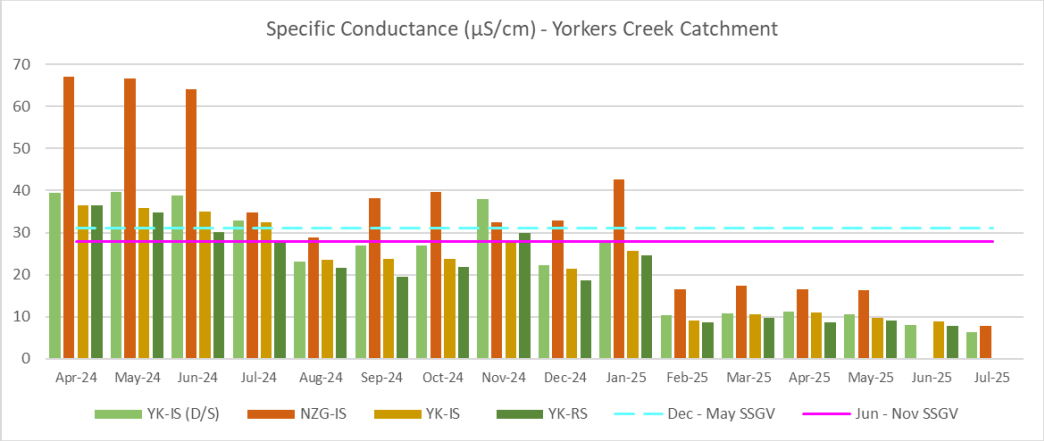

FIGURE 15: SPC for Yorkers Creek Catchment

5.2.1.5 Electrical Conductivity

In July 2025, EC (µS/cm) levels across the Yarrangobilly River Catchment were within the June — November SSGV (90(µS/cm)) for most monitoring sites except for CG-IS exceeding the guideline (refer to FIGURE 16). The Talbingo Reservoir recorded EC (µS/cm) values below the June — November SSGV (FIGURE 17). Yorkers Creek Catchment remained low and within the SSGV across all sites (FIGURE 18). It is noted that EC (µS/cm) was not tested for in June 2025.

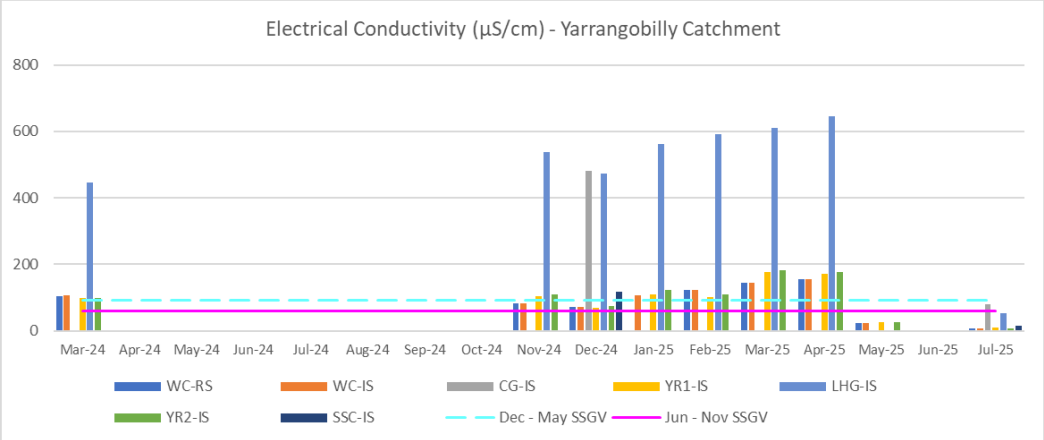

FIGURE 16: EC FOR YARRANGOBILLY RIVER CATCHMENT

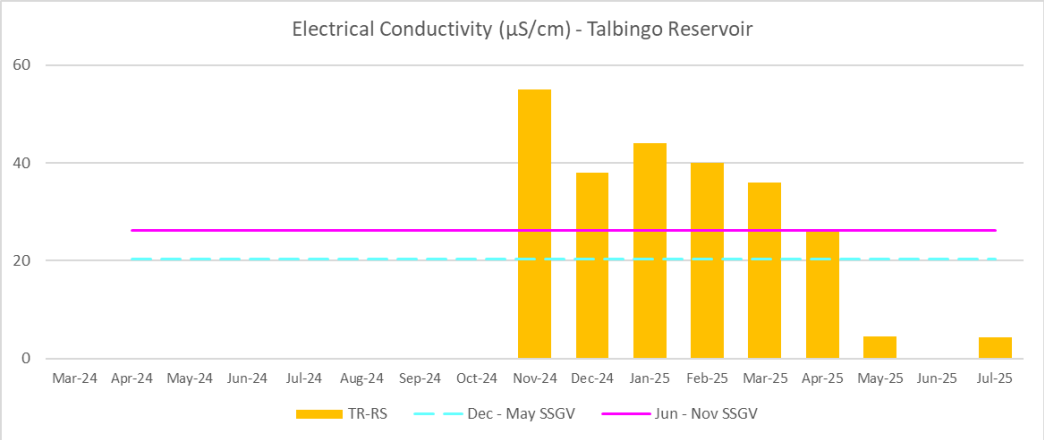

FIGURE 17: EC FOR TALBINGO RESERVOIR

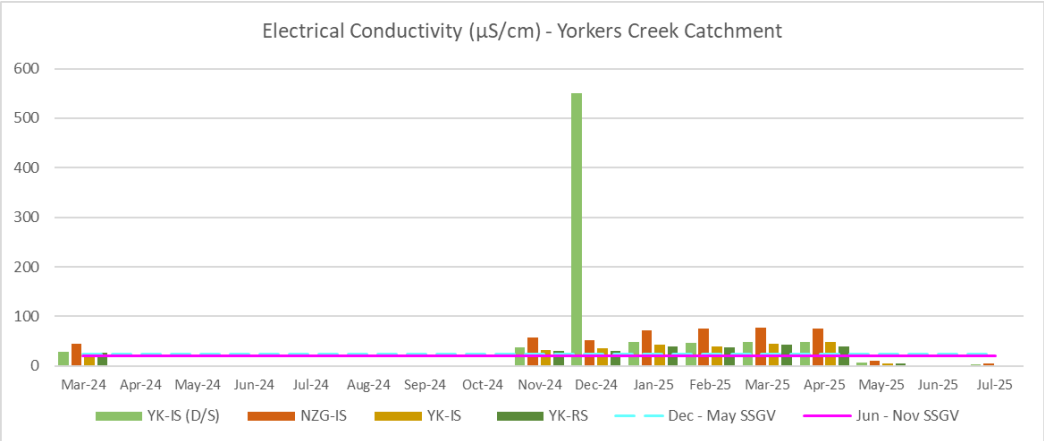

FIGURE 18: EC FOR YORKERS CREEK CATCHMENT

5.2.1.6 Turbidity

In July 2025, Turbidity (NTU) levels in the Yarrangobilly River Catchment increased across most sites, with several exceeding the June — November SSGV (5 NTU), refer to FIGURE 19. The Talbingo Reservoir also recorded a significant rise in turbidity from June 2025 to July 2025, as shown in FIGURE 20. Yorkers Creek Catchment, turbidity levels exceeded June — November SSGV expressed in FIGURE 21.

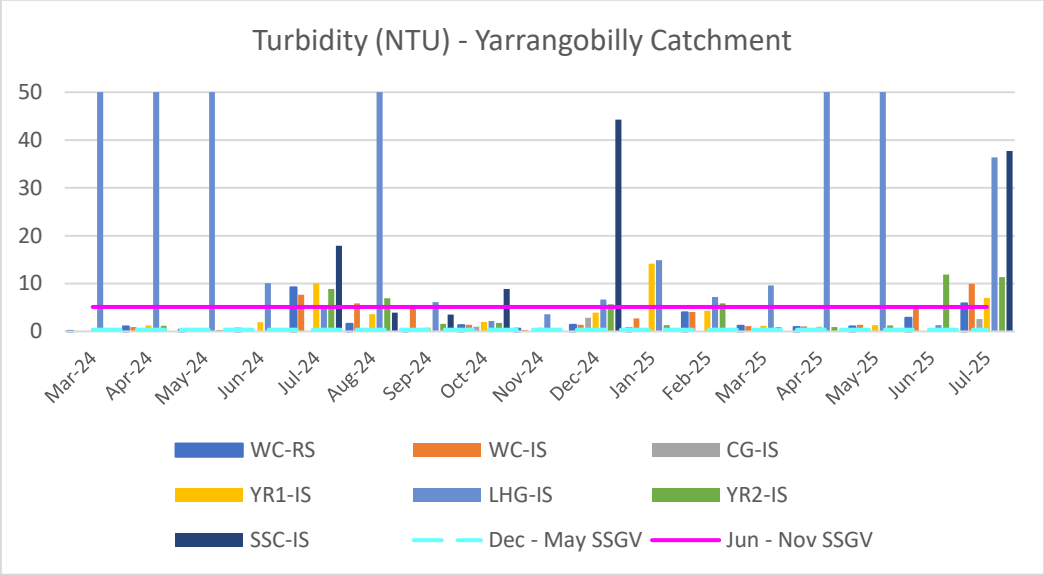

FIGURE 19: TURBIDITY FOR YARRANGOBILLY RIVER CATCHMENT

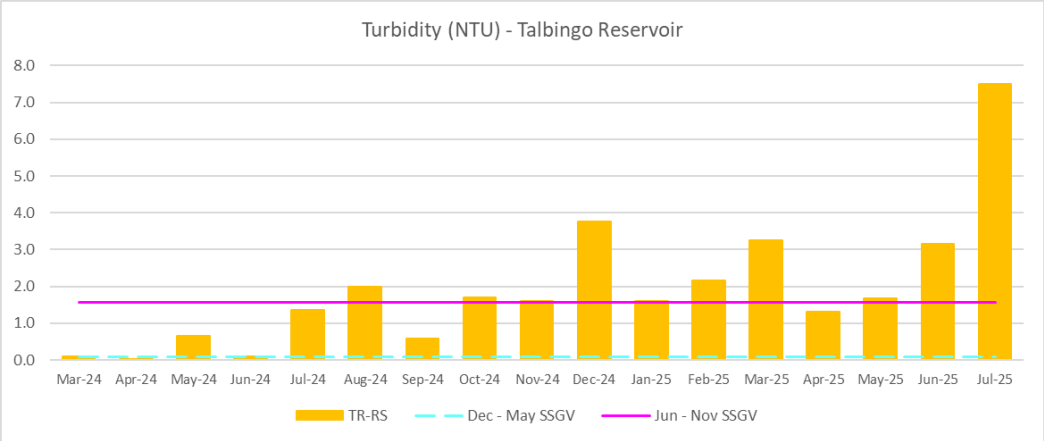

FIGURE 20: Turbidity for Talbingo Reservoir

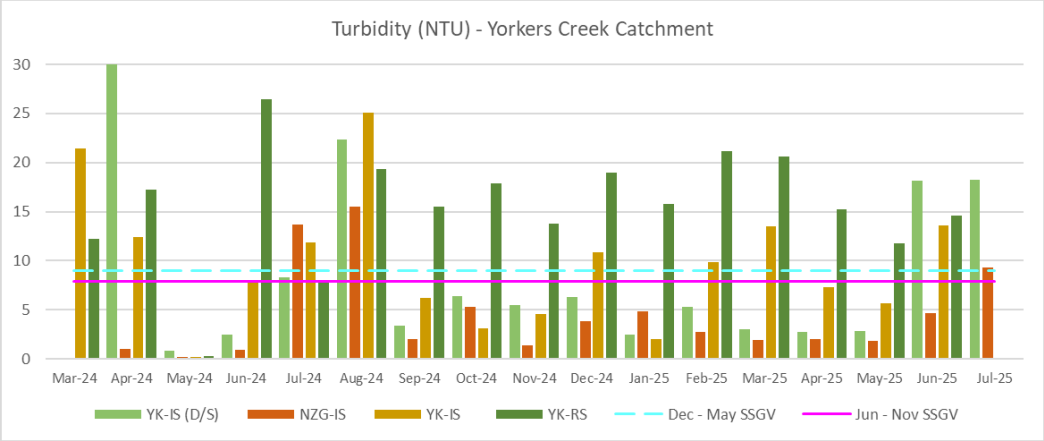

FIGURE 21: TURBIDITY FOR YORKERS CREEK CATCHMENT

5.2.1.7 Total Suspended Solids

In July 2025, TSS (mg/L) levels within the Yarrangobilly River Catchment generally decreased compared to values recorded in June 2025 (FIGURE 22). Talbingo Reservoir values increased from June 2025 (1mg/L) to July 2025 (5mg/L) significantly higher than the June — November SSGV (FIGURE 23). In the Yorkers Creek Catchment, YK-IS and NZG-IS remained above the June — November SSGV (FIGURE 24).

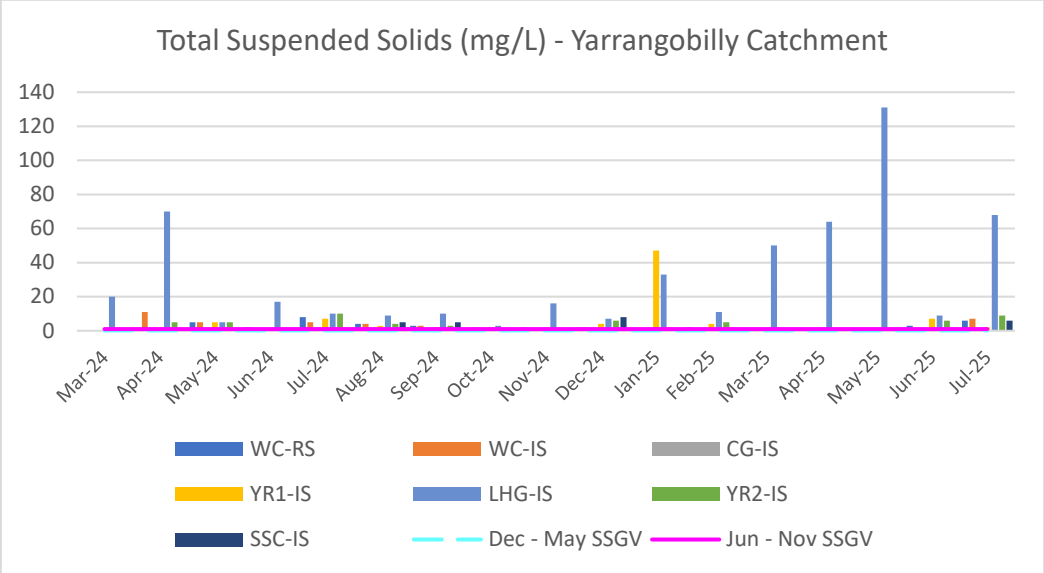

FIGURE 22: TSS FOR YARRANGOBILLY RIVER CATCHMENT

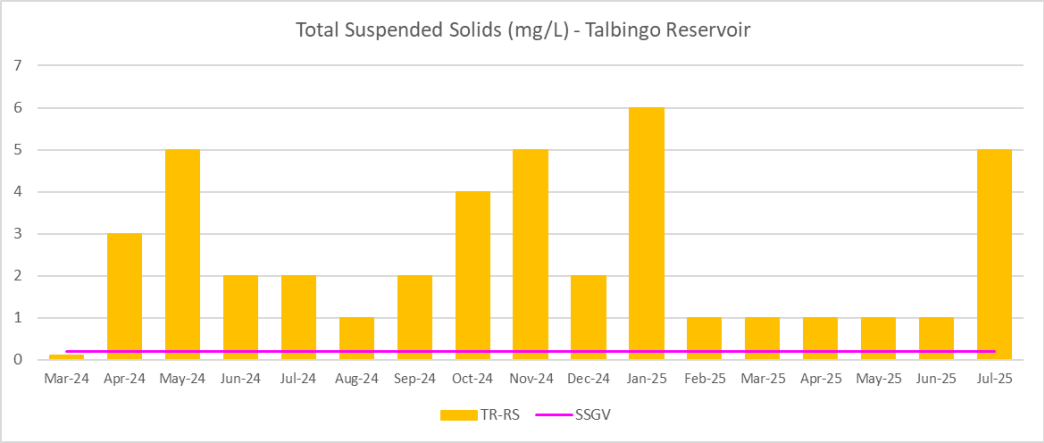

FIGURE 23: TSS for Talbingo Reservoir

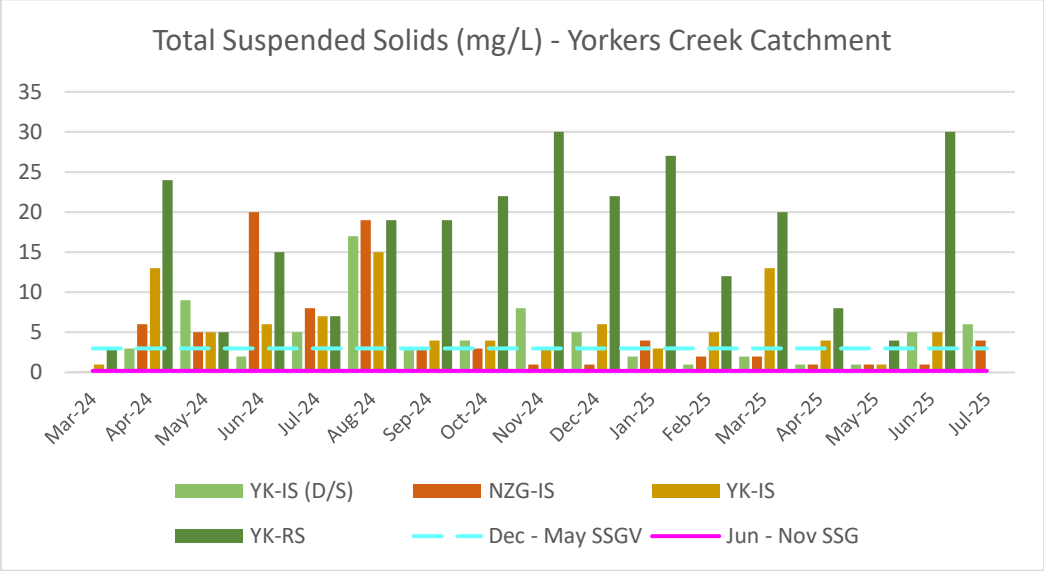

FIGURE 24: TSS FOR YORKERS CREEK CATCHMENT

5.2.1.8 Total Dissolved Solids

In July 2025, TDS (mg/L) levels across Yarrangobilly River Catchment provided evidence of a reduction in TDS from June 2025. Several sites moved below the June — November SSGV with the exception of CG-IS and LHG-IS exceeding the guideline significantly and SSC-IS slightly exceeding the guideline (FIGURE 25). Talbingo Reservoir TDS (mg/L) levels decreased significantly from June 2025 to July 2025 albeit still exceeding the June — November SSGV (refer to FIGURE 26). Across the Yorkers Creek Catchment, TDS (mg/L) exceeded the June — November SSGV although NZG-IS met the December —May SSGV (refer to FIGURE 27)

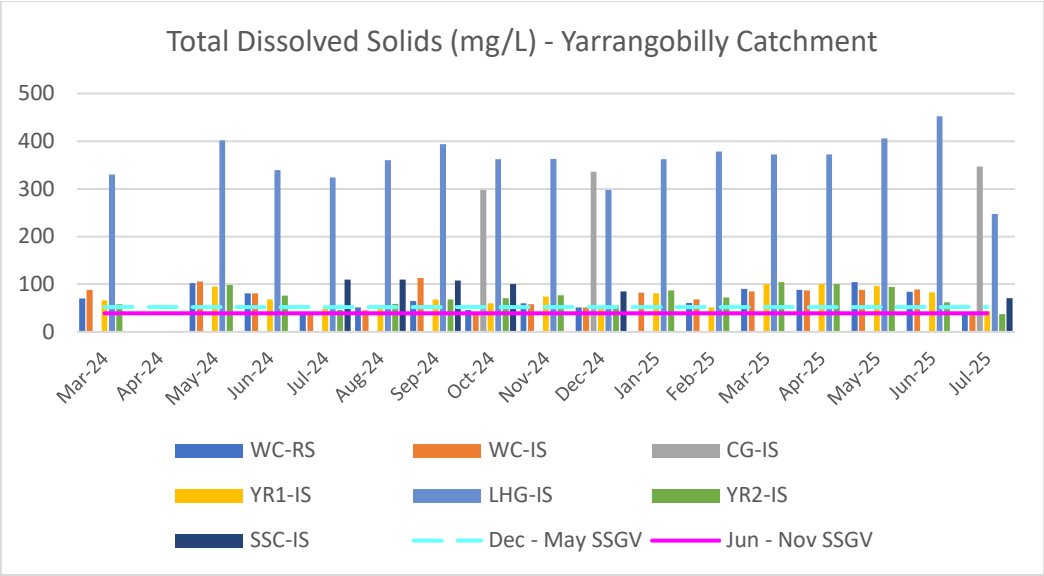

FIGURE 25 TDS for Yarrangobilly River Catchment

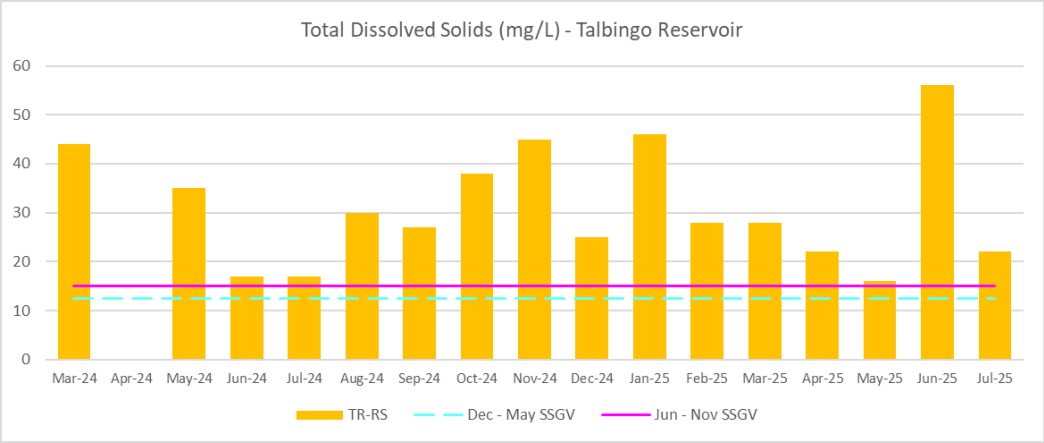

FIGURE 26 TDS for Talbingo Reservoir

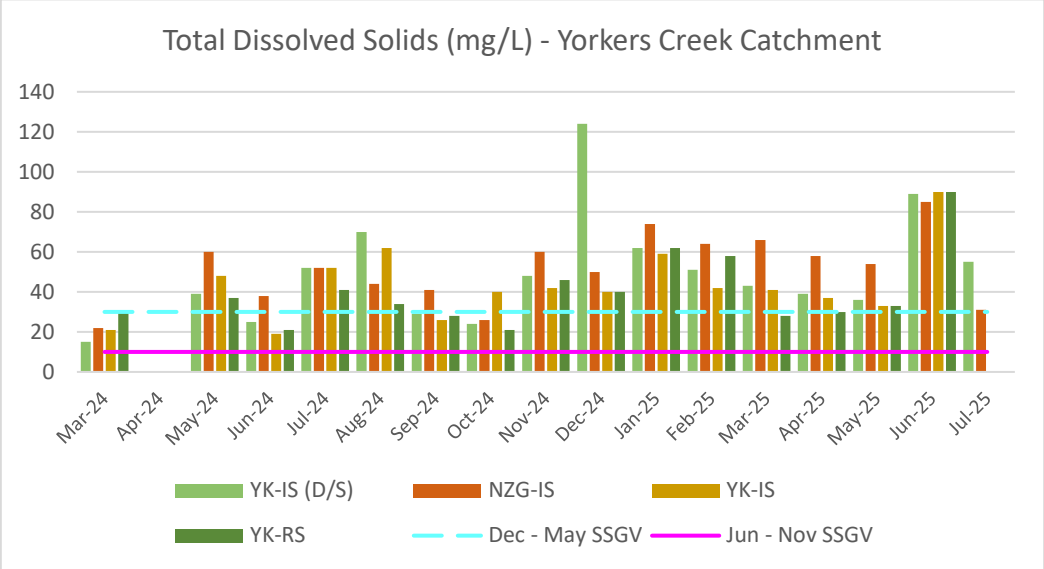

FIGURE 27 TDS FOR YORKERS CREEK CATCHMENT

5.2.1.9 Redox

Redox (mV) levels in July 2025 were above the June — November SSGV across all three catchments (refer to FIGUREs 28 — 30). While the results indicate exceedance, the recorded values were considerably lower than earlier peaks observed between November 2024 and February 2025.

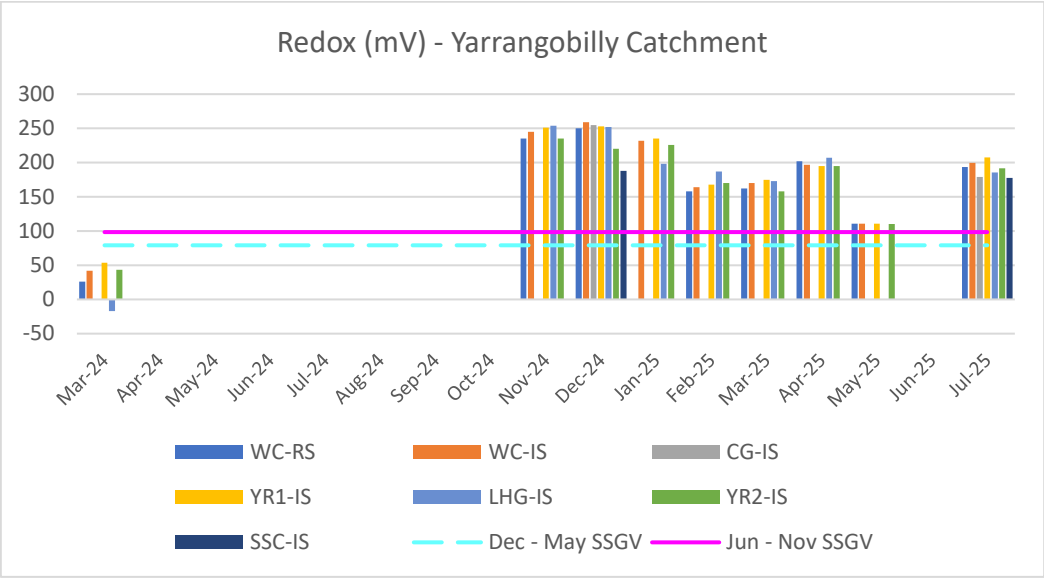

FIGURE 28: REDOX FOR YARRANGOBILLY RIVER CATCHMENT

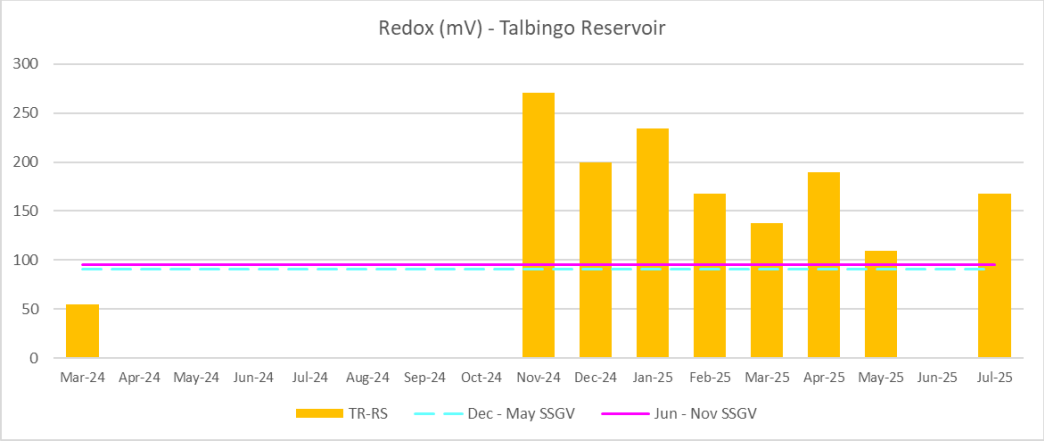

FIGURE 29: Redox for Talbingo Reservoir

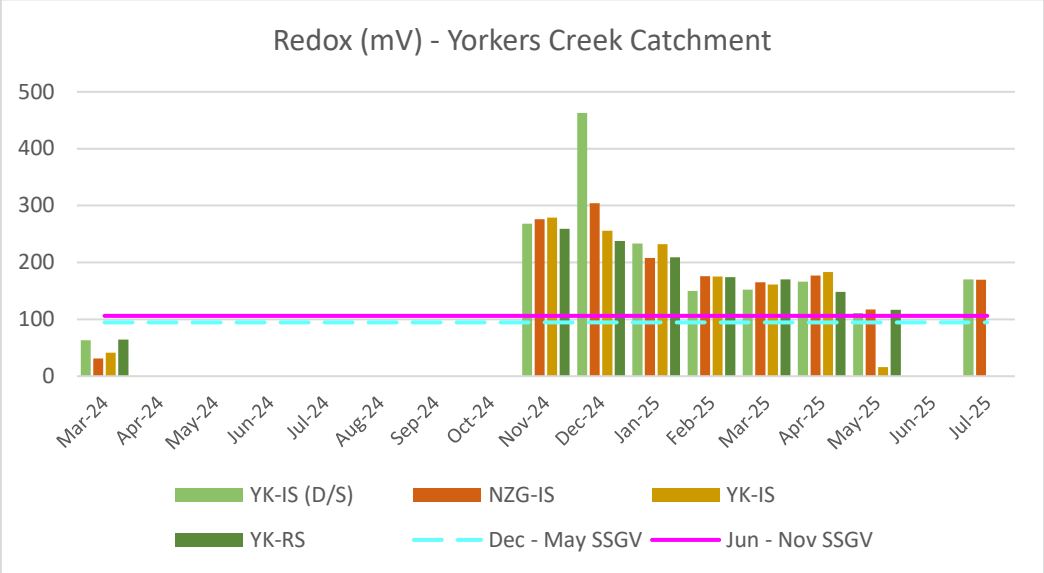

FIGURE 30: REDOX FOR YORKERS CREEK CATCHMENT

5.2.1.10 Nitrogen Oxides

Nitrogen oxides (mg/L) levels in July 2025 remained generally low across all monitored catchments with evidence of reduction in values between June 2025 and July 2025. YR2-IS produced a value of 8.0mg/L in June 2025, reducing to approximately 0.1mg/L in July 2025 (FIGURE 31). Talbingo Reservoir recorded an increase from 0.04mg/L in June 2025 to 0.1mg/L in July 2025 (FIGURE 32). Yorkers Creek Catchment exhibited slight exceedances from the June — November SSGV (FIGURE 33).

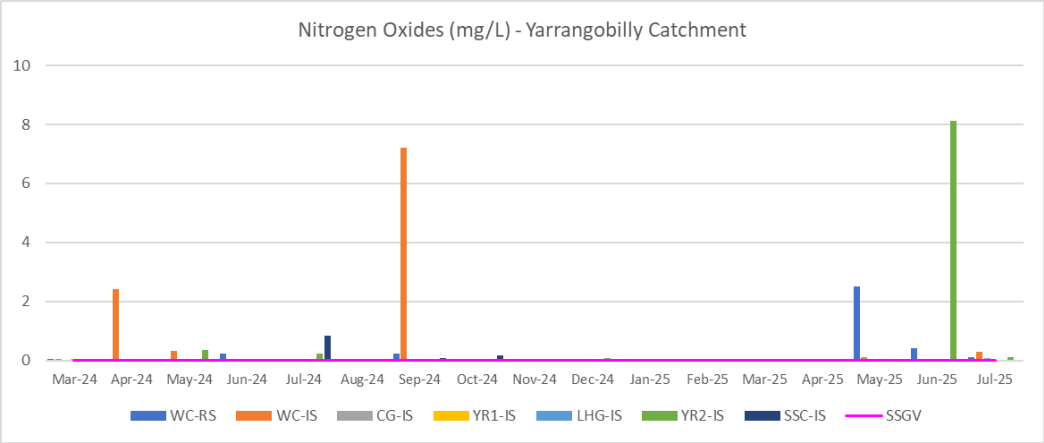

FIGURE 31: NITROGEN OXIDES FOR YARRANGOBILLY RIVER CATCHMENT

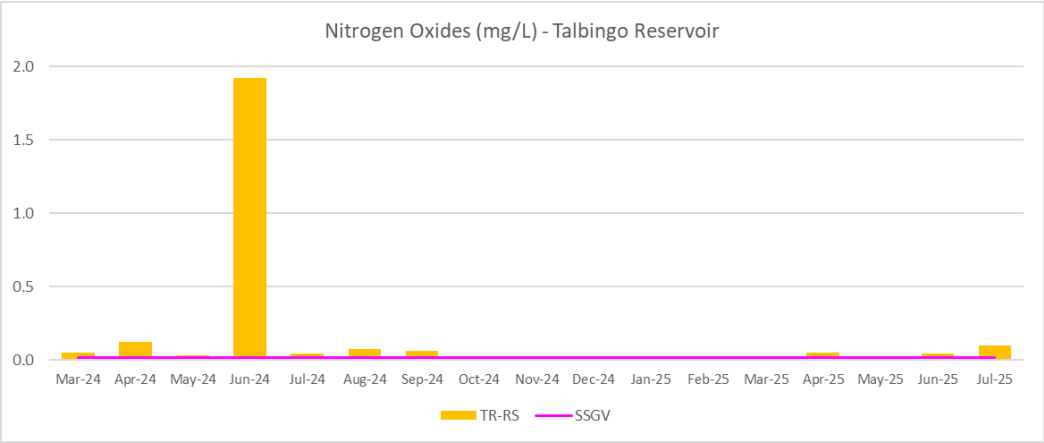

FIGURE 32: Nitrogen Oxides for Talbingo Reservoir

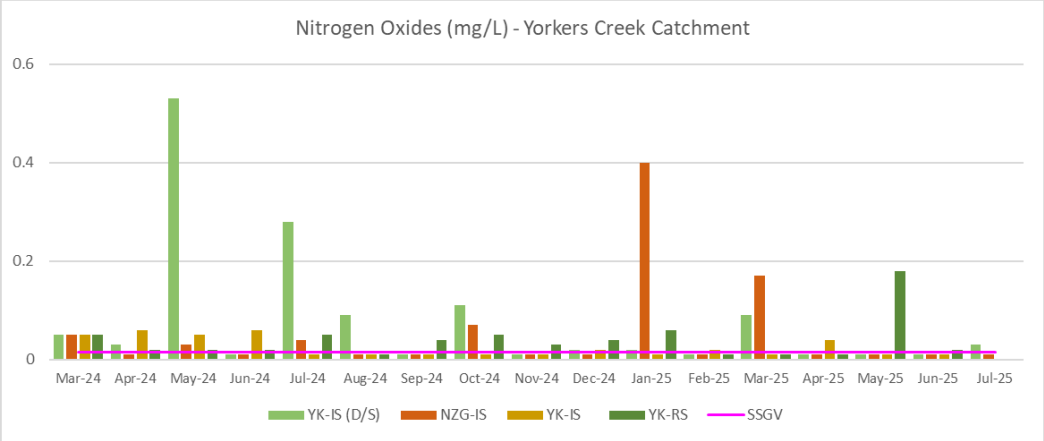

FIGURE 33: Nitrogen Oxides for Yorkers Creek Catchment

5.2.1.11 Ammonia

Ammonia (mg/L) levels between June 2025 and July 2025 showed notable variation across the three catchments. In Yarrangobilly Catchment, concentrations increased across various sampling sites, with substantial exceedances of the SSGV at WC-IS, YR2-IS and SSC-IS, compared to June 2025 levels (refer to FIGURE 34). In contrast, Talbingo Reservoir recorded a reduction in Ammonia (mg/L) levels compared to June 2025 (see FIGURE 35). The Yorkers Creek Catchment remained similar to values identified in June 2025 with isolated exceedance at NZG-IS in July 2025 (refer to FIGURE 36).

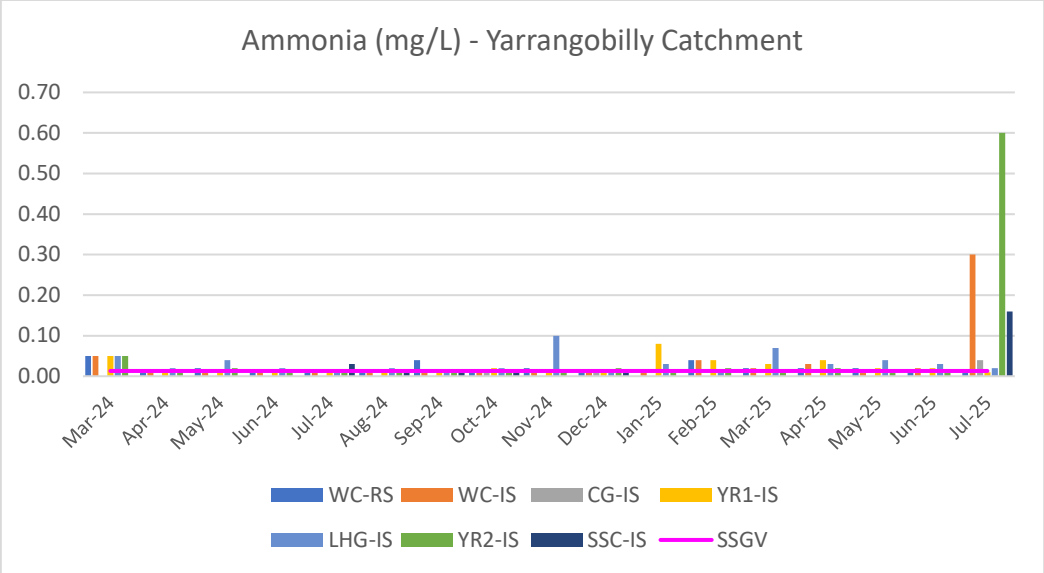

FIGURE 34: AMMONIA FOR YARRANGOBILLY RIVER CATCHMENT

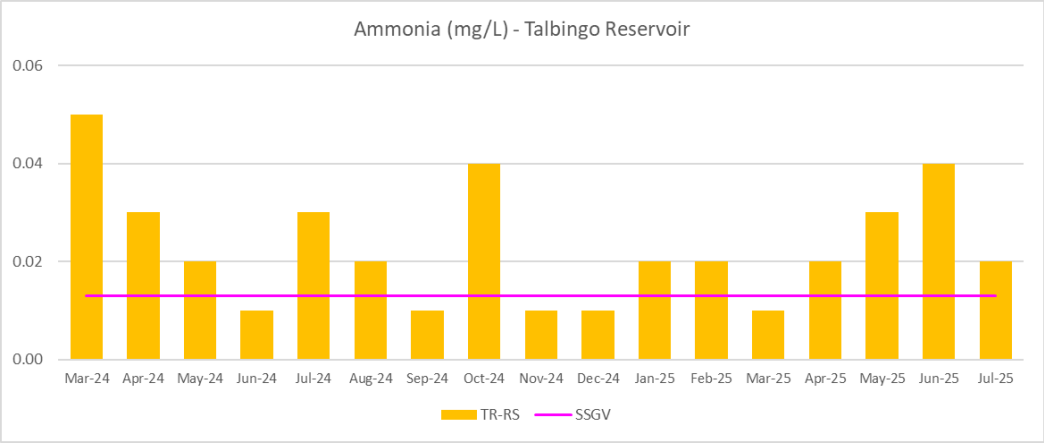

FIGURE 35: Ammonia for Talbingo Reservoir

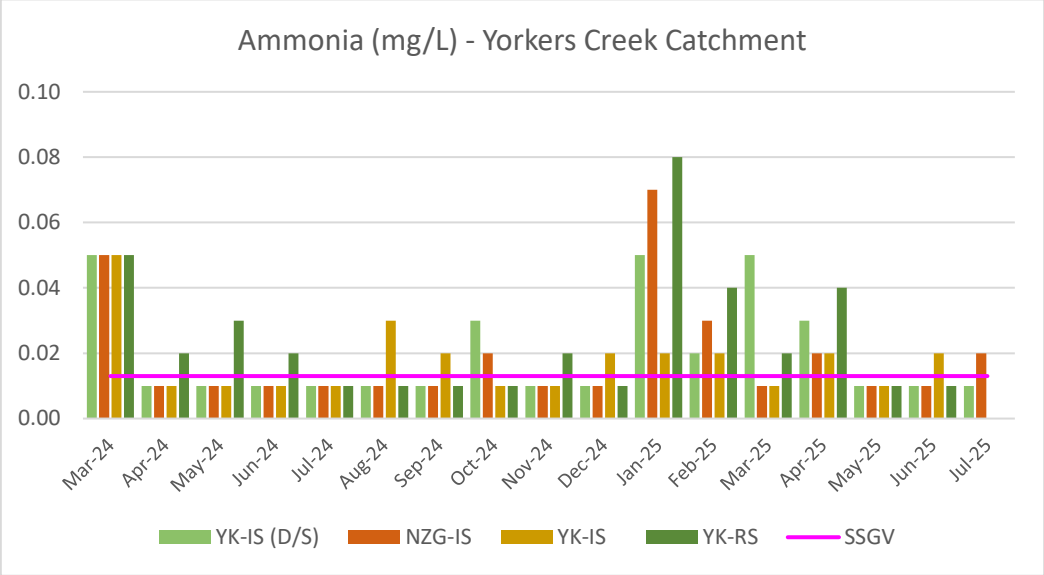

FIGURE 36: AMMONIA FOR YORKERS CREEK CATCHMENT

5.2.1.12 Cyanide

Cyanide (mg/L) concentrations remained consistent and below the limit of reporting (LOR) across all monitoring sites and catchments throughout the assessment period (refer to FIGURE 37—39).

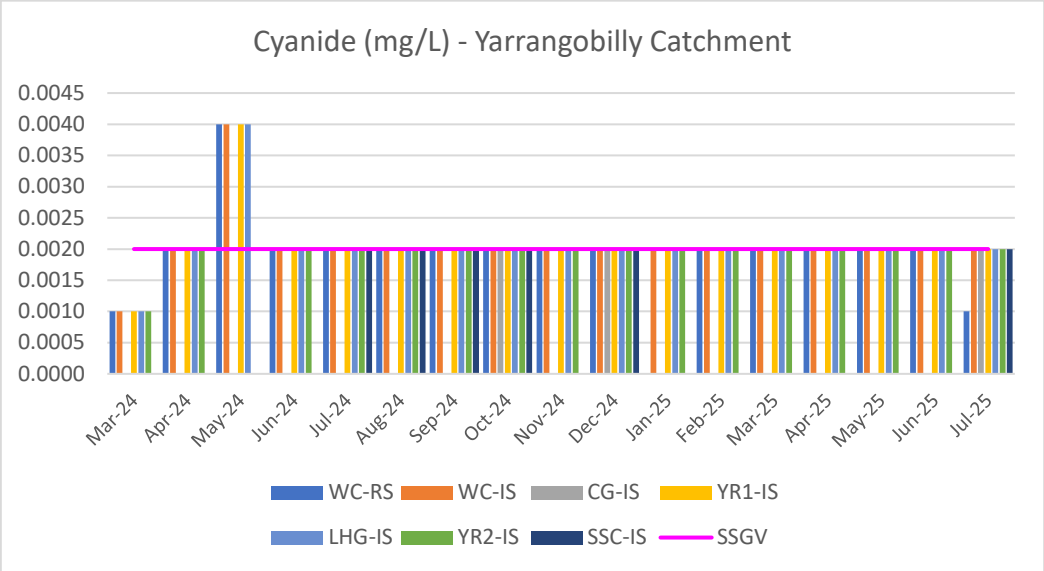

FIGURE 37: CYANIDE FOR YARRANGOBILLY RIVER CATCHMENT

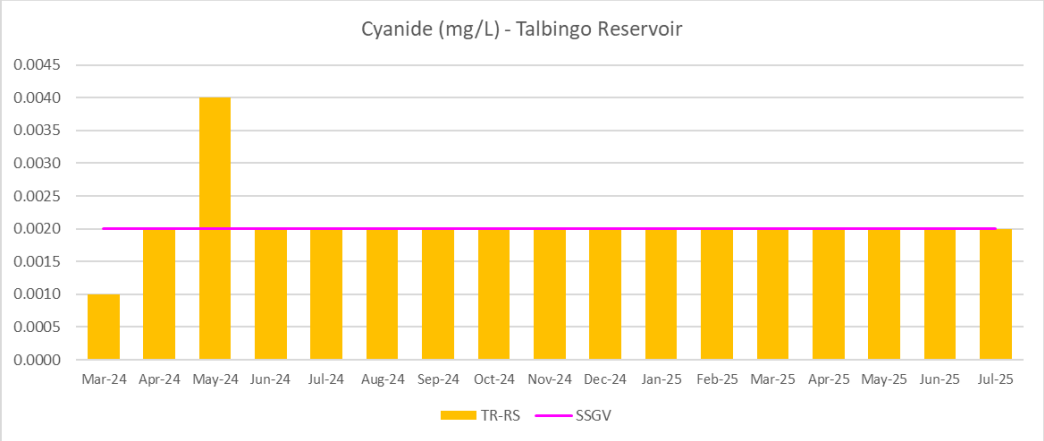

FIGURE 38: Cyanide for Talbingo Reservoir

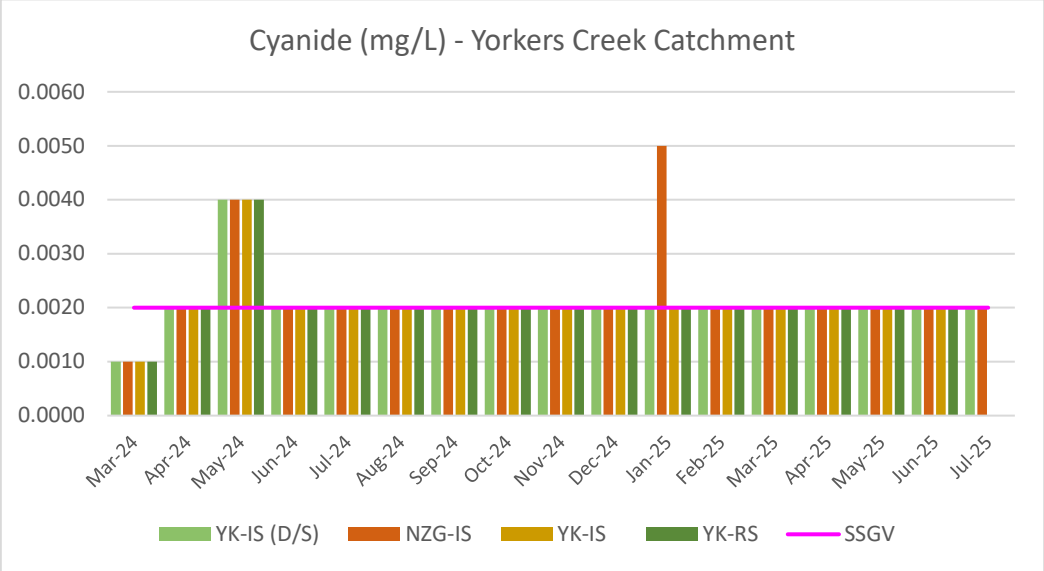

FIGURE 39: CYANIDE FOR YORKERS CREEK CATCHMENT

5.2.1.13 Total Hardness

Within the Yarrangobilly River Catchment, $CaCO_3$ (mg/L) levels decreased across most sites between June 2025 and July 2025, though several sites continued to exceed the June — November SSGV, particularly CG-IS and LHG-IS (refer to FIGURE 40). The Talbingo Reservoir exhibited an increase from June 2025 with slight exceedance above the June — November SSGV (refer to FIGURE 41). Yorkers Creek Catchment expressed a decrease in $CaCO_3$ from June 2025 to July 2025 although NZG-IS continued to exceed the June — November SSGV (FIGURE 42).

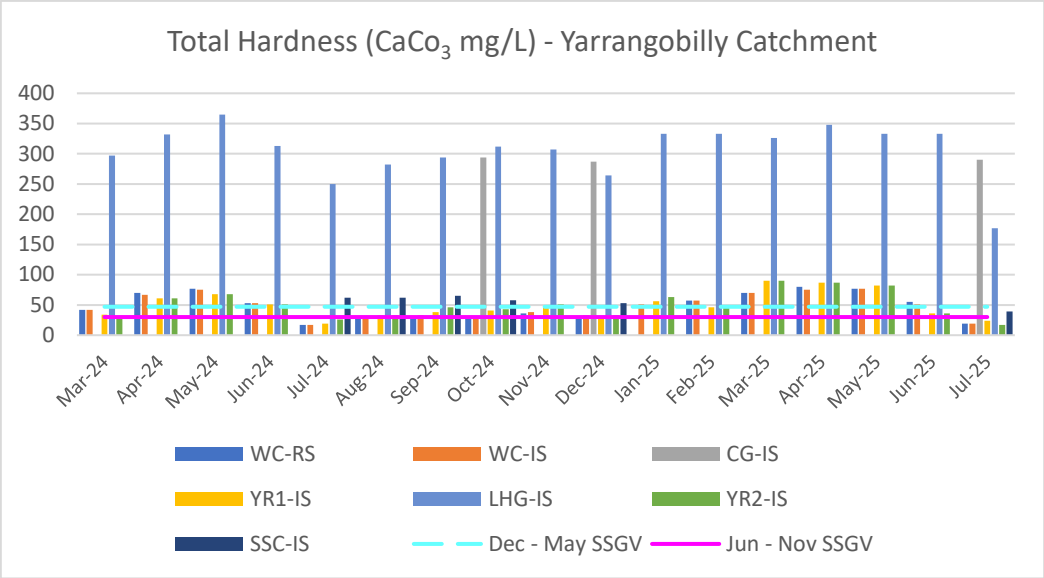

FIGURE 40: $CACO_3$ FOR YARRANGOBILLY RIVER CATCHMENT

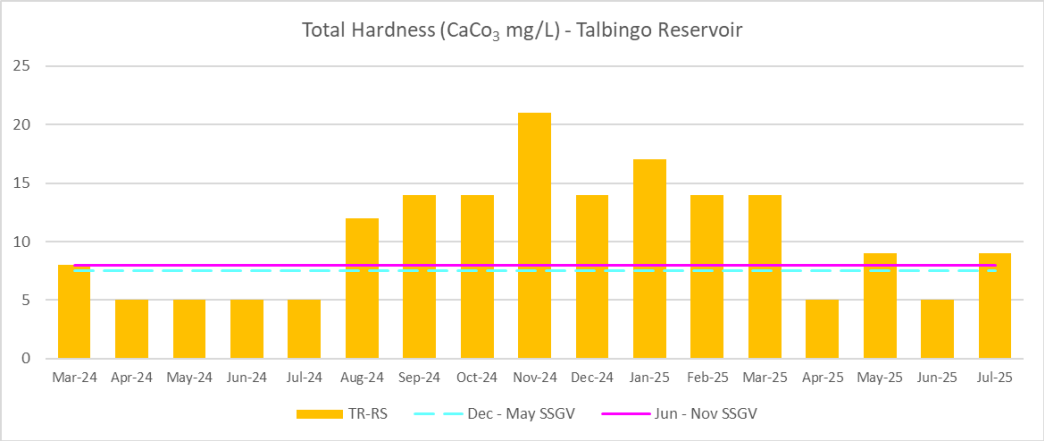

FIGURE 41: $CaCO_3$ for Talbingo Reservoir

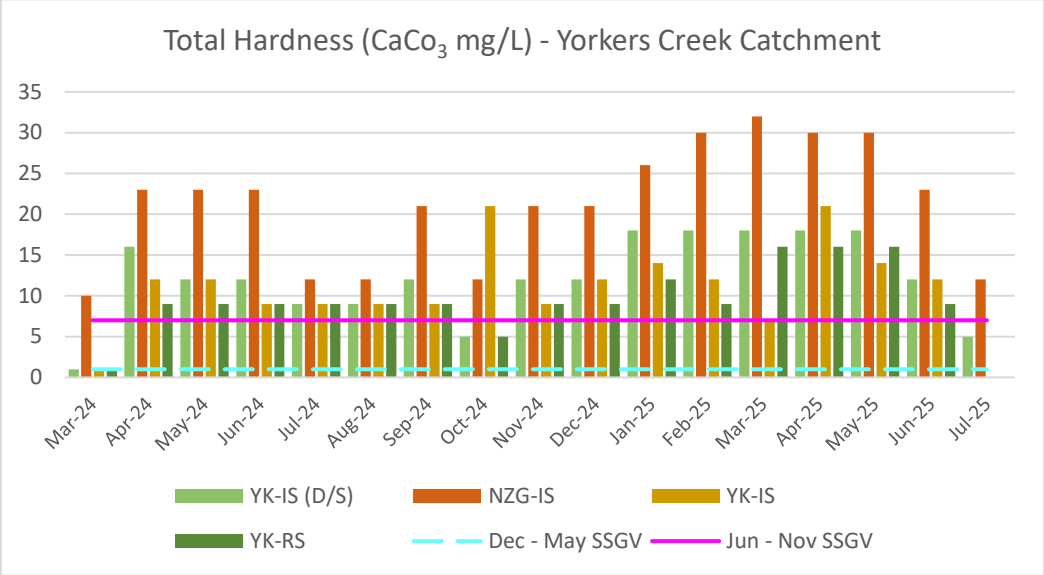

FIGURE 42: $CACO_3$ FOR YORKERS CREEK CATCHMENT

5.2.1.14 Total Kjeldahl Nitrogen

TKN (mg/L) values in July 2025 were generally consistent across all catchments. Within the Yarrangobilly Catchment a slight exceedance of the SSGV was identified at WC-IS (refer to FIGURE 43). The Talbingo Reservoir recorded stable results below the June — November SSGV (FIGURE 44). Yorkers Creek Catchment exhibited results meeting the June — November SSGV (FIGURE 45).

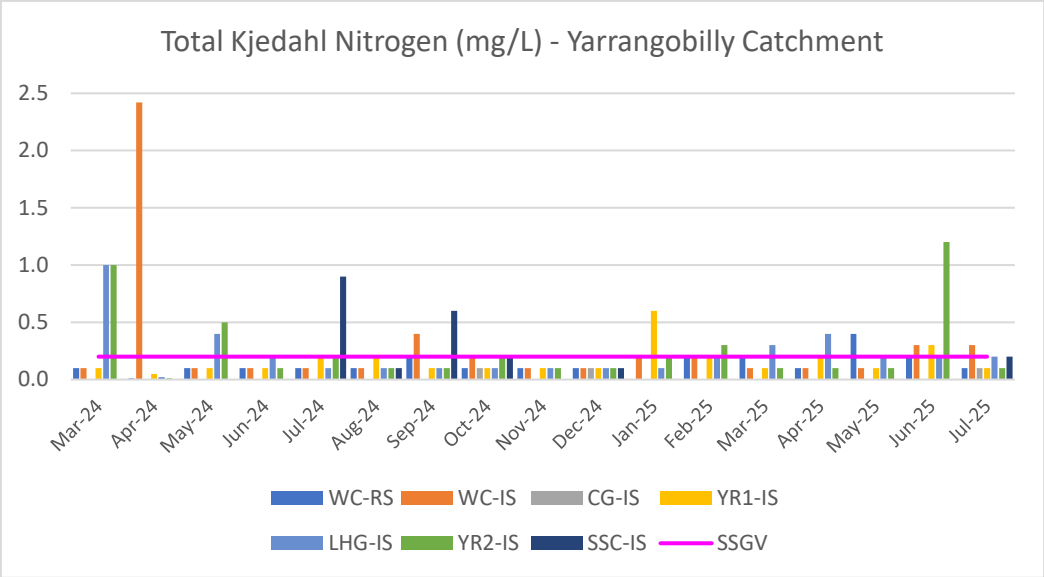

FIGURE 43: TKN FOR YARRANGOBILLY RIVER CATCHMENT

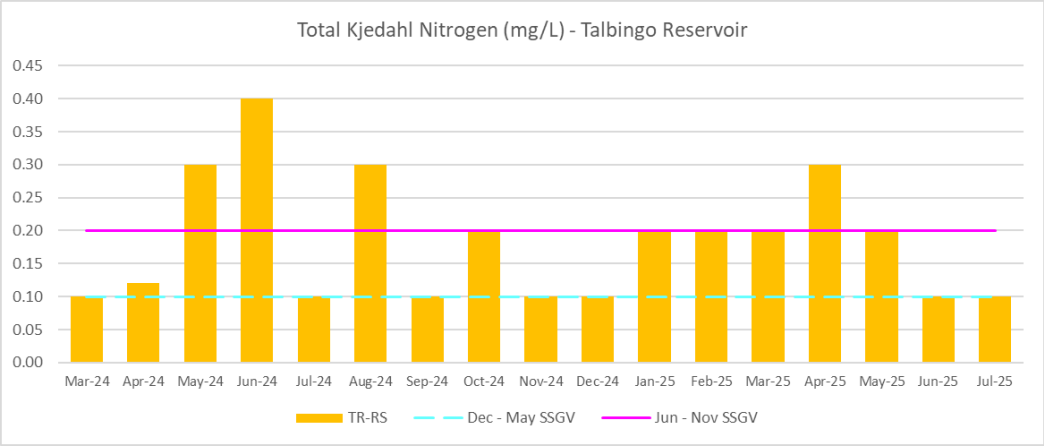

FIGURE 44: TKN for Talbingo Reservoir

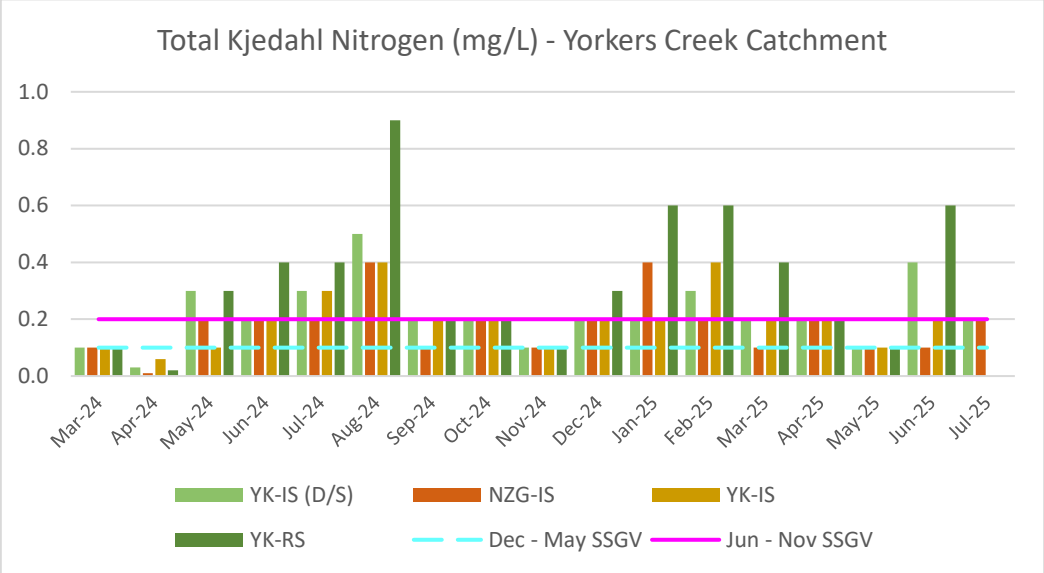

FIGURE 45: TKN FOR YORKERS CREEK CATCHMENT

5.2.1.15 Total Nitrogen

TN (mg/L) values consistently remained below the SSGV across all catchments (FIGURE 46-48) with the exception of WC-IS marginally exceeding the SSGV with a result of 0.3mg/L (FIGURE 46)

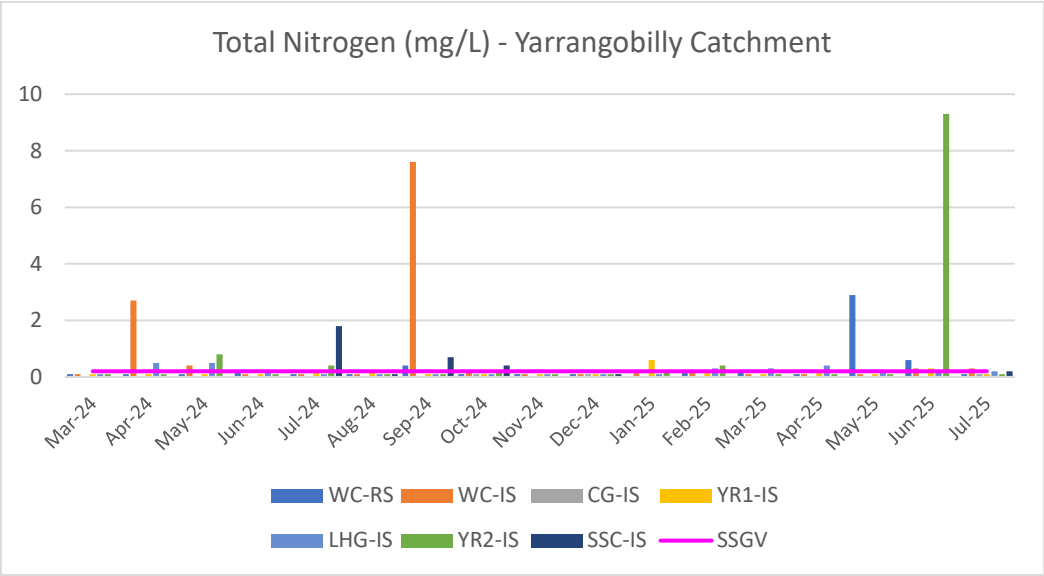

FIGURE 46: TN FOR YARRANGOBILLY RIVER CATCHMENT

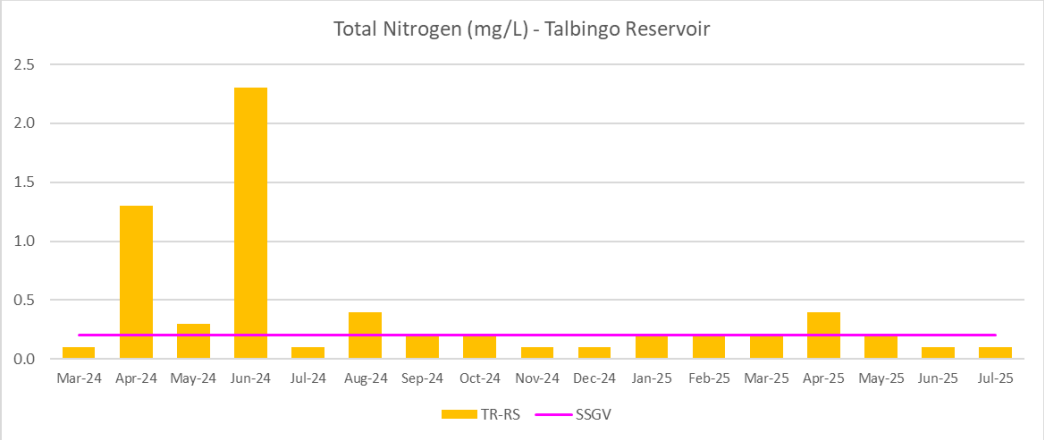

FIGURE 47: TN for Talbingo Reservoir

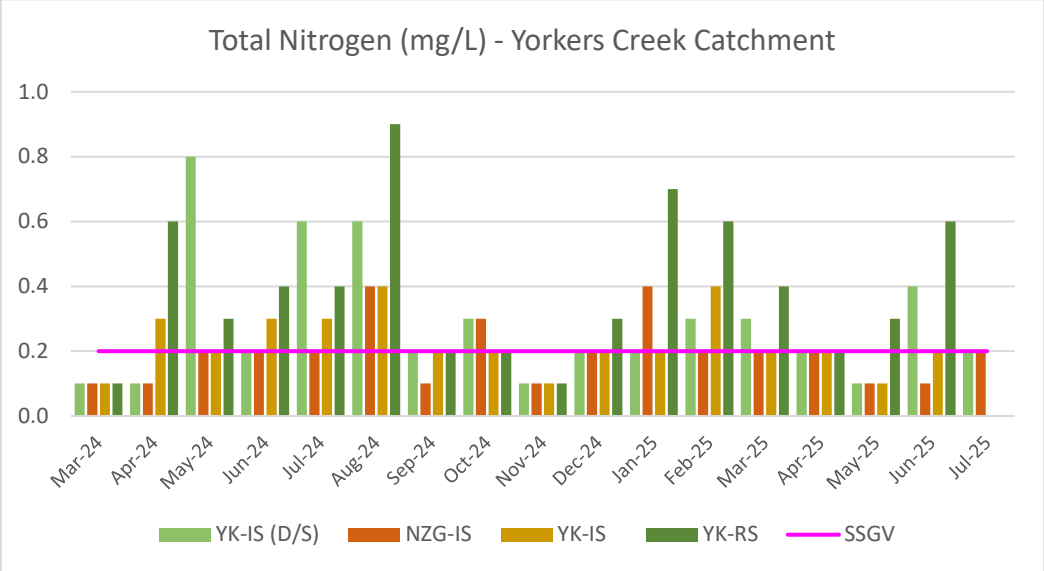

FIGURE 48: TN FOR YORKERS CREEK CATCHMENT

5.2.1.16 Total Phosphorus

TP (mg/L) levels fluctuated from June 2025 across each catchment. A marginal increase of TP was identified at each of the Yarrangobilly Catchment sampling sites, with exceedance identified against the SSGV (FIGURE 49). A reduction in TP between June 2025 and July 2025 was noted at the Talbingo Reservoir although continued exceedance of SSGV values was exhibited (FIGURE 50). Reduction in TP was observed at the Yorkers Creek Catchment sampling sites although continued exceedance of the SSGV was apparent (FIGURE 51).

The sudden peak in total phosphorus identified at LHG-IS in May 2025 was likely a result of laboratory error and has been removed from the graph.

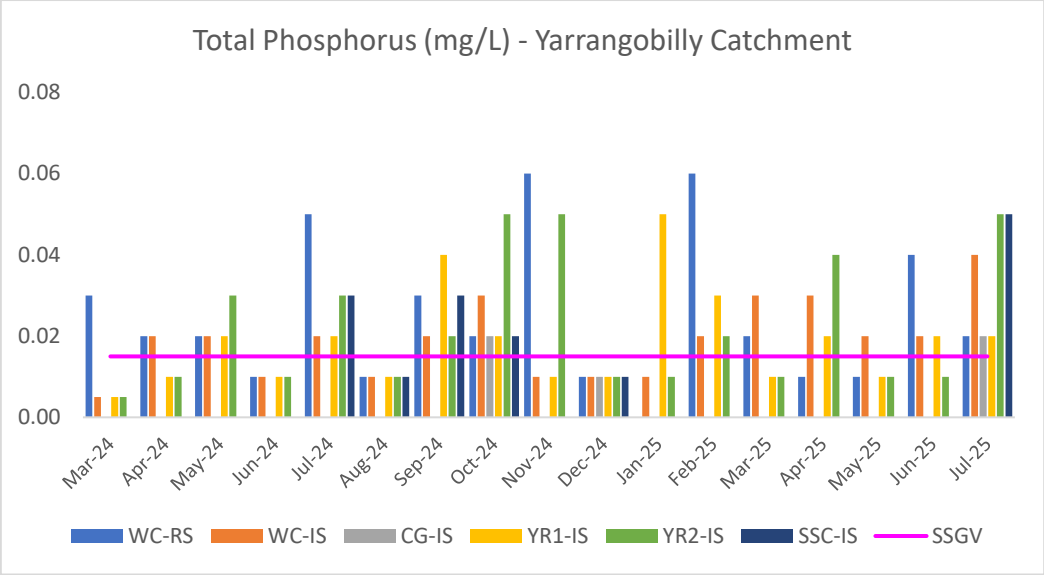

FIGURE 49: TP FOR YARRANGOBILLY RIVER CATCHMENT

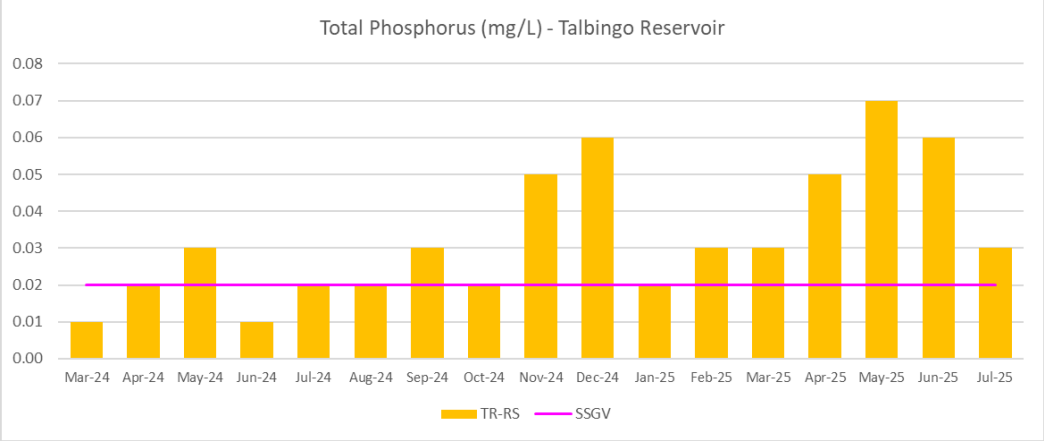

FIGURE 50: TP for Talbingo Reservoir

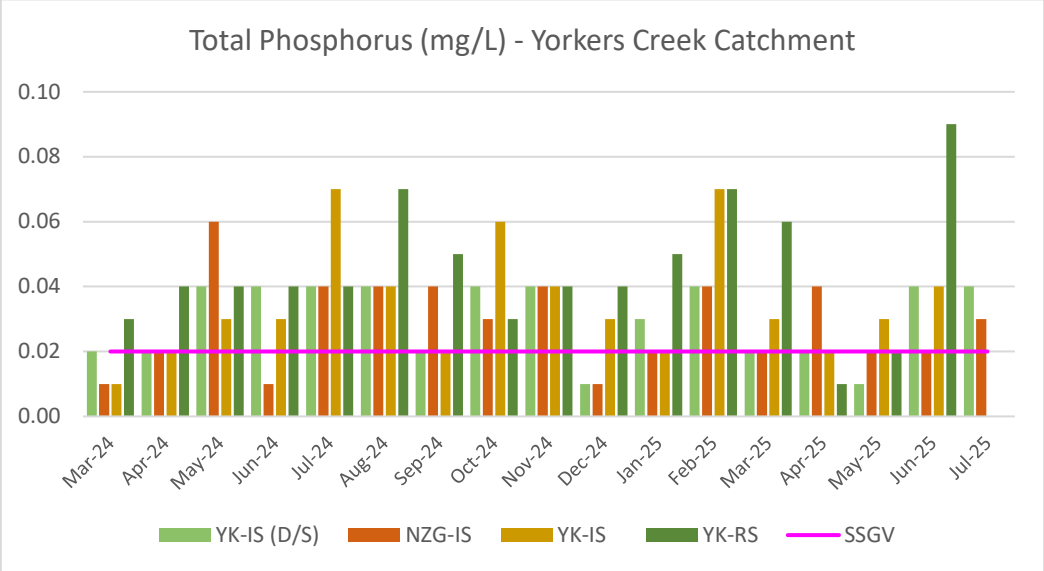

FIGURE 51: TP FOR YORKERS CREEK CATCHMENT

5.2.1.17 Reactive Phosphorus

All sites measured below the LOR for RP (mg/L), refer to FIGURE 52 to FIGURE 54.

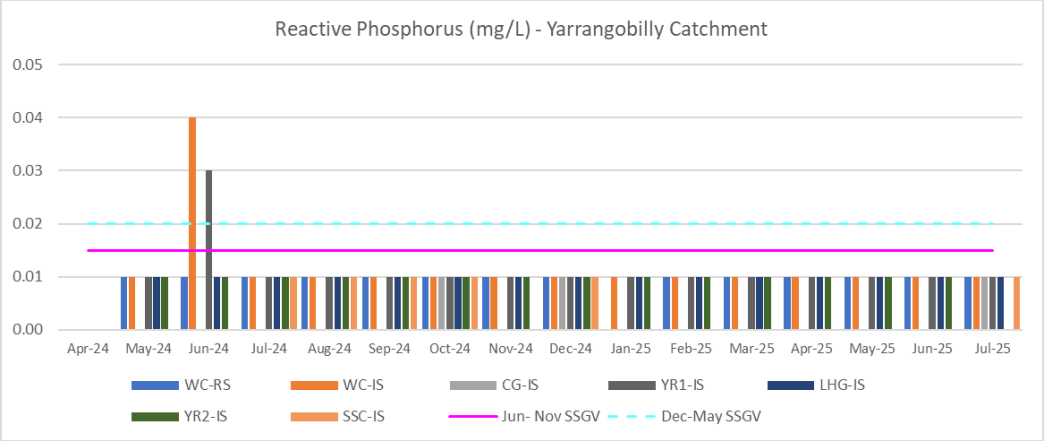

FIGURE 52: RP FOR YARRANGOBILLY RIVER CATCHMENT

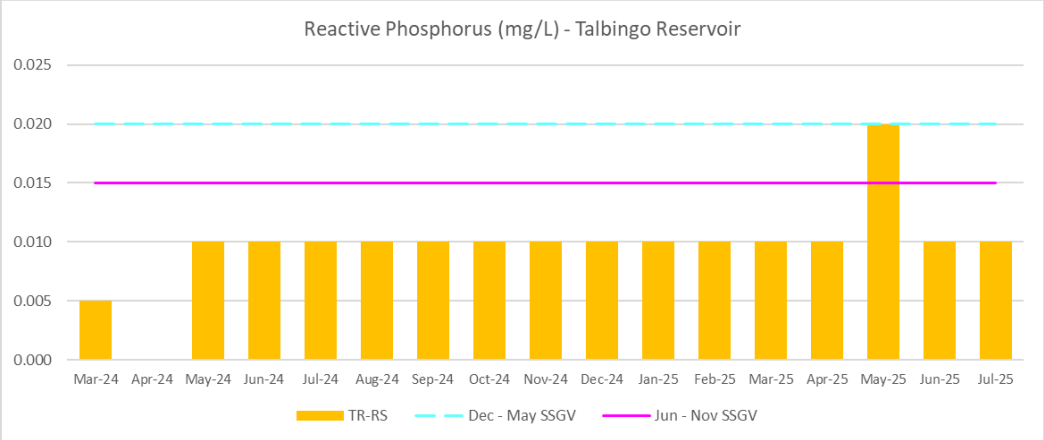

FIGURE 53: RP FOR TALBINGO RESERVOIR

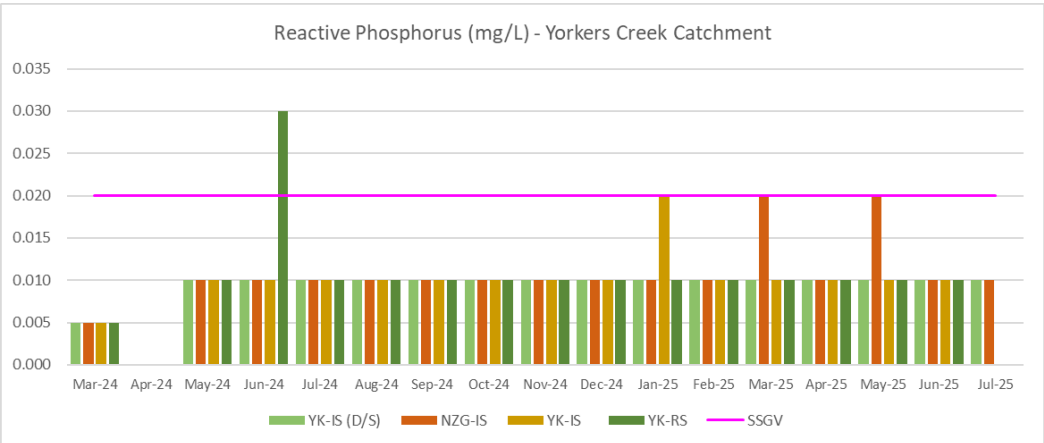

FIGURE 54: RP FOR YORKERS CREEK CATCHMENT

5.2.2 Dissolved Metals

Dissolved metals exceeding the relevant SSGV are listed in Table 4.

Table 4: Results for Dissolved Metals

DISSOLVED METALS RESULTS				
Analyte	**Site**	**Result (mg/L)**	**SSGV (mg/L)**	**Comment**
Al	WC-RS	0.06	0.03	The following Yarrangobilly Catchment samples exceeded the SSGV of 0.03mg/L: WC-RS, WC-IS, YR1-IS, LHG-IS, YR2-IS and SSC-IS. TR-RS from Talbingo Reservoir exceeded the SSGV value of 0.015mg/L. YK-IS(D/S) from the Yorkers Creek Catchment exceeded the SSGV value of 0.32mg/L.
	WC-IS	0.06		
	YR1-IS	0.12		
	LHG-IS	0.09		
	YR2-IS	0.08		
	SSC-IS	0.49		
	TR-RS	0.1	0.015	
	YK-IS(D/S)	0.45	0.32	
Fe	WC-IS	0.05	0.002	The following Yarrangobilly Catchment samples exceeded the SSGV value of 0.002mg/L: WC-IS, CG-IS, YR1-IS, LHG-IS, YR2-IS, and SSC-IS. TR-RS from Talbingo Reservoir exceeded the SSGV value of 0.02mg/L. YK-IS(D/S) from Yorkers Creek Catchment exceeded the SSGV value of 0.23mg/L.
	CG-IS	0.05		
	YR1-IS	0.06		
	LHG-IS	0.07		
	YR2-IS	0.05		
	SSC-IS	0.31		
	TR-RS	0.18	0.02	
	YK-IS (D/S)	0.29	0.23	
Mn	CG-IS	0.004	0.002	CG-IS (0.004mg/L) and SSC-IS (0.004mg/L) from the Yarrangobilly Catchment exceeded the SSGV of 0.002mg/L. All other Yarrangobilly Catchment sampling locations either met or were below the respective SSGV TR-RS (0.011mg/L) from the Talbingo Reservoir, exceeded the respective SSGV. YK-IS(D/S) (0.005mg/L) and YK-IS (0.004mg/L) from the Yorkers Creek Catchment exceeded the respective SSGV. All other sampling locations from the Yorkers Creek Catchment either met or were below the respective SSGV.
	SSC-IS	0.004		
	TR-RS	0.011		
	YK-IS(D/S)	0.005	0.003	
	YK-IS	0.004		

5.2.3 Total Metals

Total metals exceeding the DGV are listed in Table 5.

Table 5: Results for Total Metals

TOTAL METALS RESULTS				
Analyte	**Site**	**Result (mg/L)**	**DGV (mg/L)**	**Comment**
Al	WC-RS	0.17	0.027	Yarrangobilly Catchment, Talbingo Reservoir and Yorkers Creek Catchment exceeded the Al DGV value (0.027mg/L) at the following locations: WC-RS, WC-IS, CG-IS, YR1-IS, LHG-IS, YR2-IS, SSC-IS, TR-RS, YK-IS (D/S) and NZG-IS. All other samples were within their respective DGV value.
	WC-IS	0.14		
	CG-IS	0.03		
	YR1-IS	0.15		
	LHG-IS	0.46		
	YR2-IS	0.29		
	SSC-IS	1.64		
	TR-RS	0.16		
	YK-IS (D/S)	0.67		
	NZG-IS	0.21		
	YK-IS	0.26		
Cr	SSC-IS	0.002	0.00001	SSC-IS from the Yarrangobilly Catchment was the only recorded exceedance of the Cr DGV value (0.00001mg/L). All other samples were within their respective DGV value.
Cu	YR1-IS	0.002	0.001	YR1-IS from the Yarrangobilly Catchment was the only recorded exceedance of the Cu DGV value (0.001mg/L). All other samples were within their respective DGV value.
Pb	SSC-IS	0.003	0.001	SSC-IS from the Yarrangobilly Catchment was the only recorded exceedance of the Pb DGV value (0.001mg/L). All other samples were within their respective DGV value.
Zn	SSC-IS	0.008	0.005	SSC-IS from the Yarrangobilly Catchment and TR-RS from the Talbingo Reservoir were the only recorded exceedance of the DGV value (0.005mg/L). All other samples were within their respective DGV value.
	TR-RS	0.009		
Fe	LHG-IS	1.04	0.3	LHG-IS from the Yarrangobilly Catchment, SSC-IS from the Talbingo Reservoir and YK-IS (D/S) from the Yorkers Creek Catchment were the only recorded exceedance of the DGV value. All other samples were within their respective DGV value.
	SSC-IS	1.16		
	YK-IS (D/S)	0.48		

6 DISCUSSION

Below is a summary of key observations and discussion points from the July monitoring results:

- Potential impacts to SWQ:
  - » Transmission line clearing and bulk earthworks activities were ongoing within the Yarrangobilly and Yorkers Creek catchment areas
  - » Impact sites within the Yarrangobilly River catchment are influenced by other activities associated with the Snowy 2.0
  - » TR-RS is located in O'Hares Campground, a popular public recreational area for water based activities including boating. It is also located adjacent to ancillary infrastructure associated with Talbingo Reservoir
  - » Many reference sites and impact sites are located adjacent to publicly accessible tracks used for maintenance and recreational activities
  - » Hoof marks, fauna scats and aquatic fauna indicate presence of fauna in and around waterways increasing potential for erosion of banks and sedimentation into waterways
  - » Vegetative debris and materials in the water have potential to leach nutrients into waterways
  - » Existing eroded banks increase potential for sedimentation into waterways
  - » Waterways with shallow water depth are more prone to SWQ impacts due to lack of volume
  - » Overhanging vegetation have potential to fall into waterways and influence water parameters
  - » Vegetation cover along the riparian zone can influence the stability of the banks and groundwater which in turn may influence the waterways
  - » Sheen from organic decomposition observed on the surface of the water at LHG-IS and YK-RS may impact WQ parameters
- Sampling and analysis:
  - » Many of the results were recorded as below (<) the LOR
  - » Analysis of some parameters were inconclusive as the SSGV/DGV for a number of parameters was lower than the LOR from the laboratory
  - » Shallow water depth at sampling sites increased difficulty of sampling without disturbing bed
  - » Redox (mV), RP (mg/L) and DO (ppm) were analysed outside their respective holding times which may have decreased reliability of results
  - » YK-RS was dry at the time of monitoring, therefore no samples were collected
- SWQ parameters:
  - » Since March 2024, sites at the Yarrangobilly River catchment, including the reference site WC-RS, have consistently exceeded the relevant SSGV/DGV for the following parameters: $CaCO_3$, TSS, TDS, redox and total Al
  - » Since March 2024, Talbingo Reservoir has consistently exceeded the relevant SSGV/DGV for the following parameters: DO, pH, turbidity, ammonia, nitrogen oxides, $CaCO_3$, TSS, TDS, redox and total Al

- Since March 2024, sites at the Yorkers Creek catchment, including the reference site YK-RS, have consistently exceeded the relevant SSGV/DGV for the following parameters: DO, pH, turbidity, dissolved Mn, TP, nitrogen oxides, $CaCO_3$, TSS, TDS, redox, total Al and total Fe
- Presence of aquatic fauna and invertebrates at YR1-IS, LHG-IS, YR2-IS, TR-RS, YK-RS, YK-IS (D/S), NZG-IS and YK-IS indicate the SWQ at these waterways is sufficient to support aquatic ecosystems
- Presence of algae (not overgrown) and aquatic vegetation in waterways indicate the SWQ is sufficient to support aquatic ecosystems
- LHG-IS has consistently recorded exceedances across multiple parameters. This could be influenced by the shallow depth of the water and the high silt deposits observed in the bed
- CG-IS has only flowed twice during construction sampling, therefore, there is insufficient data to compare the results
- An increase in temperature (°C) was identified across Yarrangobilly Catchment and Yorkers Creek Catchment although decrease from June 2025 results was identified at TR-RS (7.9°C) during the July 2025 sampling period.
- During the July 2025 sampling period, all SPC (µS/cm) results were below the SSGV.
- DO (%) results across all sampling locations were generally similar to June 2025 results, although a marginal decrease was identified across each sampling location of Yorkers Creek Catchment.
- Turbidity (NTU) results varied across each sampling location. The greatest exceedances were recorded at LHG-IS (36.35 NTU), SSC-IS (37.69NTU) and TR-RS (7.5 NTU).
- TSS (mg/L) exceedance was recorded at LHG-IS (68mg/L), YR2-IS (9mg/L, SSC-IS (6mg/L), TR-RS (5mg/L), YK-IS (D/S) (6mg/L) and NZG-IS (4mg/L).
- TDS (mg/L) exceedance was recorded at CG-IS (347mg/L) which was the first exceedance since December 2024. Various sampling locations maintained exceedance of the SSGV although decreased from June 2025 results.
- Redox (mV) results obtained in July 2025 remained similar to May 2025. Redox (mV) was not assessed in June 2025 to provide a month to month comparison.
- Three marginal exceedances of nitrogen oxides (mg/L) were identified at WC-IS (0.3mg/L), TR-RS (0.1mg/L) and YK-IS (D/S) (0.3mg/L). All other sampling locations remained within their respective SSGV.
- Sampling locations across all three catchments varied in ammonia (mg/L) levels, with the greatest exceedance recorded at WC-IS (0.3mg/L). Marginal exceedance was obtained from CG-IS (0.04mg/L), TR-RS (0.02mg/L) and NZG-IS (0.02mg/L). All remaining sampling locations remained below their respective SSGV.
- A marginal exceedance of TKN (mg/L) was recorded at WC-IS (0.3mg/L), YK-IS (D/S) (0.2mg/L) and NZG-IS (0.2mg/L). All other sampling locations either met or were below their respective SSVG.
- TP (mg/L) levels were generally consistent with previous sampling periods, with only marginal exceedances recorded.
- Three dissolved metal analytes were recorded in exceedance across various sampling locations. The following analytes were in exceedance, Al, Fe and Mn. It is noted that SSC-IS (0.31mg/L) is 155 times the SSGV.

- Six total metal analytes (total Al, Cr, Cu, Pb, Zn and Fe) were identified in exceedance across various sampling locations during July 2025. It is noted that SSC-IS (0.002mg/L) was 200 times above the respective total Cr DGV during the July 2025 sampling period.

7 CONCLUSION

Monthly construction SWQ monitoring was undertaken on 26 and 29 July 2025 in accordance with EPL 21753. Monitoring was completed using the revised methodology outlined in Section 3 at the 12 locations listed in Table 1.

The results from the construction SWQ monitoring program were reported for three key catchments: Yarrangobilly River, Talbingo Reservoir, and Yorkers Creek. Each catchment had a reference site, with impact sites also monitored for comparison. Key parameters such as temperature, pH, DO, SPC, EC, turbidity, TSS, redox, ammonia, nitrogen oxides, cyanide, TKN, $CaCO_3$, TN, TP, RP and metals (both dissolved and total) were analysed.

Between June and July 2025, water quality across the Yarrangobilly River Catchment, Talbingo Reservoir, and Yorkers Creek Catchment remained largely consistent with expected seasonal trends, though several exceedances of the June–November Site-Specific Guideline Values (SSGVs) were recorded across key parameters.

Temperature (°C) in the Yarrangobilly River Catchment remained relatively stable, ranging between 6°C and 9°C, while the Talbingo Reservoir exhibited a slight decrease from 10.5°C to 8.2°C. The Yorkers Creek Catchment maintained consistent cooler temperatures between 5.5°C and 6.5°C, indicating a period of thermal stability across the monitoring network.

pH levels increased across most Yarrangobilly River sites (≈+0.2–0.6 units), exceeding the June–November SSGV at most sites. In contrast, the Talbingo Reservoir showed a slight decrease from 8.3 to 7.8 pH, aligning more closely with the guideline value, while Yorkers Creek pH values decreased marginally but remained above the SSGV.

Dissolved Oxygen (%) remained generally consistent with previous sampling periods, with marginal improvements closer to the SSGV across all sampling sites excluding Yorkers creek which obtained marginally decreased levels at all sampling locations.

Specific Conductance (SPC µS/cm) remained relatively unchanged across Yarrangobilly River sites, with LHG-IS showing a small decrease from June. Talbingo Reservoir and Yorkers Creek Catchment maintained SPC values well below their respective SSGV.

Electrical Conductivity (EC µS/cm) measurements taken in July 2025, were within the June–November SSGV at most Yarrangobilly sites except CG-IS, which slightly exceeded the guideline. Talbingo Reservoir and Yorkers Creek Catchment remained within acceptable limits.

Turbidity (NTU) increased across most Yarrangobilly River and Talbingo Reservoir sites, with several locations exceeding the SSGV (5 NTU). The greatest exceedance was identified at SSC-IS (37.69 NTU) Yorkers Creek also recorded exceedances across all monitoring sites.

Total Suspended Solids (TSS mg/L) decreased in the Yarrangobilly River Catchment compared to June, whereas Talbingo Reservoir recorded a significant increase from 1 mg/L to 5 mg/L, exceeding the SSGV. Yorkers Creek sites YK-IS and NZG-also remained above the guideline.

Total Dissolved Solids (TDS mg/L) decreased across Yarrangobilly sites, although CG-IS, LHG-IS, and SSC-IS exceeded the SSGV. Talbingo Reservoir TDS values reduced notably but continued to exceed the guideline, while Yorkers Creek results generally exceeded SSGVs except for NZG-IS, which met the previous December–May standard.

Redox (mV) levels remained above the June–November SSGV across all catchments, consistent with historical exceedances since November 2024, though values were lower than previous peak readings.

Nitrogen Oxides (mg/L) reduced across most sites between June and July 2025. YR2-IS showed a substantial decrease from 8.0 mg/L to approximately 0.1 mg/L, while Talbingo Reservoir increased slightly to 0.1 mg/L. Yorkers Creek Catchment recorded minor exceedances above the guideline.

Ammonia (mg/L) concentrations increased at several Yarrangobilly sites, notably WC-IS, YR2-IS, and SSC-IS, while Talbingo Reservoir showed a reduction and Yorkers Creek remained steady, with only NZG-IS showing an exceedance.

Cyanide (mg/L) remained below the Limit of Reporting (LOR) across all catchments.

Total Hardness ($CaCO_3$ mg/L) decreased across most Yarrangobilly River sites but continued to exceed the SSGV at CG-IS and LHG-IS. Talbingo Reservoir increased slightly above its SSGV, and Yorkers Creek decreased overall though NZG-IS remained elevated.

Total Kjeldahl Nitrogen (TKN mg/L) results were generally consistent across all catchments, with minor exceedance at WC-IS. Talbingo Reservoir and Yorkers Creek Catchment remained within the SSGV. Total Nitrogen (TN mg/L) remained below SSGVs at all sites except for WC-IS, which recorded a marginal exceedance of 0.3 mg/L.

Total Phosphorus (TP mg/L) increased slightly across Yarrangobilly River sites with continued exceedances, while Talbingo Reservoir and Yorkers Creek both showed reductions from June yet remained above SSGVs. The previously identified May 2025 TP spike at LHG-IS is considered likely due to laboratory error. Reactive Phosphorus (RP mg/L) was below the LOR across all catchments.

Dissolved metals analysis indicated exceedances for Al and Fe across multiple Yarrangobilly sites, including WC-RS, WC-IS, YR1-IS, LHG-IS, YR2-IS, and SSC-IS, with Talbingo Reservoir (TR-RS) and Yorkers Creek (YK-IS D/S) also exceeding their respective SSGVs. Mn results met or were below SSGVs in all catchments.

Total metals results showed exceedances for Al, Cr, Cu, Pb, Zn, and Fe.

- Al exceeded the DGV across all catchments, with the highest levels recorded at SSC-IS (1.64 mg/L).
- Cr, Cu, and Pb exceedances were isolated to SSC-IS and YR1-IS.
- Zn exceeded at SSC-IS and TR-RS.
- Fe exceeded at LHG-IS, SSC-IS, and YK-IS (D/S).

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Appendix A: Field Sheet (UGL, 2025)

UGL

WATER QUALITY MONITORING FIELD SHEET

Date: 26107125 **Personnel:** Ebony & katie **Sampling Purpose:** Monthly WQM July (surface water)

Site	Time	Temp (°C)	Water Pressure (mmhg)	DO (%)	SPC (µS/cm)	pH	Turbidity (NTU)	TSS (mg/L) LAB ANALYSIS	Observations
DGV:		-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 34.5mm in 24hr
Dec - May SSGV:		-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 90% 10-20mm
Jun - Nov SSGV:		-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: 12PM, overcast, rainy, windy, cold
WC-RS Wallace Creek	11:55	8.6	703.4	87.6	11.3 / EC 7.7	8.65 / 9.2	5.90 / MV 193.5	0.00	• High flow, elevated level, fast flow • vegetative debri • Rock lined banks & undercut & eroded • Large tree & exposed roots • slight yellow tinge to water
WC-IS Wallace Creek	12:07	8.1	703.8	85.9	11.2 / EC 7.6	8.28 / 9.4	9.92 / MV 199.4	0.00	• High flow, elevated level, fast flow • Blk berry • Recieved discharge from Track & SA • under bridge • Nearby deposits of FGJV Landslips & clean water drain.
CG-IS Cave Gully	1:51	10.1	702.1	85.1	13.1 / EC 80.9	8.30 / 9.3	2.60 / MV 179.0	0.00	• elevated level, High flow • vegetative debri • sandy bank • moss/ algae, overhanging veg, aquatic veg • clear visability • Pipe
YR1-IS Yarrangobilly River	11:16	9.3	706.2	88.8	15.3 / EC 10.7	10.03 / 8.6	7.02 / MV 207.5	0.00	• High flow, elevated level, fast flow • FGJV pumping out of sed basin upstream • Rocky bed • Blk Berry • Foam collecting on debri • moderate visability • slight yellow tinge.

UGL

WATER QUALITY MONITORING FIELD SHEET

Date: 26/07/25 | Personnel: Ebony & Katie | Sampling Purpose: Monthly WQM July (surface water)

Site	Time	Temp (°C)	Water Pressure (mmhg)	DO (%)	SPC (µS/cm)	pH	Turbidity (NTU)	TSS (mg/L) LAB ANALYSIS	Observations
DGV:		-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 34.5mm in 24hr
Dec - May SSGV:		-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 90% 10-20mm
Jun - Nov SSGV:		-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: 12PM, OVERCAST, RAINY, WINDY, COLD
DIS **LHG-IS** Lick Hole Gully	1:14	8.1	702.7	83.7 / EC 53.1	78.3	8.08 / 9.1	36.35 / MV 185.7	0.00	• moderate flow, elevated level • moderate clarity • milky colour • aquatic veg • shrubs & grass groundcover • adjacent to bridge & work road
YR2-IS Yarrangobilly River	12:44	8.1	703.5	86.0 / EC 7.6	11.2	7.98 / 9	11.35 / MV 191.5	0.00	• High flow, elevated level • minimal clarity • rocky bed, undecut banks, eroded banks • over hanging vea
SSC-IS Sheep Station Creek	2:19	9.4	704.6	84.5 / EC 14.2	20.2	8.08 / 9.1	37.69 / MV 177.5	0.00	• High flow, elevated level • Turbid brown/milky • over hanging veg • under ssc bridge • sump overtopped into it before project hrs. • Yellow tinge • white foam collecti on debri
W **TR-RS** Talbingo Reservoir 29.07.25	11:47	7.9	713.2	90 / EC 4.4	6.5	7.78	7.5 / MV 168.1	0.00	• moderate level • calm • rocky bed • aquatic vegetation • low visibility, slight yellow tinge.

UGL

WATER QUALITY MONITORING FIELD SHEET

Date: 29107125 **Personnel:** Ebony **Sampling Purpose:** Monthly WQM July (surface water)

Site	Time	Temp (°C)	Water Pressure (mmhg)	DO (%)	SPC (µS/cm)	pH	Turbidity (NTU)	TSS (mg/L) LAB ANALYSIS	Observations
DGV:		-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 0.8mm in 24hr
Dec - May SSGV:		-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 50% <1mm
Jun - Nov SSGV:		-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: 09h00, cloudy, cold
W **YK-RS** Yorkers Creek 29/07/25	09:45								DRY.
W **YK-IS** ~~(D/S)~~ Yorkers Creek	10:00	5.5°C	664.7	78.3	5.8 EC 3.6	7.55	32.45 mV 168.1	0.00	• Elevated level, fast flow • Elevated banks • Yellow tinge, reduced visibility • Turbid water, cloudy
W **NZG-IS** New Zealand Gully 29/07/25	09:17	5.7°C	668	81.2	7.9 EC 5.0	7.97	9.32 mV 169.7	0.00	• Elevated level, fast flow • Good visibility • Eroded banks, vegetated-leaves + sticks
W **YK-IS** Yorkers Creek (DIS)	8:45	5.8	660.2	81.6	6.4 EC 4.1	7.95	18.25 MV 170.2	0.00	• Elevated level, High flow • Yellow/brownish tinge to water, vegetative debri in water, groundcover & trees & overhonging veg. BIC berry • adjacent to bridge.

Appendix B: COA (ALS, 2025a), QA/QC Assessment (ALS, 2025b) and QCR (ALS, 2025c)

CERTIFICATE OF ANALYSIS

Work Order	: **ES2523525**	Page	: 1 of 8
Client	: **UGL LIMITED**	Laboratory	: Environmental Division Sydney
Contact	: CAMILLE PALMER	Contact	: Customer Services ES
Address	: Level 4, 40 Miller Street North Sydney 2060	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
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Project	: Monthly WQM July 2025	Date Samples Received	: 04-Aug-2025 15:28
Order number	: 4501837828	Date Analysis Commenced	: 04-Aug-2025
C-O-C number	: 85941	Issue Date	: 08-Aug-2025 12:49
Sampler	: EBONY HAMES		
Site	: Lobs Hole		
Quote number	: ES24UGLLIM0001_V4		
No. of samples received	: 12		
No. of samples analysed	: 12		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- TDS by method EA-015 may bias high due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	YR1-IS	YR2-IS	SSC-IS	LHG-IS	WC-RS
				Sampling date / time	26-Jul-2025 14:54	26-Jul-2025 15:13	26-Jul-2025 15:21	26-Jul-2025 15:28	26-Jul-2025 15:33
Compound	CAS Number	LOR	Unit		ES2523525-001	ES2523525-002	ES2523525-003	ES2523525-004	ES2523525-005
					Result	Result	Result	Result	Result
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**44**	**37**	**71**	**247**	**36**
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	1	mg/L		**2**	**9**	**6**	**68**	**6**
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L		**24**	**17**	**39**	**177**	**19**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.12**	**0.07**	**0.49**	**0.09**	**0.06**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Manganese	7439-96-5	0.001	mg/L		**0.001**	**0.002**	**0.004**	**0.005**	**0.001**
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		**0.06**	<0.05	**0.31**	**0.07**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.15**	**0.29**	**1.64**	**0.46**	**0.17**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.002**	<0.001	**0.001**	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	**0.003**	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	**0.008**	<0.005	<0.005
Manganese	7439-96-5	0.001	mg/L		**0.005**	**0.013**	**0.015**	**0.134**	**0.011**

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	YR1-IS	YR2-IS	SSC-IS	LHG-IS	WC-RS
				Sampling date / time	26-Jul-2025 14:54	26-Jul-2025 15:13	26-Jul-2025 15:21	26-Jul-2025 15:28	26-Jul-2025 15:33
Compound	CAS Number	LOR	Unit		ES2523525-001	ES2523525-002	ES2523525-003	ES2523525-004	ES2523525-005
					Result	Result	Result	Result	Result
EG020T: Total Metals by ICP-MS - Continued									
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		**0.20**	**0.28**	**1.16**	**1.04**	**0.16**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.002	mg/L		<0.002	<0.002	<0.002	<0.002	<0.002
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		<0.01	**0.06**	**0.16**	**0.02**	<0.01
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.02**	**0.01**	**0.01**	**0.03**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.02**	**0.01**	**0.01**	**0.03**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		<0.1	**0.1**	**0.2**	**0.2**	**0.1**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		<0.1	**0.1**	**0.2**	**0.2**	**0.1**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.02**	**0.05**	**0.05**	**0.04**	**0.02**
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	WC-IS	CG-IS	YK-IS	NZG-IS	YK-IS D/S
				Sampling date / time	26-Jul-2025 15:37	26-Jul-2025 15:41	29-Jul-2025 10:39	29-Jul-2025 10:45	29-Jul-2025 11:11
Compound	CAS Number	LOR	Unit		ES2523525-006	ES2523525-007	ES2523525-008	ES2523525-009	ES2523525-010
					Result	Result	Result	Result	Result
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**35**	**347**	**27**	**31**	**55**
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	1	mg/L		**7**	<1	**4**	**4**	**6**
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L		**19**	**290**	**5**	**12**	**5**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.06**	<0.01	**0.26**	**0.18**	**0.45**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Manganese	7439-96-5	0.001	mg/L		**0.001**	<0.001	**0.004**	**0.003**	**0.005**
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	**0.20**	**0.15**	**0.29**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.14**	**0.03**	**0.68**	**0.21**	**0.67**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Manganese	7439-96-5	0.001	mg/L		**0.010**	**0.004**	**0.008**	**0.006**	**0.009**

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	WC-IS	CG-IS	YK-IS	NZG-IS	YK-IS D/S
				Sampling date / time	26-Jul-2025 15:37	26-Jul-2025 15:41	29-Jul-2025 10:39	29-Jul-2025 10:45	29-Jul-2025 11:11
Compound	CAS Number	LOR	Unit		ES2523525-006	ES2523525-007	ES2523525-008	ES2523525-009	ES2523525-010
					Result	Result	Result	Result	Result
EG020T: Total Metals by ICP-MS - Continued									
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Iron	7439-89-6	0.05	mg/L		**0.13**	<0.05	**0.46**	**0.21**	**0.48**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.002	mg/L		<0.002	<0.002	<0.002	<0.002	<0.002
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.30**	**0.04**	**0.04**	**0.02**	<0.01
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.02**	**0.07**	**0.01**	**0.01**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.02**	**0.07**	**0.01**	**0.01**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.3**	<0.1	**0.3**	**0.2**	**0.2**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**0.3**	<0.1	**0.3**	**0.2**	**0.2**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.04**	**0.02**	**0.06**	**0.03**	**0.04**
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	TR-RS	TR-RS Duplicate	----	----	----
				Sampling date / time	29-Jul-2025 11:16	29-Jul-2025 11:20	----	----	----
Compound	CAS Number	LOR	Unit		ES2523525-011	ES2523525-012	--------	--------	--------
					Result	Result	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**22**	**21**	----	----	----
EA025: Total Suspended Solids dried at 104 ± 2°C									
Suspended Solids (SS)	----	1	mg/L		**5**	**4**	----	----	----
ED093F: SAR and Hardness Calculations									
Total Hardness as CaCO3	----	1	mg/L		**9**	**9**	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.10**	**0.11**	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.002**	**0.003**	----	----	----
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.06**	**0.07**	----	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.16**	**0.20**	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.009**	<0.005	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.011**	**0.011**	----	----	----

Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	TR-RS	TR-RS Duplicate	----	----	----
				Sampling date / time	29-Jul-2025 11:16	29-Jul-2025 11:20	----	----	----
Compound	CAS Number	LOR	Unit		ES2523525-011	ES2523525-012	--------	--------	--------
					Result	Result	----	----	----
EG020T: Total Metals by ICP-MS - Continued									
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.18**	**0.20**	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	----	----	----
EK026SF: Total CN by Segmented Flow Analyser									
Total Cyanide	57-12-5	0.002	mg/L		<0.002	<0.002	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.02**	**0.05**	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.03**	**0.03**	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**0.03**	**0.03**	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**0.1**	**0.1**	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ **Total Nitrogen as N**	----	0.1	mg/L		**0.1**	**0.1**	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.03**	**0.02**	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	----	----	----

Appendix C: July 2025 SWQ Monitoring Results

Parameter	Date	Sheen/ oil/ grease	Temp. (°C)	Dissolved Oxygen (DO %)	DO (ppm)	Specific EC (SPC uS/cm)	EC (uS/cm)	pH	Redox (mV)	Turbidity (NTU)	Dissolved Al (mg/L)	Dissolved As (mg/L)	Dissolved Cd (mg/L)	Dissolved Cr (mg/L)	Dissolved Cu (mg/L)	Cyanide (mg/L)	Dissolved Fe (mg/L)	Dissolved Pb (mg/L)	Dissolved Mn (mg/L)
YARRANGOBILLY CATCHMENT																			
Default Guideline Value (DGV)		No	-	90-110	-	30-350	30-350	6.5-8	-	2-25	0.027	0.0008	0.0006	0.00001	0.001	0.004	0.3	0.001	1.2
Limit of Reporting (LOR)				-	-	-	-	-	-	0.1	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
Dec - May Site Specific Guideline Value (SSGV)				96.2	9.08	115	93.2	7.85	79.1	0.37	0.03	0.0003	0.00002	0.00001	0.0002	0.002	0.03	0.001	0.002
June - Nov SSGV				89.7	10.28	88	60.85	7.62	98.4	5.12	0.04	0.0003	0.00002	0.00001	0.0002	0.002	0.02	0.001	0.002
WC-RS	Mar-24	No	10.7	87.5	9.72	143.6	104.3	7.80	25.9	0.1	0.02	0.00015	0.00001	0.00001	0.002	0.001	0.03	0.002	0.003
	Apr-24	No	10.7	94.8	-	145.6	-	8.44	-	1.05	0.01	0.001	0.0001	0.001	0.001	0.002	0.11	0.001	0.007
	May-24	No	2.1	93.8	-	155	-	8.05	-	0.39	0.01	0.001	0.0001	0.001	0.001	0.004	0.05	0.001	0.009
	Jun-24	No	4.7	92.9	-	126.8	-	7.51	-	0.56	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.005
	Jul-24	No	6.4	91.9	-	46.6	-	6.96	-	9.24	0.07	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Aug-24	No	10.4	80.6	-	47.1	-	7.80	-	1.6	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Sep-24	No	11.7	92.0	-	43	-	7.86	-	0.5	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Oct-24	No	9.3	92.7	-	52	-	7.55	-	1.3	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Nov-24	No	12.2	90.6	9.7	82	82	7.63	235	0.6	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.004
	Dec-24	Yes	12.7	90.0	10.0	41.8	71.0	7.75	250	1.4	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
*sample not an	Jan-25	No	26.6	83.2	-	27.3	-	8.13	-	0.65	-	-	-	-	-	-	-	-	-
	Feb-25	No	16.3	86.0	9.2	26.3	123	7.76	158	4.01	0.06	0.001	0.0001	0.001	0.001	0.002	0.08	0.001	0.008
	Mar-25	Yes	14.7	92.7	9.8	34.6	145	8.32	162	1.16	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.008
	Apr-25	No	17.6	91.8	10.5	34	155	8.19	202	0.9	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.007
	May-25	Yes	9.9	96.0	-	33.7	24	8.59	110.8	1.04	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.007
	Jun-25	No	5.9	89.1	-	12.4	7.9	8.63	113.9	2.87	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.005
	Jul-25	No	8.6	87.6	-	11.3	7.7	9.20	193.5	5.9	0.06	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001
WC-IS	Mar-24	No	10.7	87.1	9.68	145.9	105.9	7.83	41.9	0.1	0.03	0.00015	0.00001	0.00001	0.002	0.001	0.03	0.002	0.003
	Apr-24	No	10.7	95.0	-	145.2	-	8.45	-	0.9	0.01	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.006
	May-24	No	2.1	94.1	-	154.9	-	7.86	-	0.3	0.01	0.001	0.0001	0.001	0.001	0.004	0.05	0.001	0.007
	Jun-24	No	4.8	93.3	-	126.7	-	7.72	-	0.35	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.004
	Jul-24	No	6.6	91.2	-	46.6	-	6.96	-	7.65	0.07	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Aug-24	No	10.5	91.5	-	45.6	-	7.83	-	5.85	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Sep-24	No	11.7	92.9	-	54.4	-	7.83	-	5.5	0.04	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.005
	Oct-24	No	9.5	93.3	-	52.1	-	7.66	-	1.4	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Nov-24	No	12.2	90.4	9.9	82	82	7.63	245	0.3	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Dec-24	No	12.7	91.1	10.1	41.3	72	7.48	259	1.4	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Jan-25	No	17.8	85.7	9.1	24.5	108	7.80	232	2.75	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.007
	Feb-25	No	16.3	85.2	9.4	26	123	7.80	164	4.08	0.06	0.001	0.0001	0.001	0.001	0.002	0.08	0.001	0.007
	Mar-25	No	16.1	95.8	9.7	31.8	145	8.33	170	1.13	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.006
	Apr-25	No	17.3	92.8	10.6	33.5	155	8.66	197	1.02	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.005
	May-25	No	9.4	96.1	-	34.3	24.1	8.71	110.9	1.4	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.006
	Jun-25	No	5.8	89.6	-	24.5	15.5	8.30	113.6	5.1	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003
	Jul-25	No	8.1	85.9	-	11.2	7.6	9.40	199.4	9.92	0.06	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
CG-IS	Mar-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Aug-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sep-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Oct-24	No	12.7	93.2	-	382.8	-	8.17	-	1	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Nov-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Dec-24	No	14	88.5	9.7	29	480	8.12	255	2.84	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Jan-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mar-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-25	No	10.7	85.1	-	13.1	80.9	9.30	179	2.6	0.03	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.004
YR1-IS	Mar-24	No	12.2	88.2	9.47	129.4	97.7	7.81	53.8	0.1	0.05	0.00015	0.00001	0.000005	0.002	0.001	0.03	0.0005	0.002
	Apr-24	No	11.3	97.4	-	136.1	-	8.49	-	1.23	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	May-24	No	3.1	95.6	-	138.8	-	7.91	-	0.42	0.01	0.001	0.0001	0.001	0.001	0.004	0.05	0.001	0.002
	Jun-24	No	5.6	94.3	-	112.4	-	7.80	-	1.94	0.02	0.001	0.0001	0.001	0.001	0.002	0.14	0.001	0.003
	Jul-24	No	6.4	93.0	-	51.5	-	6.93	-	10.05	0.18	0.001	0.0001	0.001	0.001	0.002	0.11	0.001	0.002
	Aug-24	No	8.6	89.8	-	55.8	-	7.87	-	3.62	0.07	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Sep-24	No	13.3	93.1	-	61.4	-	7.77	-	0.79	0.04	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Oct-24	No	12.5	94.9	-	66.8	-	7.77	-	2	0.04	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Nov-24	No	15	92.2	9.7	105	105	7.69	251	0.8	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.020
	Dec-24	No	14.3	91.1	9.9	40.4	69	7.52	253	3.94	0.1	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.001
	Jan-25	No	19.5	86.6	9	19.2	110	8.01	235	14.18	0.04	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003
	Feb-25	No	17.2	86.3	9.3	21.8	101	7.78	168	4.35	0.14	0.001	0.0001	0.001	0.001	0.002	0.13	0.001	0.005
	Mar-25	No	19.5	101.4	9.6	39.3	178	8.46	175	1.16	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Apr-25	Yes	18.7	91.6	10.4	36.3	171	8.76	195	0.98	0.01	0.001	0.0001	0.001	0.01	0.002	0.05	0.001	0.006
	May-25	Yes	10.3	95.1	-	35.1	25.2	8.84	110.9	1.29	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Jun-25	No	-	-	-	-	11.5	-	122.1	-	0.14	0.001	0.0001	0.001	0.001	0.002	0.12	0.001	0.003
	Jul-25	No	9.3	88.8	-	15.3	10.7	8.60	207.5	7.02	0.12	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.001
LHG-IS	Mar-24	Yes	11.9	59.2	6.38	596	447.2	7.35	-17.2	408.5	0.2	0.00015	0.00001	0.001	0.003	0.001	0.18	0.005	0.040
	Apr-24	No	12.5	60.1	-	658	-	7.69	-	69.72	0.01	0.001	0.0001	0.001	0.001	0.002	0.34	0.001	0.184
	May-24	No	7	63.3	-	618	-	7.00	-	1003.7	0.01	0.001	0.0001	0.001	0.001	0.004	0.71	0.001	0.184
	Jun-24	No	8.5	70.4	-	616	-	7.65	-	10.05	0.01	0.001	0.0001	0.001	0.001	0.002	0.48	0.001	0.158
	Jul-24	No	8	87.5	-	503	-	7.30	-	5.44	0.01	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.025
	Aug-24	No	11.4	83.0	-	408.8	-	7.74	-	76.59	0.01	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.020
	Sep-24	No	9.7	87.3	-	424.6	-	7.68	-	6.13	0.01	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.045
	Oct-24	No	12.4	86.5	-	432.4	-	7.59	-	2.2	0.01	0.001	0.0001	0.001	0.001	0.002	0.10	0.001	0.036
	Nov-24	No	12.1	83.1	9.9	537	537	7.91	254	3.6	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Dec-24	No	17.6	87.4	9.4	278.1	473	8.24	252	6.7	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.005
	Jan-25	Yes	17.8	76.9	9.1	128.7	563	8.05	198	14.89	0.01	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.041
	Feb-25	Yes	18.6	79.2	9.3	136.1	591	7.80	187	7.23	0.01	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.105
	Mar-25	Yes	22	59.6	8.7	134.7	610	7.62	173	9.64	0.08	0.004	0.0001	0.001	0.015	0.002	2.51	0.001	0.597
	Apr-25	Yes	17.9	54.1	8.9	131	645	7.52	207	50.12	0.01	0.003	0.0001	0.001	0.001	0.002	1.38	0.001	0.997
	May-25	Yes	11.2	37.1	-	134	-	7.47	112.7	71.43	0.01	0.003	0.0001	0.001	0.001	0.002	1.9	0.001	0.736
	Jun-25	No	9	68.5	-	136.5	94.9	7.25	-	1.32	0.01	0.001	0.0001	0.001	0.001	0.002	0.75	0.001	0.261
	Jul-25	No	8.1	83.7	-	78.3	53.1	9.10	185.7	36.35	0.09	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.001
YR2-IS	Mar-24	No	12.3	88.5	9.47	130.8	99.1	7.93	43.2	0.1	0.03	0.00015	0.00001	0.000005	0.001	0.001	0.02	0.005	0.001
	Apr-24	No	11.8	97.1	-	139.7	-	8.52	-	1.16	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003
	May-24	No	2.5	94.7	-	142.1	-	7.77	-	0.343	0.01	0.001	0.0001	0.001	0.001	0.024	0.05	0.001	0.004
	Jun-24	No	4.7	97.1	-	118.6	-	7.24	-	0	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003
	Jul-24	No	5.9	93.5	-	58.4	-	6.78	-	8.87	0.17	0.001	0.0001	0.001	0.001	0.002	0.12	0.001	0.002
	Aug-24	No	9.3	93.5	-	58.5	-	7.98	-	6.97	0.06	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Sep-24	No	13.4	93.8	-	66.7	-	7.62	-	1.56	0.04	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.005
	Oct-24	No	11.6	93.7	-	69.9	-	7.34	-	1.8	0.03	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Nov-24	No	15.7	92.1	10	62	111	7.92	235	0.6	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
	Dec-24	No	13.6	90.3	9.8	44.1	75	7.84	220	5.64	0.09	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.001
	Jan-25	No	28.9	90.5	8.8	28.5	123	8.09	226	1.32	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.004
	Feb-25	No	19.3	91.3	9.4	23.3	109	7.97	170	5.89	0.11	0.001	0.0001	0.001	0.001	0.002	0.11	0.001	0.005
	Mar-25	No	22.2	102.1	9.5	39.9	182	8.55	158	0.89	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003
	Apr-25	No	18.1	95.3	10.5	37.7	178	8.46	195	0.94	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003
	May-25	No	10.8	96.8	-	35.7	26	8.87	110.1	1.27	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Jun-25	No	5.9	89.8	-	18.2	12.6	8.66	112.7	11.92	0.26	0.001	0.0001	0.001	0.002	0.002	0.18	0.001	0.004
	Jul-25	No	8.1	86.0	-	11.2	7.6	9.10	191.5	11.35	0.07	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002
SSC-IS	Mar-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-24	No	8	90.1	-	152.6	-	6.29	-	17.88	0.1	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.002
	Aug-24	No	12.1	94.0	-	120.9	-	7.78	-	3.9	0.04	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Sep-24	No	12.2	84.1	-	122.2	-	7.10	-	3.53	0.05	0.001	0.0001	0.001	0.003	0.002	0.05	0.001	0.002
	Oct-24	No	10.1	81.5	-	110.3	-	6.83	-	8.9	0.08	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Nov-24	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Dec-24	No	18.8	90.7	9.4	68.5	118	7.97	188	44.29	0.08	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
	Jan-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mar-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-25	No	9.4	84.5	-	20.2	14.2	9.10	177.5	37.69	0.49	0.001	0.0001	0.001	0.001	0.002	0.31	0.001	0.004
TALBINGO RESERVOIR																			
DGV		No	-	90-110	-	30-350	30-350	6.5-8	-	2-25	0.027	0.0008	0.0006	0.00001	0.001	0.004	0.3	0.001	1.2
LOR				-	-	-	-	-	-	0.1	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001
Dec - May SSGV				91.3	8.79	24.0	20.3	7.59	91.2	0.09	0.03	0.003	0.00002	0.00001	0.0002	0.002	0.04	0.001	0.003
June - Nov SSGV				95.5	11.53	38.7	26.2	7.59	95.4	1.56	0.015	0.0003	0.00002	0.00001	0.0002	0.002	0.02	0.001	0.002
TR-RS	Mar-24	No	13.4	72.5	7.57	24	18.7	7.10	55	0.10	0.015	0.00015	0.00001	0.000005	0.0001	0.001	0.05	0.005	0.005
	Apr-24	No	12.2	85.9	-	25.9	-	7.17	-	0.02	0.01	0.001	0.0001	0.001	0.005	0.002	0.05	0.001	0.026
	May-24	No	10.1	91.5	-	30.2	-	6.80	-	0.65	0.01	0.001	0.0001	0.001	0.001	0.004	0.05	0.001	0.002
	Jun-24	No	8.7	91.6	-	26.4	-	8.32	-	0.10	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.010

Parameter	Date	Dissolved Hg (mg/L)	Dissolved Ni (mg/L)	TN (mg/L)	TP (mg/L)	Dissolved Ag (mg/L)	Dissolved Zn (mg/L)	Ammonia (mg/L)	Nitrogen Oxides (mg/L)	Reactive Phosphorous (mg/L)	Total Hardness (mg/L) (CaCO3)	Total Kjedahl Nitrogen (mg/L) (TKN)	TDS (mg/L)	TSS (mg/L)	Total Al (mg/L)	Total As (mg/L)	Total Cd (mg/L)	Total Cr (mg/L)	Total Cu (mg/L)	Total Pb (mg/L)	Total Mn (mg/L)	Total Ni (mg/L)	Total Ag (mg/L)	Total Zn (mg/L)	Total Fe (mg/L)	Total Hg (mg/L)
YARRANGOBILLY CATCHMENT																										
Default Guideline Value (DGV)		0.00006	0.008	0.25	0.02	0.00002	0.0024	0.013	0.015	0.015	-	-	-	0.2	0.027	0.0008	0.0006	0.00001	0.001	0.001	1.2	0.008	0.00002	0.0024	0.3	0.00006
Limit of Reporting (LOR)		0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.010	0.010	1	0.1	10	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.05	0.0001
Dec - May Site Specific Guideline Value (SSGV)		0.00003	0.001	0.2	0.02	0.00002	0.002	0.013	0.015	0.020	47	0.2	52	0.2												
June - Nov SSGV		0.00003	0.001	0.2	0.02	0.00002	0.002	0.013	0.015	0.015	30	0.2	39	1.0												
WC-RS	Mar-24	0.00002	0.001	0.1	0.03	0.00001	0.001	0.050	0.05	0.005	42	0.1	70	0.1	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	-	70	0.01	-	1	0.02	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.05	0.0001
	May-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.020	0.01	0.01	77	0.1	102	5	0.01	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.05	0.0001
	Jun-24	0.0001	0.001	0.2	0.01	0.001	0.005	0.010	0.23	0.01	53	0.1	81	2	0.01	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.05	0.0001
	Jul-24	0.0001	0.001	0.1	0.05	0.001	0.005	0.010	0.01	0.01	17	0.1	38	8	0.09	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.09	0.0001
	Aug-24	0.0001	0.001	0.1	0.01	0.001	0.032	0.010	0.01	0.01	28	0.1	51	4	0.06	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.07	0.0001
	Sep-24	0.0001	0.001	0.4	0.03	0.001	0.005	0.040	0.22	0.01	31	0.2	65	3	0.04	0.001	0.0001	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.05	0.0001
	Oct-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.02	0.01	31	0.1	46	1	0.07	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.005	0.1	0.0001
	Nov-24	0.0001	0.001	0.1	0.06	0.001	0.005	0.020	0.02	0.01	36	0.1	60	2	0.01	0.001	0.0001	0.001	0.001	0.001	0.003	0.001	0.001	0.005	0.05	0.0001
	Dec-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	31	0.1	51	2	0.09	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.08	0.0001
*sample not an	Jan-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	0.0001	0.001	0.2	0.06	0.001	0.005	0.040	0.02	0.01	57	0.2	61	2	0.16	0.001	0.0001	0.001	0.001	0.001	0.011	0.001	0.001	0.008	0.15	0.0001
	Mar-25	0.0001	0.001	0.2	0.02	0.001	0.005	0.020	0.01	0.01	70	0.2	90	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.05	0.0001
	Apr-25	0.0001	0.001	0.1	0.01	0.001	0.005	0.020	0.01	0.01	80	0.1	88	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.009	0.001	0.001	0.005	0.06	0.0001
	May-25	0.0001	0.001	2.9	0.01	0.001	0.005	0.020	2.5	0.01	77	0.4	104	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.009	0.001	0.001	0.005	0.05	0.0001
	Jun-25	0.0001	0.001	0.6	0.04	0.001	0.005	0.010	0.42	0.01	55	0.2	84	3	0.08	0.001	0.0001	0.001	0.001	0.001	0.008	0.001	0.001	0.005	0.09	0.0001
	Jul-25	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.1	0.01	19	0.1	36	6	0.17	0.001	0.0001	0.001	0.001	0.001	0.011	0.001	0.001	0.005	0.16	0.0001
WC-IS	Mar-24	0.00002	0.0005	0.1	0.005	0.00001	0.001	0.050	0.05	0.005	42	0.1	88	0.1	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	0.0001	0.001	2.7	0.02	0.001	0.005	0.010	2.42	-	67	2.42	-	11	0.15	0.001	0.0001	0.001	0.001	0.001	0.022	0.004	0.001	0.005	0.22	0.0001
	May-24	0.0001	0.001	0.4	0.02	0.001	0.005	0.010	0.31	0.01	75	0.1	106	5	0.01	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.05	0.0001
	Jun-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.02	0.04	53	0.1	81	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.05	0.0001
	Jul-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	0.01	17	0.1	42	5	0.11	0.001	0.0001	0.001	0.001	0.001	0.011	0.001	0.001	0.005	0.1	0.0001
	Aug-24	0.0001	0.001	0.1	0.01	0.001	0.006	0.010	0.03	0.01	28	0.1	45	4	0.06	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.06	0.0001
	Sep-24	0.0001	0.001	7.6	0.02	0.001	0.017	0.010	7.21	0.01	33	0.4	113	3	0.02	0.001	0.0001	0.001	0.001	0.001	0.002	0.001	0.001	0.005	0.05	0.0001
	Oct-24	0.0001	0.001	0.2	0.03	0.001	0.005	0.010	0.02	0.01	31	0.2	39	2	0.08	0.001	0.0001	0.001	0.001	0.001	0.004	0.005	0.001	0.005	0.12	0.0001
	Nov-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	38	0.1	58	1	0.02	0.001	0.0001	0.001	0.001	0.001	0.003	0.001	0.001	0.005	0.05	0.0001
	Dec-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	33	0.1	51	2	0.08	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.09	0.0001
	Jan-25	0.0001	0.001	0.2	0.01	0.001	0.005	0.010	0.01	0.01	51	0.2	82	1	0.04	0.001	0.0001	0.001	0.001	0.001	0.015	0.001	0.001	0.005	0.07	0.0001
	Feb-25	0.0001	0.001	0.2	0.02	0.001	0.005	0.040	0.01	0.01	57	0.2	68	1	0.14	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.14	0.0001
	Mar-25	0.0001	0.001	0.1	0.03	0.001	0.005	0.020	0.01	0.01	70	0.1	85	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.05	0.0001
	Apr-25	0.0001	0.001	0.1	0.03	0.001	0.005	0.030	0.01	0.01	75	0.1	87	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.06	0.0001
	May-25	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.1	0.01	77	0.1	88	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.05	0.0001
	Jun-25	0.0001	0.001	0.3	0.02	0.001	0.005	0.020	0.03	0.01	51	0.3	89	1	0.12	0.001	0.0001	0.001	0.001	0.001	0.016	0.001	0.001	0.005	0.19	0.0001
	Jul-25	0.0001	0.001	0.3	0.04	0.001	0.005	0.300	0.3	0.01	19	0.3	35	7	0.14	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.13	0.0001
CG-IS	Mar-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Aug-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sep-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Oct-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	0.01	294	0.1	298	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.05	0.0001
	Nov-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Dec-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.02	0.01	287	0.1	336	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.05	0.0001
	Jan-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mar-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-25	0.0001	0.001	0.1	0.02	0.001	0.005	0.040	0.07	0.01	290	0.1	347	1	0.03	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.005	0.05	0.0001
YR1-IS	Mar-24	0.000015	0.001	0.1	0.005	0.00001	0.001	0.050	0.05	0.005	34	0.1	66	0.1												
	Apr-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.05	-	61	0.05	-	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.002	0.001	0.001	0.005	0.05	0.0001
	May-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	0.01	68	0.1	95	5	0.01	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.05	0.0001
	Jun-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.03	51	0.1	68	1	0.03	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.05	0.0001
	Jul-24	0.0001	0.001	0.2	0.02	0.001	0.005	0.010	0.01	0.01	19	0.2	48	7	0.17	0.001	0.0001	0.001	0.001	0.001	0.009	0.001	0.001	0.005	0.15	0.0001
	Aug-24	0.0001	0.001	0.2	0.01	0.001	0.005	0.010	0.01	0.01	33	0.2	55	3	0.12	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.005	0.09	0.0001
	Sep-24	0.0001	0.001	0.1	0.04	0.001	0.005	0.010	0.02	0.01	38	0.1	68	2	0.06	0.001	0.0001	0.001	0.001	0.001	0.003	0.001	0.001	0.005	0.05	0.0001
	Oct-24	0.0001	0.001	0.1	0.02	0.001	0.006	0.020	0.01	0.01	41	0.1	60	2	0.08	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.09	0.0001
	Nov-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	48	0.1	74	1	0.04	0.001	0.0001	0.001	0.001	0.001	0.003	0.001	0.001	0.005	0.05	0.0001
	Dec-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.02	0.01	31	0.1	52	4	0.17	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.039	0.15	0.0001
	Jan-25	0.0001	0.001	0.6	0.05	0.001	0.005	0.080	0.05	0.01	56	0.6	81	47	0.27	0.001	0.0001	0.001	0.001	0.001	0.051	0.001	0.001	0.009	0.33	0.0001
	Feb-25	0.0001	0.001	0.2	0.03	0.001	0.005	0.040	0.02	0.01	46	0.2	51	4	0.15	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.015	0.16	0.0001
	Mar-25	0.0001	0.001	0.1	0.01	0.001	0.005	0.030	0.01	0.01	90	0.1	100	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.003	0.001	0.001	0.005	0.05	0.0001
	Apr-25	0.0001	0.001	0.2	0.02	0.001	0.005	0.040	0.01	0.01	87	0.2	100	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.05	0.0001
	May-25	0.0001	0.001	0.1	0.01	0.001	0.005	0.020	0.01	0.01	82	0.1	96	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.002	0.001	0.001	0.005	0.05	0.0001
	Jun-25	0.0001	0.001	0.3	0.02	0.001	0.008	0.020	0.02	0.01	36	0.3	83	7	0.71	0.001	0.0001	0.002	0.001	0.001	0.014	0.002	0.001	0.01	0.56	0.0001
	Jul-25	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.02	0.01	24	0.1	44	2	0.15	0.001	0.0001	0.001	0.002	0.001	0.005	0.001	0.001	0.005	0.2	0.0001
LHG-IS	Mar-24	0.000015	0.003	0.1	0.01	0.00001	0.006	0.050	0.05	0.005	297	1	330	20												
	Apr-24	0.0001	0.001	0.5	0.09	0.001	0.005	0.020	0.02	-	332	0.02	-	70	0.25	0.003	0.0001	0.001	0.002	0.001	0.51	0.006	0.001	0.009	2.22	0.0001
	May-24	0.0001	0.001	0.5	0.05	0.001	0.005	0.040	0.06	0.01	365	0.4	402	5	0.07	0.001	0.0001	0.001	0.001	0.001	0.177	0.001	0.001	0.005	1.09	0.0001
	Jun-24	0.0001	0.001	0.2	0.04	0.001	0.005	0.020	0.02	0.01	313	0.2	339	17	0.38	0.002	0.0001	0.001	0.001	0.001	0.282	0.001	0.001	0.005	1.54	0.0001
	Jul-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	250	0.1	324	10	0.53	0.001	0.0001	0.001	0.002	0.001	0.033	0.001	0.001	0.005	0.16	0.0001
	Aug-24	0.0001	0.001	0.1	0.01	0.001	0.006	0.020	0.01	0.01	282	0.1	360	9	0.09	0.001	0.0001	0.001	0.001	0.001	0.026	0.001	0.001	0.005	0.17	0.0001
	Sep-24	0.0001	0.001	0.1	0.09	0.001	0.006	0.010	0.01	0.01	294	0.1	394	10	0.06	0.001	0.0001	0.001	0.001	0.001	0.051	0.001	0.001	0.005	0.19	0.0001
	Oct-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.020	0.01	0.01	312	0.1	362	3	0.04	0.001	0.0001	0.001	0.001	0.001	0.034	0.001	0.001	0.005	0.26	0.0001
	Nov-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.100	0.01	0.01	307	0.1	363	16	0.15	0.001	0.0001	0.001	0.001	0.001	0.023	0.001	0.001	0.005	0.21	0.0001
	Dec-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	0.01	264	0.1	298	7	0.13	0.001	0.0001	0.001	0.001	0.001	0.014	0.001	0.001	0.005	0.12	0.0001
	Jan-25	0.0001	0.001	0.1	0.04	0.001	0.005	0.030	0.01	0.01	333	0.1	362	33	0.26	0.002	0.0001	0.001	0.001	0.001	0.219	0.001	0.001	0.005	1.13	0.0001
	Feb-25	0.0001	0.001	0.3	0.08	0.001	0.005	0.010	0.06	0.01	333	0.2	378	11	0.09	0.001	0.0001	0.001	0.001	0.001	0.121	0.001	0.001	0.007	0.41	0.0001
	Mar-25	0.0001	0.001	0.3	0.1	0.001	0.005	0.070	0.04	0.01	326	0.3	372	50	0.1	0.001	0.0001	0.001	0.01	0.001	0.559	0.001	0.001	0.006	4.16	0.0001
	Apr-25	0.0001	0.001	0.4	0.16	0.001	0.006	0.030	0.01	0.01	348	0.4	372	64	0.55	0.01	0.0001	0.001	0.002	0.001	1.17	0.001	0.001	0.008	8.45	0.0001
	May-25	0.0001	0.001	0.2	0.44	0.001	0.005	0.040	0.03	0.01	333	0.2	406	131	0.61	0.019	0.0001	0.001	0.001	0.002	2.22	0.002	0.001	0.009	19.2	0.0001
	Jun-25	0.0001	0.001	0.2	0.02	0.001	0.006	0.030	0.01	0.01	333	0.2	452	9	0.22	0.001	0.0001	0.001	0.001	0.001	0.281	0.001	0.001	0.005	1.32	0.0001
	Jul-25	0.0001	0.001	0.2	0.04	0.001	0.005	0.020	0.03	0.01	177	0.2	247	68	0.46	0.001	0.0001	0.001	0.001	0.001	0.134	0.001	0.001	0.005	1.04	0.0001
YR2-IS	Mar-24	0.000015	0.001	0.1	0.005	0.00001	0.001	0.050	0.05	0.005	27	1	58	0.1												
	Apr-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	-	61	0.01	-	5	0.02	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.005	0.05	0.0001
	May-24	0.0001	0.001	0.8	0.03	0.001	0.007	0.020	0.34	0.01	68	0.5	98	5	0.01	0.001	0.0001	0.001	0.001	0.001	0.002	0.001	0.001	0.007	0.05	0.0001
	Jun-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	51	0.1	76	1	0.03	0.001	0.0001	0.001	0.001	0.001	0.002	0.001	0.001	0.005	0.05	0.0001
	Jul-24	0.0001	0.001	0.4	0.03	0.001	0.005	0.010	0.24	0.01	26	0.2	46	10	0.17	0.001	0.0001	0.001	0.001	0.001	0.012	0.001	0.001	0.007	0.16	0.0001
	Aug-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	33	0.1	59	4	0.11	0.001	0.0001	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.09	0.0001
	Sep-24	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	0.01	46	0.1	68	3	0.07	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.07	0.0001
	Oct-24	0.0001	0.001	0.2	0.05	0.001	0.005	0.010	0.01	0.01	43	0.2	71	1	0.07	0.001	0.0001	0.001	0.001	0.001	0.002	0.001	0.001	0.005	0.08	0.0001
	Nov-24	0.0001	0.001	0.1	0.05	0.001	0.005	0.010	0.02	0.01	51	0.1	77	1	0.04	0.001	0.0001	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.05	0.0001
	Dec-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.020	0.08	0.01	33	0.1	55	6	0.21	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.18	0.0001
	Jan-25	0.0001	0.001	0.2	0.01	0.001	0.005	0.010	0.01	0.01	63	0.2	87	1	0.2	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.005	0.05	0.0001
	Feb-25	0.0001	0.001	0.4	0.02	0.001	0.005	0.020	0.05	0.01	48	0.3	72	5	0.2	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.21	0.0001
	Mar-25	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	90	0.1	104	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.005	0.05	0.0001
	Apr-25	0.0001	0.001	0.1	0.04	0.001	0.005	0.020	0.02	0.01	87	0.1	100	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.005	0.05	0.0001
	May-25	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.03	0.01	82	0.1	94	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.002	0.001	0.001	0.005	0.05	0.0001
	Jun-25	0.0001	0.001	9.3	0.01	0.001	0.005	0.010	8.13	0.01	36	1.2	62	6	0.67	0.001	0.0001	0.002	0.001	0.001	0.011	0.002	0.001	0.005	0.48	0.0001
	Jul-25	0.0001	0.001	0.1	0.05	0.001	0.005	0.600	0.1	<0.01	17	0.1	37	9	0.29	0.001	0.0001	0.001	0.001	0.001	0.013	0.001	0.001	0.005	0.28	0.0001
SSC-IS	Mar-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-24	0.0001	0.001	1.8	0.03	0.001	0.024	0.030	0.85	0.01	62	0.9	110	1	0.09	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.025	0.4	0.0001
	Aug-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	62	0.1	110	5	0.21	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.09	0.0001
	Sep-24	0.0001	0.001	0.7	0.03	0.001	0.036	0.010	0.07	0.01	65	0.6	108	5	0.10	0.001	0.0001	0.001	0.003	0.001	0.004	0.001	0.001	0.028	0.08	0.0001
	Oct-24	0.0001	0.001	0.4	0.02	0.001	0.005	0.010	0.18	0.01	58	0.2	100	1	0.13	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.1	0.0001
	Nov-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Dec-24	0.0001	0.001	0.1	0.01	0.001	0.005	0.01	0.01	0.01	53	0.1	85	8	0.57	0.001	0.0001	0.001	0.001	0.001	0.013	0.001	0.001	0.005	0.41	0.0001
	Jan-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mar-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-25	0.0001	0.002	0.2	0.05	0.001	0.005	0.160	0.01	0.01	39	0.2	71	6	1.64	0.001	0.0001	0.002	0.001	0.003	0.015	0.002	0.001	0.008	1.16	0.0001
TALBINGO RESERVOIR																										
DGV		0.00006	0.008	0.25	0.02	0.00002	0.0024	0.013	0.015	0.015	-	-	-	0.2	0.027	0.0008	0.0006	0.00001	0.001	0.001	1.2	0.008	0.00002	0.0024	0.3	0.00006
LOR		0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.010	0.01	1	0.1	10	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.05	0.0001
Dec - May SSGV		0.00003	0.001	0.2	0.02	0.00002	0.002	0.013	0.015	0.02	7.5	0.1	12.5	0.2												
June - Nov SSGV		0.00003	0.001	0.2	0.02	0.00002	0.002	0.013	0.015	0.015	8	0.2	15	0.2												
TR-RS	Mar-24	0.000015	0.0005	0.1	0.01	0.00001	0.001	0.050	0.05	0.005	8	0.1	44	0.1												
	Apr-24	0.0001	0.001	1.3	0.02	0.001	0.066	0.030	0.12	-	5	0.12	-	3	0.02	0.001	0.0001	0.001	0.006	0.001	0.039	0.002	0.001	0.067	0.07	0.0001
	May-24	0.0001	0.001	0.3	0.03	0.001	0.023	0.020	0.03	0.01	5	0.3	35	5	0.03	0.001	0.0001	0.001	0.001	0.001	0.033	0.001	0.001	0.012	0.06	0.0001
	Jun-24	0.0001	0.001	2.3	0.01	0.001	0.005	0.010	1.92	0.01	5	0.4	17	2	0.03	0.001	0.0001	0.001	0.001	0.001	0.056	0.001	0.001	0.005	0.07	0.0001

	Jul-24	No	6	92.1	-	28.7	-	7.76	-	1.35	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003	0.0001	0.001	0.1	0.02	0.001	0.005	0.030	0.04	0.01	5	0.1	17	2	0.05	0.001	0.0001	0.001	0.001	0.001	0.014	0.001	0.001	0.005	0.06	0.0001
	Aug-24	No	12.7	91.5	-	26.3	-	6.67	-	2.0	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002	0.0001	0.001	0.4	0.02	0.001	0.011	0.020	0.07	0.01	12	0.3	30	1	0.04	0.001	0.0001	0.001	0.001	0.001	0.004	0.001	0.001	0.008	0.05	0.0001
	Sep-24	No	10.2	96.2	-	25	-	7.78	-	0.58	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002	0.0001	0.001	0.2	0.03	0.001	0.005	0.010	0.06	0.01	14	0.1	27	2	0.06	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.07	0.0001
	Oct-24	No	9.5	95.2	-	15.3	-	7.78	-	1.7	0.04	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.008	0.0001	0.001	0.2	0.02	0.001	0.013	0.040	0.02	0.01	14	0.2	38	4	0.07	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.11	0.0001
	Nov-24	No	15.6	92.1	9.7	55	55	7.73	271	1.6	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.05	0.0001	0.001	0.1	0.05	0.001	0.005	0.010	0.02	0.01	21	0.1	45	5	0.14	0.001	0.0001	0.001	0.001	0.001	0.07	0.001	0.001	0.005	0.23	0.0001
	Dec-24	No	22.8	95.5	9.1	22.2	38	7.97	200	3.76	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001	0.0001	0.001	0.1	0.06	0.001	0.005	0.010	0.01	0.01	14	0.1	25	2	0.04	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.007	0.06	0.0001
	Jan-25	No	25.7	91.6	9.1	27.8	44	7.23	234	1.61	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001	0.0001	0.001	0.2	0.02	0.001	0.005	0.020	0.01	0.01	17	0.2	46	6	0.03	0.001	0.0001	0.001	0.001	0.001	0.018	0.001	0.001	0.005	0.05	0.0001
	Feb-25	No	24.6	94.8	9.1	8.7	40	7.61	168	2.16	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002	0.0001	0.001	0.2	0.03	0.001	0.005	0.020	0.01	0.01	14	0.2	28	1	0.04	0.001	0.0001	0.001	0.001	0.001	0.017	0.001	0.001	0.005	0.07	0.0001
	Mar-25	No	21.3	90.1	8.9	8.3	36	7.56	138	3.25	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.002	0.0001	0.001	0.2	0.03	0.001	0.005	0.010	0.01	0.01	14	0.2	28	1	0.04	0.001	0.0001	0.001	0.001	0.001	0.019	0.001	0.001	0.005	0.06	0.0001
	Apr-25	No	17.6	67.6	9.9	5.8	26	6.96	190	1.3	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.03	0.0001	0.001	0.4	0.05	0.001	0.005	0.020	0.05	0.01	5	0.3	22	1	0.03	0.001	0.0001	0.001	0.001	0.001	0.051	0.001	0.001	0.005	0.09	0.0001
	May-25	No	12.3	88.6	-	5.9	4.5	7.59	109.8	1.68	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.003	0.0001	0.001	0.2	0.07	0.001	0.005	0.030	0.01	0.02	9	0.2	16	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.03	0.001	0.001	0.005	0.05	0.0001
	Jun-25	No	10.5	86.4	-	6.1	4	8.34	111.9	3.15	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.008	0.0001	0.001	0.1	0.06	0.001	0.005	0.040	0.04	0.01	5	0.1	56	1	0.02	0.001	0.0001	0.001	0.001	0.001	0.046	0.001	0.001	0.005	0.05	0.0001
	Jul-25	No	7.9	90	-	6.5	4.4	7.78	168.1	7.5	0.1	0.001	0.0001	0.001	0.001	0.002	0.18	0.001	0.011	0.0001	0.001	0.1	0.03	0.001	0.005	0.020	0.1	0.01	9	0.1	22	5	0.16	0.001	0.0001	0.001	0.001	0.001	0.011	0.001	0.001	0.009	0.18	0.0001
YORKERS CREEK CATCHMENT																																												
DGV		No	-	90-110	-	30-350	30-350	6.5-8	-	2-25	0.027	0.0008	0.0006	0.00001	0.001	0.004	0.3	0.001	1.2	0.00006	0.008	0.25	0.02	0.00002	0.0024	0.013	0.015	0.015	-	-	-	0.2	0.027	0.0008	0.0006	0.00001	0.001	0.001	1.2	0.008	0.00002	0.0024	0.3	0.00006
LOR				-	-	-	-	-	-	0.1	0.01	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.001	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.010	0.01	1	0.1	10	1	0.01	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.05	0.0001
Dec - May SSGV				89.6	8.35	31	24	6.79	94.6	9	0.36	0.003	0.00002	0.00001	0.002	0.002	0.41	0.001	0.005	0.00003	0.001	0.2	0.02	0.00002	0.002	0.013	0.015	0.02	1	0.1	30	3												
June - Nov SSGV				88.7	10.2	27.9	20.5	6.61	106.1	7.87	0.32	0.0003	0.00002	0.00001	0.0002	0.002	0.23	0.001	0.003	0.00003	0.001	0.2	0.02	0.00002	0.002	0.013	0.015	0.02	7	0.2	10	0.2												
YK-RS	Mar-24	Yes	16.3	82.5	8.09	31.5	26.2	6.69	64.5	12.24	0.6	0.00015	0.00001	0.000005	0.001	0.001	0.66	0.002	0.013	0.000015	0.0005	0.1	0.03	0.00001	0.003	0.050	0.05	0.005	1	0.1	30	3												
	Apr-24	No	6.8	80.7	-	36.5	-	7.04	-	17.27	0.10		0.0001	0.001	0.001	0.002	0.12	0.001	0.014	0.0001	0.001	0.6	0.04	0.001	0.013	0.020	0.02	-	9	0.02	-	24	0.15	0.001	0.0001	0.001	0.007	0.001	0.021	0.006	0.001	0.016	0.46	0.0001
	May-24	No	4.2	85.1	-	34.7	-	6.62	-	0.3	0.10	0.001	0.0001	0.001	0.001	0.004	0.17	0.001	0.026	0.0001	0.001	0.3	0.04	0.001	0.005	0.030	0.02	0.01	9	0.3	37	5	0.10	0.001	0.0001	0.001	0.001	0.001	0.027	0.001	0.001	0.005	0.34	0.0001
	Jun-24	No	3.5	84.2	-	30.1	-	7.99	-	26.48	0.09	0.001	0.0001	0.001	0.001	0.002	0.18	0.001	0.021	0.0001	0.001	0.4	0.04	0.001	0.005	0.020	0.02	0.03	9	0.4	21	15	0.23	0.001	0.0001	0.001	0.001	0.001	0.032	0.001	0.001	0.005	0.50	0.0001
	Jul-24	No	2.9	83.1	-	27.8	-	7.40	-	7.97	0.19	0.001	0.0001	0.001	0.001	0.002	0.21	0.001	0.010	0.0001	0.001	0.4	0.04	0.001	0.007	0.010	0.05	0.01	9	0.4	41	7	0.59	0.001	0.0001	0.001	0.001	0.001	0.017	0.001	0.001	0.005	0.53	0.0001
	Aug-24	No	7.3	82.7	-	21.6	-	6.89	-	19.36	0.33	0.001	0.0001	0.001	0.001	0.002	0.29	0.001	0.017	0.0001	0.001	0.9	0.07	0.001	0.012	0.010	0.01	0.01	9	0.9	34	19	1.82	0.001	0.0001	0.003	0.001	0.001	0.076	0.001	0.001	0.005	1.77	0.0001
	Sep-24	No	12.3	86.5	-	19.5	-	7.58	-	15.51	0.09	0.001	0.0001	0.001	0.001	0.002	0.16	0.001	0.013	0.0001	0.001	0.2	0.05	0.001	0.010	0.010	0.04	0.01	9	0.2	28	19	0.28	0.001	0.0001	0.001	0.001	0.001	0.023	0.001	0.001	0.005	0.52	0.0001
	Oct-24	No	18.3	87.8		21.8	-	7.55	-	17.9	0.14	0.001	0.0001	0.001	0.001	0.002	0.15	0.001	0.013	0.0001	0.001	0.2	0.03	0.001	0.005	0.010	0.05	0.01	5	0.2	21	22	0.24	0.001	0.0001	0.001	0.001	0.001	0.02	0.001	0.001	0.005	0.45	0.0001
	Nov-24	No	19.3	84.8	9	30	30	6.68	259	13.8	0.06	0.001	0.0001	0.001	0.001	0.002	0.12	0.001	0.014	0.0001	0.001	0.1	0.04	0.001	0.008	0.020	0.03	0.01	9	0.1	46	30	1.29	0.001	0.0001	0.002	0.001	0.001	0.032	0.001	0.001	0.005	1.05	0.0001
	Dec-24	No	22.9	82.6	8.3	18.7	31	7.52	238	19	0.13	0.001	0.0001	0.001	0.001	0.002	0.16	0.001	0.024	0.0001	0.001	0.3	0.04	0.001	0.005	0.010	0.04	0.01	9	0.3	40	22	0.22	0.001	0.0001	0.001	0.001	0.001	0.031	0.001	0.001	0.005	0.51	0.0001
	Jan-25	No	17.4	72.5	8.8	24.5	40	7.26	209	15.77	0.08	0.001	0.0001	0.001	0.001	0.002	0.15	0.001	0.015	0.0001	0.001	0.7	0.05	0.001	0.005	0.080	0.06	0.01	12	0.6	62	27	0.43	0.001	0.0001	0.001	0.001	0.001	0.038	0.001	0.001	0.005	0.96	0.0001
	Feb-25	Yes	22.8	76.3	8.9	8.6	38	7.09	174	21.19	0.18	0.001	0.0001	0.001	0.001	0.002	0.32	0.001	0.009	0.0001	0.001	0.6	0.07	0.001	0.005	0.040	0.01	0.01	9	0.6	58	12	0.4	0.001	0.0001	0.001	0.001	0.001	0.017	0.001	0.001	0.007	0.77	0.0001
	Mar-25	No	17.4	81.4	9.3	9.7	43	7.46	170	20.65	0.45	0.001	0.0001	0.001	0.001	0.002	0.3	0.001	0.009	0.0001	0.001	0.4	0.06	0.001	0.005	0.020	0.01	0.01	16	0.4	28	20	0.39	0.001	0.0001	0.001	0.001	0.001	0.015	0.001	0.001	0.005	0.7	0.0001
	Apr-25	No	11	77.6	10.2	8.6	39	7.64	148	15.23	0.12	0.001	0.0001	0.001	0.001	0.002	0.17	0.001	0.004	0.0001	0.001	0.2	0.01	0.001	0.005	0.040	0.01	0.01	16	0.2	30	8	0.78	0.001	0.0001	0.001	0.001	0.001	0.009	0.001	0.001	0.005	0.74	0.0001
	May-25	Yes	4.2	83.9	-	9.1	5.5	7.73	116.9	11.81	0.08	0.001	0.0001	0.001	0.001	0.002	0.14	0.001	0.004	0.0001	0.001	0.3	0.02	0.001	0.005	0.010	0.18	0.01	16	0.1	33	4	0.52	0.001	0.0001	0.001	0.001	0.001	0.009	0.001	0.001	0.005	0.63	0.0001
	Jun-25	No	5.4	83.0	-	7.8	4.9	8.24	114.3	14.6	0.19	0.001	0.0001	0.001	0.001	0.002	0.31	0.001	0.016	0.0001	0.001	0.6	0.09	0.001	0.005	0.010	0.02	0.01	9	0.6	90	30	1.07	0.001	0.0001	0.002	0.001	0.001	0.023	0.001	0.001	0.005	0.88	0.0001
	Jul-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YK-IS (D/S)	Mar-24	No	10	81.6	9.21	39.1	27.9	7.02	63.2	0.1	0.0065	0.00015	0.00001	0.000005	0.0001	0.001	0.26	0.0005	0.006	0.000015	0.0005	0.1	0.02	0.00001	0.002	0.050	0.05	0.005	1	0.1	15	0.1												
	Apr-24	No	5.9	86.0	-	39.4	-	7.33	-	221.78	0.05	0.001	0.0001	0.001	0.001	0.002	0.11	0.001	0.014	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.03	-	16	0.03	-	3	0.1	0.001	0.0001	0.001	0.001	0.001	0.016	0.003	0.001	0.006	0.26	0.0001
	May-24	No	3.1	85.9	-	39.6	-	6.59	-	0.8	0.09	0.001	0.0001	0.001	0.001	0.004	0.15	0.001	0.021	0.0001	0.001	0.8	0.04	0.001	0.005	0.010	0.53	0.01	12	0.3	39	9	0.12	0.001	0.0001	0.003	0.001	0.001	0.035	0.002	0.001	0.005	0.61	0.0001
	Jun-24	No	3.2	84.6	-	38.9	-	7.76	-	2.46	0.06	0.001	0.0001	0.001	0.001	0.002	0.1	0.001	0.009	0.0001	0.001	0.2	0.04	0.001	0.005	0.010	0.01	0.01	12	0.2	25	2	0.48	0.001	0.0001	0.001	0.001	0.001	0.027	0.001	0.001	0.005	0.66	0.0001
	Jul-24	No	3.2	85.0	-	32.8	-	7.11	-	8.29	0.28	0.001	0.0001	0.001	0.001	0.002	0.22	0.001	0.005	0.0001	0.001	0.6	0.04	0.001	0.007	0.010	0.28	0.01	9	0.3	52	5	0.3	0.001	0.0001	0.001	0.001	0.001	0.011	0.001	0.001	0.005	0.32	0.0001
	Aug-24	No	7.3	84.7	-	23.2	-	6.85	-	22.38	0.51	0.001	0.0001	0.001	0.001	0.002	0.34	0.001	0.011	0.0001	0.001	0.6	0.04	0.001	0.005	0.010	0.09	0.01	9	0.5	70	17	1.02	0.001	0.0001	0.005	0.001	0.001	0.026	0.001	0.001	0.005	0.89	0.0001
	Sep-24	No	9.3	84.5	-	26.9	-	7.52	-	3.34	0.07	0.001	0.0001	0.001	0.001	0.002	0.1	0.001	0.008	0.0001	0.001	0.2	0.02	0.001	0.011	0.010	0.01	0.01	12	0.2	29	3	0.16	0.001	0.0001	0.001	0.001	0.001	0.012	0.001	0.001	0.005	0.26	0.0001
	Oct-24	No	11.3	84.0		27		7.36		6.4	0.1	0.001	0.0001	0.001	0.001	0.002	0.12	0.001	0.010	0.0001	0.001	0.3	0.04	0.001	0.009	0.030	0.11	0.01	5	0.2	24	4	0.22	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.005	0.28	0.0001
	Nov-24	No	13.5	83.3	9.4	38	38	7.17	268	5.5	0.05	0.001	0.0001	0.001	0.001	0.002	0.1	0.001	0.011	0.0001	0.001	0.1	0.04	0.001	0.005	0.010	0.01	0.01	12	0.1	48	8	0.26	0.001	0.0001	0.001	0.001	0.001	0.07	0.001	0.001	0.005	0.41	0.0001
	Dec-24	No	17.7	82.9	9.2	22.2	550	7.03	463	6.27	0.07	0.001	0.0001	0.001	0.001	0.002	0.1	0.001	0.004	0.0001	0.001	0.2	0.01	0.001	0.005	0.010	0.02	0.01	12	0.2	124	5	0.13	0.001	0.0001	0.001	0.001	0.001	0.01	0.001	0.001	0.011	0.27	0.0001
	Jan-25	No	16.2	79.2	9.2	28.2	48	7.40	233	2.44	0.04	0.001	0.0001	0.001	0.001	0.002	0.14	0.001	0.013	0.0001	0.001	0.2	0.03	0.001	0.005	0.050	0.02	0.01	18	0.2	62	2	0.04	0.001	0.0001	0.001	0.001	0.001	0.013	0.001	0.001	0.005	0.14	0.0001
	Feb-25	No	20.5	85.0	9.3	10.4	47	7.09	150	5.32	0.14	0.001	0.0001	0.001	0.001	0.002	0.24	0.001	0.016	0.0001	0.001	0.3	0.04	0.001	0.005	0.020	0.01	0.01	18	0.3	51	1	0.25	0.001	0.0001	0.001	0.001	0.001	0.021	0.001	0.001	0.005	0.45	0.0001
	Mar-25	No	15.9	89.2	9.6	10.7	48	7.32	152	3.01	0.07	0.001	0.0001	0.001	0.002	0.002	0.21	0.001	0.016	0.0001	0.001	0.3	0.02	0.001	0.005	0.050	0.09	0.01	18	0.2	43	2	0.06	0.001	0.0001	0.001	0.001	0.001	0.019	0.001	0.001	0.005	0.33	0.0001
	Apr-25	No	12.5	84.0	10.7	11.1	49	7.42	166	2.71	0.04	0.001	0.0001	0.001	0.001	0.002	0.1	0.001	0.018	0.0001	0.001	0.2	0.02	0.001	0.005	0.030	0.01	0.01	18	0.2	39	1	0.08	0.001	0.0001	0.001	0.001	0.001	0.02	0.001	0.001	0.005	0.26	0.0001
	May-25	No	5.4	85.5	-	10.6	6.6	7.54	111.1	2.84	0.05	0.001	0.0001	0.001	0.001	0.002	0.1	0.001	0.013	0.0001	0.001	0.1	0.01	0.001	0.005	0.010	0.01	0.01	18	0.1	36	1	0.17	0.001	0.0001	0.001	0.001	0.001	0.033	0.001	0.001	0.005	0.44	0.0001
	Jun-25	No	5.6	83.1	-	8.1	5.1	8.07	114.1	18.14	0.18	0.001	0.0001	0.001	0.001	0.002	0.3	0.001	0.01	0.0001	0.001	0.4	0.04	0.001	0.005	0.010	0.01	0.01	12	0.4	89	5	0.24	0.001	0.0001	0.001	0.001	0.001	0.015	0.001	0.001	0.005	0.46	0.0001
	Jul-25	No	5.7	81.6	-	6.4	4.1	7.95	170.2	18.25	0.45	0.001	0.0001	0.001	0.001	0.002	0.29	0.001	0.005	0.0001	0.001	0.2	0.04	0.001	0.005	0.010	0.03	0.01	5	0.2	55	6	0.67	0.001	0.0001	0.001	0.001	0.001	0.009	0.001	0.001	0.005	0.48	0.0001
NZG-IS	Mar-24	No	9.6	80.2	9.13	64.2	45.3	7.45	31.1	0.1	0.14	0.00015	0.00001	0.000005	0.0001	0.001	0.18	0.0005	0.004	0.000015	0.0005	0.1	0.01	0.00001	0.002	0.050	0.05	0.005	10	0.1	22	0.1												
	Apr-24	No	6.4	84.9	-	67.1	-	7.38	-	0.96	0.03		0.0001	0.001	0.001	0.002	0.08	0.001	0.006	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	-	23	0.01	-	6	0.04	0.001	0.0001	0.001	0.001	0.001	0.012	0.001	0.001	0.005	0.24	0.0001
	May-24	No	3.9	85.8	-	66.6	-	6.68	-	0.2	0.04	0.001	0.0001	0.001	0.001	0.004	0.07	0.001	0.007	0.0001	0.001	0.2	0.06	0.001	0.007	0.010	0.03	0.01	23	0.2	60	5	0.06	0.001	0.0001	0.001	0.001	0.001	0.021	0.001	0.001	0.005	0.35	0.0001
	Jun-24	No	4.4	82.7	-	64.1	-	8.14	-	0.89	0.04	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.005	0.0001	0.001	0.2	0.01	0.001	0.005	0.010	0.01	0.01	23	0.2	38	20	0.12	0.001	0.0001	0.001	0.001	0.001	0.037	0.001	0.001	0.005	0.67	0.0001
	Jul-24	No	3.7	83.9	-	34.8	-	7.44	-	13.66	0.2	0.001	0.0001	0.001	0.001	0.002	0.18	0.001	0.004	0.0001	0.001	0.2	0.04	0.001	0.005	0.010	0.04	0.01	12	0.2	52	8	0.22	0.001	0.0001	0.001	0.001	0.001	0.009	0.001	0.001	0.005	0.26	0.0001
	Aug-24	No	7.7	84.4	-	28.9	-	6.95	-	15.47	0.44	0.001	0.0001	0.001	0.001	0.002	0.31	0.001	0.008	0.0001	0.001	0.4	0.04	0.001	0.005	0.010	0.01	0.01	12	0.4	44	19	0.92	0.001	0.0001	0.001	0.001	0.001	0.023	0.001	0.001	0.005	0.85	0.0001
	Sep-24	No	8.2	84.6	-	38.2	-	7.32	-	2.02	0.06	0.001	0.0001	0.001	0.001	0.002	0.08	0.001	0.004	0.0001	0.001	0.1	0.04	0.001	0.005	0.010	0.01	0.01	21	0.1	41	3	0.07	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.15	0.0001
	Oct-24	No	11.1	84.5		39.6		7.47		5.3	0.08	0.001	0.0001	0.001	0.001	0.002	0.11	0.001	0.008	0.0001	0.001	0.3	0.03	0.001	0.005	0.020	0.07	0.01	12	0.2	26	3	0.17	0.001	0.0001	0.001	0.001	0.001	0.01	0.002	0.001	0.005	0.27	0.0001
	Nov-24	No	12.4	82.2	9.6	32.4	57	7.29	276	1.4	0.04	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.005	0.0001	0.001	0.1	0.04	0.001	0.005	0.010	0.01	0.01	21	0.1	60	1	0.11	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.14	0.0001
	Dec-24	No	17.3	84.8	9.2	32.8	52	7.30	304	3.79	0.04	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.001	0.0001	0.001	0.2	0.01	0.001	0.005	0.010	0.01	0.01	21	0.2	50	1	0.09	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.16	0.0001
	Jan-25	No	13.6	75.2	9.3	42.7	72	7.40	208	4.83	0.02	0.001	0.0001	0.001	0.001	0.005	0.05	0.001	0.004	0.0001	0.001	0.4	0.02	0.001	0.005	0.070	0.4	0.01	26	0.4	74	4	0.06	0.001	0.0001	0.001	0.001	0.001	0.008	0.001	0.001	0.005	0.16	0.0001
	Feb-25	No	19	87.1	9.3	16.6	75	7.42	176	2.72	0.07	0.001	0.0001	0.001	0.001	0.002	0.09	0.001	0.004	0.0001	0.001	0.2	0.04	0.001	0.005	0.030	0.01	0.01	30	0.2	64	2	0.07	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.14	0.0001
	Mar-25	No	13.6	84.1	9.6	17.4	78	7.75	165	1.91	0.03	0.001	0.0001	0.001	0.001	0.002	0.07	0.001	0.005	0.0001	0.001	0.2	0.02	0.001	0.005	0.010	0.17	0.02	32	0.1	66	2	0.11	0.001	0.0001	0.001	0.001	0.001	0.007	0.001	0.001	0.005	0.18	0.0001
	Apr-25	No	9	78.4	10.7	16.6	75	8.24	177	2.03	0.05	0.001	0.0001	0.001	0.001	0.002	0.1	0.001	0.007	0.0001	0.001	0.2	0.04	0.001	0.005	0.020	0.01	0.01	30	0.2	58	1	0.04	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.12	0.0001
	May-25	No	3.7	80.3	-	16.4	9.7	7.71	117.1	1.78	0.02	0.001	0.0001	0.001	0.001	0.002	0.05	0.001	0.004	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	0.02	30	0.1	54	1	0.11	0.001	0.0001	0.001	0.005	0.001	0.008	0.001	0.001	0.011	0.16	0.0001
	Jun-25	No	5.5	83.5	-	5.1	5.1	8.47	114.1	4.66	0.06	0.001	0.0001	0.001	0.001	0.002	0.14	0.001	0.006	0.0001	0.001	0.1	0.02	0.001	0.005	0.010	0.01	0.01	23	0.1	85	1	0.14	0.001	0.0001	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.18	0.0001
	Jul-25	No	5.7	81.2	-	7.9	5	7.97	169.7	9.32	0.18	0.001	0.0001	0.001	0.001	0.002	0.15	0.0001	0.003	0.0001	0.001	0.2	0.03	0.001	0.005	0.020	0.01	0.01	12	0.2	31	4	0.21	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.21	0.0001
YK-IS	Mar-24	No	11.4	78.0	8.53	35	25.9	6.70	41.1	21.44	0.45	0.00015	0.00001	0.000005	0.001	0.001	0.4	0.0005	0.018	0.000015	0.0005	0.1	0.01	0.00001	0.004	0.050	0.05	0.005	1	0.1	21	1												
	Apr-24	No	6.8	80.7	-	36.5	-	7.04	-	12.37	0.09	0.001	0.0001	0.001	0.001	0.002	0.15	0.001	0.016	0.0001	0.001	0.3	0.02	0.001	0.005	0.010	0.06	-	12	0.06	-	13	0.15	0.001	0.0001	0.001	0.001	0.001	0.024	0.001	0.001	0.005	0.52	0.0001
	May-24	No	4.7	82.7	-	35.8	-	6.43	-	0.2	0.06	0.001	0.0001	0.001	0.001	0.004	0.1	0.001	0.015	0.0001	0.001	0.2	0.03	0.001	0.005	0.010	0.05	0.01	12	0.1	48	5	0.04	0.001	0.0001	0.001	0.001	0.001	0.014	0.001	0.001	0.005	0.16	0.0001
	Jun-24	No	3.9	83.1	-	35.1	-	7.88	-	7.99	0.08	0.001	0.0001	0.001	0.001	0.002	0.15	0.001	0.010	0.0001	0.001	0.3	0.03	0.001	0.005	0.010	0.06	0.01	9	0.2	19	6	0.32	0.001	0.0001	0.001	0.001	0.001	0.014	0.001	0.001	0.005	0.42	0.0001
	Jul-24	No	3.2	82.8	-	32.5	-	7.00	-	11.9	0.31	0.001	0.0001	0.001	0.001	0.002	0.25	0.001	0.008	0.0001	0.001	0.3	0.07	0.001	0.009	0.010	0.01	0.01	9	0.3	52	7	0.8	0.001	0.0001	0.001	0.001	0.001	0.015	0.001	0.001	0.005	0.62	0.0001
	Aug-24	No	7.2	81.3	-	23.5	-	6.70	-	25.12	0.67	0.001	0.0001	0.001	0.001	0.002	0.46	0.001	0.015	0.0001	0.002	0.4	0.04	0.001	0.005	0.030	0.01	0.01	9	0.4	62	15	1.22	0.001	0.0001	0.003	0.001	0.001	0.026	0.001	0.001	0.005	0.99	0.0001
	Sep-24	No	9.3	83.4	-	23.8	-	7.41	-	6.24	0.09	0.001	0.0001	0.001	0.001	0.002	0.13	0.001	0.009	0.0001	0.001	0.2	0.02	0.001	0.005	0.020	0.01	0.01	9	0.2	26	4	0.16	0.001	0.0001	0.001	0.001	0.001	0.012	0.001	0.001	0.005	0.26	0.0001
	Oct-24	No	13.7	86.3		23.7		7.83		3.1	0.07	0.001	0.0001	0.001	0.001	0.002	0.06	0.001	0.004	0.0001	0.001	0.2	0.06	0.001	0.005	0.010	0.01	0.01	21	0.2	40	4	0.14	0.001	0.0001	0.001	0.001	0.001	0.006	0.001	0.001	0.005	0.23	0.0001
	Nov-24	No	14.7	83.3	9.3	27.7	32	7.17	279	4.6	0.06	0.001	0.0001	0.001	0.001	0.002	0.12	0.001	0.016	0.0001	0.001	0.1	0.04	0.001	0.01	0.010	0.01	0.01	9	0.1	42	3	0.31	0.001	0.0001	0.001	0.001	0.001	0.022	0.001	0.001	0.005	0.39	0.0001
	Dec-24	No	18.4	80.2	8.7	21.4	35	7.15	256	10.86	0.08	0.001	0.0001	0.001	0.001	0.002	0.16	0.001	0.017	0.0001	0.001	0.2	0.03	0.001	0.005	0.020	0.02	0.01	12	0.2	40	6	0.59	0.001	0.0001	0.001	0.001	0.001	0.026	0.001	0.001	0.005	0.55	0.0001
	Jan-25	No	16.1	69.0	8.7	25.7	43	7.09	232	1.98	0.01	0.001	0.0001	0.001	0.001	0.002	0.12	0.001	0.051	0.0001	0.001	0.2	0.02	0.001	0.008	0.020	0.01	0.02	14	0.2	59	3	0.07	0.001	0.0001	0.001	0.001	0.001	0.055	0.001	0.001	0.005	0.61	0.0001
	Feb-25	No	21	73.5	8.8	9.1	40	6.61	175	9.85	0.46	0.001	0.0001	0.001	0.001	0.002	0.46	0.001	0.036	0.0001	0.001	0.4	0.07	0.001	0.005	0.020	0.02	0.01	12	0.4	42	5	1.44	0.001	0.0001	0.002	0.001	0.001	0.048	0.001	0.001	0.005	1.31	0.0001
	Mar-25	No	17.6	71.4	8.8	10.5	45	6.77	161	13.54	0.02	0.001	0.0001	0.001	0.001	0.002	0.19	0.001	0.059	0.0001	0.001	0.2	0.03	0.001	0.005	0.010	0.01	0.01	7	0.2	41	13	0.25	0.001	0.0001	0.001	0.001	0.001	0.054	0.001	0.001	0.005	0.74	0.0001
	Apr-25	Yes	11.9	65.4	9.7	10.9	49	6.93	183	7.27	0.07	0.001	0.0001	0.001	0.001	0.002	0.19	0.001	0.036	0.0001	0.001	0.2	0.02	0.001	0.005	0.020	0.04	0.01	21	0.2	37	4	0.15	0.001	0.0001	0.001	0.001	0.001	0.095	0.001	0.001	0.005	0.88	0.0001
	May-25	No	4.9	70.3	-	9.7	6	7.21	15.8	5.62	0.08	0.001	0.0001	0.001	0.001	0.002	0.18	0.001	0.021	0.0001	0.001	0.1	0.03	0.001	0.005	0.010	0.01	0.01	14	0.1	33	1	0.15	0.001	0.0001	0.001	0.001	0.001	0.027	0.001	0.001	0.005	0.58	0.0001
	Jun-25	No	5.9	84.9	-	8.9	5.6	8.07	110.3	13.6	0.14	0.001	0.0001	0.001	0.001	0.002	0.25	0.001	0.01	0.0001	0.001	0.2	0.04	0.001	0.005	0.020	0.01	0.01	12	0.2	90	5	0.28	0.001	0.0001	0.001	0.001	0.001	0.011	0.001	0.001	0.005	0.38	0.0001
	Jul-25																																											

Legend:
- (orange) Reference Site exceeds SSGV
- (red) Impact Site Result exceeds SSGV or DGV
- *italics* Result exceeds the Limit of Reporting

Appendix D: Calibration Certificate

HK Calibration Technologies Pty Ltd
ACN: 152 274 014 ABN: 84 152 274 014
Postal Address: PO Box 4489, North Rocks, 2151 NSW Australia
T: 1300 309 881 F: 1300 885 178
Email: info@hkcalibrations.com.au
Web: www.hkcalibrations.com.au

CALIBRATION CERTIFICATE

REPORT NO: 177471-1

CLIENT:	**CLIENT ADDRESS:**
UGL PTY LIMITED -AUBURN	3 GEORGE YOUNG STREET AUBURN NSW 2144

INSTRUMENT DATA

A	EQUIPMENT TYPE	WATER QUALITY METER
B	MAKE	YSI
C	MODEL	PRO DSS
D	SERIAL NUMBER	23H104391
E	ASSET NUMBER	NOT FOUND
F	DESCRIPTION OF TYPE	DIGITAL
G	RANGE	VARIOUS
H	RATED ACCURACY / TOLERANCE OF U.U.T. (±)	AS FOUND

CALIBRATION DATE

I	DATE OF CALIBRATION	25/10/2024
J	RECOMMENDED DUE DATE	25/10/2025

CALIBRATION RESULT

The results of the tests, calibrations, and /or measurements included in this document are traceable to Australian/national standards.

K	READING OF U.U.T.	SEE PAGE 2
L	READING OF MASTER INSTRUMENT	SEE PAGE 2
M	ADJUSTMENT	NIL
N	REPAIR	NIL
O	SERVICEABILITY/FUNCTIONALITY	ACCEPTABLE
P	TECHNICIAN COMMENT	THIS INSTRUMENT WAS FOUND TO BE FUNCTIONING AS INDICATED BY OUR FINDINGS WITHIN THIS REPORT.

The applicable measurement uncertainties are calculated in accordance with the method described in the ISO Guide to the Expression of Uncertainty in Measurement, with confidence level of 95% using a coverage factor k=2.

CALIBRATION PROCEDURE AND TRACEABILITY

Q	LOCATION OF EQUIPMENT	TEST AND MEASUREMENT LAB
R	CALIBRATED BY	CHINMAY
S	CALIBRATION ENVIRONMENT	TEMPERATURE: 23.0 ± 2°C AVERAGE HUMIDITY: 45% ± 10% RH
T	CALIBRATION PROCEDURE	HKC SOP 11-28-V8
U	REFERENCE CALIBRATION STANDARD USED:- HKCT'S PRECISION INSTRUMENT TRACEABLE TO AUSTRALIAN NATIONAL STANDARDS VIA A NATA CERTIFIED CALIBRATION CERTIFICATE:-	*MODEL: 5502E,34465A* *ASSET: HKC001A,HKC001C* *SERIAL NO: 2371801,MY60083003* *NATA REPORT NO: A43641EA, 2023004169*