OCTOBER 2025

MONTHLY CONSTRUCTION WATER QUALITY MONITORING REPORT

October 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.

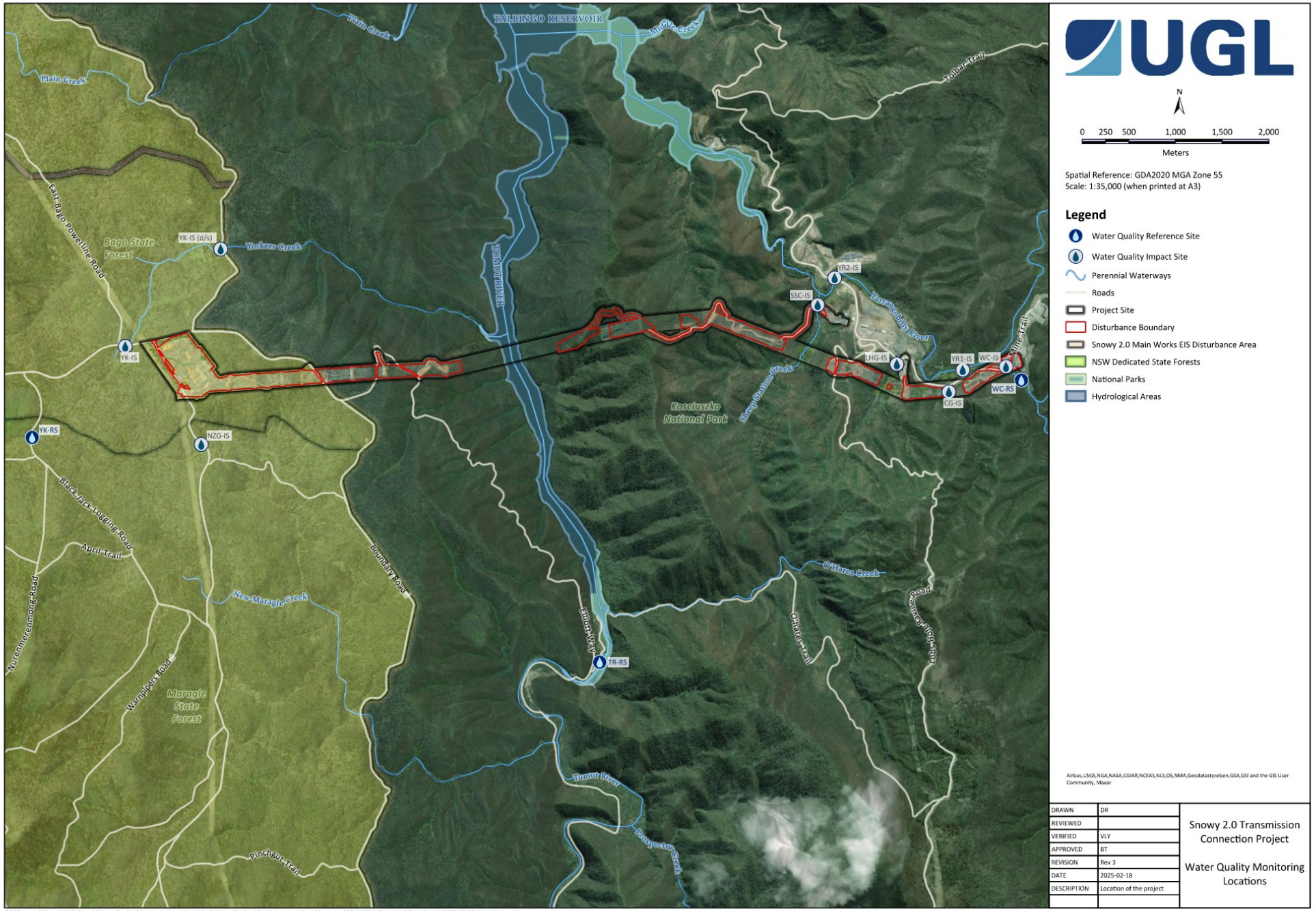


FIGURE 1 LOCALITY OF THE PROJECT AND SWQ MONITORING LOCATIONS

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

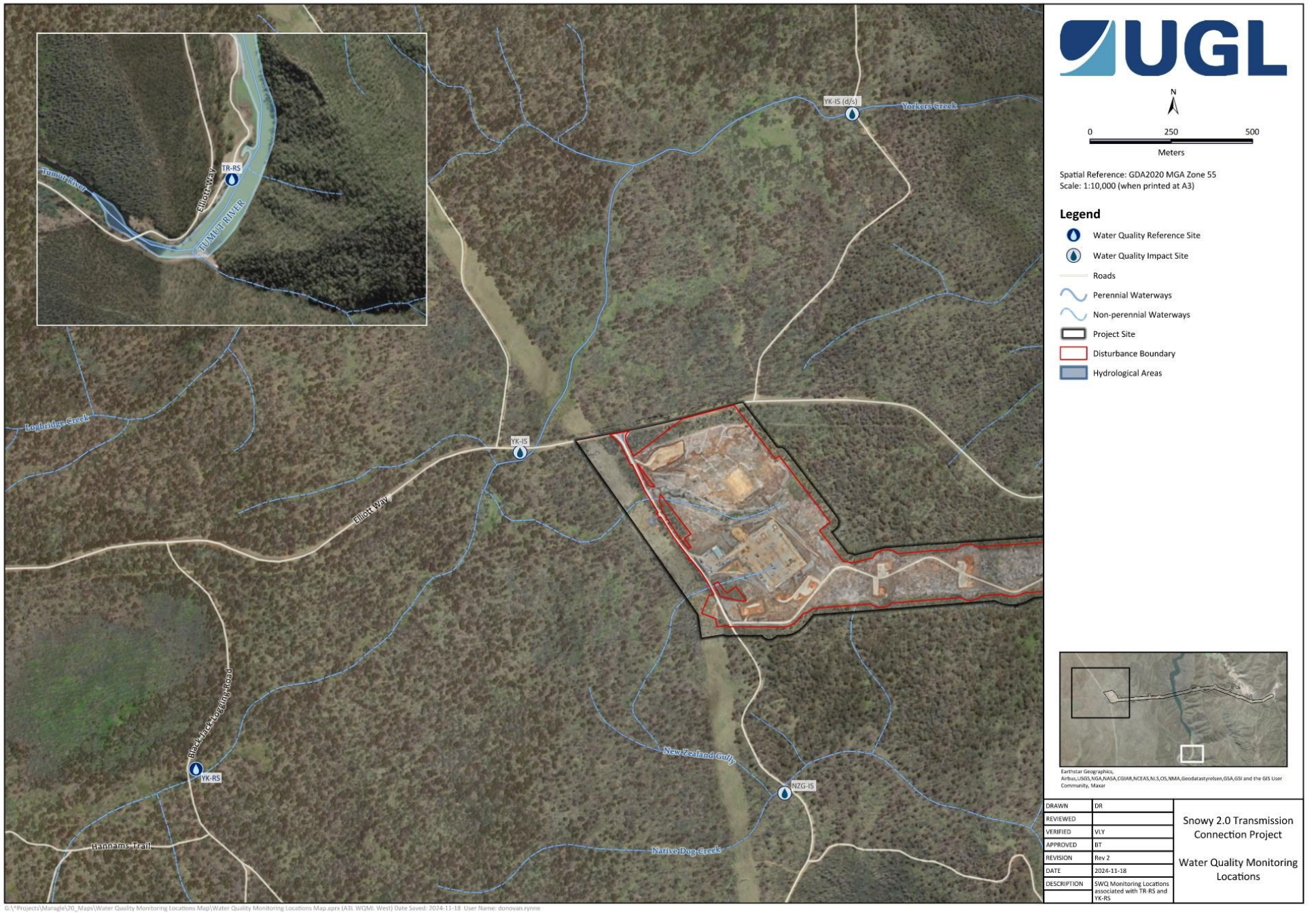


FIGURE 2 WATER QUALITY MONITORING LOCATIONS ASSOCIATED WITH REFERENCE SITE YR-RS AND TR-RS IN RELATION TO THE PROJECT

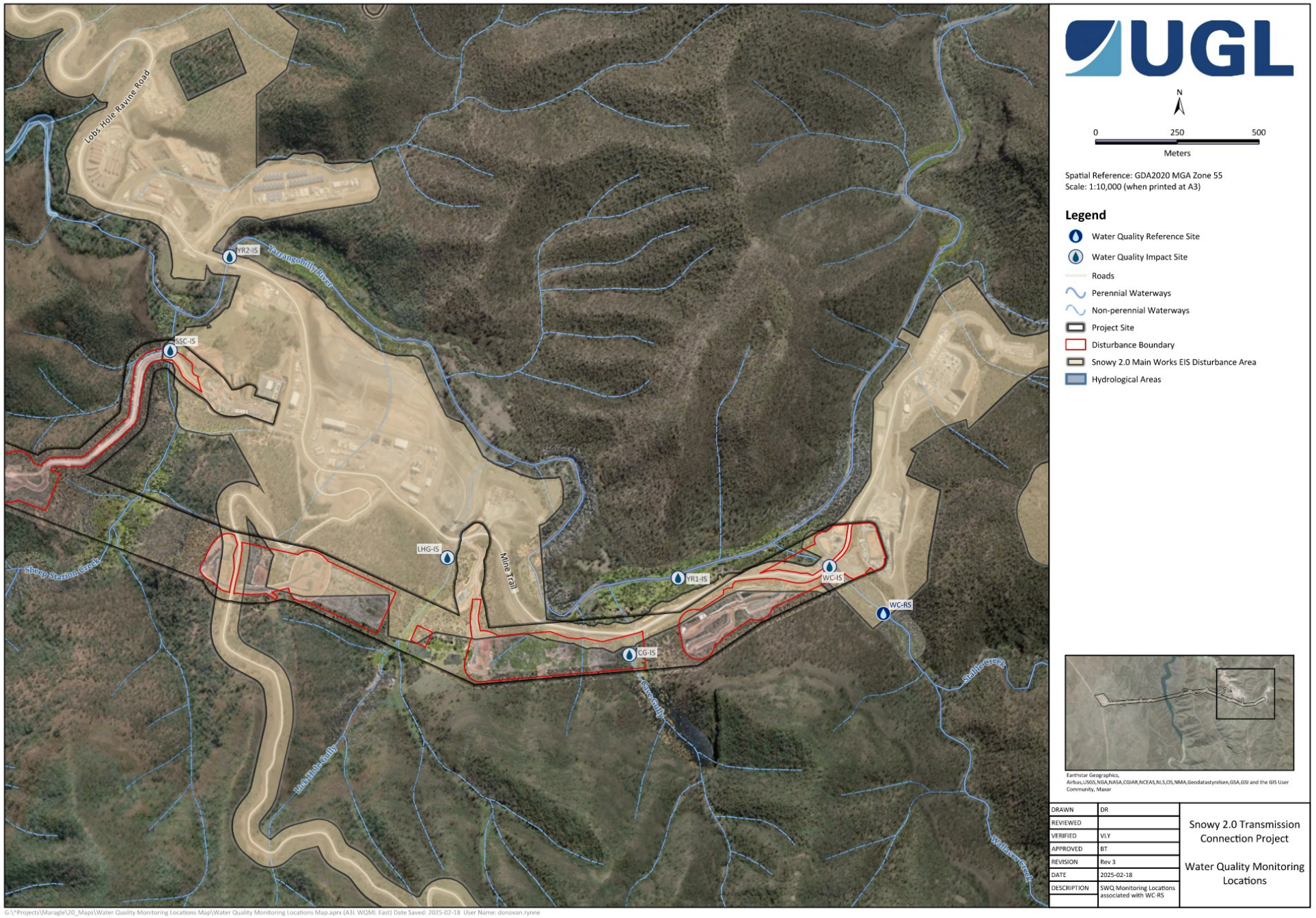


FIGURE 3 WATER QUALITY MONITORING LOCATIONS ASSOCIATED WITH REFERENCE SITE WC-RS IN RELATION TO THE PROJECT

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 OCTOBER 2025 MONITORING

SW sampling was undertaken at 11 monitoring locations from 12 and 13 October 2025. SSC-IS was dry or had no flow at the time of monitoring.

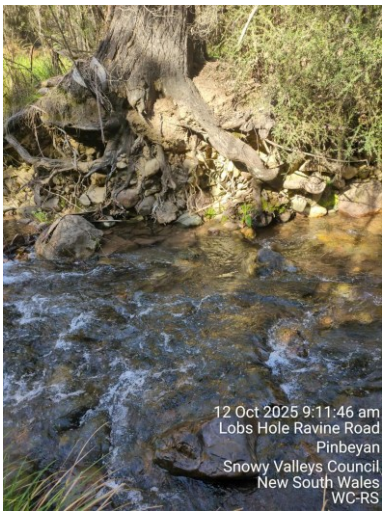
In accordance with the methodology outlined in Section 3, SW samples were either measured in situ using a calibrated YSI ProDSS Sonde Multiparameter Digital Water Quality Meter (refer to Appendix D) or analysed by National Association of Testing Authorities, Australia (NATA) accredited ALS Limited (ALS)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

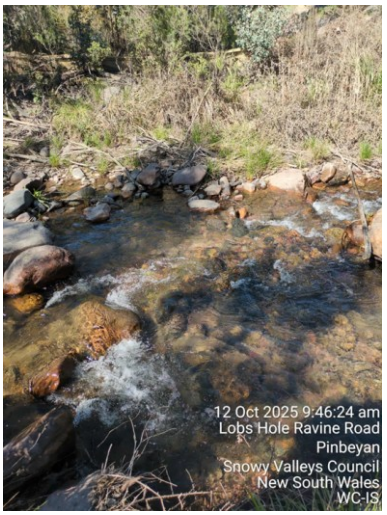
5.1 Observations

Field observations during sampling are summarised in Table 3.

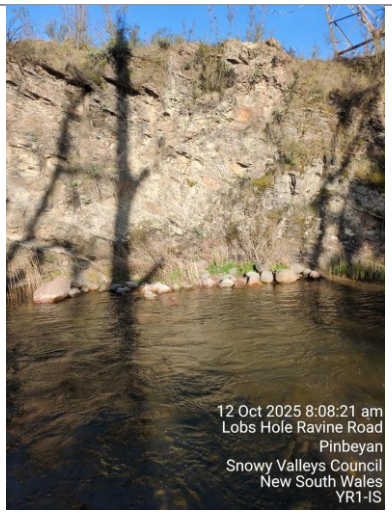
Table 3 Field observations during sampling

FIELD OBSERVATIONS		
Date	12-13 October 2025	
Weather	The weather forecast for 12 October was 8°C with 60 percent of <1 millimetres (mm) of rain. The previous 48 hours were cloudy and experienced a total of 0.00mm of rainfall across 10 to 11 October. The weather forecast for 13 October was 5°C with 5 percent if <1 mm. At the time of The previous 48 hours was cloudy and experienced a total of 0.00mm of rainfall across 11 to 12 October. At the time of sampling, the weather was fine and sunny.	
ID	**Observations**	**Photo**
WC-RS	• Moderate volume and flow rate. • Presence of sheen on water surface due to organic decomposition. • Presence of aquatic vegetation in the water channel. • Presence of vegetative detritus in the waterbody. • Rocky and eroded banks with exposed roots from a large tree. • Riparian vegetation comprised of groundcover species, shrubs and mature trees. • Moderate weed density, including blackberry (*Rubus fruticosus*).	

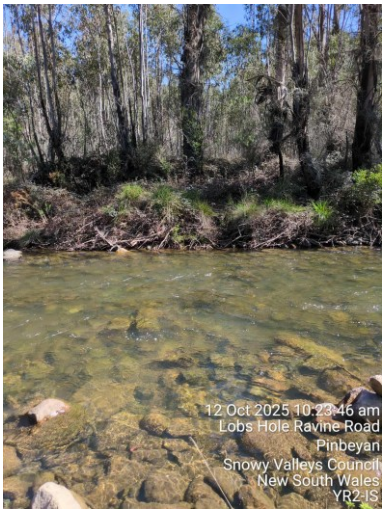
FIELD OBSERVATIONS

ID	Observations	Photo
WC-IS	• Moderate volume and flow rate. • Water clear with no visible discolouration. • Presence of aquatic vegetation in water channel. • Presence of vegetative detritus in waterbody. • Rocky and undercut banks present. • Riparian vegetation, comprised of trees and grass. • High weed density, including blackberry (*Rubus fruticosus*). • Monitoring location is situated adjacent to bridge and Mine Trail Road which is frequently used by snowy 2.0 vehicles, plant and machinery.	
CG-IS	• Moderate water volume and flow rate. • Water clear with no visible discolouration. • Presence of aquatic vegetation in water channel. • Presence of old metal pipe submerged in waterbody. • Eroded banks and sandy bed. • Overhanging vegetation present. • Riparian vegetation comprised of shrubs and grasses.	

FIELD OBSERVATIONS

ID	Observations	Photo
YR1-IS	• Moderate water volume and flow rate. • Slight water discolouration present. • Presence of aquatic vegetation in channel. • Rocky banks with sections of exposed soil along upper bank areas. • Riparian vegetation comprised of groundcover species, shrubs and trees. • Moderate weed density including thistle (*Cirsium spp.*) and blackberry (*Rubus fruticosus*) • Presence of wildlife. • Monitoring location is situated adjacent to bridge and electrical transmission tower on top of rocky cliff and Snowy 2.0 laydown area	
LHG-IS	• Low water volume and moderate flow rate. • Slight discolouration in water. • Presence of aquatic vegetation within channel. • Vegetation of vegetative detritus in waterbody. • Presence of silt and grass seed husks on stream bed. • Rocky bed with no defined banks. • Overgrown vegetation, predominantly groundcover species. • Monitoring location is adjacent to Mine Trail Road which is frequently used by Snowy 2.0 vehicles, plant and machinery.	

FIELD OBSERVATIONS

ID	Observations	Photo
YR2-IS	• Moderate water volume and flow rate. • Slight yellow tinge observed in water. • Presence of aquatic vegetation in channel. • Presence of vegetative detritus • Rocky bed with no defined banks. • Riparian vegetation comprised of groundcover species, shrubs and trees. • Moderate weed density, including blackberry (*Rubus fruticosus*). • Presence of road washout from Mine Trail Road in vegetation adjacent to river.	
SSC-IS	• Dry; no flow at the time of sampling.	

FIELD OBSERVATIONS

ID	Observations	Photo
TR-RS	• Moderate water volume and flow rate. • Yellow tinge observed in water. • Presence of aquatic invertebrates and vegetation in water channel. • Presence of vegetative detritus in waterbody. • Sandy bed and rocky banks. • Riparian vegetation comprised of groundcover and trees. • Presence of landslips. • Monitoring location is situated adjacent to publicly accessible O'Hares Campground and Talbingo Reservoir ancillary infrastructure.	
YK-RS	• Low water volume and flow rate. • Turbid water. • Yellow and brown tinge observed in water. • Sandy stream bed. • Presence of aquatic vegetation (including algae) in water channel. • Presence of vegetative detritus in waterbody. • Eroded and undercut banks. • Ground cover is comprised of shrubs and grasses. • Presence of horse scat.	

FIELD OBSERVATIONS

ID	Observations	Photo
YK-IS (D/S)	• Low water volume and flow rate. • Yellow and brown tinge observed in water. • Presence of aquatic vegetation (including algae) in water channel. • Presence of vegetative detritus observed in waterbody. • Evidence of undermined banks • Rocky and sandy stream bed • Riparian vegetation consisted of groundcover species and trees. • Overhanging and overgrown vegetation. • Monitoring location is situated adjacent to publicly accessible 4WD track.	
NZG-IS	• Low water volume and flow rate. • Slight yellow tinge observed in water. • Presence of aquatic vegetation (including algae) in water channel. • Presence of organic detritus in waterbody. • Evidence of eroded and undermined banks. • Pebbly stream bed. • Riparian vegetation consisted of groundcover species and trees. • Overhanging and overgrown vegetation. • Monitoring location is situated adjacent to publicly accessible 4WD track.	

FIELD OBSERVATIONS

ID	Observations	Photo
YK-IS	• Low water volume and flow rate. • Yellow tinge observed in water. • Presence of aquatic vegetation in water channel. • Presence of vegetative detritus in waterbody. • Rocky and sandy stream bed. • Eroded and muddy banks. • Overhanging vegetation. • Riparian vegetation consisted of groundcover species, shrubs and trees. • Moderate weed density. • Monitoring location is situated adjacent to Elliot 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

During October 2025, all three sampling locations (Yarrangobilly catchment, Talbingo Reservoir and Yorkers Creek Catchment) exhibited an increase in temperature (°C) compared to September 2025 (Figure 4—6). In Yarrangobilly Catchment, mean temperatures increased to 14°C (Figure 4). Talbingo Reservoir, increased marginally from 11°C to 13°C (Figure 5). Mean temperature at Yorkers Creek Catchment increased to 11°C (Figure 6).

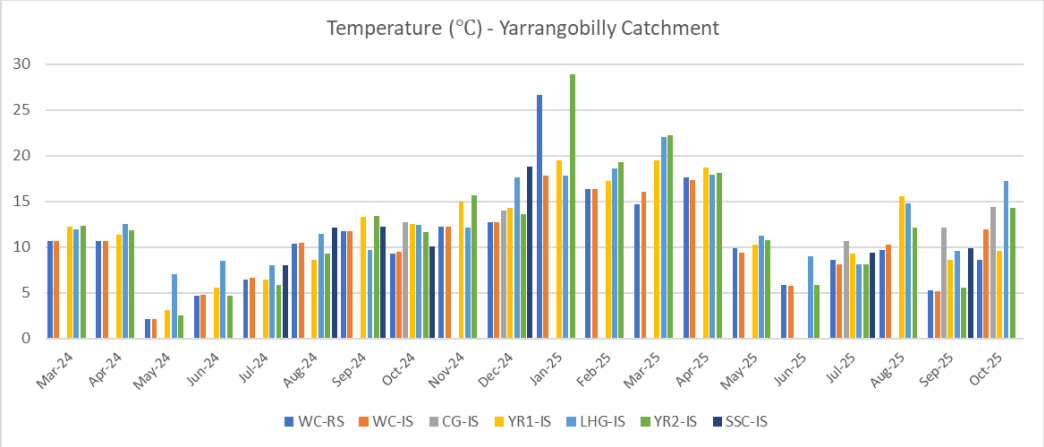


FIGURE 4 : TEMPERATURE FOR YARRANGOBILLY RIVER CATCHMENT

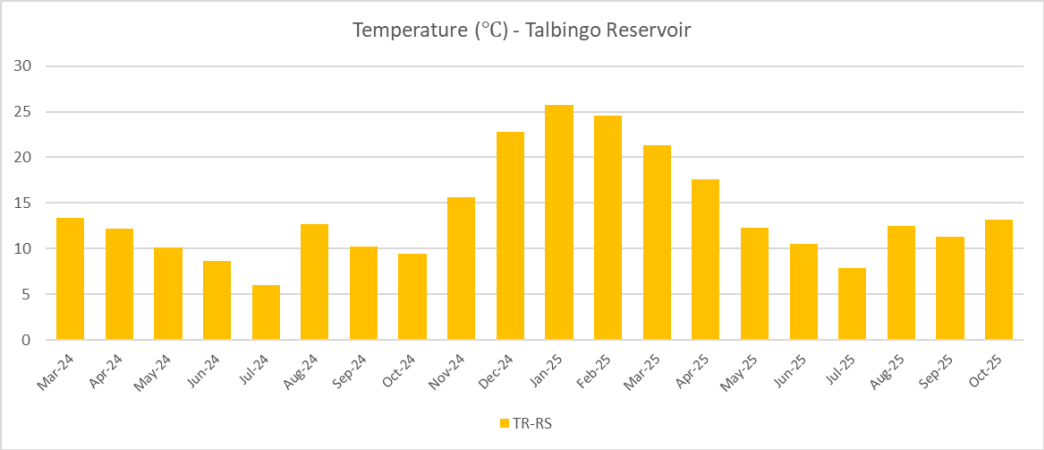


FIGURE 5: TEMPERATURE FOR TALBINGO RESERVOIR

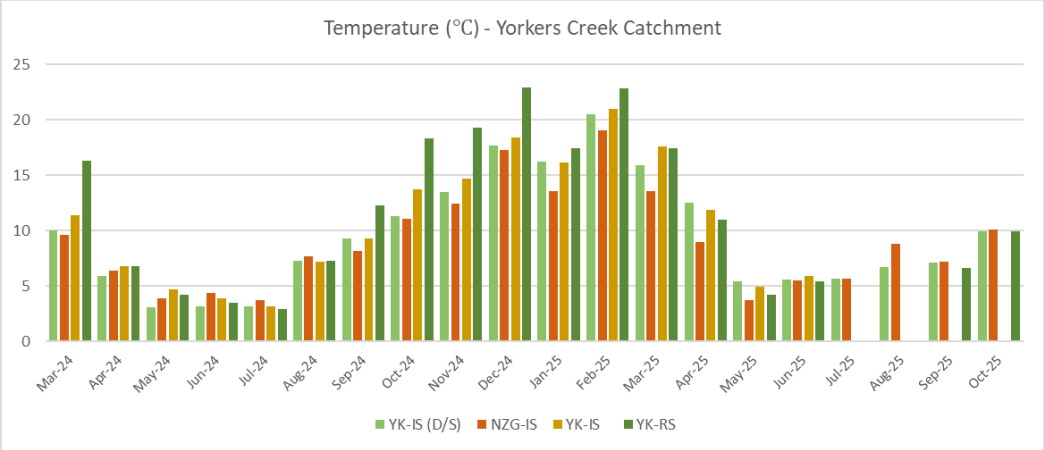


FIGURE 6: TEMPERATURE FOR YORKERS CREEK CATCHMENT

5.2.1.2 pH

During the October 2025 sampling period, Yarrangobilly Catchment pH results marginally reduced from September values marginally exceeding the June—November SSGV value (Figure 7). Talbingo Reservoir exhibited an increase in pH values to 7.35pH (Figure 8). Yorkers Creek Catchment maintained similar pH values to September 2025 (Figure 9).

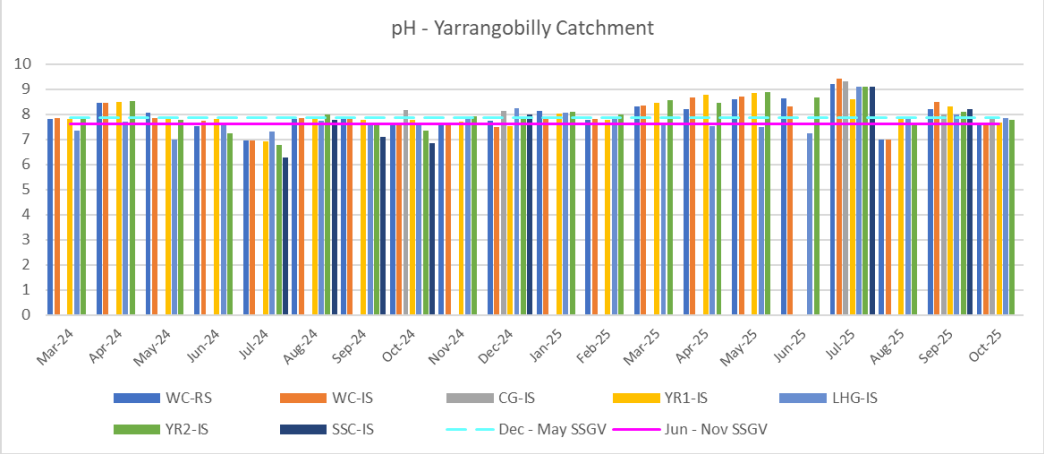


FIGURE 7: PH FOR YARRANGOBILLY RIVER CATCHMENT

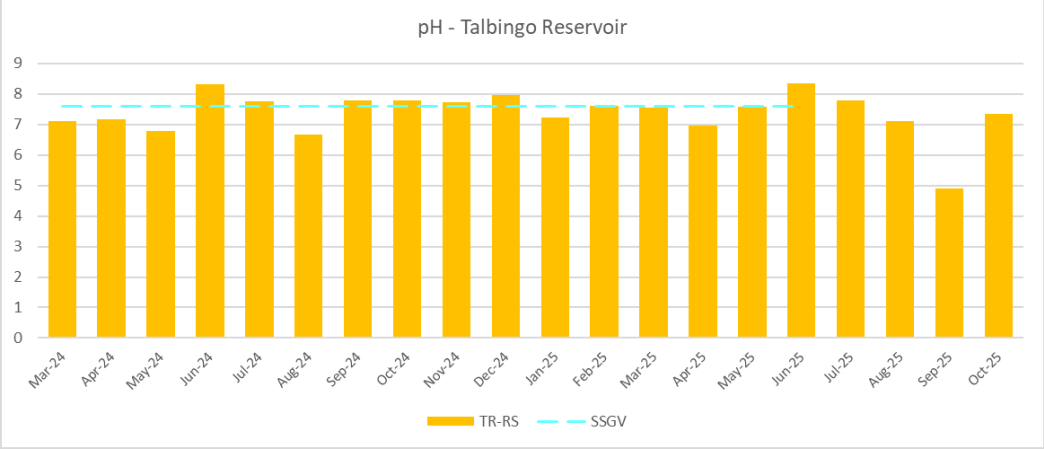


FIGURE 8: PH FOR TALBINGO RESERVOIR

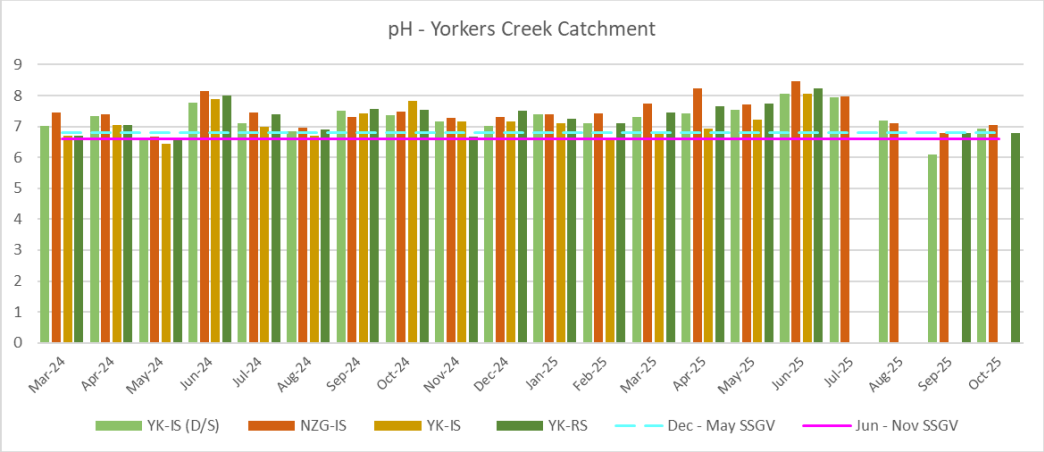


FIGURE 9: PH FOR YORKERS CREEK CATCHMENT

5.2.1.3 Dissolved Oxygen

During the October 2025 sampling period, Yarrangobilly Catchment DO (%) maintained consistent results to September 2025 (Figure 10—12). Yarrangobilly Catchment exhibited results above the June—November SSGV (Figure 10), Talbingo Reservoir, reduced from the June—November SSGV to 45.9% (Figure 11). Yorkers Creek Catchment presented similar results to Talbingo Reservoir, with a reduction to 40% (Figure 12).

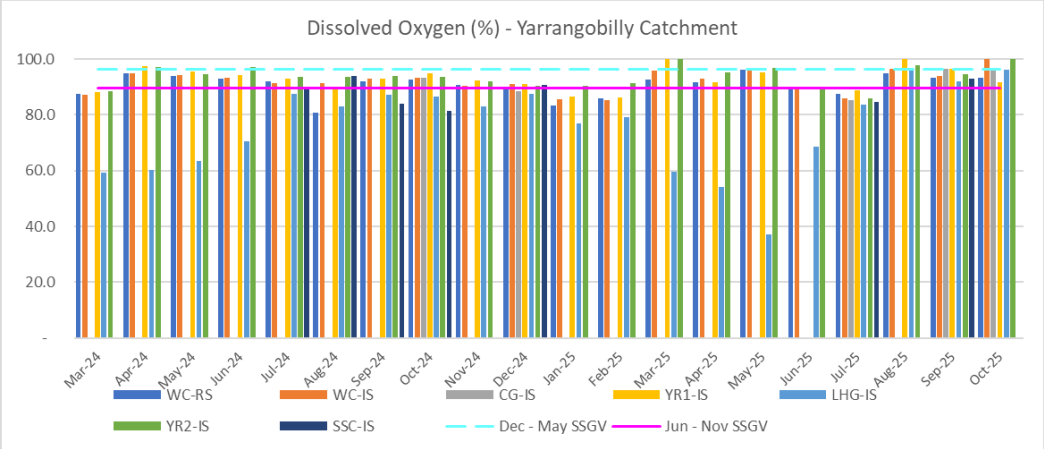


FIGURE 10: DO FOR YARRANGOBILLY RIVER CATCHMENT

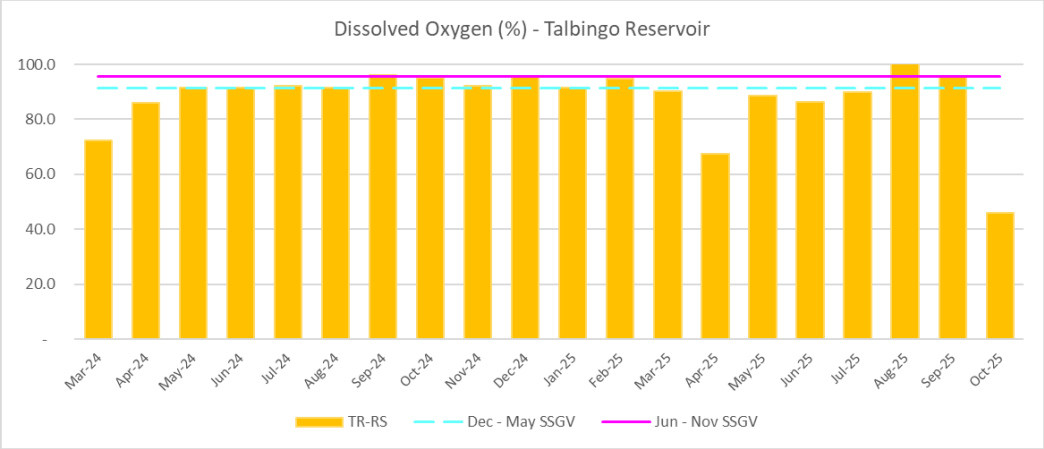


FIGURE 11: DO FOR TALBINGO RESERVOIR

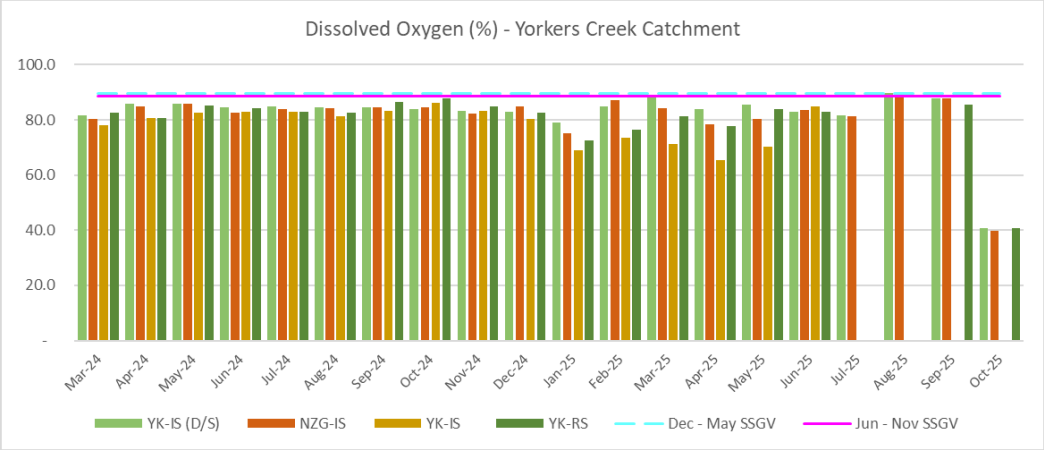


FIGURE 12: DO FOR YORKERS CREEK CATCHMENT

5.2.1.4 Specific Conductance

October 2025 specific conductance (µS/cm) results varied across all sampling locations. Exceedance of the June—November SSGV were recorded in Yarrangobilly Catchment at YR1-IS, YR2-IS and notable results at CG-IS and LHG-IS (Figure 13). An exceedance was recorded in Talbingo Reservoir (Figure 14) and Yorkers Creek Catchment at all sampling locations.

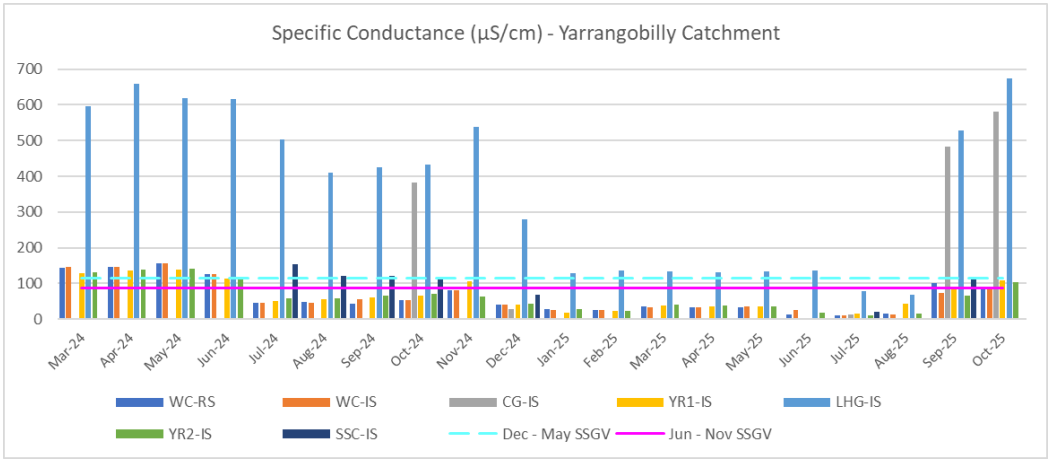


FIGURE 13: SPC FOR YARRANGOBILLY RIVER CATCHMENT

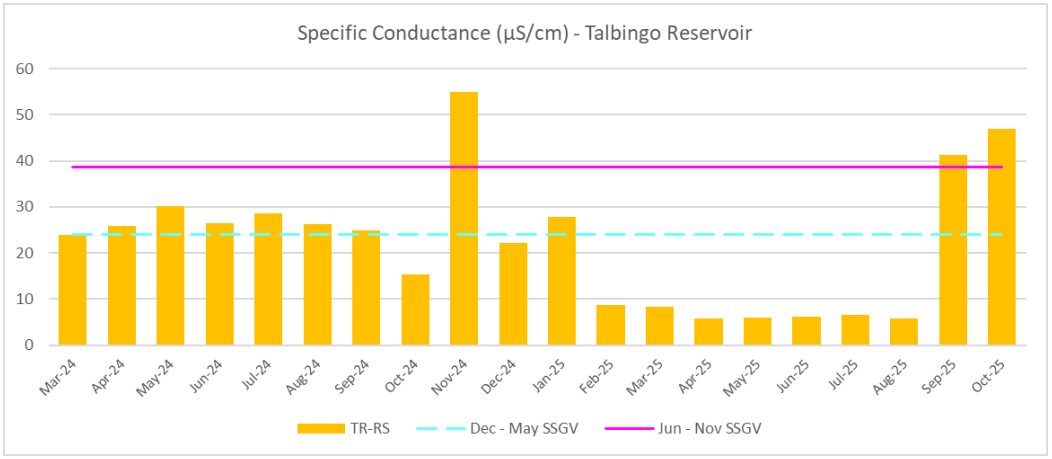


Figure 14: SPC for Talbingo Reservoir

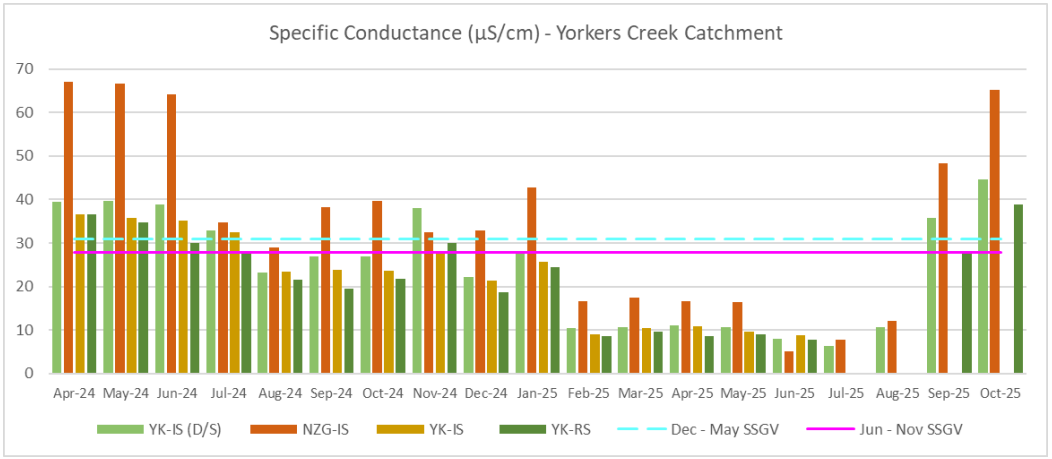


FIGURE 15: SPC FOR YORKERS CREEK CATCHMENT

5.2.1.5 Electrical Conductivity

In October 2025, Electrical Conductivity (EC, µS/cm) continued to exceed SSGV values across all three catchments (Yarrangobilly Catchment, Talbingo Reservoir and Yorkers Creek Catchment) compared to previous results (Figure 16—18). The most notable exceedance of the June—November SSGV, was recorded at CG-IS (464.4 µS/cm) (Figure 16).

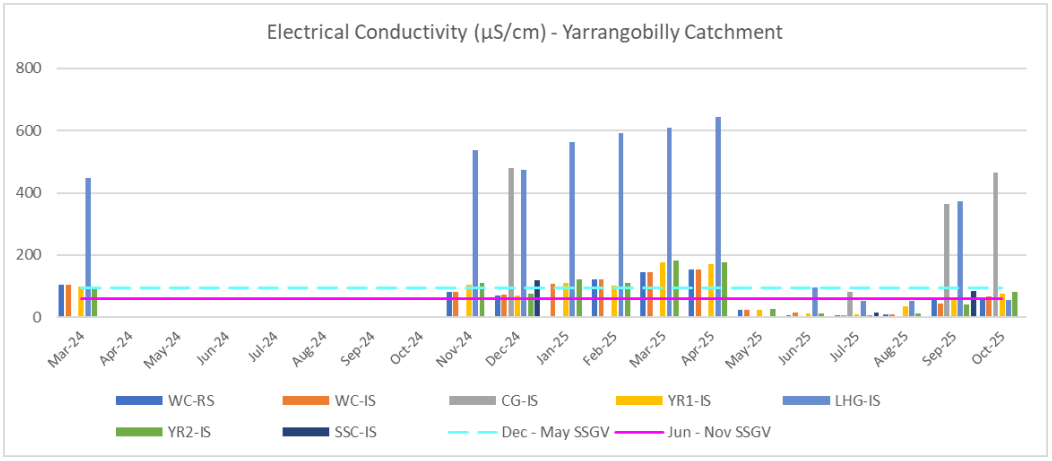


FIGURE 16: EC FOR YARRANGOBILLY RIVER CATCHMENT

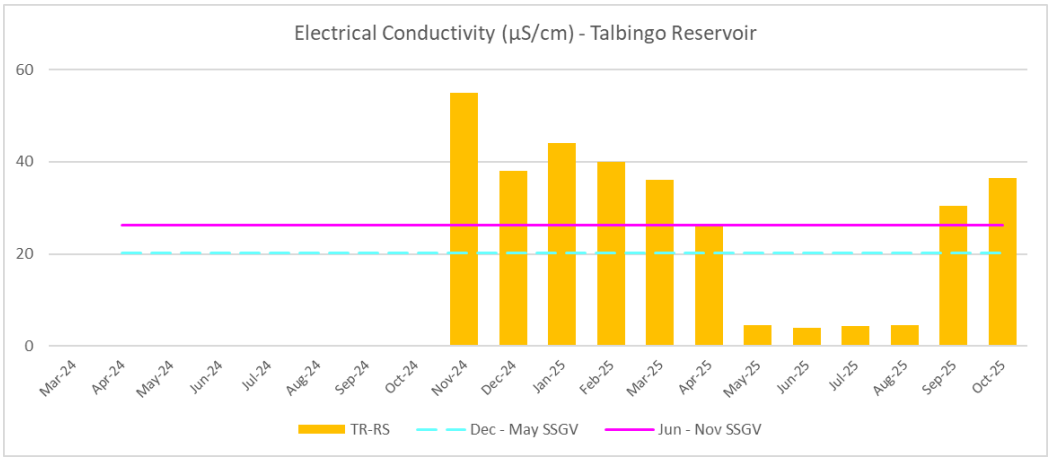


Figure 17: EC for Talbingo Reservoir

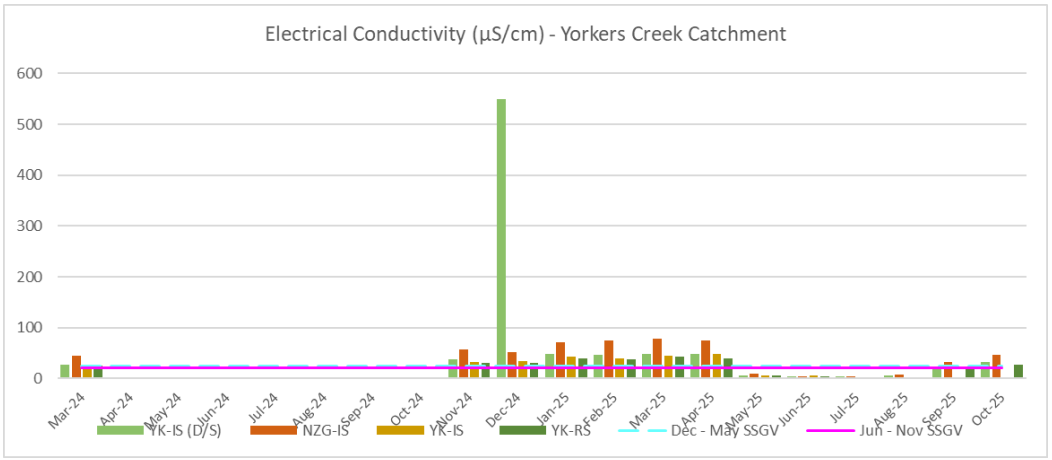


FIGURE 18: EC FOR YORKERS CREEK CATCHMENT

5.2.1.6 Turbidity

In October 2025, results were generally below the June—November SSGV (Figure 19—21) with only one exceedance recorded from YK-RS (10.07NTU) in the Yorkers Creek Catchment (Figure 21).

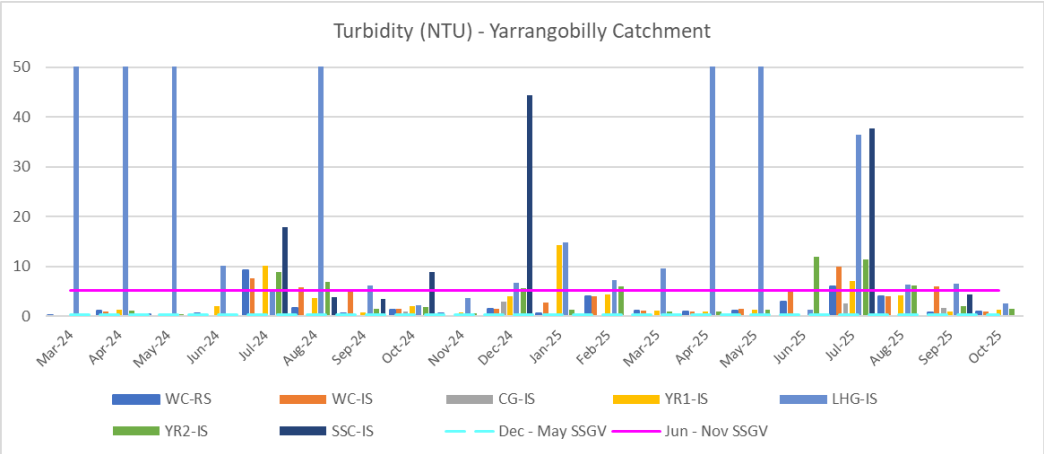


FIGURE 19: TURBIDITY FOR YARRANGOBILLY RIVER CATCHMENT

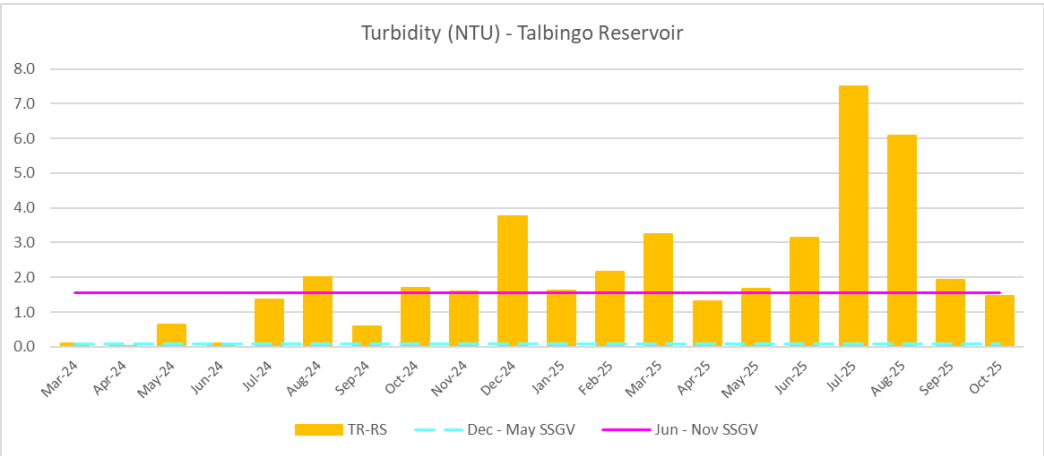


Figure 20: Turbidity for Talbingo Reservoir

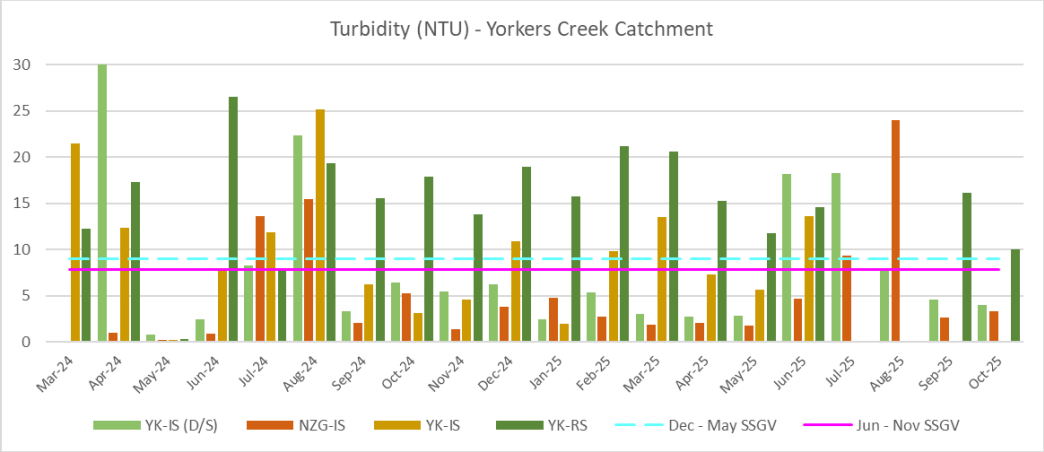


FIGURE 21: TURBIDITY FOR YORKERS CREEK CATCHMENT

5.2.1.7 Total Suspended Solids

Total Suspended Solids (mg/L) maintained similar results compared to September 2025 (Figure 22—24) although YK-RS increased to 7mg/L (Figure 24).

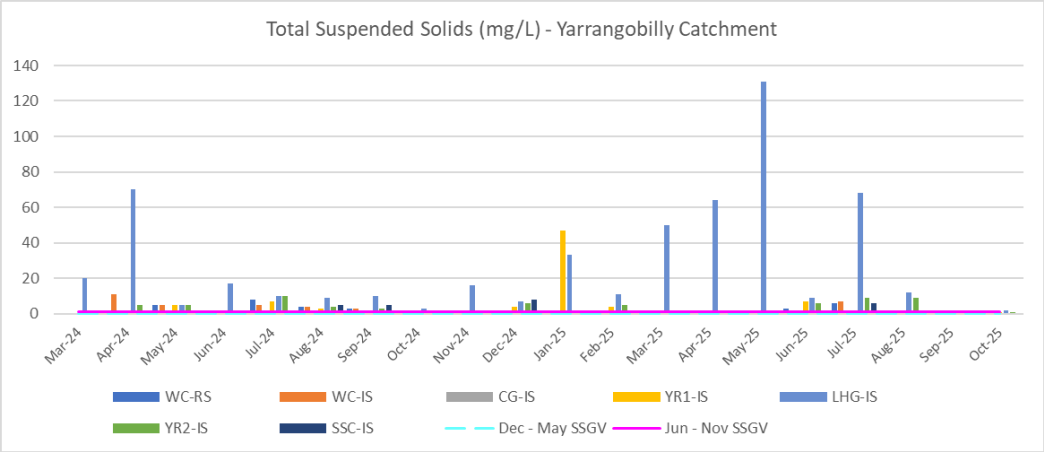


FIGURE 22: TSS FOR YARRANGOBILLY RIVER CATCHMENT

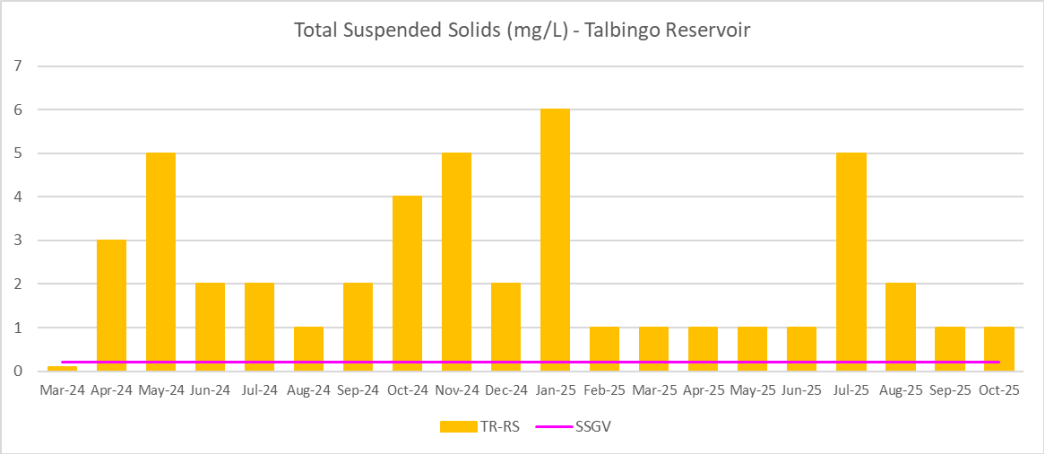


Figure 23: TSS for Talbingo Reservoir

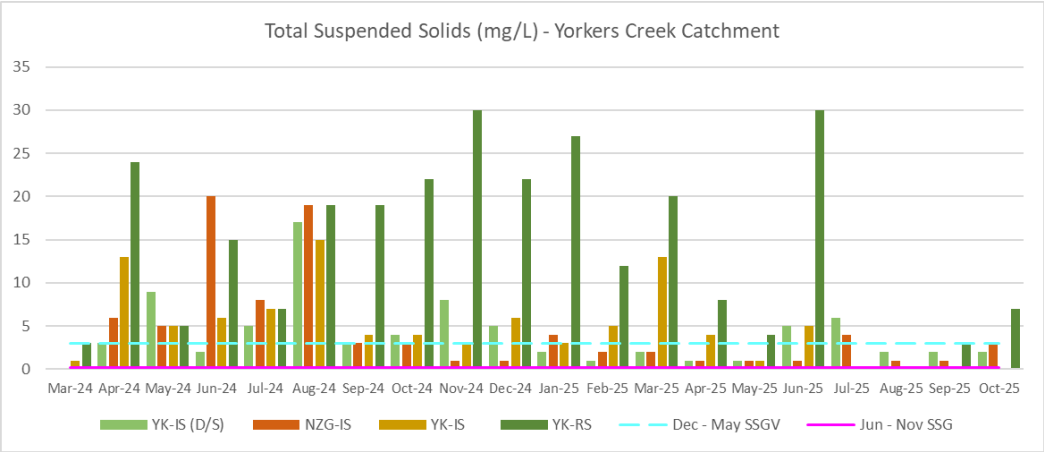


FIGURE 24: TSS FOR YORKERS CREEK CATCHMENT

5.2.1.8 Total Dissolved Solids

Total Dissolved Solids (mg/L) results were varied across each catchment area during the October 2025 sampling period. Yarrangobilly Catchment maintained similar results to September 2025 (Figure 25). TR-RS from the Talbingo Reservoir reduced from September 2025 to 20mg/L (Figure 26). Yorkers Creek Catchment continued to reduce although still exceeding the June—November SSGV values (Figure 27).

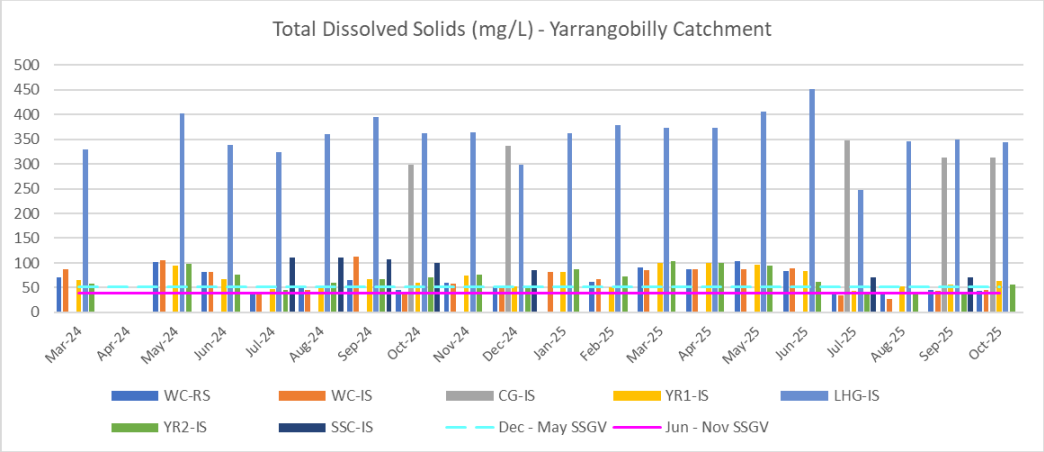


Figure 25: TDS for Yarrangobilly River Catchment

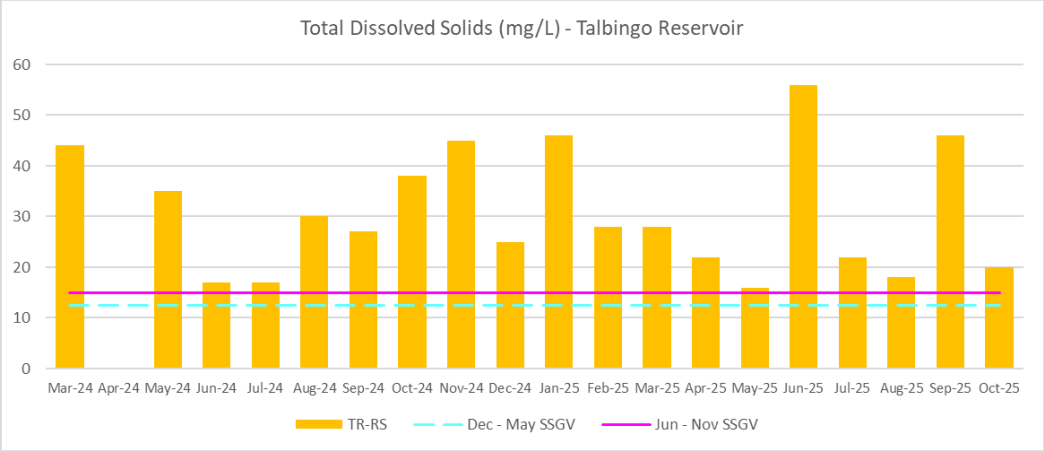


Figure 26: TDS for Talbingo Reservoir

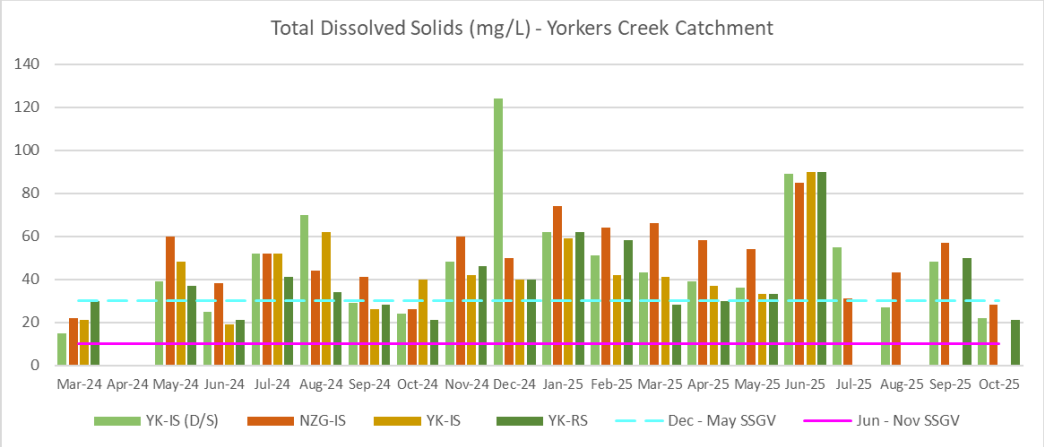


FIGURE 27: TDS FOR YORKERS CREEK CATCHMENT

5.2.1.9 Redox

Varied Redox (mV) results were produced during the October 2025 sampling period. Results continued decreasing at the Yarrangobilly Catchment sampling sites (Figure 28). A marginal increase was identified at TR-RS from the Talbingo Reservoir (Figure 29) and all sampling locations in the Yorkers Creek Catchment (Figure 30).

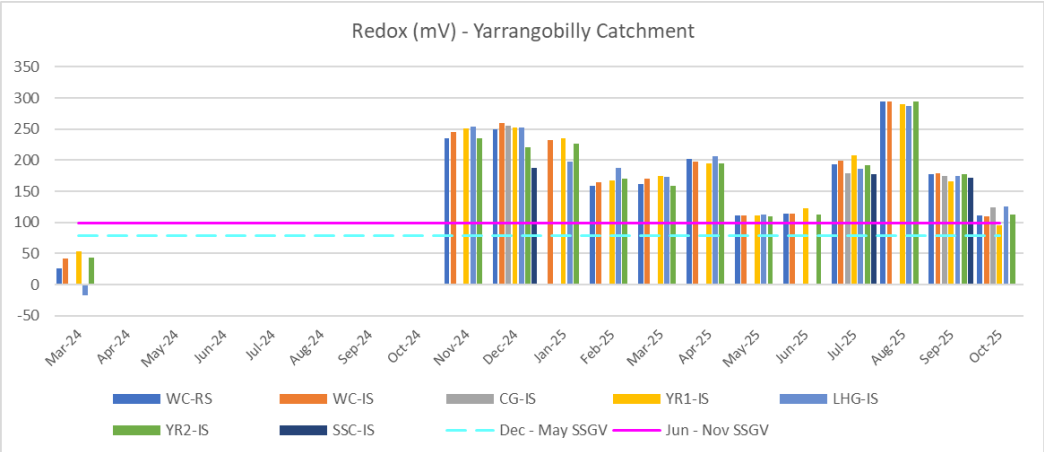


FIGURE 28: REDOX FOR YARRANGOBILLY RIVER CATCHMENT

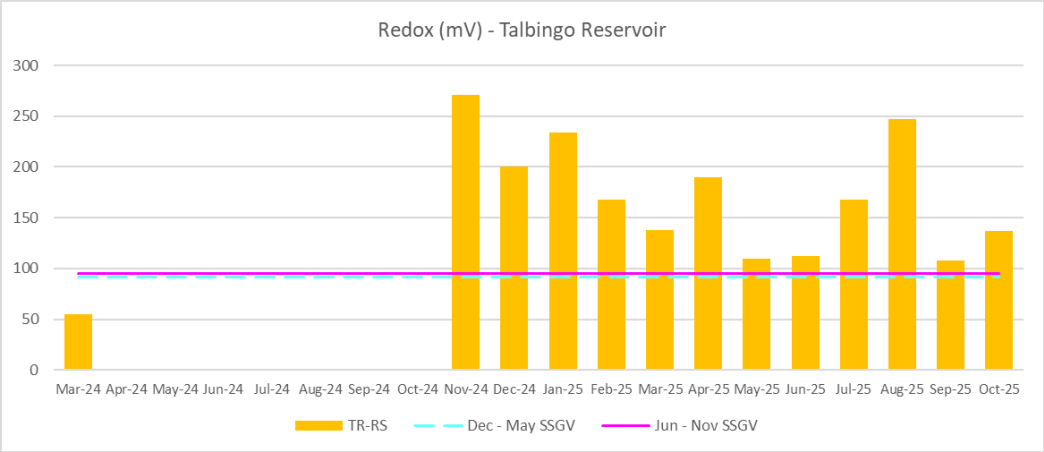


Figure 29: Redox for Talbingo Reservoir

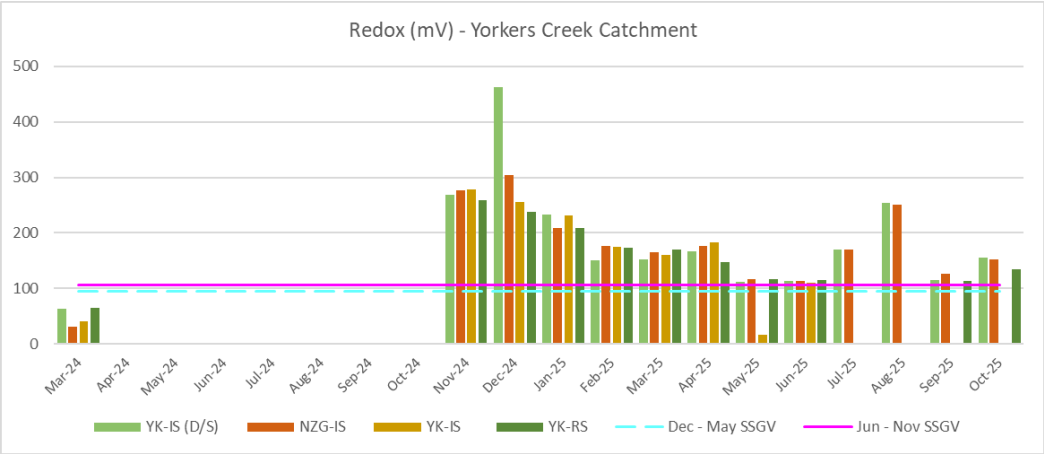


FIGURE 30: REDOX FOR YORKERS CREEK CATCHMENT

5.2.1.10 Nitrogen Oxides

Nitrogen Oxides (mg/L) levels remained below the LOR during the October 2025 sampling period across all catchments (Figure 31 — 33). A notable decrease was identified at TR-RS from the Talbingo Reservoir compared to the September 2025 sampling period (Figure 32).

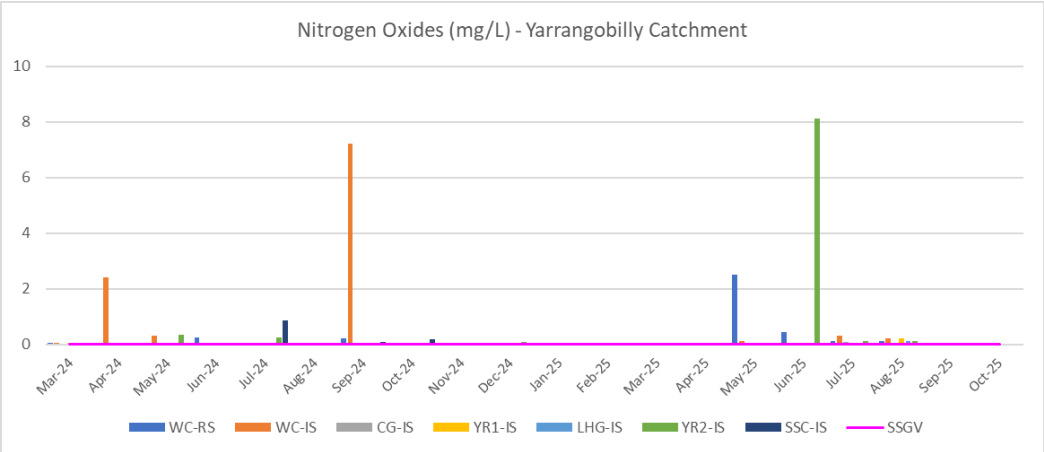


FIGURE 31: NITROGEN OXIDES FOR YARRANGOBILLY RIVER CATCHMENT

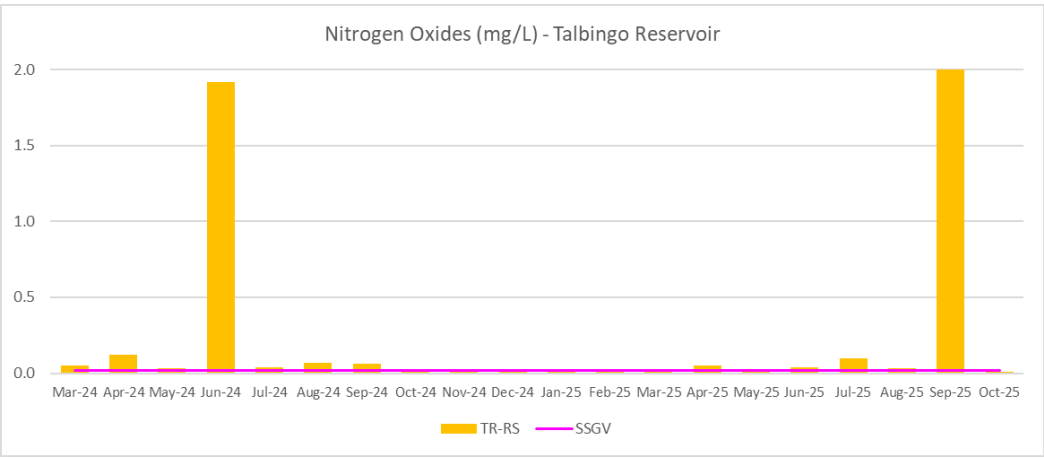


FIGURE 32: NITROGEN OXIDES FOR TALBINGO RESERVOIR

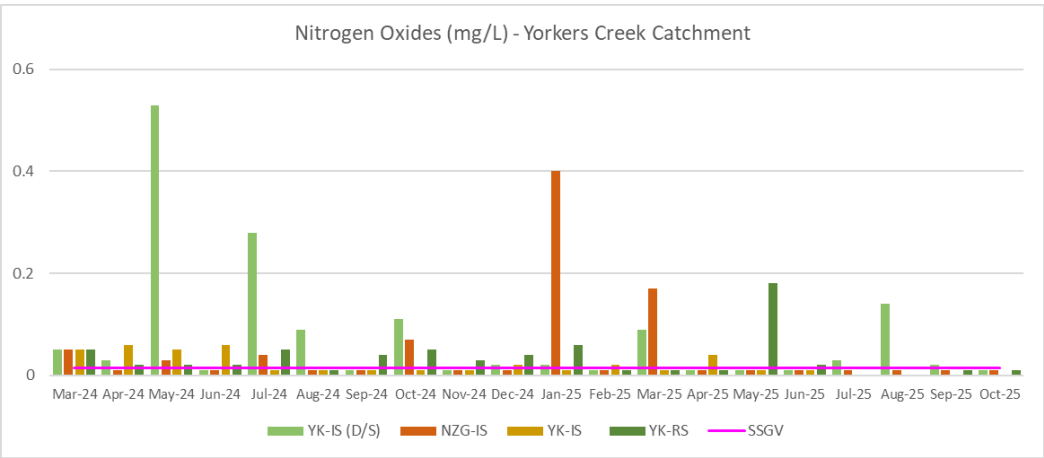


FIGURE 33: NITROGEN OXIDES FOR YORKERS CREEK CATCHMENT

5.2.1.11 Ammonia

Ammonia (mg/L) concentrations remained consistent with September 2025 results during the October 2025 sampling period (Figure 34—36). Exceedances were identified at YR1-IS from the Yarrangobilly Catchment (Figure 34), TR-RS from the Talbingo Reservoir (Figure 35) and YK-IS(D/S) from the Yorkers Creek Catchment (Figure 36).

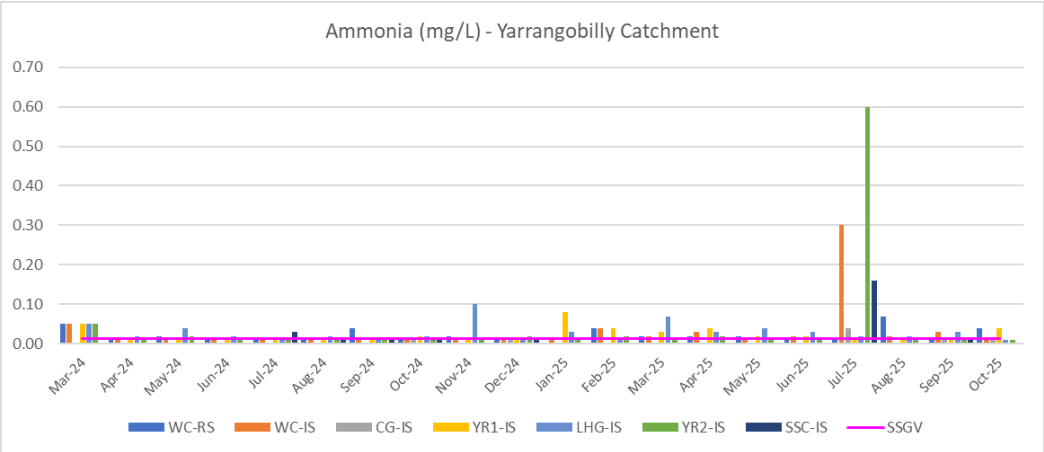


FIGURE 34: AMMONIA FOR YARRANGOBILLY RIVER CATCHMENT

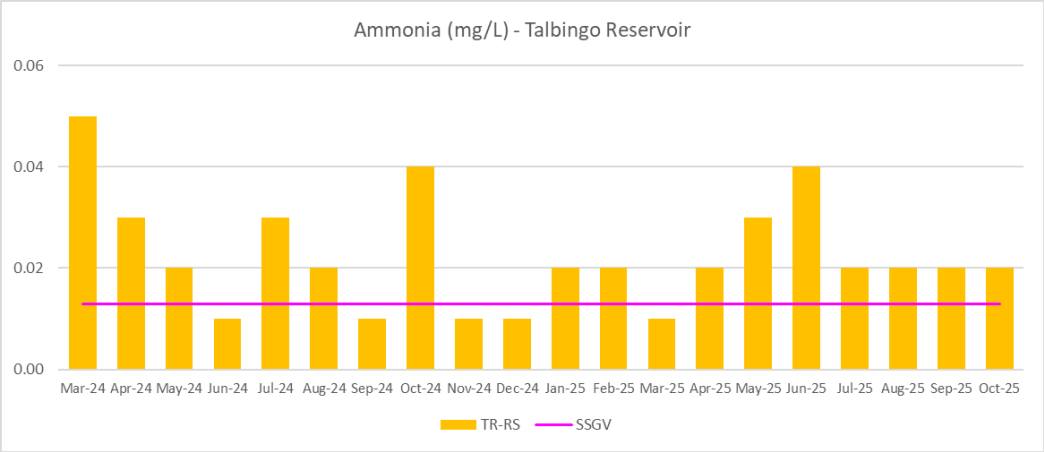


Figure 35: Ammonia for Talbingo Reservoir

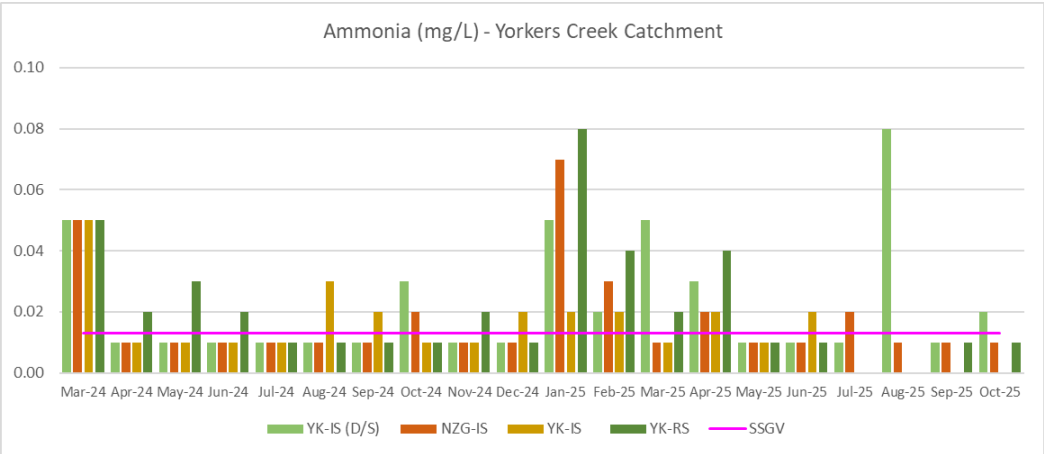


FIGURE 36: AMMONIA FOR YORKERS CREEK CATCHMENT

5.2.1.12 Cyanide

Cyanide (mg/L) concentration were below the LOR at all sites across all three catchments, refer Figure 37 to Figure 38.

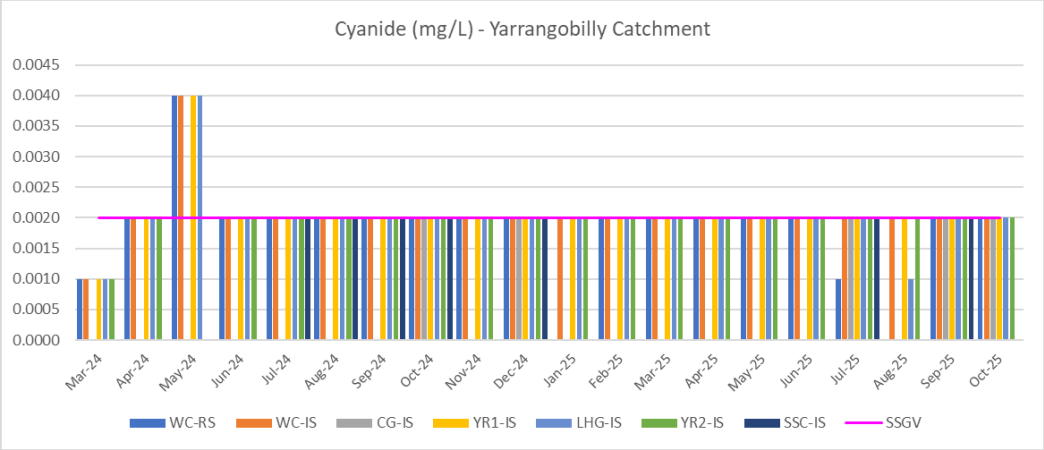


FIGURE 37: CYANIDE FOR YARRANGOBILLY RIVER CATCHMENT

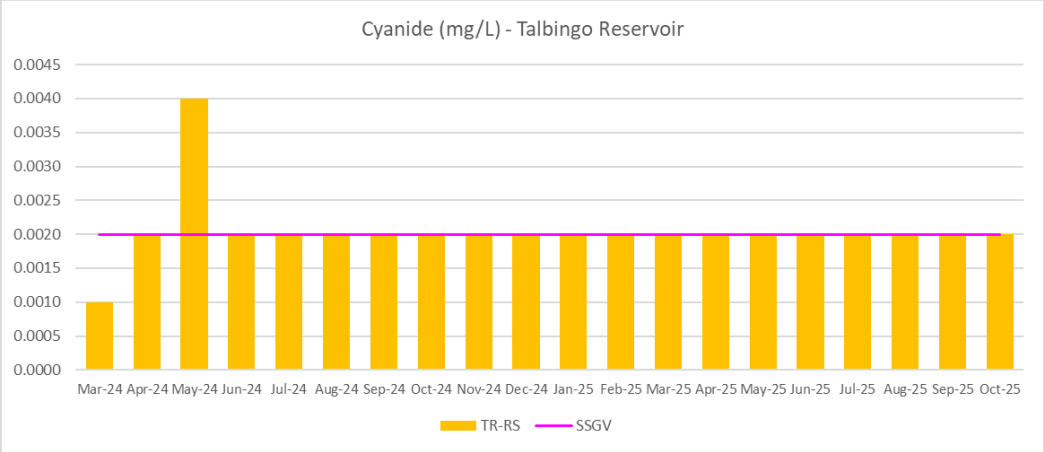


FIGURE 38: CYANIDE FOR TALBINGO RESERVOIR

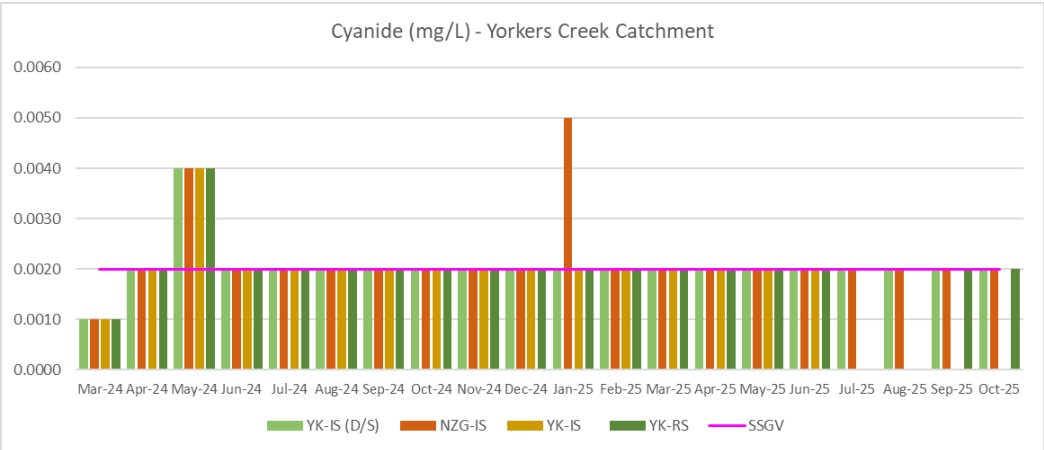


FIGURE 38: CYANIDE FOR YORKERS CREEK CATCHMENT

5.2.1.13 Total Hardness

October 2025 Total Hardness results were comparative to September 2025 although marginal decreases were identified in various sampling locations across the three catchments (Figure 40—42).

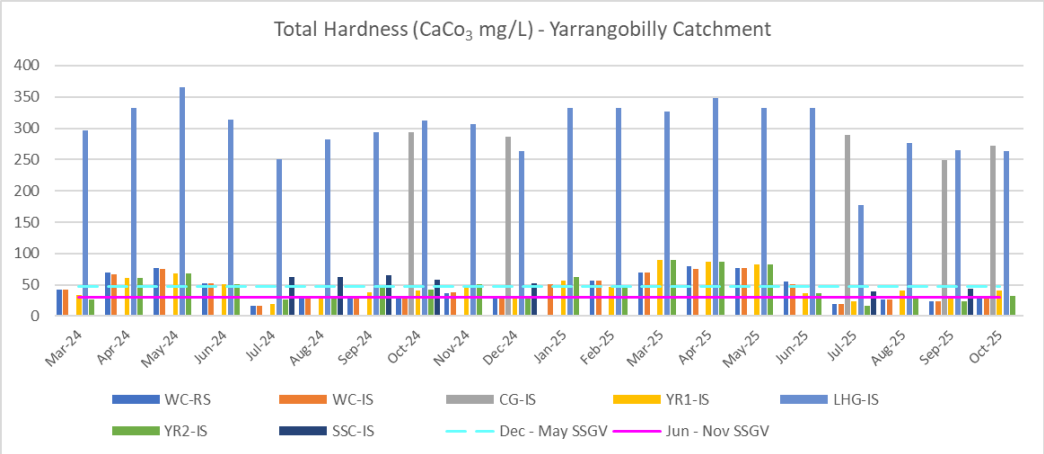


FIGURE 39: $CACO_3$ FOR YARRANGOBILLY RIVER CATCHMENT

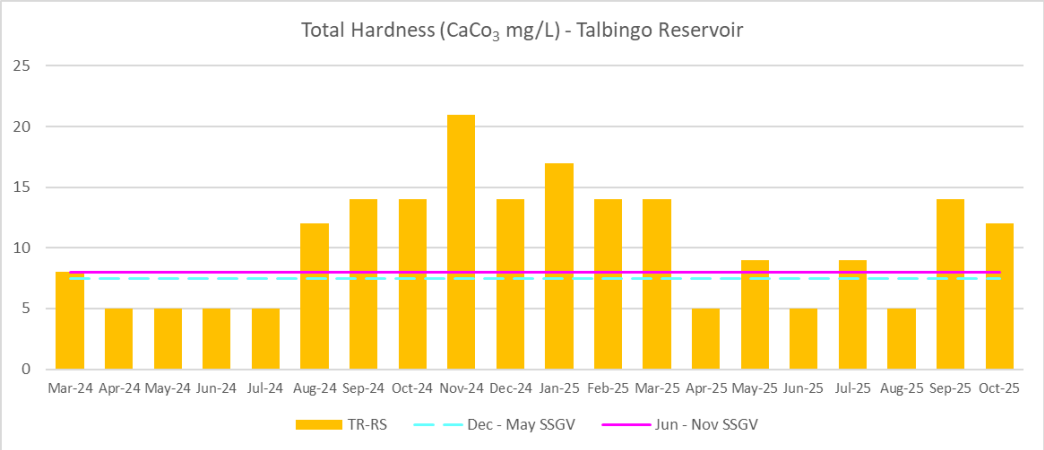


FIGURE 40: $CACO_3$ FOR TALBINGO RESERVOIR

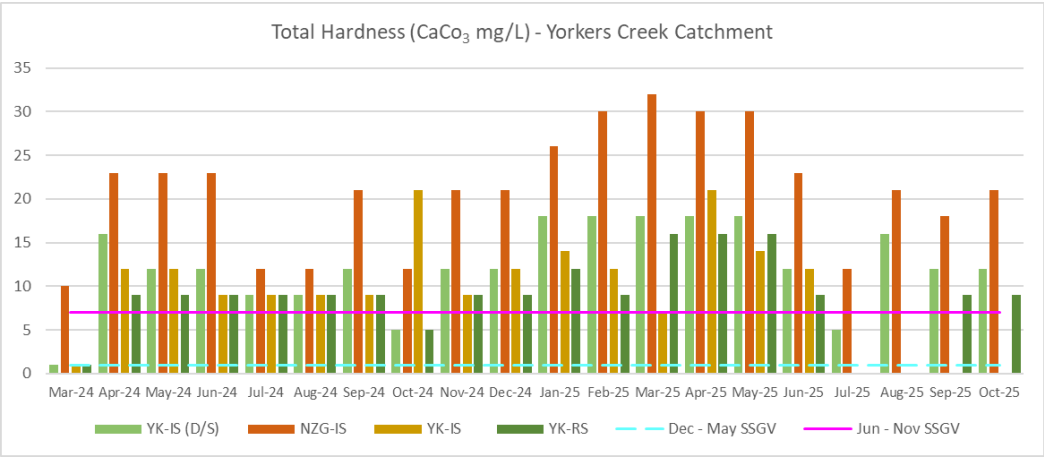


FIGURE 41: $CACO_3$ FOR YORKERS CREEK CATCHMENT

5.2.1.14 Total Kjeldahl Nitrogen

During the October 2025 sampling period, each catchment provided results below the SSGV value (Figure 43—45) excluding YK-IS from the Yorkers Creek Catchment, which met the June—November SSGV value (Figure 45).

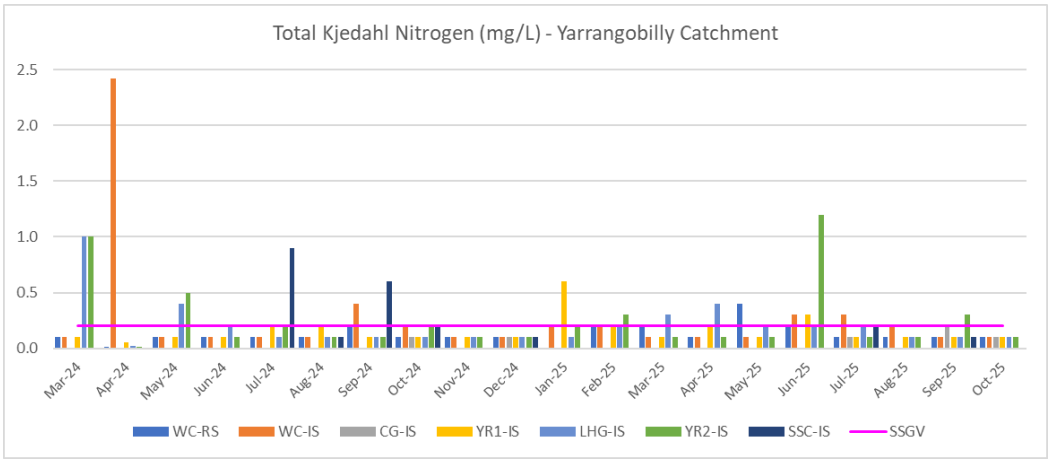


FIGURE 42: TKN FOR YARRANGOBILLY RIVER CATCHMENT

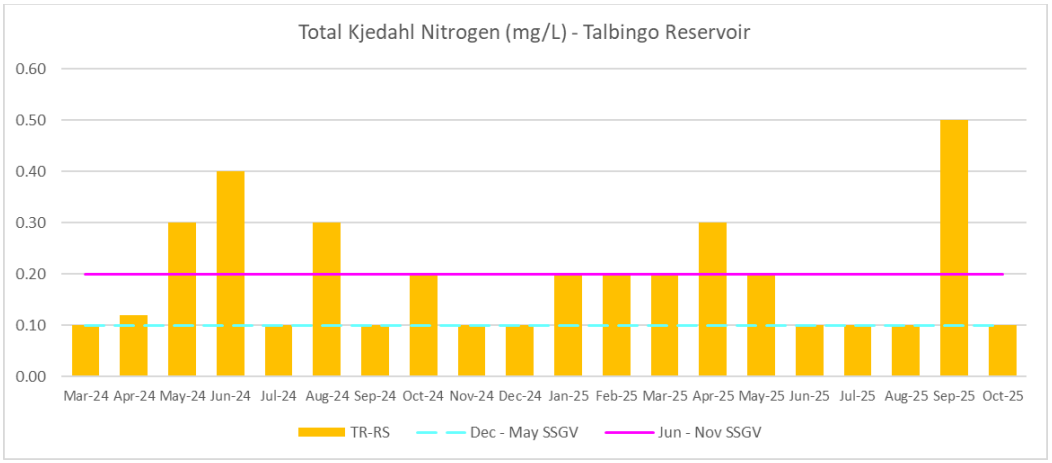


FIGURE 43: TKN FOR TALBINGO RESERVOIR

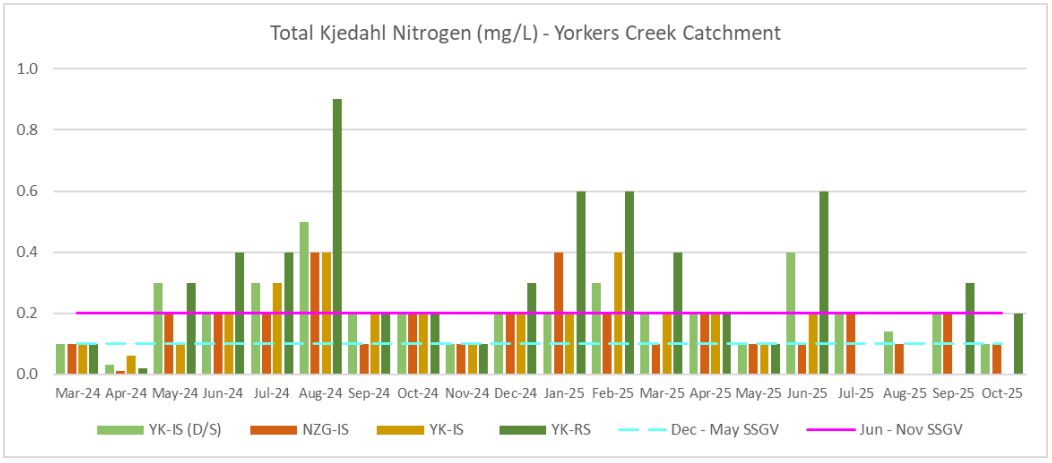


FIGURE 44: TKN FOR YORKERS CREEK CATCHMENT

5.2.1.15 Total Nitrogen

TN (mg/L) results remained consistent at the Yarrangobilly Catchment (Figure 46). A notable reduction from September 2025 results were recorded at TR-RS from the Talbingo Reservoir during the October 2025 sampling period (Figure 47). Results varied across the Yorkers Creek Catchment with YK-RS decreasing from 3.2mg/L to 0.1mg/L.

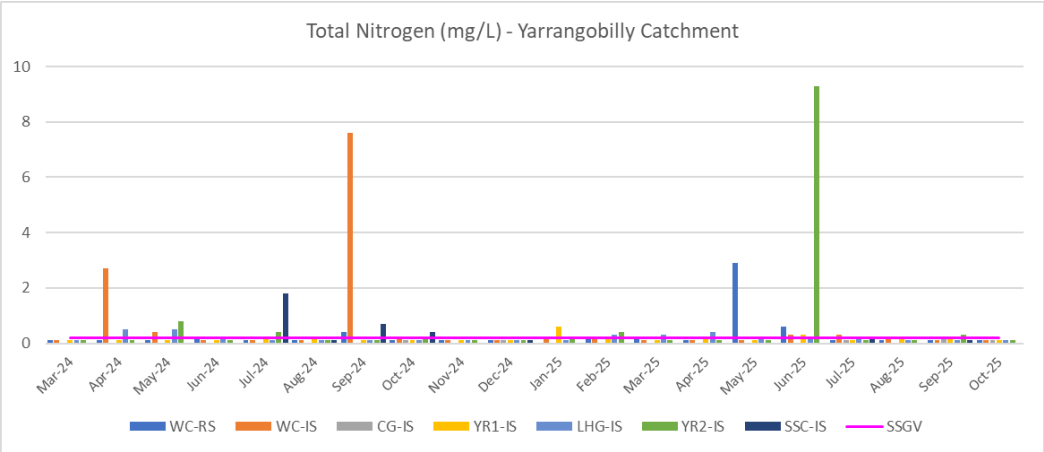


FIGURE 45: TN FOR YARRANGOBILLY RIVER CATCHMENT

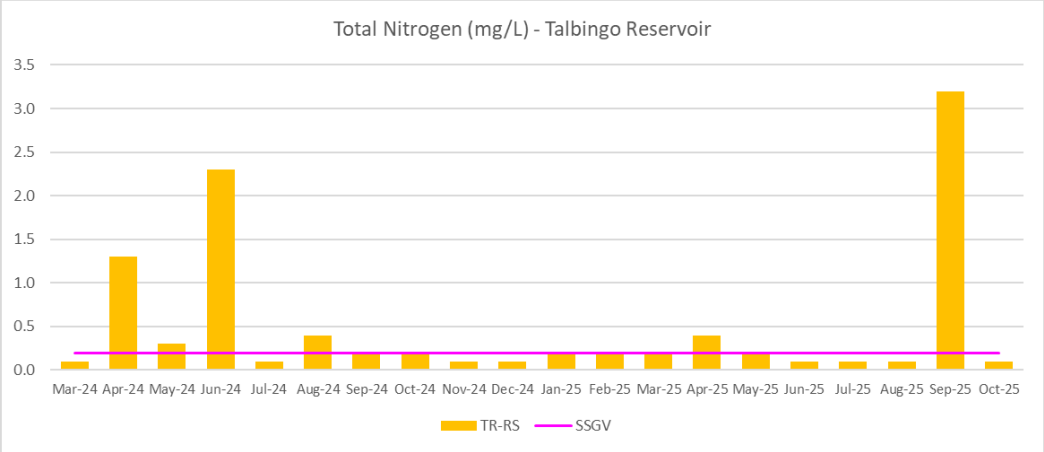


Figure 46: TN for Talbingo Reservoir

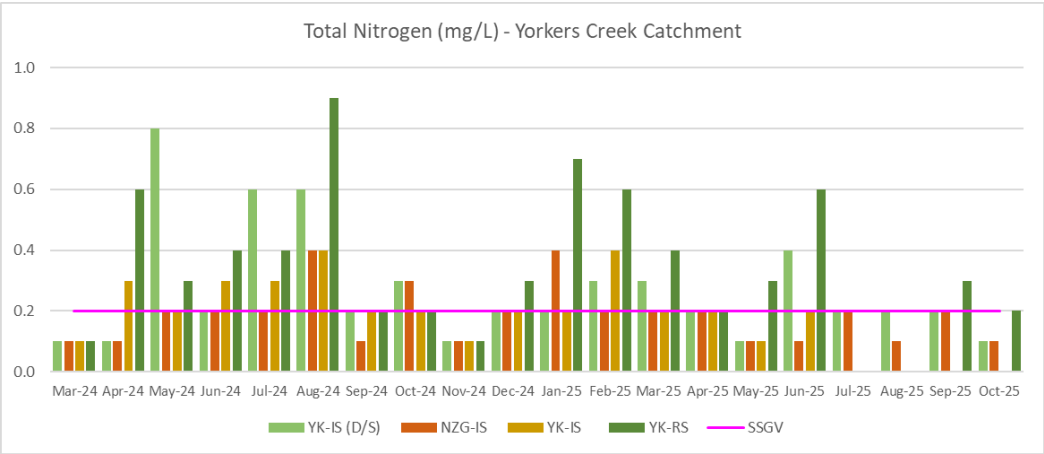


FIGURE 47: TN FOR YORKERS CREEK CATCHMENT

5.2.1.16 Total Phosphorus

During the October 2025 sampling period, marginal Total Phosphorus (mg/L) SSGV exceedance was recorded at WC-RS, WC-IS and YR2-IS in the Yarrangobilly Catchment (Figure 49). Exceedance of the SSGV was recorded at TR-RS from the Talbingo Reservoir (Figure 50). Exceedance of the SSGV was recorded at YK-RS from the Yorkers Creek Catchment (Figure 51).

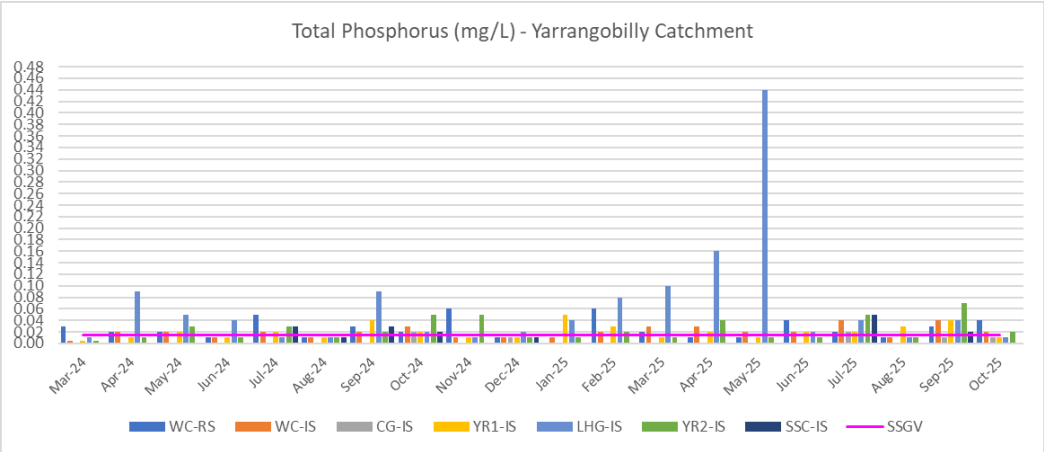


FIGURE 48: TP FOR YARRANGOBILLY RIVER CATCHMENT

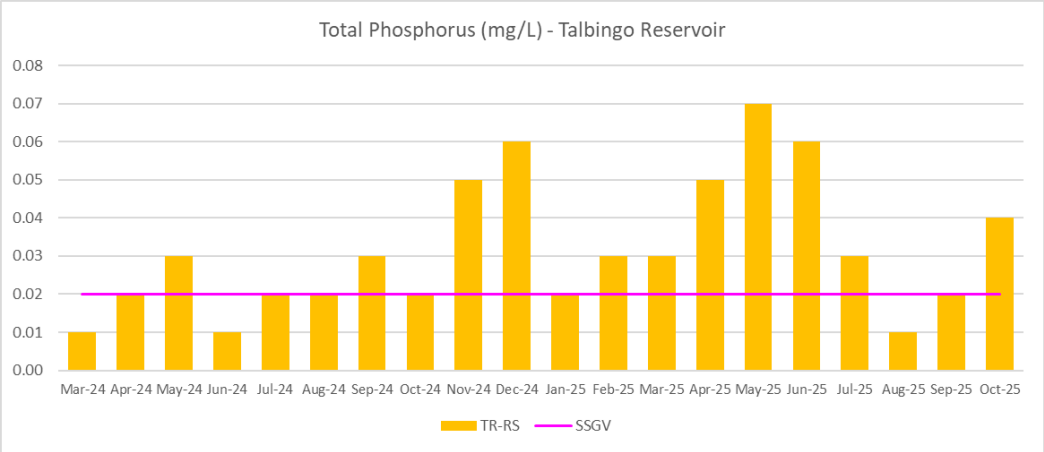


FIGURE 49: TP FOR TALBINGO RESERVOIR

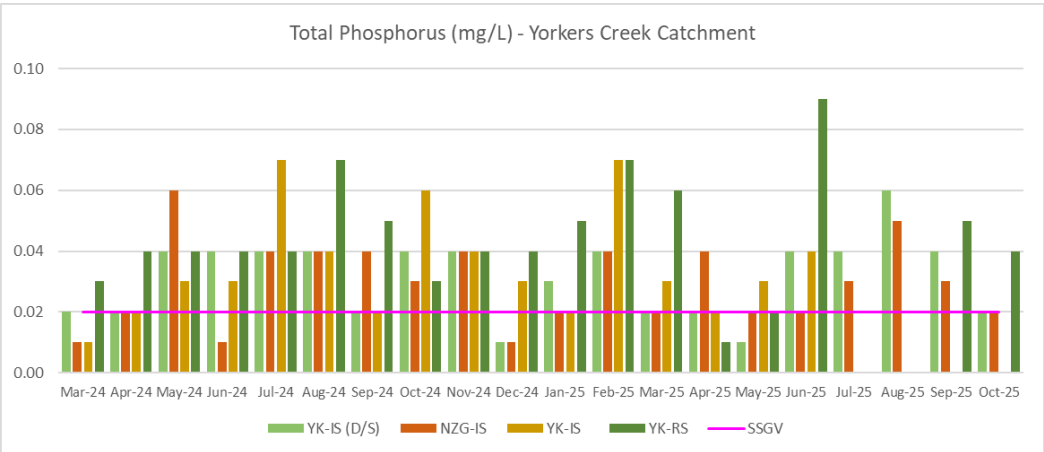


FIGURE 50: TP FOR YORKERS CREEK CATCHMENT

5.2.1.17 Reactive Phosphorus

All sites measured below the LOR for RP (mg/L), refer to Figure 51 to Figure 53.

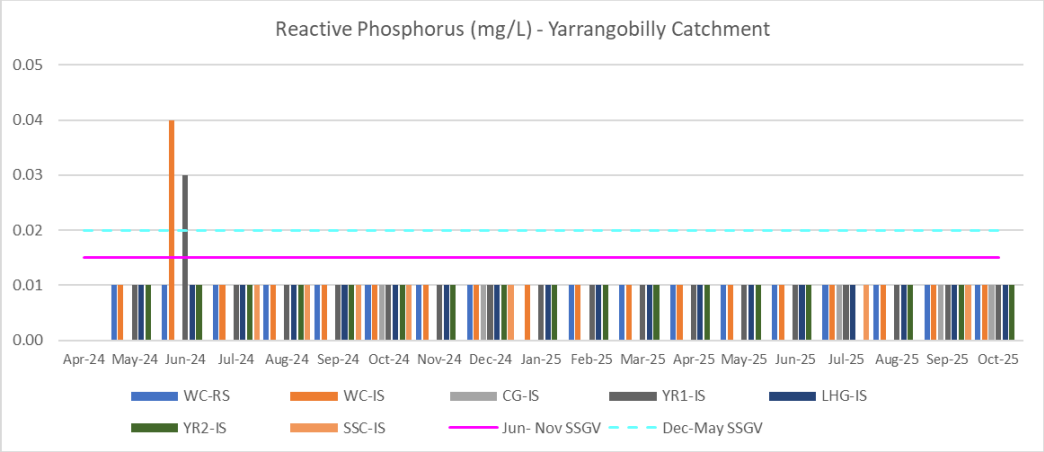


FIGURE 51: RP FOR YARRANGOBILLY RIVER CATCHMENT

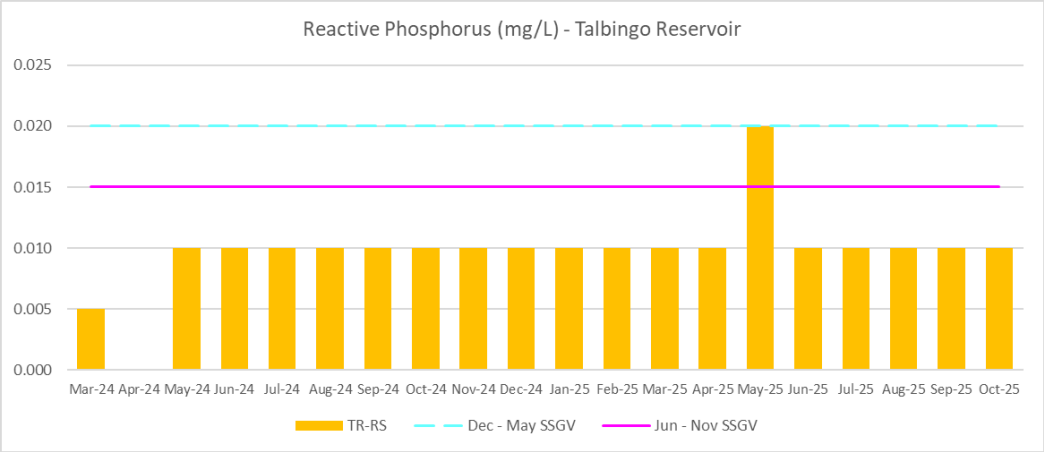


FIGURE 52: RP FOR TALBINGO RESERVOIR

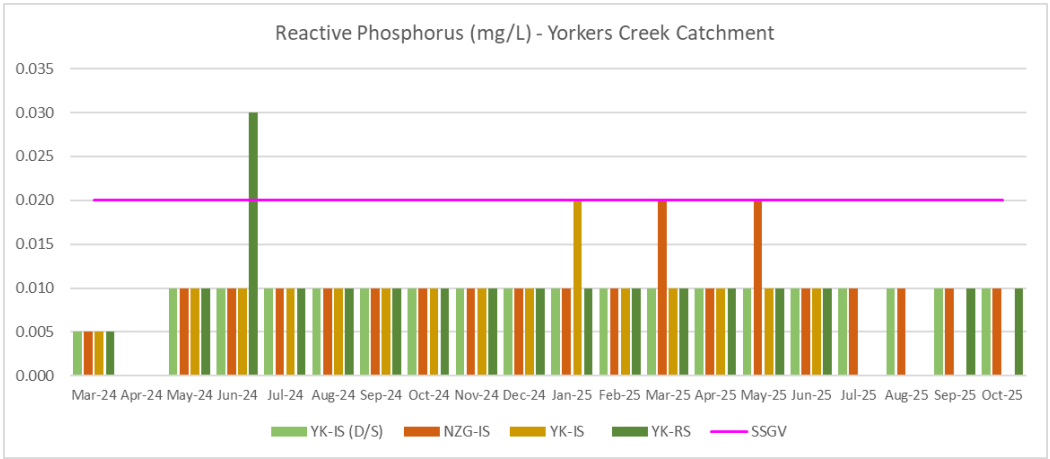


FIGURE 53: RP FOR YORKERS CREEK CATCHMENT

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	YR1-IS	0.06	0.04	YR1-IS and YR2-IS from the Yarrangobilly Catchment recorded greater values than the SSGV of 0.04mg/L for dissolved Al. TR-RS from Talbingo Reservoir recorded a greater value than SSGV value of 0.015mg/L. All other samples collected were within their respective SSGV Value.
	YR2-IS	0.05		
	TR-RS	0.02	0.015	
Fe	LHG-IS	0.5	0.02	LHG-IS and YR2-IS from the Yarrangobilly Catchment exceeded the dissolved Fe SSGV value (0.02mg/L), TR-RS from the Talbingo Reservoir also exceeded the dissolved Fe SSGV value (0.002mg/L). YK-RS from Yorkers Creek Catchment exceeded the SSGV value (0.23mg/L). All other samples were within their respective SSGV values.
	YR2-IS	0.05		
	TR-RS	0.05		
	YK-RS	0.57	0.23	
Mn	LHG-IS	0.011	0.002	LHG-IS exceeded the dissolved Mn SSGV value (0.002mg/L). YK-RS, YK-IS (D/S), NZG-IS and YK-IS exceeded the dissolved Mn SSGV value (0.003mg/L) for the Yorkers Creek Catchment. All other samples collected were within their respective SSGV values.
	YK-RS	0.025	0.003	
	YK-IS (D/S)	0.008		
	NZG-IS	0.004		
	YK-IS	0.009		
Zn	WC-RS	0.005	0.002	The following samples collected exceeded the SSGV value of 0.002mg/L: WC-RS, WC-IS, CG-IS, YR1-IS, LHG-IS and YR2-IS. All other samples were within their respective SSGV values.
	WC-IS	0.005		
	CG-IS	0.005		
	YR1-IS	0.005		
	LHG-IS	0.005		
	YR2-IS	0.005		

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	0.04	0.027	All listed sampling locations exceeded the DGV value for Total Al (0.027mg/L).
	WC-IS	0.04		
	YR1-IS	0.12		
	LHG-IS	0.05		
	YR2-IS	0.08		
	TR-RS	0.04		
	YK-RS	0.6		
	YK-IS(D/S)	0.27		
	NZG-IS	0.15		
	YK-IS	0.38		
	YR2-IS	0.006		
	TR-RS	0.01		
	YK-IS(D/S)	0.007		
Fe	YK-RS	0.57	0.3	YK-RS and YK-IS exceeded the Yorkers Creek DGV of 0.3mg/L. All other samples were within their respective DGV value.
	YK-IS	0.33		

6 DISCUSSION

Below is a summary of key observations and discussion points from the October 2025 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 has 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
- 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
  - » SSC-IS 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
- In October 2025, mean temperature (°C) was 15.2°C across the Yarrangobilly Catchment sampling locations, 13.2°C at Talbingo Reservoir, and 10.2°C across the Yorkers Creek Catchment sampling locations. Overall, the mean temperatures increased relative to the September 2025 sampling period.
- SPC (µS/cm) levels varied across each catchment sampling location during the October 2025 sampling period. Notably, LHG-IS recorded the greatest exceedance of the Jun-Nov SSGV, with a result of 674 µS/cm. Historically, LHG-IS has produced large exceedances in monthly sampling.
- During the October 2025 sampling period, all catchments produced exceedances of their corresponding EC (µS/cm) SSGV. The greatest exceedance was recorded at CG-IS (464.4 µS/cm), with other sampling locations only marginally exceeding their respective SSGV.
- Dissolved oxygen (DO %) levels remained stable across the Yarrangobilly Catchment. In contrast, site TR-RS within the Talbingo Reservoir recorded a markedly low DO concentration of 45.9%, while all sampling locations within the Yorkers Creek Catchment exhibited similarly depleted levels, with a mean DO of 40.4%.
- Turbidity (NTU) values recorded in October 2025 were generally consistent with their corresponding SSGV thresholds. Observed exceedances were minimal and not considered significant.
- TSS (mg/L) results collected in October 2025 were generally consistent with their corresponding SSGV thresholds. Observed exceedances were minimal and not considered significant.
- TDS (mg/L) results collected in October 2025 were generally consistent with their corresponding SSGV thresholds. The greatest exceedances were identified at CG-IS (312mg/L) and LHG-IS (344mg/L) from the Yarrangobilly Catchment, however these results remained similar to previous sampling periods.
- Redox potential (mV) levels remained above their respective SSGV thresholds during the October 2025 sampling period. However, the exceedances were minor compared to previous sampling periods and not considered significant.
- Nitrogen oxides (mg/L) levels were recorded below their corresponding SSGV during the October 2025 sampling period. It is noted that TR-RS (Talbingo Reservoir) decreased from 2.66mg/L to below the LOR value (0.01mg/L).
- Results for Ammonia (mg/L) concentrations varied across all three catchments during the October 2025 sampling period. Exceedances were considered marginal and not significant compared to previous sampling periods.

- No exceedances of TKN (mg/L) concentrations were recorded across all three catchments during the October 2025 sampling period.
- In general, total phosphorus (TP; mg/L) concentrations remained below the SSGV thresholds during the October 2025 sampling period. Minor exceedances were observed but were not considered significant relative to previous sampling periods.
- Two different total metal analytes (Al and Fe) were recorded in exceedance of their corresponding DGV across various sampling location in October 2025. The greatest exceedance of total metal Al was identified at YK-RS which was twenty-two times greater than the DGV. Marginal exceedances of total Fe were identified at YK-RS and YK-IS.
- Four dissolved metal analytes (Al, Fe, Mn and Zn) exceeded their respective DGV thresholds across multiple sampling locations in October 2025. The highest exceedance of dissolved Al was recorded at TR-RS (Talbingo Reservoir), measuring thirteen times greater than its corresponding SSGV. The most substantial exceedance of Fe occurred at LHG-IS (Yarrangobilly Catchment), at twenty-five times above its respective SSGV. Dissolved Mn concentrations were greatest at YK-RS (Yorkers Creek Catchment), reaching eight times above the SSGV. Exceedances of dissolved Zn were comparatively lower, at approximately two and a half times greater than their respective SSGV thresholds.

7 CONCLUSION

The results of the October 2025 monitoring program indicate that while minor exceedances were recorded for several parameters (including ammonia, dissolved oxygen, EC/SPC and metals), these are considered consistent with a combination of natural environmental influences and existing catchment conditions, rather than being attributable to a single or direct construction-related source. Key influencing factors include ongoing regional disturbance associated with Snowy 2.0 activities, shallow water depths at several sites, and the presence of elevated silt deposits, which increase the susceptibility of waterways to water quality fluctuations.

In addition, low dissolved oxygen conditions observed within the Yorkers Creek catchment and Talbingo Reservoir are likely to have influenced ammonia concentrations, as reduced oxygen limits nitrification processes and promotes the persistence of ammonia in the water column. The presence of vegetative debris, fauna activity, and existing bank erosion within and adjacent to waterways further contributes to natural nutrient inputs and sediment mobilisation, which can elevate parameters such as ammonia, turbidity, and metals.

Importantly, similar exceedances have been consistently observed at both reference and impact sites across previous monitoring periods, indicating that the recorded results are reflective of background catchment conditions and broader environmental influences, rather than isolated construction impacts. Overall, the monitoring results suggest that the waterways continue to support aquatic ecosystems, with observed variations in water quality attributable to a combination of natural processes, catchment characteristics, and cumulative regional disturbances.

REFERENCES

ALS. (2025a). ES2504313. *Certificate of Analysis*. NSW, Australia: ALS Limited.

ALS. (2025b). ES2504313. *QA/QC Compliance Assessment to assist with Quality Review*. NSW, Australia: ALS Limited.

ALS. (2025c). ES2504313. *Quality Control Report*. NSW, Australia: ALS Limited.

ANZG. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. ACT, Australia: Australian and New Zealand Governments and Australian state and territory governments.

Jacobs. (2020). *Environmental Impact Statement.* NSW: Transgrid.

NGH. (2022). *Pre-construction Water Quality Monitoring Program and Methodology.* NSW: NGH Pty Ltd.

NGH. (2024). *Baseline Water Quality Report.* NSW: NGH Pty Ltd.

UGL. (2025). October 2025. *Water Quality Monitoring Field Data Sheet*. NSW, Australia: UGL Limited.

Appendix A: Field Sheet (UGL, 2025)

UGL

WATER QUALITY MONITORING FIELD SHEET

Date: 12-10-25 **Personnel:** EH + MC **Sampling Purpose:** Monthly WQM October 2025

Site	Time	Temp (°C)	Water Pressure (mmhg)	DO (%)	SPC (µS/cm)	pH	Turbidity (NTU)	TSS (mg/L)	Observations
DGV:		-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 0.00 in 24hr
Dec - May SSGV:		-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 60% 1-5mm of rainfall
Jun - Nov SSGV:		-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: Sunny and clear skies
WC-RS Wallace Creek	9:~~07~~	8.6	709.1	93.4	86.7 / 59.6 EC	7.59	0.88 / 111.6 mV	0.00	• Moderate level & Flow • organic detritus • clear visability • Sheen on water surface (organic • rocky bed • eroded bank & tree root exposed • aquatic veg • Foam collecting on rocks • overhanging veg & out grown
WC-IS Wallace Creek	9:03	11.9	708.8	100.6	89.7 / 67.2 EC	7.64	0.85 / 110.3 mV	0.00	• moderate level & Flow • aquatic vegetation • organic detritus • under mine trail bridge • eroded & undercut bank • overhanging vegetation • sulfur/fish odour • rocky/pebbly bed • No discolouration to water • clear visability • debri in water.
LHG-IS ~~CG-IS~~ Cave Gully	~~MAR~~ 12:07	17.2	7.073	96.2	674 / 578 EC	7.86	2.62 / 125.1 mV	0.00	* Low level and ~~flow~~ moderate flow * Fair visibility (slight discolouration * Rocky bed * Aquatic vegetation & adjacent grasses * moderate density of trees upstream * organic debris through water
YR1-IS Yarrangobilly River	8.35	9.6	711.3	91.8	108.4 / 76.4 ec	7.66	1.30 / 94.7 mV ORP	0.00	• Moderate flow and level * Yellow tinge to water and reduced visib.lity * Bed type? Rocky and pebbly * Aquatic vegetation and algae present * Riparian consists of shrubs and over-hanging vegetation * Underneath bridge * Wildlife present in general area * Moderate weed presence * Adjacent to transmission line

UGL

WATER QUALITY MONITORING FIELD SHEET

Date: 12/10/25 **Personnel:** EH & MC **Sampling Purpose:** Monthly WQM October 2025

Site	Time	Temp (°C)	Water Pressure (mmhg)	DO (%)	SPC (µS/cm)	pH	Turbidity (NTU)	TSS (mg/L)	Observations
DGV:		-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 0.00 in 24hr
Dec - May SSGV:		-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 60% 1-5mm rainfall
Jun - Nov SSGV:		-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: Fine & sunny
CG-IS ~~LHG-IS~~ Lick Hole Gully	11:31	14.4	707.4	95.8	582 / 464.4 EC	7.84	0.24 / 124.5 mV	0.00	• Mild flow & low level • dense shrubs and grasses * predominantly dry * clear visibility * sand bed with natural erosion * Aquatic vegetation and algae present. * over hanging vegetation * metal pipe submerged in water
YR2-IS Yarrangobilly River	10:24	14.3	708.9	100.2	102.0 / 81.1 EC	7.78	1.44 / 112.6 mV	0.00	• Moderate level & Flow • Shrubs, grass, tr • clear visability • organic detritus • rocky / pebbly bed • eroded & undercut banks • aquatic vegetation • High weed presnc • overhanging vegetation • algae • silt
SSC-IS Sheep Station Creek									NO FLOW, DRY AT TIME OF SAMPLING
TR-RS Talbingo Reservoir	8:20	13.2	714.9	45.9	47.0 / 36.4 EC	7.35	1.46 / 136.6 mV	0.00	• moderate level • clear visability • rocky sandy bed • presence of ducks & cormorants • no disdouration to water • grass, shrubs & trees • previous campground utilised • adjacent to public accessable road

UGL

WATER QUALITY MONITORING FIELD SHEET

Date: 13/10/25 **Personnel:** EH & MC **Sampling Purpose:** Monthly WQM October 2025

Site	Time	Temp (°C)	Water Pressure (mmhg)	DO (%)	SPC (µS/cm)	pH	Turbidity (NTU)	TSS (mg/L)	Observations
DGV:		-	-	90 - 110	30 - 350	6.5 - 8	2 - 25	0.2	Weather Pre 24 hrs: 0.00mm in 24hr
Dec - May SSGV:		-	-	96.2	115	7.85	0.37	0.2	Weather Forecast: 5-1. <1mm of rainfall
Jun - Nov SSGV:		-	-	89.7	88	7.62	5.12	1	Weather Time of Sampling: Fine & sunny
YK-RS Yorkers Creek	10:00	9.3	665.0	39.3	38.9 / 27.3 EC	6.80	10.07 / 134.9 mV	0.00	• Low level & Flow • adjacent to pubic access track • clear visability • yellow/brown tinge to water. • sandy bed • aquatic veg • overhanging & overgrown vegetation • organic detritus • dirty water • eroded banks • horse scatt
YK-IS (D/S) Yorkers Creek	9.10	9.9	668.4	40.7	44.6 / 31.7 EC	6.93	4.01 / 156.2 mV	0.00	• Low level, moderate flow • clear visability • yellow tinge to water • shrubs, grass & trees • undermined bank • overhanging & overgrown vegetation • rocky bed • adjacent to pubic access track • aquatic vegetation & algae/moss • organic detritus
NZG-IS New Zealand Gully	10:25	10.1	670.5	39.9	65.1 / 46.6 EC	7.06	3.28 / 152.3 mV	0.00	• Low flow & level • moderate weed desinity inc blackberry • clear visability • rocky fine bed • slight yellow tinge to water • overhanging & overgrown vegetation • aquatic vegetation & algae • adjacent to pubic access track • grass, shrubs, trees • eroded muddy bank
YK-IS Yorkers Creek	9:30	11.0	666.7	41.0	39.1 / 28.6 EC	6.61	5.67 / 151.6 mV	0.00	• low level & moderate flow • eroded & muddy banks • clear visability • yellow tinge to water • moderate weed desinity • rocky bed • algae & aquatic vegetation • wild horse present • overhanging vegetation • shrubs, grass, trees • horse poop • organic detritus • adjacent to culvert & elliot way

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

Appendix C: October 2025 SWQ Monitoring Results

Parameter		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)	Dissolved Hg (mg/L)	Dissolved Ni (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	0.00006	0.008
Limit of Reporting (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
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	0.00003	0.001
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	0.00003	0.001
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	*0.00002*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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*	*0.0001*	*0.001*
*sample not ana	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	*0.0001*	*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	*0.00002*	*0.0005*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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*	*0.0001*	*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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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*	*0.0001*	*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	*0.0001*	*0.001*
	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	*0.0001*	*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*	*0.0001*	*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*	*0.0001*	*0.001*
	Jan-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)		0.25	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)		0.1	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 Va		0.2	0.02	0.00002	0.002	0.013	0.015	0.020	47	0.2	52	0.2												
June - Nov SSGV		0.2	0.02	0.00002	0.002	0.013	0.015	0.015	30	0.2	39	1.0												
WC-RS	Mar-24	*0.1*	0.03	*0.00001*	*0.001*	0.050	0.05	*0.005*	42	*0.1*	70	*0.1*	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	*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	*0.1*	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	0.2	*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	*0.1*	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	*0.1*	*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	0.4	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	*0.1*	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	*0.1*	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	*0.1*	*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 ana	Jan-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	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*
WC-IS	Mar-24	*0.1*	*0.005*	*0.00001*	*0.001*	0.050	0.05	*0.005*	42	*0.1*	88	*0.1*	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	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	0.4	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	*0.1*	*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	*0.1*	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	*0.1*	*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	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	0.2	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	*0.1*	*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	*0.1*	*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	0.2	*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	0.2	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*
CG-IS	Mar-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Aug-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sep-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Oct-24	*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	*0.1*	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)	Dissolved Hg (mg/L)	Dissolved Ni (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	0.00006	0.008
Limit of Reporting (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
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	0.00003	0.001
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	0.00003	0.001
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	*0.000015*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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*	*0.0001*	*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	*0.0001*	*0.001*
	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*	*0.0001*	*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	*0.0001*	*0.001*
	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*	*0.0001*	*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	*0.0001*	*0.001*
	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	*0.0001*	*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	*0.000015*	0.003
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*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*	*0.000015*	*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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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*	*0.0001*	*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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)		0.25	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)		0.1	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 Va		0.2	0.02	0.00002	0.002	0.013	0.015	0.020	47	0.2	52	0.2												
June - Nov SSGV		0.2	0.02	0.00002	0.002	0.013	0.015	0.015	30	0.2	39	1.0												
YR1-IS	Mar-24	*0.1*	*0.005*	*0.00001*	*0.001*	0.050	0.05	*0.005*	34	*0.1*	66	*0.1*												
	Apr-24	*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	*0.1*	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	*0.1*	*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	0.2	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	0.2	*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	*0.1*	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	*0.1*	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	*0.1*	*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	*0.1*	*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	0.6	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	0.2	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*
LHG-IS	Mar-24	*0.1*	*0.01*	*0.00001*	0.006	0.050	0.05	*0.005*	297	1	330	20												
	Apr-24	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	0.5	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	0.2	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	*0.1*	*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	*0.1*	*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	*0.1*	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	*0.1*	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	*0.1*	*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	*0.1*	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	*0.1*	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	0.3	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*
YR2-IS	Mar-24	*0.1*	*0.005*	*0.00001*	*0.001*	0.050	0.05	*0.005*	27	1	58	*0.1*												
	Apr-24	*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	0.8	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	*0.1*	*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	0.4	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	*0.1*	*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	*0.1*	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	0.2	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	*0.1*	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	*0.1*	*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	0.2	*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	0.4	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*

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)	Dissolved Hg (mg/L)	Dissolved Ni (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	0.00006	0.008
Limit of Reporting (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
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	0.00003	0.001
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	0.00003	0.001
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	*0.0001*	*0.001*
	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*	*0.0001*	*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	*0.0001*	*0.001*
	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*	*0.0001*	*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*	*0.0001*	*0.001*
	Jan-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Feb-25	No Flow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Parameter		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)		0.25	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)		0.1	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 Va		0.2	0.02	0.00002	0.002	0.013	0.015	0.020	47	0.2	52	0.2												
June - Nov SSGV		0.2	0.02	0.00002	0.002	0.013	0.015	0.015	30	0.2	39	1.0												
SSC-IS	Mar-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Apr-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	May-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jun-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Jul-24	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	*0.1*	*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	0.7	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	0.4	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	*0.1*	*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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)	Dissolved Hg (mg/L)	Dissolved Ni (mg/L)
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	0.00006	0.008
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
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	0.00003	0.001
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	0.00003	0.001
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	*0.000015*	*0.0005*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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	*0.0001*	*0.001*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*

Parameter		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)
TALBINGO RESERVOIR																								
DGV		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	0.005	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		0.2	0.02	0.00002	0.002	0.013	0.015	0.02	7.5	0.1	12.5	0.2												
June - Nov SSGV		0.2	0.02	0.00002	0.002	0.013	0.015	0.015	8	0.2	15	0.2												
TR-RS	Mar-24	*0.1*	*0.01*	*0.00001*	*0.001*	0.050	0.05	*0.005*	8	*0.1*	44	*0.1*												
	Apr-24	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	0.3	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	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	*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	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	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	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	*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	*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	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	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*

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)	Dissolved Hg (mg/L)	Dissolved Ni (mg/L)
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
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
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
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
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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
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*
	Apr-24	No	5.9	86.0	-	39.4	-	7.33	-	221.76	0.05	*0.001*	*0.0001*	*0.001*	*0.001*	*0.002*	0.11	*0.001*	0.014	*0.0001*	*0.001*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*
	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*

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)
YORKERS CREEK CATCHMENT																								
DGV		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	0.005	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		0.2	0.02	0.00002	0.002	0.013	0.015	0.02	1	0.1	30	3												
June - Nov SSGV		0.2	0.02	0.00002	0.002	0.013	0.015	0.02	7	0.2	10	0.2												
YK-RS	Mar-24	*0.1*	0.03	*0.00001*	*0.003*	0.050	0.05	*0.005*	*1*	*0.1*	30	3												
	Apr-24	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	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	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	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	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	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	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	*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	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	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	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*
YK-IS (D/S)	Mar-24	*0.1*	0.02	*0.00001*	*0.002*	0.050	0.05	*0.005*	*1*	*0.1*	15	*0.1*												
	Apr-24	*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	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	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	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	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	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	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	*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	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	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	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*
NZG-IS	Mar-24	*0.1*	*0.01*	*0.00001*	*0.002*	0.050	0.05	*0.005*	10	*0.1*	22	*0.1*												
	Apr-24	*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	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	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	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	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	*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	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	*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	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	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	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*

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Parameter		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)	Dissolved Hg (mg/L)	Dissolved Ni (mg/L)
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
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
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
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
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*
	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*
	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*
	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*
	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*
	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
	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*
	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*
	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*
	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*
	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*
	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*

Parameter		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)
YORKERS CREEK CATCHMENT																								
DGV		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	0.005	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		0.2	0.02	0.00002	0.002	0.013	0.015	0.02	1	0.1	30	3												
June - Nov SSGV		0.2	0.02	0.00002	0.002	0.013	0.015	0.02	7	0.2	10	0.2												
YK-IS	Mar-24	*0.1*	*0.01*	*0.00001*	*0.004*	0.050	0.05	*0.005*	*1*	*0.1*	21	*1*												
	Apr-24	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	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	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	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	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	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	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	*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	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	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	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*

	Reference Site exceeds SSGV
	Impact Site Result exceeds SSGV or DGV
italics	Result exceeds the Limit of Reporting

Appendix D: Calibration Certificate

Head Office Perth
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CALIBRATION CERTIFICATE - WATER

Invoice No: 17218

Equipment Received: YSI ProDSS

Handheld S/N 23H104391

Cable S/N:

Included Items:

SENSOR CALIBRATION DETAILS

	Pre Calibration	Post Calibration	Accuracy	Pass	Fail
Temp	Factory	Calibrated	+/- 0.2C	✓	
pH	4.1	pH 4.00	+/- 0.2	✓	
pH	7	pH 7.00	+/- 0.2	✓	
ORP	220	225.3mV@24.3	+/- 30mV	✓	
Conductivity	12950uS/cm	12900uS/cm	+/- 0.5%	✓	
DO	98%	100% @763.3	+/- 2%	✓	
Turbidity	0	0 FNU	+/- 0.3 FNU	✓	
Turbidity	118	124 FNU	+/- 20 FNU	✓	
			+/-		
			+/-		
			+/-		

Findings/ Recommendations /Comments:

1/ DO cap and calibration cup seal replaced.

2/ Firmware version upgraded.

3/ Calibrated.

4/

This is to certify that where possible, this instrument has been calibrated in accordance with the manufacturer's calibration procedure as recommended in the instrument service manual.

Regards,

Navid Black

Equipment Specialist
ECO Environmental Holdings

06-Nov-2025

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