



# **Drinking Water Service Annual Report 2024-25**

---

## **Napranum Aboriginal Shire Council**

January 2026

# Contents

|                                                                   |     |
|-------------------------------------------------------------------|-----|
| Executive Summary .....                                           | 3   |
| 1. Introduction.....                                              | 3   |
| 1.1. Scope .....                                                  | 4   |
| 1.2. Purpose.....                                                 | 4   |
| 2. Scheme Operated .....                                          | 4   |
| 3. DWQMP Implementation.....                                      | 4   |
| 3.1. Risk management .....                                        | 4   |
| 3.2. Monitoring .....                                             | 4   |
| 3.3. Implementation of the Risk Management Improvement Plan ..... | 5   |
| 4. Verification Monitoring.....                                   | 6   |
| 5. Incidents Reported to the Regulator .....                      | 133 |
| 6. Customer Complaints .....                                      | 144 |
| 7. DWQMP Review Outcomes.....                                     | 144 |
| 8. DWQMP Audit findings.....                                      | 155 |
| 9. Customer Service Standards .....                               | 155 |
| 9. Glossary .....                                                 | 155 |
| 11. Appendix – Risk Management Improvement Plan .....             | 156 |

## Tables

|                                                                                                |     |
|------------------------------------------------------------------------------------------------|-----|
| Table 1 Drinking water quality performance – verification monitoring.....                      | 6   |
| Table 2 Drinking water quality performance - bore monitoring .....                             | 9   |
| Table 3 Drinking water quality performance – reticulation verification monitoring .....        | 10  |
| Table 4 Drinking water quality performance - Reticulation verification monitoring for PFAS. 12 |     |
| Table 4 Incidents reported to regulator.....                                                   | 103 |
| Table 5 Glossary .....                                                                         | 15  |

## Figures

|                                                    |   |
|----------------------------------------------------|---|
| Figure 1 Water Treatment Plant Free Chlorine ..... | 7 |
| Figure 2 Reticulation Free Chlorine.....           | 7 |
| Figure 3 Water Treatment Plant pH.....             | 8 |
| Figure 4 Water Treatment Plant Turbidity.....      | 8 |

## EXECUTIVE SUMMARY

Water suppliers in Queensland (QLD) are required under the *Water Supply (Safety and Reliability) Act 2008* (the Act) to operate under an approved Drinking Water Quality Management Plan (DWQMP) to protect public health. In addition, the preparation of a DWQMP report per financial year is required by the Act.

This DWQMP report documents the performance of Napranum Aboriginal Shire Council (NASC or Council) in implementing the DWQMP for the 2024-25 financial year.

NASC is a registered service provider operating the drinking water scheme for the Napranum township under an approved DWQMP. The water supply scheme is comprised of two bores, a water treatment plant (WTP) (pH adjustment unit and chlorination), pump station, two service reservoirs and distribution network.

Council has undertaken effective risk management and water quality testing to ensure the supply of safe drinking water. The water quality verification results and assessment showed that Council supplied safe quality water to the customers.

Various improvement actions have been undertaken and/or planned as continual improvement. The improvement actions have been identified through detailed risk assessment to ensure safe quality of drinking water.

The water quality verification results and assessment showed that Council supplied safe quality water to the customers. No detection of *E. coli* over the reporting period indicates supply of safe quality drinking water. Over the reporting period, some gaps in the data were identified, related to record keeping. This will be improved moving forward.

Physio-chemical testing of the water quality in the bores and reticulation show natural occurring low pH in raw water that is treated for, otherwise, overall conformance with the ADWG health and aesthetic guidelines.

The absence of water quality related customer complaints indicated excellent customer satisfaction.

No regular DWQMP audit was required to be undertaken during the reporting period. The next DWQMP review is due by 1 March 2026 and the regular audit by 1 September 2026 respectively.

## 1. INTRODUCTION

This Report documents the performance of Napranum Aboriginal Shire Council (NASC or Council) in implementing the Drinking Water Quality Management Plan (DWQMP) for the 1 July 2024 – 30 June 2025 financial year as required under the *Water Supply (Safety and Reliability) Act 2008* (the Act).

Council is operating under an approved DWQMP, with the approval granted by the Department of Local Government, Water and Volunteers (DLGWV).

This report aims to:

- be a reference document for the Regulator, as well as customers, on Council's performance in relation to the DWQMP reporting obligations under the Act, for the reporting period,
- provide a summary of Council's performance in implementing the DWQMP.

The report is submitted to the Regulator to fulfil NASC's regulatory requirements and is made available to customers via our website or for inspection upon request at Council's office.

### **1.1. Scope**

The report has been prepared to fulfil the legislative DWQMP reporting requirements set out in the Act.

### **1.2. Purpose**

This Annual Report aims to:

- be a reference document for the Regulator, as well as customers, on Council's performance in relation to the DWQMP reporting obligations under the Act, for the reporting period,
- provide a summary of Council's performance in implementing the DWQMP.

## **2. SCHEME OPERATED**

Council is a registered service provider (Service Provider Identification [SPID] number 144) operating under an approved DWQMP to ensure a consistent and safe supply of quality drinking water to protect public health. This is achieved through proactive identification and minimisation of public health related risks associated with drinking water.

Council manages the Napranum drinking water supply scheme and distributes treated water to the township of Napranum. The water supply scheme is comprised of two bores, a water treatment plant (WTP) (pH adjustment unit and chlorination), pump stations, two service reservoirs and distribution network.

## **3. DWQMP IMPLEMENTATION**

The implementation of the DWQMP is discussed in this section and captured in the other sections that follow.

### **3.1. Risk management**

The process of keeping drinking water safe is one of risk management. Through efficient operations and implementation of the DWQMP, Council has ensured effective risk management to assure safe quality of drinking water to our customers.

### **3.2. Monitoring**

Council undertakes water quality testing on the scheme in accordance with the DWQMP to ensure compliance with the ADWG. The monitoring programs assist to identify any issue before it becomes a significant water quality incident. The results from the verification monitoring for the reporting period are discussed in Section 4.

Council also undertakes operational monitoring, which includes the planned sequence of measurements and observations to assess and confirm the performance of our preventive or control measures. Measurements are of operational parameters that indicate whether processes are functioning effectively.

Quality assurance is important to guarantee consistently reliable and legally defensible results and ensure customers are provided with the best water quality.

Council has the following quality assurance systems in place:

- while microbiological samples are tested in-house, quality checks for testing accuracy are undertaken by sending regular samples to the Cairns Regional Council Water Laboratory, which is a National Association of Testing Authorities (NATA) accredited laboratory
- operations staff have been appropriately trained to undertake sampling.

### **3.3. Implementation of the Risk Management Improvement Plan**

NASC has undertaken and/or planned various improvement actions to ensure the safety of drinking water for our customers. The improvement actions have been identified through detailed risk assessment to ensure safe quality of drinking water. During the reporting period, Council has started undertaking several improvement actions and has implemented key actions. See Appendix A for a full list.

## 4. VERIFICATION MONITORING

This section discusses the compliance with the water quality criteria. Council supplied safe quality drinking water to its customers during the reporting period as discussed in Table 1. No *E.coli* was detected during the 24/25 FY and NASC has complied with the water quality criteria *Escherichia coli must not be detected in at least 98% of the samples reviewed each month.*

A summary of the microbiological samples is included in Table 1.

Table 1 Drinking water quality performance – verification monitoring

| Location                   | Parameter                           | No. of samples – records available | Water quality criteria (spec) | No. of non-compliant samples | No. of samples required |
|----------------------------|-------------------------------------|------------------------------------|-------------------------------|------------------------------|-------------------------|
| Water Yard (Overhead Tank) | <i>E. coli</i> (CFU/100mL) in-house | 31                                 | Absent <1                     | 0                            | 52                      |
|                            | <i>E. coli</i> (CFU/100mL) external | 9                                  | Absent <1                     | 0                            | 12                      |
| NECC (School)              | <i>E. coli</i> (CFU/100mL) in-house | 32                                 | Absent <1                     | 0                            | 52                      |
|                            | <i>E. coli</i> (CFU/100mL) external | 9                                  | Absent <1                     | 0                            | 12                      |
| Health Services (Hospital) | <i>E. coli</i> (CFU/100mL) in-house | 32                                 | Absent <1                     | 0                            | 52                      |
|                            | <i>E. coli</i> (CFU/100mL) external | 9                                  | Absent <1                     | 0                            | 12                      |
| NADS Aged Care (Aged Care) | <i>E. coli</i> (CFU/100mL) in-house | 32                                 | Absent <1                     | 0                            | 52                      |
|                            | <i>E. coli</i> (CFU/100mL) external | 9                                  | Absent <1                     | 0                            | 12                      |
| Twal Street (dead end)     | <i>E. coli</i> (CFU/100mL) in-house | 32                                 | Absent <1                     | 0                            | 52                      |
|                            | <i>E. coli</i> (CFU/100mL) external | 5                                  | Absent <1                     | 0                            | 12                      |
| Tavern Road (dead end)     | <i>E. coli</i> (CFU/100mL) in-house | 32                                 | Absent <1                     | 0                            | 52                      |
|                            | <i>E. coli</i> (CFU/100mL) external | 9                                  | Absent <1                     | 0                            | 12                      |

### Variations:

- In-house testing record keeping was poor. This has been identified and has been improved. Sampling results were not available for inclusion in this report for some weeks, this was reported to Water Supply Regulator as an incident (DWI-144-25-12348).
- Verification monitoring did not occur in July 2024, September 2024 and March 2025, this was also reported to Water Supply regulator as incidents (DWI-144-25-12348, DWI-144-24-11421). The process to collect and send samples to Cairns Water Laboratory has been reviewed and improved to prevent missed samples from occurring.

Operational testing undertaken for free chlorine in the Water Treatment Plant (WTP) and reticulation network is plotted below in Figure 1 and 2. Only one reading at the WTP dropped below the critical control point of 0.2mg/L. There were adequate levels of free chlorine maintained in the reticulation the majority of

the time, any low readings were quickly resolved. Turbidity and pH were also monitored at the WTP as seen in Figures 3 and 4. Only 4 turbidity results exceeded the target range, and all pH results were within the target range.

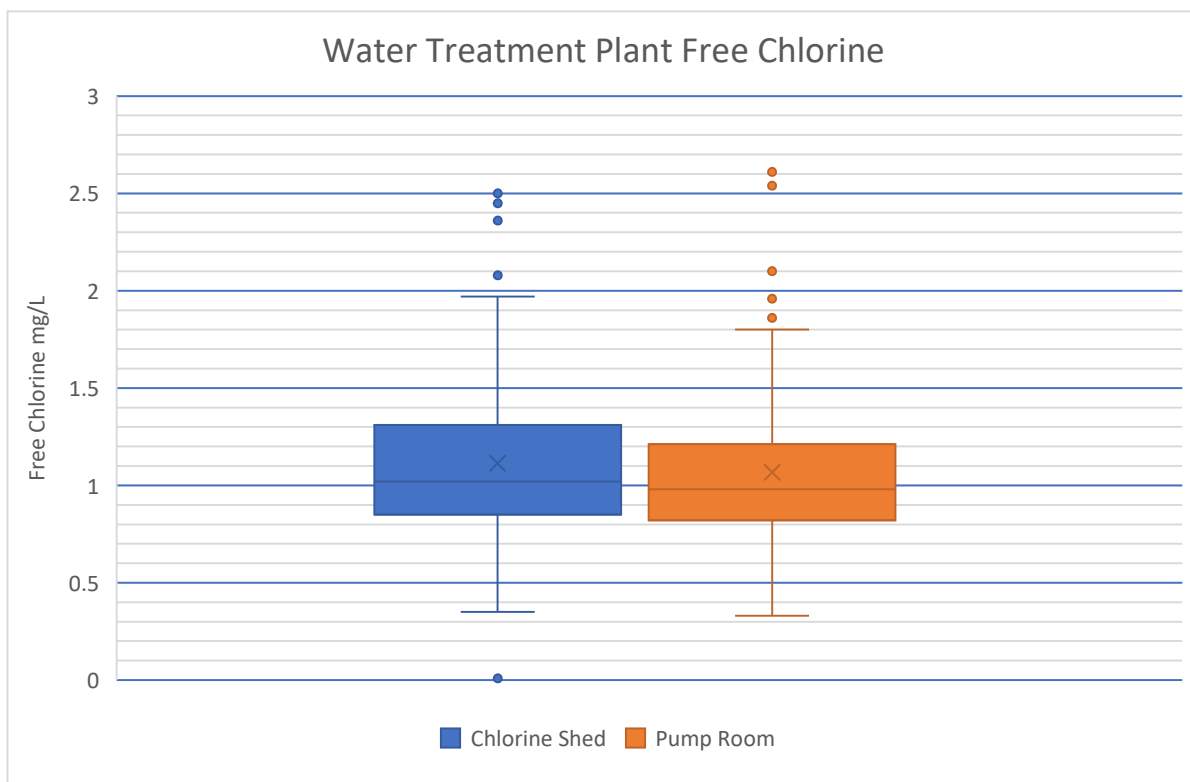


Figure 1 Water Treatment Plant Free Chlorine

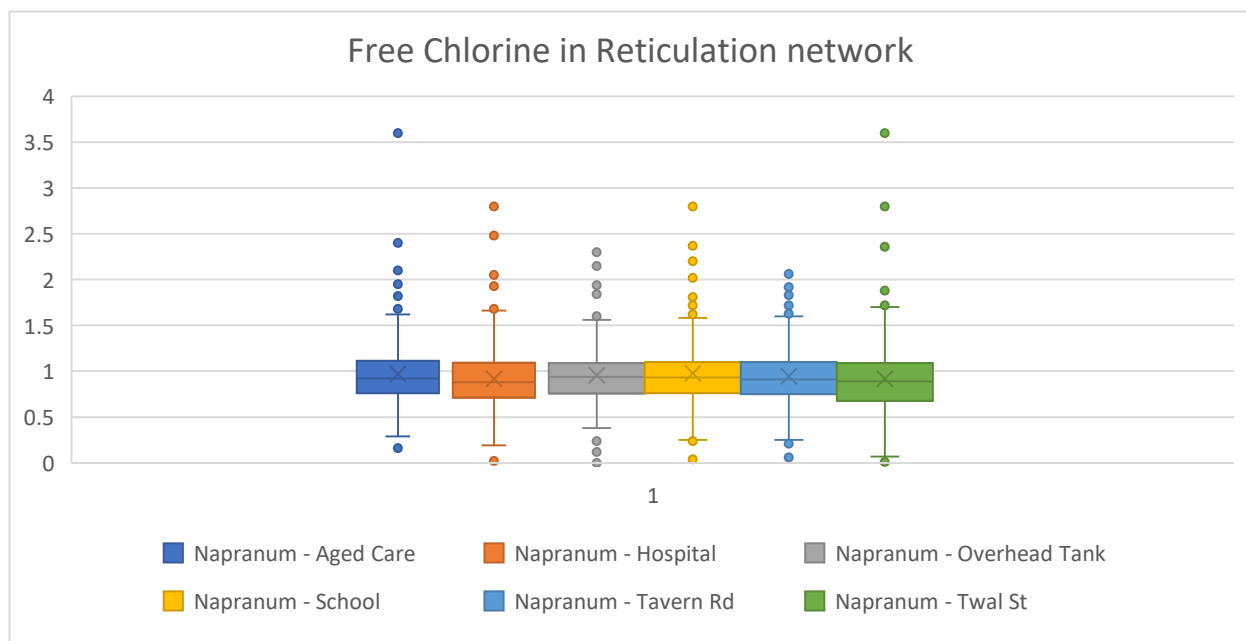


Figure 2 Reticulation Free Chlorine

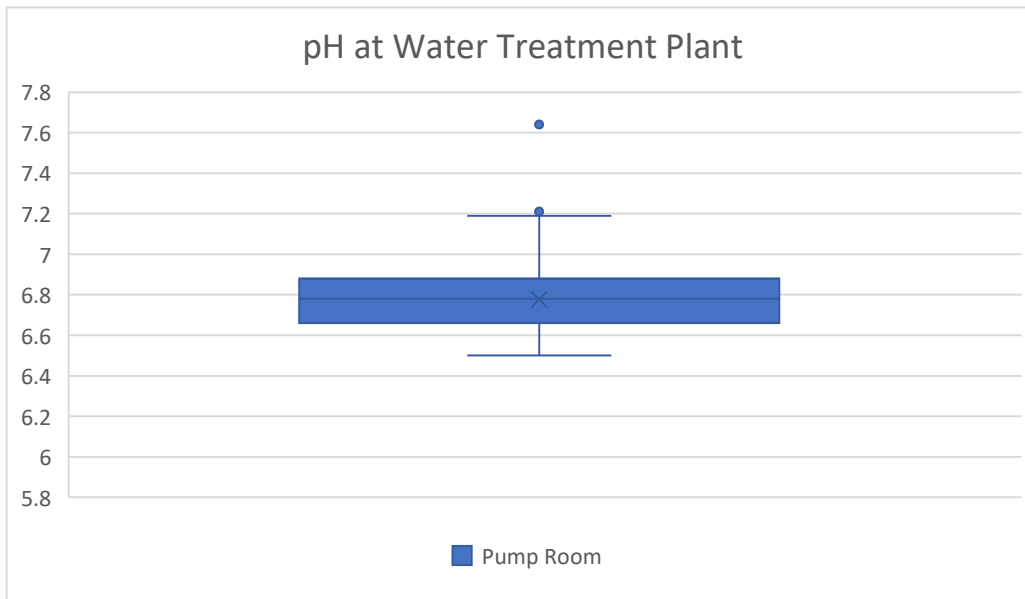


Figure 3 Water Treatment Plant pH

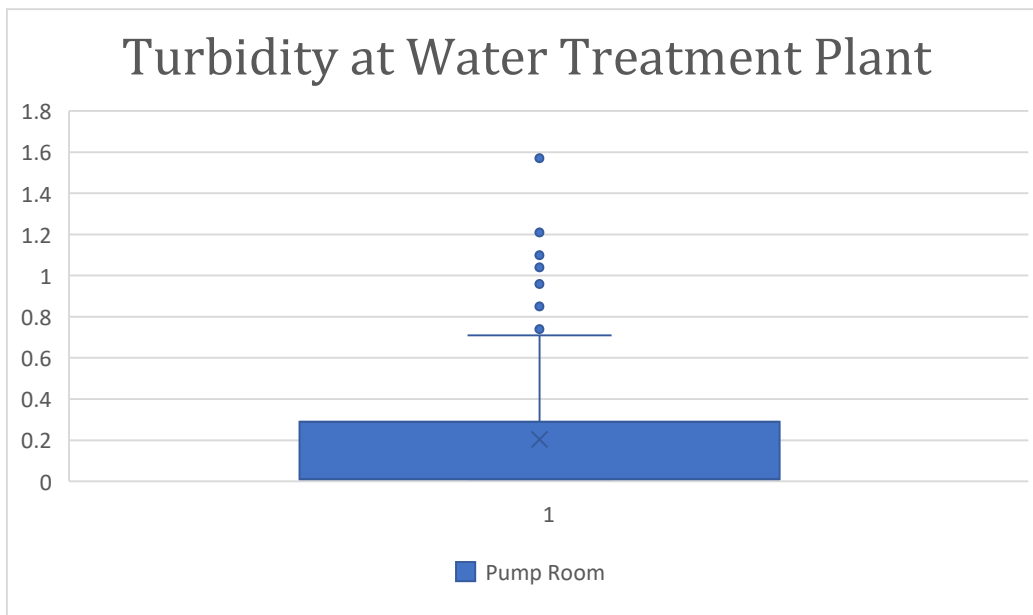


Figure 4 Turbidity at Water Treatment Plant

A summary of the physio-chemical testing undertaken quarterly for the bores is included in Table 2. Although raw water, all parameters were compliant with the ADWG, except pH. pH is naturally low in the source water. This is an aesthetic parameter and not of health concern. NASC undertake pH correction as part of the water treatment process to bring pH back into ADWG recommended ranges via aeration then filtering through calcium carbonate chips.

Table 2 Drinking water quality performance - bore monitoring

| Napranum Water - Bores |                         |                      |         |         |         |                  |                    |               |
|------------------------|-------------------------|----------------------|---------|---------|---------|------------------|--------------------|---------------|
| Parameter              | No. of Samples Required | No. of Samples Taken | Minimum | Maximum | Median  | ADWG Value       | No. of Exceedances | Units         |
| Apparent Colour        | 8                       | 8                    | <1      | <1      | <1      | 15 HU (A)        | 0                  | Pt/Co units   |
| Calcium                | 8                       | 8                    | 0.1     | <0.2    | <0.2    | NA               | 0                  | mg/L          |
| Chloride               | 8                       | 8                    | 3.2     | 3.6     | 3.4     | 250 (A)          | 0                  | mg/L          |
| Electrical Conductance | 8                       | 8                    | 20      | 21      | 20      | NA               | 0                  | µS/cm         |
| Fluoride               | 8                       | 8                    | <0.03   | <0.03   | <0.03   | 1.5 (H)          | 0                  | mg/L          |
| ICPMS Aluminium        | 8                       | 8                    | <0.008  | 0.018   | 0.01    | 0.2 (A)          | 0                  | mg/L          |
| ICPMS Antimony         | 8                       | 8                    | <0.000  | <0.001  | <0.001  | 0.003 (H)        | 0                  | mg/L          |
| ICPMS Arsenic          | 8                       | 8                    | <0.0002 | 0.001   | <0.0010 | 0.01 (H)         | 0                  | mg/L          |
| ICPMS Barium           | 8                       | 8                    | <0.001  | 0.004   | 0.001   | 2 (H)            | 0                  | mg/L          |
| ICPMS Beryllium        | 8                       | 8                    | <0.0001 | <0.0010 | 0.0006  | 0.06 (H)         | 0                  | mg/L          |
| ICPMS Boron            | 8                       | 8                    | <0.05   | <0.05   | <0.05   | 4 (H)            | 0                  | mg/L          |
| ICPMS Cadmium          | 8                       | 8                    | <0.0001 | <0.0001 | <0.0001 | 0.002 (H)        | 0                  | mg/L          |
| ICPMS Chromium         | 8                       | 8                    | <0.0005 | <0.0010 | 0.0008  | 0.05 (H)         | 0                  | mg/L          |
| ICPMS Copper           | 8                       | 8                    | 0.011   | 0.022   | 0.016   | 2(H)<br>1(A)     | 0                  | mg/L          |
| ICPMS Iron             | 8                       | 8                    | <0.015  | <0.050  | 0.04    | 0.3(A)           | 0                  | mg/L          |
| ICPMS Lead             | 8                       | 8                    | 0.0005  | 0.001   | <0.0010 | 0.01(H)          | 0                  | mg/L          |
| ICPMS Manganese        | 8                       | 8                    | <0.0002 | <0.0010 | 0.0009  | 0.5(H)<br>0.1(A) | 0                  | mg/L          |
| ICPMS Molybdenum       | 8                       | 8                    | <0.0005 | <0.0010 | 0.0008  | 0.05(H)          | 0                  | mg/L          |
| ICPMS Nickel           | 8                       | 8                    | <0.0002 | <0.0010 | 0.0008  | 0.02(H)          | 0                  | mg/L          |
| ICPMS Selenium         | 8                       | 8                    | <0.002  | <0.010  | 0.006   | 0.01(H)          | 0                  | mg/L          |
| ICPMS Silver           | 8                       | 8                    | <0.0002 | <0.0010 | 0.0006  | 0.1(H)           | 0                  | mg/L          |
| ICPMS Uranium          | 8                       | 8                    | <0.0000 | <0.0010 | 0.0006  | 0.02 (H)         | 0                  | mg/L          |
| ICPMS Zinc             | 8                       | 8                    | <0.005  | 0.022   | 0.01    | 3 (A)            | 0                  | mg/L          |
| ICPOES Silicon         | 8                       | 8                    | 5.3     | 6.6     | 6       | 100 (H)          | 0                  | mg/ L<br>SiO2 |
| Magnesium              | 8                       | 8                    | 0.2     | 0.3     | 0.2     | NA               | 0                  | mg/L          |
| Mercury                | 8                       | 8                    | <0.06   | <0.06   | <0.06   | 1 (H)            | 0                  | ug/L          |
| Nitrate                | 8                       | 8                    | 0.12    | 0.2     | 0.15    | 50 (H)           | 0                  | mg/L as N     |
| Nitrite                | 8                       | 8                    | <0.01   | <0.01   | <0.01   | 3 (H)            | 0                  | mg/L as N     |
| pH                     | 8                       | 8                    | 4.8     | 5.1     | 5       | 6.5 - 8.5 (A)    | 8                  |               |
| Potassium              | 8                       | 8                    | <0.15   | <0.15   | <0.15   | NA               | 0                  | mg/L          |
| Sodium                 | 8                       | 8                    | 2.2     | 2.4     | 2.3     | 180 (A)          | 0                  | mg/L          |

|                               |   |   |       |       |       |         |   |                          |
|-------------------------------|---|---|-------|-------|-------|---------|---|--------------------------|
| <b>Sulphate</b>               | 8 | 8 | <0.10 | <0.10 | <0.10 | 250 (A) | 0 | mg/L                     |
| <b>Total Alkalinity</b>       | 8 | 8 | <1.0  | <1.0  | <1.0  | NA      | 0 | mg CaCO <sub>3</sub> / L |
| <b>Total Dissolved Solids</b> | 8 | 8 | 11    | 18    | 15.5  | 600 (A) | 0 | mg/L                     |
| <b>Total Hardness</b>         | 8 | 8 | <1.0  | 1.1   | 1.1   | 200 (A) | 0 | mg CaCO <sub>3</sub> / L |
| <b>Turbidity</b>              | 8 | 8 | <0.1  | 0.1   | <0.1  | 5 (A)   | 0 | NTU                      |

*A – aesthetic guidelines (spec) as per the ADWG. Does not impact public health.*

*H – health-based guidelines (spec) as per the ADWG. Requires investigation and corrective actions.*

A summary of the physio-chemical testing in the reticulation is included in Table 3. All parameters were compliant with the ADWG health guidelines.

*Table 3 Drinking water quality performance – reticulation verification monitoring*

| Napranum Water Reticulation   |                         |                      |         |         |         |         |              |                    |             |
|-------------------------------|-------------------------|----------------------|---------|---------|---------|---------|--------------|--------------------|-------------|
| Parameter                     | No. of Samples Required | No. of Samples Taken | Minimum | Maximum | Median  | Average | ADWG Value   | No. of Exceedances | Units       |
| <b>Apparent Colour</b>        | 4                       | 5                    | <1      | <1      | <1      | 1       | 15 (A)       | 0                  | Pt/Co units |
| <b>Calcium</b>                | 4                       | 5                    | 2.3     | 4.7     | 3.4     | 3.5     | NA           | 0                  | mg/L        |
| <b>Chlorate</b>               | 4                       | 5                    | <0.005  | 0.011   | 0.005   | 0.006   | 0.8 (H)      | 0                  | mg/L        |
| <b>Chloride</b>               | 4                       | 5                    | 3.7     | 4.3     | 4       | 4       | 250 (A)      | 0                  | mg/L        |
| <b>Chlorite</b>               | 4                       | 5                    | <0.005  | <0.005  | <0.005  | 0.005   | 0.8 (H)      | 0                  | mg/L        |
| <b>Electrical Conductance</b> | 4                       | 5                    | 28      | 40      | 32      | 33      | NA           | 0                  | µS/cm       |
| <b>Fluoride</b>               | 4                       | 5                    | <0.03   | <0.03   | <0.03   | 0.03    | 1.5 (H)      | 0                  | mg/L        |
| <b>ICPMS Aluminium</b>        | 4                       | 5                    | <0.008  | <0.015  | <0.010  | 0.01    | 0.2 (A)      | 0                  | mg/L        |
| <b>ICPMS Antimony</b>         | 4                       | 5                    | <0.000  | <0.001  | <0.001  | 0.001   | 0.003 (H)    | 0                  | mg/L        |
| <b>ICPMS Arsenic</b>          | 4                       | 5                    | <0.0002 | <0.0010 | <0.0002 | 0.0005  | 0.01 (H)     | 0                  | mg/L        |
| <b>ICPMS Barium</b>           | 4                       | 5                    | 0.001   | 0.002   | <0.002  | 0.002   | 2(H)         | 0                  | mg/L        |
| <b>ICPMS Beryllium</b>        | 4                       | 5                    | <0.0001 | <0.0010 | <0.0001 | 0.0005  | 0.06 (H)     | 0                  | mg/L        |
| <b>ICPMS Boron</b>            | 4                       | 5                    | <0.05   | <0.05   | <0.05   | 0.05    | 4 (H)        | 0                  | mg/L        |
| <b>ICPMS Cadmium</b>          | 4                       | 5                    | <0.0001 | <0.0001 | <0.0001 | 0.0001  | 0.002 (H)    | 0                  | mg/L        |
| <b>ICPMS Chromium</b>         | 4                       | 5                    | <0.0005 | <0.0010 | <0.0005 | 0.0007  | 0.05 (H)     | 0                  | mg/L        |
| <b>ICPMS Copper</b>           | 4                       | 5                    | 0.021   | 0.09    | 0.03    | 0.047   | 2(H)<br>1(A) | 0                  | mg/L        |
| <b>ICPMS Iron</b>             | 4                       | 5                    | <0.015  | <0.050  | <0.015  | 0.029   | 0.3(A)       | 0                  | mg/L        |
| <b>ICPMS Lead</b>             | 4                       | 5                    | 0.0002  | 0.001   | <0.0010 | 0.0007  | 0.01(H)      | 0                  | mg/L        |

|                        |   |   |         |         |         |        |                  |   |                             |
|------------------------|---|---|---------|---------|---------|--------|------------------|---|-----------------------------|
| ICPMS Manganese        | 4 | 5 | <0.0002 | <0.0010 | <0.0003 | 0.0006 | 0.5(H)<br>0.1(A) | 0 | mg/L                        |
| ICPMS Molybdenum       | 4 | 5 | <0.0005 | <0.0010 | <0.0005 | 0.0007 | 0.05(H)          | 0 | mg/L                        |
| ICPMS Nickel           | 4 | 5 | <0.0002 | <0.0010 | <0.0005 | 0.0006 | 0.02(H)          | 0 | mg/L                        |
| ICPMS Selenium         | 4 | 5 | <0.002  | <0.010  | <0.002  | 0.005  | 0.01(H)          | 0 | mg/L                        |
| ICPMS Silver           | 4 | 5 | <0.0002 | <0.0010 | <0.0002 | 0.0005 | 0.1(H)           | 0 | mg/L                        |
| ICPMS Uranium          | 4 | 5 | <0.0000 | <0.0010 | <0.0001 | 0.0004 | 0.02 (H)         | 0 | mg/L                        |
| ICPMS Zinc             | 4 | 5 | 0.004   | 0.008   | 0.007   | 0.006  | 3 (A)            | 0 | mg/L                        |
| ICPOES Silicon         | 4 | 5 | 5.7     | 6.2     | 5.9     | 5.9    | 100 (H)          | 0 | mg/ L<br>SiO <sub>2</sub>   |
| Magnesium              | 4 | 5 | 0.2     | 0.3     | 0.2     | 0.2    | NA               | 0 | mg/L                        |
| Mercury                | 4 | 5 | <0.06   | <0.06   | <0.06   | 0.06   | 1 (H)            | 0 | ug/L                        |
| Nitrate                | 4 | 5 | 0.12    | 0.14    | 0.13    | 0.13   | 50 (H)           | 0 | mg/L as N                   |
| Nitrite                | 4 | 5 | <0.01   | <0.01   | <0.01   | 0.01   | 3 (H)            | 0 | mg/L as N                   |
| pH                     | 4 | 5 | 6.7     | 7.2     | 7       | 6.9    | 6.5 - 8.5<br>(A) | 0 |                             |
| Potassium              | 4 | 5 | <0.15   | <0.15   | <0.15   | 0.15   | NA               | 0 | mg/L                        |
| Sodium                 | 4 | 5 | 2.2     | 2.4     | 2.4     | 2.3    | 180 (A)          | 0 | mg/L                        |
| Sulphate               | 4 | 5 | <0.10   | <0.10   | <0.10   | 0.1    | 250 (A)          | 0 | mg/L                        |
| Total Alkalinity       | 4 | 5 | 5.8     | 12      | 8.7     | 8.8    | NA               | 0 | mg CaCO <sub>3</sub><br>/ L |
| Total Dissolved Solids | 4 | 5 | 22      | 30      | 23      | 24.8   | 600 (A)          | 0 | mg/L                        |
| Total Hardness         | 4 | 5 | 6.9     | 13      | 9.6     | 9.9    | 200 (A)          | 0 | mg CaCO <sub>3</sub><br>/ L |
| Total Trihalomethanes  | 4 | 5 | <5.0    | <5.0    | <5.0    | 5      | 250 (H)          | 0 | µg/L                        |
| Turbidity              | 4 | 5 | <0.1    | <0.1    | <0.1    | 0.1    | 5 (A)            | 0 | NTU                         |

A – aesthetic guidelines (spec) as per the ADWG. Does not impact public health.

H – health-based guidelines (spec) as per the ADWG. Requires investigation and corrective actions.

Table 4 Drinking water quality performance – reticulation verification monitoring for PFAS at overhead tank.

| Napranum Water Reticulation – Overhead tank sample point |                         |                      |         |         |        |         |            |                    |       |
|----------------------------------------------------------|-------------------------|----------------------|---------|---------|--------|---------|------------|--------------------|-------|
| Parameter                                                | No. of Samples Required | No. of Samples Taken | Minimum | Maximum | Median | Average | ADWG Value | No. of Exceedances | Units |
| <i>Perfluorobutane sulfonic acid (PFBS) (µg/L)</i>       | 0                       | 5                    | <0.0    | <0.0    | <0.0   | <0.0    | 0.1        | 0                  | ug/L  |
| <i>Perfluorohexane sulfonic acid (PFHxS) (µg/L)</i>      | 0                       | 5                    | <0.0    | 0.003   | 0.0025 | 0.0025  | 0.03       | 0                  | ug/L  |
| <i>Perfluorooctane sulfonic acid (PFOS) (µg/L)</i>       | 0                       | 5                    | 0.004   | 0.006   | 0.005  | 0.005   | 0.008      | 0                  | ug/L  |
| <i>Perfluorooctanoic acid (PFOA) (µg/L)</i>              | 0                       | 5                    | <0.0    | <0.0    | <0.0   | <0.0    | 0.2        | 0                  | ug/L  |

## 5. INCIDENTS REPORTED TO THE REGULATOR

Table 4 Incidents reported to regulator

| Drinking Water Incident Number | Date of incident                      | Scheme name/Location              | Issue                                                  | Immediate action                                                                                                         | Preventative action                                                                                                                                                                                                                              |
|--------------------------------|---------------------------------------|-----------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DWI-144-25-12349</b>        | July 2024 – February - 2025           | Napranum Aboriginal Shire Council | Bore turbidity exceedance of critical control point    | Flush bores.                                                                                                             | Further training for water operators on critical control points and sampling technique.                                                                                                                                                          |
| <b>DWI-144-25-12348</b>        | July 2024 – April 2025                | Napranum Aboriginal Shire Council | Missed in-house <i>E.coli</i> verification monitoring. | Check chlorine results to ensure sufficient chlorine residual.                                                           | Further training for water operators on DWQMP requirements. Additional staff join the team assist with workload and management.                                                                                                                  |
| <b>DWI-144-24-11421</b>        | July 2024, September 2024, March 2025 | Napranum Aboriginal Shire Council | Missed monthly laboratory samples                      | Check chlorine results to ensure sufficient chlorine residual.                                                           | Further training for water operators on DWQMP requirements. Additional staff join the team assist with workload and management. Improve process on sending samples via airfreight.                                                               |
| <b>DWI-144-25-12213</b>        | 30/07/2025                            | Napranum Aboriginal Shire Council | PFAS detection.                                        | Isolate bore with exceedance, contact Water supply regulator and Public Health unit.                                     | Blending of Councils two bores to bring the final water to below safe limits. Implementing monthly testing of Bores and final water to verify process is working. Begin work on supplementing supply with additional bore with low PFAS results. |
| <b>DWI-144-25-11824</b>        | 05/02/2025                            | Napranum Aboriginal Shire Council | Sewer pipe incident                                    | Ensure water main isolation was sound. Disinfected and flushed line. Notified Water supply regulators and Public Health. | Share with contractors working on Council assets all available drawings. Share Standard Operating Procedure for working on water mains.                                                                                                          |
| <b>DWI-144-24-11442</b>        | 29/10/2024                            | Napranum Aboriginal Shire Council | Free chlorine exceedance of critical control point.    | Notify Water supply regulators and public health. Implement a Boil water alert.                                          | Further training for water operators on DWQMP requirements. Training for new staff. Contact SCADA service provider and                                                                                                                           |

|                         |            |                                   |                                                     |                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                              |
|-------------------------|------------|-----------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         |            |                                   |                                                     | Restore free chlorine to safe levels. Carry out verification monitoring.                                                                                 | investigate why no alarms were received.                                                                                                                                                                                                                                                                                     |
| <b>DWI-144-24-11414</b> | 11/10/2024 | Napranum Aboriginal Shire Council | Free chlorine exceedance of critical control point. | Notify Water supply regulators and public health. Implement a Boil water alert. Restore free chlorine to safe levels. Carry out verification monitoring. | Further training for water operators on DWQMP requirements. Training for new staff. Contact SCADA service provider and investigate why no alarms were received.                                                                                                                                                              |
| <b>DWI-144-24-11506</b> | 25/11/2024 | Napranum Aboriginal Shire Council | Free chlorine exceedance of critical control point. | Notify Water supply regulators and public health. Implement a Boil water alert. Restore free chlorine to safe levels. Carry out verification monitoring. | Increase monitoring at the chlorine shed to ensure all key aspects of the system are operational. Contact SCADA service provider and investigate why no alarms were received. Contactor to upgrade chlorine gas regulators. Additional staff join the team assist with workload and management. Test alarms are operational. |

## 6. CUSTOMER COMPLAINTS

Monitoring of consumer complaints can provide valuable information on potential problems that may not have been identified by performance monitoring of the water supply system. Consumer satisfaction with drinking water quality is largely based on a judgment that the aesthetic quality of tap water is 'good', which usually means that it is colourless, free from suspended solids and has no unpleasant taste or odour.

There were no water quality related customer complaints during the reporting period.

## 7. DWQMP REVIEW OUTCOMES

No review of the DWQMP was due in this period.

The next formal review is due by 1 March 2026.

## 8. DWQMP AUDIT FINDINGS

No regular DWQMP audit was required to be conducted during the reporting period.

The next regular audit is due by 1 September 2026.

## 9. CUSTOMER SERVICE STANDARDS

Council has finalised their Customer Service Standards (CSS) after a period of community consultation from 1/12/25 to 22/12/25. The CSS can be found on Council website for public perusal and ongoing feedback.

## 10. GLOSSARY

Table 4 Glossary

| Term                         | Definition                                                                                                                                      |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ADWG</b>                  | Australian Drinking Water Guidelines (2011).                                                                                                    |
| <b>CFU/100mL</b>             | Colony forming units per 100 millilitres                                                                                                        |
| <b>DLGWV</b>                 | Department of Local Government, Water and Volunteers                                                                                            |
| <b>DWQMP</b>                 | Drinking Water Quality Management Plan.                                                                                                         |
| <b><i>E. coli</i></b>        | <i>Escherichia coli</i> , a bacterium which is considered to indicate the presence of faecal contamination and therefore potential health risk. |
| <b>ESS</b>                   | Essential Services Supervisor                                                                                                                   |
| <b>Incident</b>              | Means a non-compliance with water quality criteria (e.g., exceeding an ADWG health guideline value).                                            |
| <b>NASC/Council</b>          | Napranum Aboriginal Shire Council                                                                                                               |
| <b>Mg CaCO<sub>3</sub>/L</b> | Milligrams per Litre Calcium Carbonate                                                                                                          |
| <b>mg/L</b>                  | Milligrams per Litre                                                                                                                            |
| <b>Mg/L N</b>                | Micrograms per Litre as Nitrogen                                                                                                                |
| <b>mg/L SiO<sub>2</sub></b>  | Milligrams per Litre Silicon Dioxide                                                                                                            |
| <b>NATA</b>                  | National Association of Testing Authorities                                                                                                     |
| <b>NA</b>                    | Not applicable                                                                                                                                  |
| <b>ND</b>                    | None detected                                                                                                                                   |
| <b>NTU</b>                   | Nephelometric Turbidity Units                                                                                                                   |
| <b>Pt/Co units</b>           | Platinum-Cobalt                                                                                                                                 |
| <b>QLD</b>                   | Queensland                                                                                                                                      |
| <b>SPID</b>                  | Service Provider Identification                                                                                                                 |
| <b>SOP</b>                   | Standard Operating Procedure                                                                                                                    |
| <b>The Act</b>               | <i>Water Supply (Safety and Reliability) Act 2008</i>                                                                                           |
| <b>µg/L</b>                  | Micrograms per Litre                                                                                                                            |
| <b>µS/cm</b>                 | Micro siemens per centimetre                                                                                                                    |

## 11. APPENDIX A - RISK MANAGEMENT IMPROVEMENT PLAN

| Action No. | Source                   | Component                           | Hazardous event from the Risk Register                                                   | Improvement Action                                                                                                                                                                              | Priority | Responsibility                                   | Timeframe by (original) | Revised (from reviews) | Status      | Comments                                                                                                                                                                     |
|------------|--------------------------|-------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------|-------------------------|------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5          | DWQMP Risk Register 2022 | Catchment and source infrastructure | Sewer leaking into aquifer                                                               | Assess condition of sewer mains e.g. using camera or based on any previous (recent) condition report. Review and implement the findings from the condition assessment.                          | Medium   | Director of Environment and Sustainability / ESS | Jun-24                  |                        | Completed   |                                                                                                                                                                              |
| 6          | DWQMP Risk Register 2022 | Catchment and source infrastructure | Sewer leaking into aquifer                                                               | Investigate procuring Council-owned sewer inspection cameras to undertake periodic condition assessment of sewer mains.                                                                         | Medium   | Director of Environment and Sustainability       | Jun-23                  | Nov-25                 | Completed   | In house and lab testing shows no E.coli present in raw water sourced from aquifer confirming no infiltration from sewage system. Contractor can be used if the need arises. |
| 9          | DWQMP Risk Register 2022 | Catchment and source infrastructure | Ingress into bores and aquifer                                                           | Establish contact with RTA Weipa (Water and Tailings Department and/or Weipa Town Authority) to be alerted of any PFAS issues in their monitoring bores which are relatively close to Napranum. | Medium   | Director of Environment and Sustainability       | Mar-26                  | Nov-25                 | In Progress | ESS notified Director to raise this point with Rio at next regular meeting.                                                                                                  |
| 11         | DWQMP Risk Register 2022 | Catchment and source infrastructure | Bore integrity - infrastructure; Surface runoff; Lack of development planning near bores | Undertake bore casing condition assessment using downhole camera. Review and implement the findings from the condition assessment.                                                              | Medium   | ESS / Operators                                  | Dec-23                  | Nov-25                 | Completed   | Completed 2025 as part of Bore upgrade works by Hampbell plumbing. Casing was in good condition, no cracks.                                                                  |

|    |                                |                  |                                                                |                                                                                                                                                                                       |        |                                                  |        |        |             |                                                                                                                                                                                                                                                             |
|----|--------------------------------|------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------|--------|--------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | DWQMP Risk Register 2022       | Chlorination     | Underdose of chlorine - impacts disinfection                   | Investigate having a contingency chlorination system e.g. hypo system can be recommissioned as emergency backup and/or maintain chlorine tablets.                                     | Medium | Director of Environment and Sustainability       | Dec-23 | Nov-25 | Completed   | Contingency not required as chlorine gas system has high reliability. Serviced every 6 months by contractor. Alarms in place, run on backup generator in case of power outage. Duty standby cylinder in place. Spare pump on site. Critical spares on site. |
| 16 | DWQMP Risk Register 2022       | Reservoir        | Vermin entry                                                   | Document the 3 monthly more detailed reservoir inspection as a checklist. Investigate the use of drones to complete visual inspections of reservoir roof during the 3 monthly checks. | High   | Director of Environment and Sustainability / ESS | Dec-22 | Nov-25 | Completed   | Checklist done, and on SWIMlocal. Drone use not required due to access ladders.                                                                                                                                                                             |
| 21 | DWQMP Risk Register 2022       | Reticulation     | Low or negative pressure / backflows                           | Verify the operational status of Hospital backflow prevention device. If it hasn't been tested, then organise for testing to be done by the Hospital.                                 | Medium | Director of Environment and Sustainability       | Dec-23 | NA     | Completed   | Contractor carries out annually.                                                                                                                                                                                                                            |
| 23 | DWQMP Risk Register 2022, 2023 | Whole of Service | Staff Turnover / Insufficient Training leading to unsafe water | Recruit a new ESS and operator and train them on the DWQMP.                                                                                                                           | High   | Director of Environment and Sustainability       | Dec-23 | NA     | Completed   | ESS employed April 2025 on one year contract.                                                                                                                                                                                                               |
| 26 | DWQMP Risk Register 2022       | Whole of Service | Staff Turnover / Insufficient Training leading to unsafe water | SCADA training to be undertaken by ESS and new operator when onboard.                                                                                                                 | High   | Director of Environment and Sustainability       | Jun-23 | Dec-24 | Completed   | Training complete.                                                                                                                                                                                                                                          |
| 29 | DWQMP Risk Register 2022       | Whole of Service | Aquifer depletion                                              | Investigate commissioning another bore to supplement the two existing bores, and also to serve as contingency.                                                                        | Low    | Director of Environment and Sustainability / ESS | Jun-26 | Nov-25 | In Progress | Bore 3 has begun to be brought online. Water quality sampling is underway, and quotes have been received for a switchboard and bore pump. Funding to be secured.                                                                                            |
| 30 | DWQMP Risk Register 2022       | Whole of Service | Cyber attack - cybersecurity breach                            | Investigate from Austek on the cybersecurity strategies in place for the SCADA system.                                                                                                | Medium | Director of Environment and Sustainability       | Jun-26 | Nov-25 | To Start    | Delayed due to staff turnover                                                                                                                                                                                                                               |

|    |                          |                                             |                                                                                   |                                                                                                                                                                          |        |                                                  |        |        |           |                                                                                                                                     |
|----|--------------------------|---------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------|--------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------|
| 31 | DWQMP Risk Register 2022 | Whole of Service                            | Cyber attack - cybersecurity breach                                               | Investigate what Council's corporate cybersecurity procedure/policy is and the need to develop one.                                                                      | Medium | Director of Environment and Sustainability       | Jun-26 | Nov-25 | To Start  | Delayed due to staff turnover                                                                                                       |
| 32 | DWQMP Risk Register 2022 | Whole of Service                            | Lack of an equipment calibration program                                          | Document the equipment calibration program, including record keeping                                                                                                     | High   | Essential Services Supervisor                    | Dec-22 | NA     | Completed | SOP done.                                                                                                                           |
| 34 | DWQMP Risk Register 2022 | Whole of Service                            | Reliability of in-house micro testing data                                        | Establish and document a QA/QC framework and procedures for the in-house micro testing, including sampling, negative/positive checks, staff training, external QA check. | High   | Director of Environment and Sustainability / ESS | Dec-22 | Dec-24 | Completed | ESS has implemented a SOP and training.                                                                                             |
| 35 | DWQMP Risk Register 2023 | Catchment and source infrastructure - Bores | Sewer leaking into aquifer                                                        | Undertake <i>E. coli</i> testing weekly in-house and monthly externally for each bore.                                                                                   | High   | Operators                                        | NA     | Nov-25 | Completed | Bores are tested weekly inhouse, lab testing program has been put in place.                                                         |
| 36 | DWQMP Risk Register 2023 | Catchment and source infrastructure - Bores | Sewer leaking into aquifer                                                        | Investigate using Quanti-tray with the in-house Colilert testing to enable counts for <i>E. coli</i> and total coliforms, as opposed to only presence/absence result.    | Medium | Director of Environment and Sustainability / ESS | Dec-24 | Nov-25 | Completed | Quanti trays are being used.                                                                                                        |
| 37 | DWQMP Risk Register 2023 | Catchment and source infrastructure - Bores | Source Water Characteristic / Ingress into bores and aquifer                      | Seal off any small gaps around wire conduits at the bores.                                                                                                               | Medium | Operators                                        | Dec-23 | Nov-25 | Completed | Completed with Bore upgrade works.                                                                                                  |
| 38 | DWQMP Risk Register 2023 | Treatment Process - pH correction           | Contact with the calcite (lime - granular) - inadequate correction of pH - low pH | Establish a system (e.g. a spreadsheet or logbook) to record date/time and actions taken when a SCADA alarm notification is received and acknowledged, especially for    | Medium | Director of Environment and Sustainability / ESS | Jun-24 | Nov-25 | Completed | pH is monitored daily at WTP and in the network weekdays. This is used to gauge whether there is sufficient pH correction in place. |

|    |                          |                                      |                                              |                                                                                                                                                                 |        |                                            |        |    |             |                                                                                                      |
|----|--------------------------|--------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------|--------|----|-------------|------------------------------------------------------------------------------------------------------|
|    |                          |                                      | (corrosive to assets)                        | water quality online monitoring (pH and chlorine).                                                                                                              |        |                                            |        |    |             |                                                                                                      |
| 39 | DWQMP Risk Register 2023 | Treatment Process - Chlorination     | Underdose of chlorine - impacts disinfection | Develop a procedure to guide for manual dosing of hypo, when required. Seek guidance from TPHU as needed.                                                       | Low    | Operators / ESS                            | Jun-26 | NA | To Start    |                                                                                                      |
| 40 | DWQMP Risk Register 2023 | Reservoirs - Ground water reservoirs | Vermin entry                                 | Complete refurbishment of the old reservoir.                                                                                                                    | High   | Director of Environment and Sustainability | Jun-26 | NA | In Progress | In progress, new roof is 80% complete with flashing to go on shortly. 20/11/25.                      |
| 41 | DWQMP Risk Register 2023 | Reservoirs - Ground water reservoirs | Stagnation                                   | Add all the routine and periodic water asset inspection and maintenance tasks to MentorAPM to enable auto reminders and task management.                        | Medium | Director of Environment and Sustainability | Dec-24 | NA | Closed      | No longer using MentorAPM. SWIMlocal is being used. Ring mains in the network to prevent stagnation. |
| 42 | DWQMP Risk Register 2023 | Reticulation                         | Dead end storages, long detention            | Eliminate dead-ends to minimise water stagnation and water age (project in place that will loop all the dead ends).                                             | Medium | Director of Environment and Sustainability | Dec-24 | NA | Completed   | Twal and Tavern Road dead ends have been turned into a ring main.                                    |
| 43 | DWQMP Risk Register 2023 | Reticulation                         | Pipe breaks / mains breaks (age, pressure)   | Share the mains/pipes repairs SOP with the relevant contractor to ensure that they meet the water quality criteria following repairs, as stipulated in the SOP. | Medium | Operators / ESS                            | Jun-24 | NA | Completed   | WIOA water main repair procedural video was shared to contractors                                    |
| 44 | DWQMP Risk Register 2023 | Reticulation                         | Low or negative pressure / backflows         | Review the status of the backflow prevention process (e.g. are BFDs being tested annually).                                                                     | Medium | Director of Environment and Sustainability | Dec-24 | NA | To Start    |                                                                                                      |

|    |                          |                  |                                                                |                                                                                                                                                                                                                |        |                                            |        |        |             |                                                                                                                                         |
|----|--------------------------|------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------|--------|--------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 45 | DWQMP Risk Register 2023 | Whole of Service | Staff Turnover / Insufficient Training leading to unsafe water | ESS to review all the SOPs when appointed.                                                                                                                                                                     | Medium | ESS                                        | Mar-25 | Nov-25 | Completed   | SOP reviewed by ESS.                                                                                                                    |
| 46 | DWQMP Risk Register 2023 | Whole of Service | Vandalism                                                      | Investigate fencing off the individual bores as an additional protection measure.                                                                                                                              | Low    | Director of Environment and Sustainability | Jun-25 | NA     | Closed      | Unnecessary protection no longer require. WTP is locked after work hours with video surveillance.                                       |
| 47 | DWQMP Risk Register 2023 | Whole of Service | Pump failure                                                   | Procure a spare chlorine dosing pump.                                                                                                                                                                          | Medium | Director of Environment and Sustainability | Dec-24 | NA     | Completed   | Spare chlorine pump to run the chlorine gas room acquired and stored in chlorine gas shed.                                              |
| 48 | DWQMP Risk Register 2023 | Whole of Service | Pump failure                                                   | Develop a critical spares list.                                                                                                                                                                                | Medium | Operators / ESS                            | Jun-26 | Nov-25 | In Progress | A spare for all critical pumps are on site, Grundfos pressure pump, bore pump, transfer pump from pH clarifier, chlorine gas room pump. |
| 49 | DWQMP Risk Register 2023 | Whole of Service | Lack of an equipment calibration program                       | Include the external calibration of the online analysers task in MentorAPM to enable auto reminders and task management.                                                                                       | Medium | Director of Environment and Sustainability | Jun-26 | NA     | To Start    | No longer using MentorAPM. SWIMlocal is being used. Calibrations of analysers and testing equipment will be tracked through that.       |
| 50 | DWQMP Risk Register 2023 | Whole of Service | Lack of a chemical quality control process                     | Review procedure/process of ordering, receiving and storing of chemicals being used at the WTP with the procurement officer, in line with the SOP on chemical control. Review and update this SOP as relevant. | Medium | Director of Environment and Sustainability | Jun-26 | NA     | To Start    |                                                                                                                                         |
| 51 | DWQMP Update 2023        | n/a              | n/a                                                            | Investigate ongoing periodic training (e.g. every 2 years) on drinking water quality incident response and management (e.g. via scenario exercises).                                                           | Medium | Director of Environment and Sustainability | Jun-25 | Nov-25 | Completed   | All staff have experienced a Drinking water advisories notice being issued during there employment.                                     |

# DOCUMENT HISTORY AND TRACKING

## Document History

| Version | Section/s Modified | Brief Description of Amendment | Author        | Approver | Issue Date |
|---------|--------------------|--------------------------------|---------------|----------|------------|
| 1.0     | NA                 | Final                          | Ben Greenwood |          | 15/01/2025 |

## Document Tracking

|                |                                                                                |
|----------------|--------------------------------------------------------------------------------|
| Document Name  | Napranum Aboriginal Shire Council Drinking Water Service Annual Report 2024-25 |
| Prepared By    | Ben Greenwood                                                                  |
| Reviewed by    | Tom Smith                                                                      |
| Approved by    | Tom Smith                                                                      |
| Date Approved  | 15/01/2025                                                                     |
| Status         | Final                                                                          |
| Version Number | 1.0                                                                            |
| Review Date    | 15/01/2026                                                                     |