Drinking Water Service Annual Report 2024-25

North Queensland Bulk Ports Corporation

December 2025

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A. Improvement Plan Progress

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.

This Annual Report documents the performance of North Queensland Bulk Ports Corporation (NQBP) in implementing the DWQMP from 1 July 2024 to 30 June 2025.

NQBP is a registered service provider operating the drinking water scheme for the Port of Mackay and Port of Hay Point under an approved DWQMP. Bulk treated water is sourced from Mackay Regional Council (MRC) and supplied to the Port of Mackay and Port of Hay Point – Half Tide Tug Harbour (HTTH).

NQBP has undertaken effective risk management and the required water quality testing to ensure the supply of safe drinking water. The water quality verification results and assessment showed that NQBP supplied safe drinking water to its customers. The absence of water quality related customer complaints indicated good customer satisfaction.

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.

No formal DWQMP review was required to be conducted during the reporting period. The next formal review is due by 15 January 2027.

No regulatory audit was required to be conducted during the reporting period. The next regular audit for the DWQMP must be conducted by 30 September 2026.

1. INTRODUCTION

This report documents the performance of North Queensland Bulk Ports Corporation Limited (NQBP) 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).

NQBP is a registered service provider (SPID number 548) 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.

This report assists the Department of Local Government, Water and Volunteers (DLGWV or Regulator) in determining whether the approved DWQMP and any approval conditions have been complied with and provides a mechanism for providers to report publicly on their performance in managing drinking water quality. Specifically, it covers:

- the activities undertaken over the financial year in operating our drinking water service,
- drinking water quality summary,
- summary of performance in implementing the approved DWQMP.

This report is submitted to the Regulator to fulfil regulatory requirements and is also made available to NQBP customers through the website or for inspection upon request.

2. SCHEME MANAGED

NQBP manages two drinking water zones - Port of Mackay and Port of Hay Point – Half Tide Tug Harbour (HTTH). Bulk potable water is sourced from the Mackay Regional Council (MRC) distribution network and supplied to both zones, including land tenants, maritime customers and general public.

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

Through efficient operations and implementation of the DWQMP, NQBP has ensured effective risk management to assure safe quality of drinking water to their customers.

A risk assessment forms part of the approved DWQMP and is used to identify control measures and process improvements.

3.2. Monitoring

NQBP undertakes water quality testing on the scheme in accordance with the DWQMP to ensure compliance with the Australian Drinking Water Guidelines (ADWG).

Verification monitoring samples are collected and tested by an external National Association of Testing Authorities (NATA) accredited laboratory. The results from the verification monitoring for the reporting period are discussed in Section 4.

During the reporting period, NQBP supplied drinking water that complied with the water quality criteria set in the ADWG.

3.3. Implementation of Risk Management Improvement Plan

NQBP has undertaken and/or planned various improvement actions to ensure safety of drinking water to their customers. The improvement actions have been identified through detailed risk assessment to ensure safe quality of drinking water.

Appendix A includes the status and relevant commentary on the Improvement Plan implementation. NQBP continues to actively implement the Improvement Plan.

4. VERIFICATION MONITORING

This section discusses the compliance with the water quality criteria. NQBP supplied safe quality drinking water to its customers during the reporting period.

The verification monitoring for each sample point has been statistically and graphically summarised below. The water supplied by NQBP has 100% conformed to the ADWG health guidelines.

Free chlorine dipped below the operational limit of 0.2 mg/L at Port of Mackay several times throughout the reporting period, however, these quickly recovered (Figure 1). Turbidity and Dissolved Oxygen (DO) had recorded excursions of the ADWG limits; however, these are aesthetic parameters and considered to not have an impact on public health. Port of Hay Point – HTTH had 100% conformance to both the ADWG health and aesthetic guidelines, including the heavy metal suites (see Figure 2 and Figure 3).

The rolling annual *E. coli* compliance for the reporting period is shown in Table 1. There has been 100% compliance with the Public Health Regulation and the DWQMP.

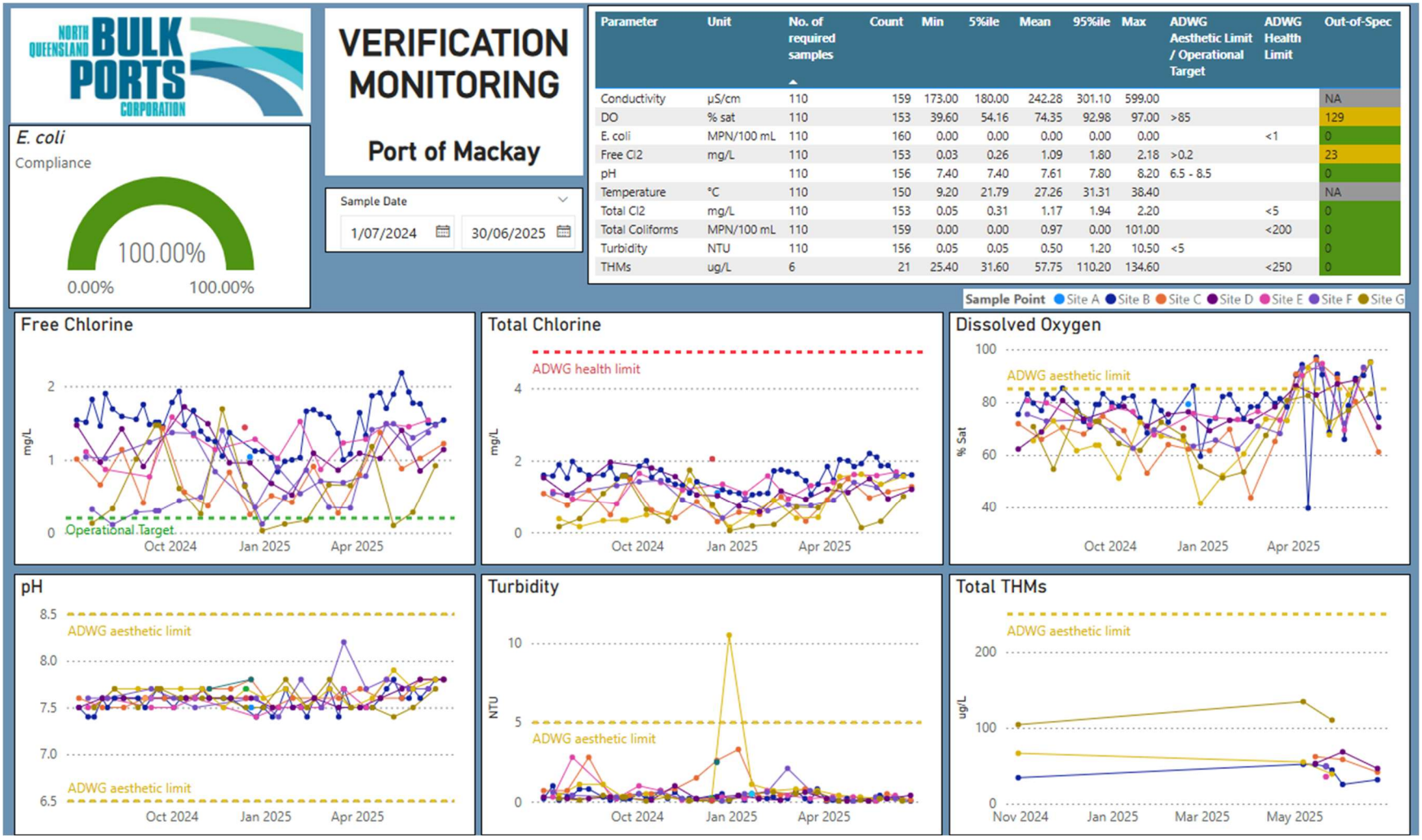
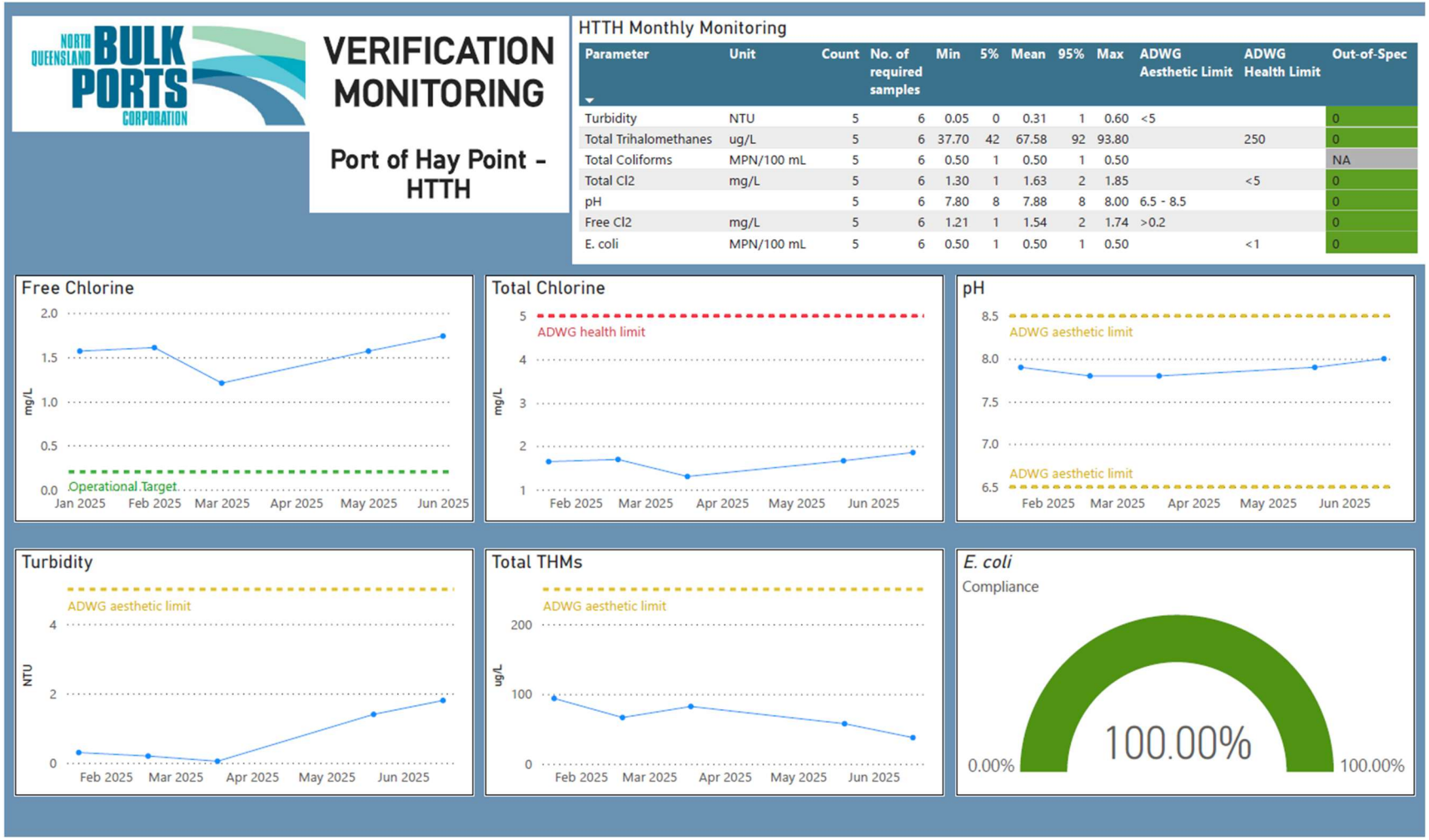


Figure 1 Port of Mackay Drinking Water Quality Performance – Verification Monitoring[1]

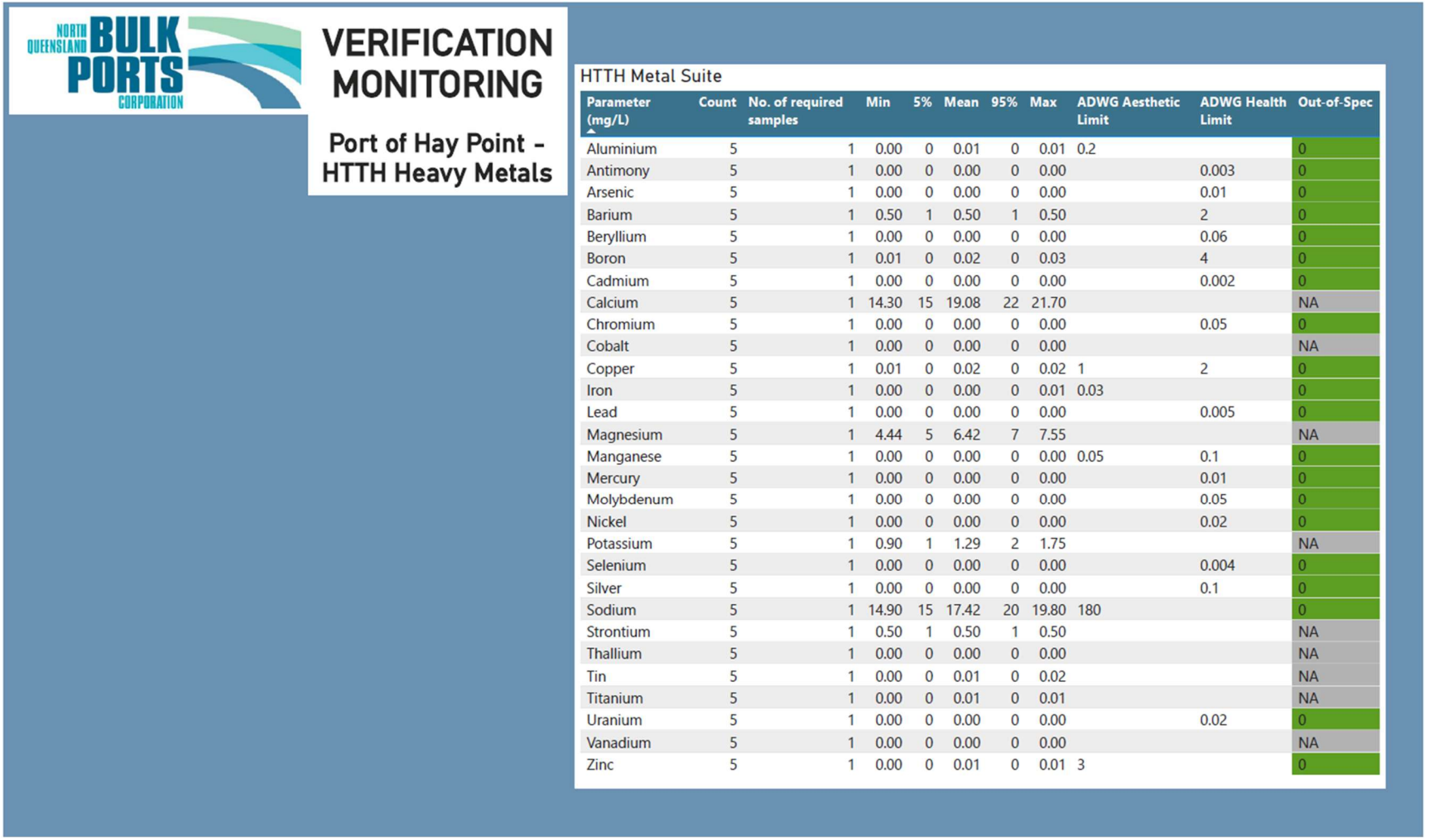
[1] As per the updated DWQMP approved in January 2025, a metals suite is required to be undertaken annually. This will be tested in December 2025.



Parameter	Unit	Count	No. of required samples	Min	5%	Mean	95%	Max	ADWG Aesthetic Limit	ADWG Health Limit	Out-of-Spec
Turbidity	NTU	5	6	0.05	0	0.31	1	0.60	<5		0
Total Trihalomethanes	ug/L	5	6	37.70	42	67.58	92	93.80		250	0
Total Coliforms	MPN/100 mL	5	6	0.50	1	0.50	1	0.50			NA
Total Cl2	mg/L	5	6	1.30	1	1.63	2	1.85		<5	0
pH		5	6	7.80	8	7.88	8	8.00	6.5 - 8.5		0
Free Cl2	mg/L	5	6	1.21	1	1.54	2	1.74	>0.2		0
E. coli	MPN/100 mL	5	6	0.50	1	0.50	1	0.50		<1	0

Figure 2 Port of Hay Point – HTTH Drinking Water Quality Performance – Verification Monitoring[2]

[2] Monthly sampling was missed for April. This was notified to the regulator as an event (see Section 5).



HTTH Metal Suite

Parameter (mg/L)	Count	No. of required samples	Min	5%	Mean	95%	Max	ADWG Aesthetic Limit	ADWG Health Limit	Out-of-Spec
Aluminium	5	1	0.00	0	0.01	0	0.01	0.2		0
Antimony	5	1	0.00	0	0.00	0	0.00		0.003	0
Arsenic	5	1	0.00	0	0.00	0	0.00		0.01	0
Barium	5	1	0.50	1	0.50	1	0.50		2	0
Beryllium	5	1	0.00	0	0.00	0	0.00		0.06	0
Boron	5	1	0.01	0	0.02	0	0.03		4	0
Cadmium	5	1	0.00	0	0.00	0	0.00		0.002	0
Calcium	5	1	14.30	15	19.08	22	21.70			NA
Chromium	5	1	0.00	0	0.00	0	0.00		0.05	0
Cobalt	5	1	0.00	0	0.00	0	0.00			NA
Copper	5	1	0.01	0	0.02	0	0.02	1	2	0
Iron	5	1	0.00	0	0.00	0	0.01	0.03		0
Lead	5	1	0.00	0	0.00	0	0.00		0.005	0
Magnesium	5	1	4.44	5	6.42	7	7.55			NA
Manganese	5	1	0.00	0	0.00	0	0.00	0.05	0.1	0
Mercury	5	1	0.00	0	0.00	0	0.00		0.01	0
Molybdenum	5	1	0.00	0	0.00	0	0.00		0.05	0
Nickel	5	1	0.00	0	0.00	0	0.00		0.02	0
Potassium	5	1	0.90	1	1.29	2	1.75			NA
Selenium	5	1	0.00	0	0.00	0	0.00		0.004	0
Silver	5	1	0.00	0	0.00	0	0.00		0.1	0
Sodium	5	1	14.90	15	17.42	20	19.80	180		0
Strontium	5	1	0.50	1	0.50	1	0.50			NA
Thallium	5	1	0.00	0	0.00	0	0.00			NA
Tin	5	1	0.00	0	0.01	0	0.02			NA
Titanium	5	1	0.00	0	0.01	0	0.01			NA
Uranium	5	1	0.00	0	0.00	0	0.00		0.02	0
Vanadium	5	1	0.00	0	0.00	0	0.00			NA
Zinc	5	1	0.00	0	0.01	0	0.01	3		0

Figure 3 Port of Hay Point – HTTH Heavy Metals Drinking Water Quality Performance – Verification Monitoring[3]

[3] While the metal testing suite is required annually, monitoring has been undertaken monthly to provide baseline results.

Table 1 E. coli compliance with annual value

Year	2024-2025 FY											
Month	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Port of Mackay												
No. of samples collected	14	9	15	18	13	13	14	12	9	15	12	12
No. of samples collected in which *E. coli* is detected (i.e., a failure)	0	0	0	0	0	0	0	0	0	0	0	0
No. of samples collected in the previous 12-month period	131	147	149	155	168	175	175	178	175	172	175	172
No. of failures for the previous 12-month period	0	0	0	0	0	0	0	0	0	0	0	0
% of samples that comply	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Compliance with 98% annual value	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Port of Hay												
No. of samples collected	Not part of approved plan for this period						1	1	1	0	1	1
No. of samples collected in which *E. coli* is detected (i.e., a failure)							0	0	0	0	0	0
No. of samples collected in the previous 12-month period							NA	NA	NA	NA	NA	NA
No. of failures for the previous 12-month period							NA	NA	NA	NA	NA	NA
% of samples that comply							100%	100%	100%	NA	100%	100%
Compliance with 98% annual value							YES	YES	YES	NA	YES	YES

5. INCIDENTS REPORTED TO THE REGULATOR

The following reporting was undertaken to the Regulator for the dataset in the 2024-25 period (notification was completed after the reporting period). Appropriate actions were undertaken to ensure water quality risks were proactively managed.

Table 2 Incidents or Events reported to the Regulator

Date	What Happened	Actions Taken	Incident open or closed
28/07/2025	While undertaking a quarterly audit of test data, no test data was received for the month of April. Our DWQMP states monthly testing for the site of Half Tide Tug Harbour for free chlorine, total chlorine, turbidity, pH, temperature, total coliforms, E. coli, THMs and a metal suite which were not completed. After following up the laboratory who undertake the testing, it was confirmed that no testing was undertaken.	An internal investigation was undertaken with the laboratory (MRC water lab). The lab found that there was miscommunication regarding the testing schedule between sampling coordination and lab operations. Monthly tests were undertaken for all other months with no quality issues. Port of Mackay (the other scheme) uses water from the same treatment plant which is tested weekly. There have been no outstanding quality issues detected here which would indicate that the quality of the water we received for Port of Hay Point – HTTH would be to a satisfactory standard.	Open.

6. CUSTOMER COMPLAINTS

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

7. DWQMP REVIEW

No formal DWQMP review was required to be conducted during the reporting period.

The next formal review is due by 15 January 2027.

8. DWQMP AUDIT FINDINGS

No regulatory audit was required to be conducted during the reporting period. The next regular audit of the DWQMP must be conducted by 30 September 2026.

9. GLOSSARY

Term	Definition
ADWG	Australian Drinking Water Guidelines (2011)
The Act	*Water Supply (Safety and Reliability) Act 2008*
DO	Dissolved Oxygen
DLGWV (Regulator)	Department of Local Government, Water and Volunteers
DWQMP	Drinking Water Quality Management Plan
HTTH	Half Tide Tug Harbour
mg/L	milligrams per litre
MPN/100mL	Most Probable Number per 100 millilitres
MRC	Mackay Regional Council
NATA	National Association of Testing Authorities
NQBP	North Queensland Bulk Ports Corporation
NTU	Nephelometric Turbidity Units
OFI	Opportunity for improvement
QLD	Queensland
REC	Recommendation
SPID	Service Provider Identification
THM	Trihalomethane

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A. IMPROVEMENT PLAN PROGRESS

The improvement actions relevant for this reporting period are included in the table below with relevant commentary on implementation status.

Action ID	Improvement Actions	Status	Comments
01	Develop a formal Bulk Water Supply Agreement or MoU between MRC and NQBP. Ensure that: - It specifies water quality; a statement such as the following is recommended: "MRC shall supply water that meets the latest Australian Drinking Water Guidelines". - The handover point is specifically referenced in the Agreement (e.g. through specific GIS coordinates or other which clearly delineates the changeover of responsibility from one party to the other) and includes water quality requirements. - It includes notification of any planned and reactive maintenance works on the MRC supply side as these may impact on the water supplied to NQPB. - All notifications have a clear timeframe and appropriate contacts. - Any water quality complaints that are relayed to MRC, but originate from NQBP's infrastructure (e.g. bubblers), are promptly and formally notified to NQBP.	In Progress	NQBP meeting regularly with MRC. As a standard customer, NQBP is covered and the inherent risk to the system is not high. Medium priority based on residual risk level.
02	Continue improvement of GIS. Improvement measures shall be identification and positioning of all water supply pipeline and components.	Completed	Updates have been made to the GIS and asset management data. Items to be closed once documentation and positioning of all existing assets is completed (final meter positioning is expected Nov 2021). Ongoing GIS updates will then become part of BAU as upgrades are completed. Moved onto new system (Esri), will work on updating new data. New system has been transferred, will continue to move data over.
03	Review planning application approval process to ensure that it covers water quality management.	In Progress	Planning Engineer is currently considering water quality impacts in his assessment by requiring backflow prevention devices to be installed at the meter. NQBP is yet to update the planning guidelines to include this as a formal requirement. Actioned but not formally written.
04	Investigate options for online monitoring of bulk water supply at handover point. Investigation to be undertaken in consultation with MRC and agreed outcome incorporated into Bulk Water Supply Agreement.	In Progress	NQBP to undertake a feasibility study for in house online monitoring of water quality at the handover point vs risks of delayed notification of issues from MRC. Monitoring and communication requirements to implement the outcome of the study to be incorporated into the Bulk Water Supply Agreement

Action ID	Improvement Actions	Status	Comments
05	Consider options for dealing with non-conforming water received at handover point. Investigation to be undertaken in consultation with MRC and agreed outcome incorporated into Bulk Water Supply Agreement.	In Progress	As above. NQBP and MRC to establish WQ requirements at the handover point in the Bulk Water Supply Agreement or MoU.
06	Consider requiring all contractors, etc., to have an 'Aqua-Card' (issued by Queensland Water Directorate) for drinking water quality awareness.	In Progress	Aqua-Card training is a requirement of all internal employees onboarding training. NQBP to review what water quality awareness training is currently required for external contractors. Requirements for proof of formal training or alternatively supervision of works by a trained NQBP employee is to be incorporated into standard works contracts, NQBP induction or permit to work. Plumbing/repairs work done by in-house contractor which hold Aqua-card, will look into it for external contractors for development of mains
07	Consider developing a diagram to show the architecture of the incident management framework and how other systems such as the external plan and records management systems (such as RiskWare and Guardian) support the framework.	In Progress	NQBP is developing a flowchart to show the integration and hierarchy of their various systems.
08	Prioritise establishment of the formal contract (Mackay Water Supply Deed) for the supply of treated drinking water from MRC. (REC-03)	Closed	This is closed from here as it is a replication of action ID #1.
09	Review SOPs to include testing of chlorine residual to assess if the actions have been successful in implementing the preventive measure. (REC-06)	In Progress	A colorimeter has been purchased and is used to support routine chlorine residual monitoring within the network (as per Action #89). Testing procedures are incorporated into the maintenance schedule to streamline information storage, rather than having standalone SOPs. NQBP is to update the maintenance schedule to ensure all aspects of a typical SOP are documented, including how to take a sample, recording results, response procedures for readings obtained, etc. Otherwise, detailed SOPs may still be required. SOP gap analysis has been completed, next step is to review and/or develop SOPs.
10	Consider capturing the drinking water risk assessment in the Risk Ware program to standardise risk management across the organisation. (OFI-01)	To Start	Paula will check with the Risk Team on practicality.
11	Consider including the requirement for a minimum free chlorine residual at the bulk water handover point in the drinking water supply deed. (OFI-14)	Closed	This is closed from here as it is a replication of action ID #1.

Action ID	Improvement Actions	Status	Comments
12	Confirm, document and install as appropriate, a BPD at: 1. Each (high risk tenant) meter 2. Atom (If not BPD check for an airgap) 3. Each wharf (to install). Ensure any unregistered BPD is added to register to track asset condition and ensure tenant is undertaking routine maintenance.	Completed	BPD have been installed at all tenants and wharfs.
13	Establish formal procedures to ensure MRC informs NQBP of breaches of chlorine residual at Mt Bassett register (MRC quality control point). Add this condition to the Bulk Water Supply Agreement.	Closed	This is closed from here as it is a replication of action ID #1.
14	Install fence or barrier (e.g. bollard) around Harbour Rd connection flowmeter (subject to MRC approval).	In Progress	Project is in the design stage for installation within the 2021/22 FY. Standardised fence to be installed.
15	Determine requirement for assigning criticality levels to equipment in AMP and/or MEX to ensure that sufficient redundancy (spares) is available in the event of a failure of critical equipment.	In Progress	Redundancy is already considered in the design of NQBP's infrastructure. NQBP still to update AMP to ensure criticality is documented, as well as in OnePort as appropriate. Categorisation has been undertaken, in the process of reviewing the asset management plan, which will take longer.
16	Establish another sample point at the northern end of the reticulation.	Completed	Done.
17	Consider streamlining the water quality risk matrix with the Business risk matrix for consistency.	To Start	Did not consider this for the DWQMP review 2023 and IRN response. Reconsider for next DWQMP regulatory review in 2025.
18	Review and update the relevant SOPs to ensure they are relevant to the current operation, up to date and available to all relevant staff. Revise the DWQMP to identify the SOPs that are currently relevant to the system.	Completed	SOP gap analysis and review has been completed.
19	A review of all sample taps is to be undertaken and an appropriate tap installed where they are found to be inadequate. Ensure sample taps are of a suitable standard to enable sterilisation collection of a sterile sample.	Completed	This has been completed. All sample taps are of suitable standard and can be sterilised.
20	Establish robust record keeping processes that include: - Clear identification of regulated documents (e.g. approved DWQMP) and supersede older version - Regulator notices and correspondence - Incident reports - Monitoring results - Communications with other organisations – e.g. MRC	Completed	'DWQMP documents are currently saved on OneDrive/SharePoint.
21	Ensure regulatory timeframes are identified and processes are in place to ensure they are met.	Completed	External contractor has been contracted for a service contract.

Action ID	Improvement Actions	Status	Comments
22	Review the notification process for the NQBP sampling program (MRC lab), ensure notifications are appropriate and include MRC. Notification Protocol for non-compliant samples should be developed.	Completed	The DWQMP was reviewed in 2023 and this has been completed.
23	Check to see if THMs are an issue in the Mackay and a possible issue that NQBP need to consider.	Completed	Not an issue on MRC side, included as comments in the risk register.
24	Review the process the Utilities Supervisor follows to ensure that works on the water supply infrastructure, including mains breaks, have been undertaken satisfactorily.	Completed	Reviewed. Processes undertaken to ensure chlorine testing to re-confirm water works.
25	Follow up with MRC to check if standpipes have backflow prevention. This is a potential issue for NQBPs as those same standpipes have been used on the port's hydrants.	Completed	Standpipes do have backflow, however, not to be used in Port area. Review locations with standpipes outside of port area.
26	NQBP should ensure that tenants are testing backflow prevention devices. Consider sending a letter to leasees to get a copy of the annual test certificate.	Completed	Have arrangement with MRC to check compliance annually. WO in system to remind engineer.
27	Check for the SOP for filling ship potable water tanks. There should be a process in place that ensures there is no potential for backflow into the NQBP network from ships.	Completed	Air gap between them, backflow present.
28	Ensure that the directional flow devices at the two firefighting tanks are in OnePort and are tested annually.	Completed	There is a single inlet for the two firefighting tanks and there is a direction flow device. Need to check whether the device is in OnePort and have been scheduled to be annually tested. WO created
29	More testing at Site E to be undertaken and spikes in turbidity investigated to determine if they correspond with any operational events.	Closed	The turbidity spikes has been resolved. Routine testing will continue.
30	Ensure contractor inductions cover awareness of water quality risks and consider introducing some Cert III modules into the NQBP training program.	In Progress	Training materials being reviewed
31	Formalise the arrangement with the lab to ensure that NQBP receive the required notifications.	To Start	The lab already flag out-of-results, a formal arrangement may not be needed but value will be checked.
32	Formalise a list of approved contractors and standing offer arrangements to attend site on short notice. This should ensure that they have appropriate training, systems and processes in place to manage risks to the drinking water network.	In Progress	Discussions have commenced, working on SOA.
33	Develop a list of critical spares.	Completed	Checking final numbers.
34	Check inventory management in the stores to ensure the required spares are restocked once used.	Completed	Checking final numbers.

Action ID	Improvement Actions	Status	Comments
35	Order new chlorine and turbidity handheld instruments. Add calibration of the new devices into OnePort.	In Progress	Has been calibrated, to purchase turbidity meter.
36	Review the arrangement with Weipa Town Authority for Port of Weipa water supply. It needs to be identified if the port infrastructure is being used for the supply of drinking water as defined by the Act and is required to be covered by a DWQMP. If it is captured it should be decided if it is best to be part of the NQBP or an alternative arrangement, such as being included in the WTA DWQMP.	Completed	WTA have a meter at the Port. Port of Weipa is treated as a customer by WTA and water quality is maintained as such by WTA.
37	Review the Drinking Water Quality Policy and get it re-endorsed.	To Start	To be done still.