

NOTICE OF MEETING

Dear Committee Members

You are requested to attend the following meeting of Council.

WATER AND WASTE STANDING COMMITTEE MEETING OF ISAAC REGIONAL COUNCIL

TO BE HELD ON
WEDNESDAY, 10 FEBRUARY 2021
COMMENCING AT 1.00PM
COUNCIL CHAMBERS, MORANBAH

GARY STEVENSON PSM

Chief Executive Officer

GARY MURPHY

Committee Officer

Director Water and Waste

Committee Members:

Cr Simon West (Chair)

Mayor Anne Baker

Cr Greg Austen

Cr Kelly Veava

Cr Lyn Jones

LOCAL GOVERNMENT ACT 2009

Local Government Regulation 2012

Chapter 8, Part 2 Local Government Meetings and Committees

Division 1A, Requirements for Local Government Meetings Generally

Section 254J Closed meetings

- (1) A local government may resolve that all or part of a meeting of the local government be closed to the public.
- (2) A committee of a local government may resolve that all or part of a meeting of the committee be closed to the public.
- (3) However, a local government or a committee of a local government may make a resolution about a local government meeting under subsection (1) or (2) only if its councillors or members consider it necessary to close the meeting to discuss one or more of the following matters—
 - (a) the appointment, discipline or dismissal of the chief executive officer;
 - (b) industrial matters affecting employees;
 - (c) the local government's budget;
 - (d) rating concessions;
 - (e) legal advice obtained by the local government or legal proceedings involving the local government including, for example, legal proceedings that may be taken by or against the local government;
 - (f) matters that may directly affect the health and safety of an individual or a group of individuals;
 - (g) negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government;
 - (h) negotiations relating to the taking of land by the local government under the [Acquisition of Land Act 1967](#);
 - (i) a matter the local government is required to keep confidential under a law of, or formal arrangement with, the Commonwealth or a State.
- (4) However, a local government or a committee of a local government must not resolve that a part of a local government meeting at which a decision mentioned in [section 150ER](#)(2), [150ES](#)(3) or [150EU](#)(2) of the [Act](#) will be considered, discussed, voted on or made be closed.
- (5) A resolution that a local government meeting be closed must—
 - (a) state the matter mentioned in subsection (3) that is to be discussed; and
 - (b) include an overview of what is to be discussed while the meeting is closed.
- (6) A local government or a committee of a local government must not make a resolution (other than a procedural resolution) in a local government meeting, or a part of a local government meeting, that is closed.

**WATER AND WASTE
STANDING COMMITTEE MEETING
OF ISAAC REGIONAL COUNCIL
TO BE HELD ON
WEDNESDAY 10 FEBRUARY 2021
COUNCIL CHAMBERS, MORANBAH**

1. OPENING OF THE MEETING
2. APOLOGIES
3. DECLARATION OF CONFLICTS OF INTEREST
4. CONFIRMATION OF MINUTES
5. OFFICER REPORTS
6. INFORMATION BULLETIN REPORT
7. GENERAL BUSINESS
8. CONCLUSION

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1. OPENING OF MEETING

2. APOLOGIES

3. DECLARATION OF CONFLICTS OF INTEREST

4. CONFIRMATION OF MINUTES

Water and Waste Standing Committee Meeting of Isaac Regional Council held in Council Chambers, Moranbah, commencing 1:00pm on Wednesday 2 December 2020.

5. OFFICER REPORTS

5.1 INTEGRATED MANAGEMENT SYSTEM CERTIFICATION UPDATE

EXECUTIVE SUMMARY

The purpose of this report is to provide an update on the Water and Waste Integrated Management System (IMS) certification, including compliance with ISO 45001:2018 Occupational Health and Safety requirements.

5.2 DRINKING WATER BLUE-GREEN ALGAE MANAGEMENT PLAN

EXECUTIVE SUMMARY

This report seeks the adoption of the revised Drinking Water Blue-Green Algae Management Plan to achieve the outcomes required by Council's Drinking Water Quality Management Plan and other statutory obligations to provide safe and reliable water.

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5.3 EXTERNAL FUNDING OPPORTUNITIES – BUILDING BETTER REGIONS FUND (ROUND 5)

EXECUTIVE SUMMARY

This report identifies a number of candidate projects from the Water and Waste Directorate for Council's consideration for submission to the Building Better Regions Fund (Round 5).

6. INFORMATION BULLETIN

6.1 WATER AND WASTE INFORMATION BULLETIN – FEBRUARY 2021

EXECUTIVE SUMMARY

The Water and Waste Directorate Information Bulletin for February 2021 is provided for Committee review.

7. GENERAL BUSINESS

8. CONCLUSION

UNCONFIRMED MINUTES

WATER AND WASTE STANDING COMMITTEE MEETING OF
ISAAC REGIONAL COUNCIL

HELD ON
WEDNESDAY, 2 DECEMBER 2020
COMMENCING AT 1.00PM

ISAAC REGIONAL COUNCIL
UNCONFIRMED MINUTES OF THE
WATER AND WASTE
STANDING COMMITTEE MEETING
HELD IN COUNCIL CHAMBERS, MORANBAH
ON WEDNESDAY 2 DECEMBER 2020

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ISAAC REGIONAL COUNCIL

UNCONFIRMED MINUTES OF THE

WATER AND WASTE

STANDING COMMITTEE MEETING

HELD IN COUNCIL CHAMBERS, MORANBAH

ON WEDNESDAY 2 DECEMBER 2020 COMMENCING AT 1.00PM

ATTENDANCE

Cr Simon West, Division Four (Chair)
Mayor Anne Baker
Cr Greg Austen, Division One
Cr Kelly Ve a Ve a, Division Five
Cr Lyn Jones, Division Six

OFFICERS PRESENT

Mr Gary Murphy, Director Water and Waste
Mrs Lisa Tonkin, Manager Business Services
Mrs Linda Roberts, Manager Planning and Projects
Mr Karl Murdoch, Manager Waste Services
Mr Stephan Wagner, Manager Operations and Maintenance
Mrs Tricia Hughes, Coordinator Executive Support
Ms Grier Williamson, Communications Officer
Ms Serena Davey, Executive Assistant

1. OPENING

The Chair declared the meeting open at 1.00pm and acknowledged the traditional custodians of the land on which we meet today and paid her respects to their Elders past, present and emerging.

2. APOLOGIES

No apologies received this meeting.

3. DECLARATION OF CONFLICTS OF INTEREST

No conflicts of interest declared this meeting.

NOTE:

Council acknowledges that Chapter 5B Councillors' Conflicts of Interest of the Local Government Act 2009 does not apply to a Councillor if the matter to be resolved relates to a corporation or association that arises solely because of a nomination or appointment of the councillor by the local government to be a member of the board of the corporation or association.

4. CONFIRMATION OF MINUTES

Confirmation of minutes from Water and Waste Standing Committee Meeting of Isaac Regional Council held at Council Chambers, Moranbah on Wednesday 4 November 2020.

Resolution No.: W&W0279

Moved: Cr Austen

Seconded: Cr Vea Vea

That the minutes from the Water and Waste Standing Committee meeting held in Council Chambers, Moranbah on Wednesday 4 November 2020 are confirmed.

Carried

5. OFFICERS REPORTS

5.1 Review of Waste and Recycling Collection Contract - First Twelve Months

EXECUTIVE SUMMARY

This report provides a review of the performance of the first twelve months of the Waste and Recycling Collection Contract IRC/CHRC2083-0119-138.

OFFICER'S RECOMMENDATION

That the Committee recommend to Council to:

- Note the content of this report on the first twelve months performance of the Waste and Recycling Collection Contract IRC/CHRC2083-0119-138.***

Resolution No.: W&W0280

Moved: Cr Vea Vea

Seconded: Cr Jones

That the Committee recommend to Council to:

- Note the content of this report on the first twelve months performance of the Waste and Recycling Collection Contract IRC/CHRC2083-0119-138.***

Carried

5.2 Regional Recycling Transport Assistance Package (RRTAP) Funding Update

EXECUTIVE SUMMARY

This report provides an update on the position with regard to Council's recent application under the Regional Recycling Transport Assistance Package (RRTAP).

OFFICER'S RECOMMENDATION

That the Committee recommends that Council:

- Note the withdrawal of the Regional Recycling Transport Assistance Package (RRTAP) funding of \$250,000 for reprocessing of legacy concrete at Dysart by the Department of Environment and Science.***
- Approve the alternative strategy to remove the transport element of the work and engage a contractor to carry out the reprocessing at Dysart Waste Management Facility.***

Resolution No.: W&W0281

Moved: Cr Austen

Seconded: Cr Vea Vea

That the Committee recommends that Council:

1. Note the withdrawal of the Regional Recycling Transport Assistance Package (RRTAP) funding of \$250,000 for reprocessing of legacy concrete at Dysart by the Department of Environment and Science.
2. Approve the alternative strategy to remove the transport element of the work and engage a contractor to carry out the reprocessing at Dysart Waste Management Facility.

Carried

ATTENDANCE

Mayor Anne Baker entered the meeting room at 1.19pm and left at 1.24pm.

Mayor Anne Baker returned to the meeting room at 1.25pm.

5.3 Theresa Creek Dam Desilting Project Contract Award

EXECUTIVE SUMMARY

The purpose of this report is to seek endorsement for delegation to the Chief Executive Officer (CEO) to award IRCT2013-1120-207 the contract for the Theresa Creek Dam Desilting Project up to the available budget. This contract is expected to close December 22, 2020 with evaluation to occur early in the new year. The program is very tight and hence the bringing forward of this delegation.

OFFICER'S RECOMMENDATION

That the Committee recommends to Council to:

1. ***Delegates the authority to the Chief Executive Officer to determine the successful tenderer for the IRCT2013-1120-207 Theresa Creek Dam Desilting Project up to \$1,260,000 under delegation LGR88 – “Power to enter into a medium-sized contractual arrangement or large-sized contractual arrangement in accordance with a quote or tender consideration plan adopted by local government resolution” under Section 230(1) Local Government Regulation 2012 subject to the following conditions;***
 - a. ***All tender evaluation reports be provided to all Councillors at the same time that the Chief Executive Officer is considering the report,***
 - b. ***Should any Councillor (free of any conflict of interest or material personal interest) notify the Chief Executive Officer that the matter should be escalated for Committee consideration, the Chief Executive Officer shall not exercise his delegated authority to determine the tender and shall instead arrange for the matter to be included in the agenda for the next available Water and Waste Standing Committee Meeting or Council Meeting,***

- c. Should the Chief Executive Officer consider that the tender evaluation gives rise to extraordinary or potentially contentious issues, the Chief Executive Officer shall not exercise his delegated authority to determine the tender and shall instead arrange for the matter to be included in the agenda for the next available Water and Waste Standing Committee Meeting or Council Meeting,**
- d. The Chief Executive Officer shall report outcomes of his actions to the Water and Waste Standing Committee on a monthly basis.**

Resolution No.: W&W0282

Moved: Cr Austen

Seconded: Cr Jones

That the Committee recommends to Council to:

- 1. Delegates the authority to the Chief Executive Officer to determine the successful tenderer for the IRCT2013-1120-207 Theresa Creek Dam Desilting Project up to \$1,260,000 under delegation LGR88 – “Power to enter into a medium-sized contractual arrangement or large-sized contractual arrangement in accordance with a quote or tender consideration plan adopted by local government resolution” under Section 230(1) Local Government Regulation 2012 subject to the following conditions;**
 - a. All tender evaluation reports be provided to all Councillors at the same time that the Chief Executive Officer is considering the report,**
 - b. Should any Councillor (free of any conflict of interest or material personal interest) notify the Chief Executive Officer that the matter should be escalated for Committee consideration, the Chief Executive Officer shall not exercise his delegated authority to determine the tender and shall instead arrange for the matter to be included in the agenda for the next available Water and Waste Standing Committee Meeting or Council Meeting,**
 - c. Should the Chief Executive Officer consider that the tender evaluation gives rise to extraordinary or potentially contentious issues, the Chief Executive Officer shall not exercise his delegated authority to determine the tender and shall instead arrange for the matter to be included in the agenda for the next available Water and Waste Standing Committee Meeting or Council Meeting,**
 - d. The Chief Executive Officer shall report outcomes of his actions to the Water and Waste Standing Committee on a monthly basis.**

Carried

5.4 Water and Waste 2020-2021 Capital Projects Strategic Procurement Plan Progress Report

EXECUTIVE SUMMARY

This report is to provide an update to the Water and Waste Standing Committee and Council of any action taken by the Chief Executive Officer (CEO) under delegation as per the W&W Strategic Procurement Plan.

OFFICER'S RECOMMENDATION

That the Committee recommend that Council:

- 1. Receive and notes works awarded under the 2020/ 2021 Water and Waste Procurement Plan, in particular the awarding of IRCQ2053-0820-765 for Sewerage Pump Station Renewals.*

Resolution No.: W&W0283

Moved: Cr Austen

Seconded: Cr Jones

That the Committee recommend that Council:

1. Receive and notes works awarded under the 2020/ 2021 Water and Waste Procurement Plan, in particular the awarding of IRCQ2053-0820-765 for Sewerage Pump Station Renewals.

Carried

ATTENDANCE

Cr Greg Austen left the meeting room at 2.06pm.

6. INFORMATION BULLETIN REPORTS

6.1 Water and Waste Information Bulletin – December 2020

EXECUTIVE SUMMARY

The Water and Waste Directorate Information Bulletin for December 2020 is provided for review.

OFFICER'S RECOMMENDATION

That the Committee:

1. *Note the Water and Waste Directorate Information Bulletin for December 2020.*

MEETING MINUTES

Resolution No.: W&W0285

Moved: Cr Vea Vea

Seconded: Cr Jones

That the Committee:

- Note the Water and Waste Directorate Information Bulletin for December 2020.**

Carried

ATTENDANCE

Cr Greg Austen returned to the meeting room at 2.09pm.

7. GENERAL BUSINESS

7.1 Christmas Star on Clermont Water Tower

An update was provided to the Committee on options that are being investigated regarding the possible replacement of the Christmas Star that was previously located on the Clermont Water Tower.

7.2 Water Restriction Triggers

The Committee received a briefing on a confidential consultant report which is still being finalised regarding Water Restriction Triggers.

8. CONCLUSION

There being no further business, the Chair declared the meeting closed at 2.54pm.

These minutes were confirmed by the Committee at the Water and Waste Standing Committee Meeting held in Moranbah on Wednesday 10 February 2021.

.....
CHAIR

..... / /
DATE

MEETING DETAILS	Water and Waste Standing Committee Wednesday 10 February 2021
AUTHOR	Lisa Tonkin
AUTHOR POSITION	Manager Business Services

5.1 INTEGRATED MANAGEMENT SYSTEM CERTIFICATION UPDATE

EXECUTIVE SUMMARY

The purpose of this report is to provide an update on the Water and Waste Integrated Management System (IMS) certification, including compliance with ISO 45001:2018 Occupational Health and Safety requirements.

OFFICER'S RECOMMENDATION

That the committee recommend to Council to:

- 1. Note the Water and Waste Directorate's attainment of ISO 45001:2018 Occupational Health and Safety certification.**
- 2. Note the Water and Waste Integrated Management System Audit Report following an external surveillance audit in November 2020.**

BACKGROUND

The Water and Waste Directorate (W&W) has achieved certification for its Integrated Management System (IMS) complying with the international standards for Environment ISO 14001:2015, Quality ISO 9001:2015 and Australian Standards for Occupational Health and Safety AS/NZS 4801:2001.

As part of its certification requirements, W&W undertake regular external surveillance audits through its certification body, Equal Assurance Pty Ltd, to confirm compliance and provide confidence in W&W's safety, quality and environmental management system.

In November 2020, W&W as part of its external surveillance audit, sought to attain additional certification to the International Standards of ISO 45001:2018 Occupational Health and Safety. The new certification was required due to scheduled expiry of AS/NZS 4801:2001 and the requirement to transition to ISO 45001:2018 by September 2021.

The Audit Report has been provided. The audit identified six Findings (opportunities for improvement) which were rated in relation to the level of perceived risk. The risk ratings are (Level 1) acceptable, (Level 2) low, (Level 3) medium, (Level 4) high and (Level 5) extreme. A Level 1 Finding signals that a previous Finding has been closed.

The audit identified one Level 3 Finding and five Level 2 Findings.

The Level 3 Finding noted "Site inspections revealed multiple hazards present on sites relating to contractors and contractor activity".

As a result of the Level 3 Finding, W&W were required to develop an Action Plan to address the Finding to the satisfaction of the Lead Auditor. This is in line with certification practices to ensure corrective actions are

implemented. This requirement has been completed and W&W has maintained certification with its existing certification standards of ISO 14001:2015, ISO 9001:2015, AS/NZS 4801:2001, and in addition has attained certification to ISO 45001:2018.

The Action Plan developed in consultation with Organisational Safety builds on the contractor management project work completed in late 2020 and will ensure improvements are implemented within W&W and across Isaac Regional Council.

W&W have until the next audit (scheduled October 2021) to implement corrective actions for the five minor Findings, which were:

- Give consideration to placing more emphasis on opportunity management within the risk management framework (Level 2).
- Ensure competence of worker' knowledge and skills needed to identify hazards and deal with Occupational Health and Safety (OH&S) risks associated with their work and workplace. Referring to persons performing site inspections (Level 2).
- Site specific competency verification could be improved with regard to plant operations (Level 2).
- Give consideration to extending mentoring time during induction handover periods. (Level 2).

As part of the audit, two previous Findings were closed as a result of corrective actions being implemented. These were:

- Adding the environmental inspections for Waste Services to the maintenance waste register.
- Compliance with Council's documented processes for vaccination record keeping.

Positive observations were noted during the audit including the work undertaken to close the loop of the Risk Register, the data analysis being performed within the Waste Services team, and the re-opening of incident investigations and diligent follow-up.

Also noted was "the excellent leadership commitment to review of IMS management issues and to ensure continued improvement from the outputs generated from the meeting".

IMPLICATIONS

Financial: W&W completed a Request for Quotation in September 2019 and awarded Equal Assurance Pty Ltd a contract of twelve (12) months with two (2) extension options, both of twelve (12) months, exercisable at the sole discretion of Council. W&W are currently tracking to have six (6) sites audited annually at a cost of approximately \$12,000 per year.

While the IMS certification is a cost, it offers financial benefits by preventing negative and unwanted outcomes through continuous improvement and documented process development.

Service Levels: The IMS allows for a systematic approach to managing customer service standards for waste, water and wastewater. This assists IRC to deliver improved services to the community and supports the Water and Waste Annual Performance Plan and IRC's Annual Operational Plan deliverables.

Risks: The IMS takes a risk-based approach by addressing both risks and opportunities.

Compliance: The IMS supports compliance with regulations by providing consistency in managing processes, incidents and non-conformances through continual improvement.

Benefits: In summary, the IMS provides a system of improvement resulting in internal efficiency and cost savings. The reward and benefits are being seen through improvements in quality, environment and health and safety performance. This in turn delivers improved performance to customers.

CONSULTATION

Director Water and Waste
Executive Leadership Team
Manager Organisational Safety
Manager Governance and Corporate Services
IMS Coordinator – major contributor to the body of this report
Learning and Development Coordinator
People and Performance Business Partner

BASIS FOR RECOMMENDATION

The certification of the IMS within the Water and Waste Directorate is producing quantifiable outcomes and streamlined processes to ensure continuous improvement.

ACTION ACCOUNTABILITY

Coordinated by the Manager Business Services, it is the responsibility of the entire Water and Waste Directorate to ensure IMS certification is maintained.

KEY MESSAGES

W&W is rapidly adopting continuous improvement through its IMS. Aligning the IMS to ISO 45001:2015 Occupational Health and Safety requirements puts Council at the forefront of best safety practice.

Report Prepared By: LISA TONKIN Manager Business Services Date: 20 January 2021	Report Authorised By: GARY MURPHY Director Water and Waste Date: 27 January 2021
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ATTACHMENTS

Nil

REFERENCE DOCUMENT

- Audit Report, Audit Number ISCQ01-02 Surveillance Audit (Partial Remote) on Isaac Regional Council (Water and Waste Directorate) quality, occupational health and safety and environmental management systems, 2-6 November 2020
- ISO 45001:2018 Occupational Health and Safety Management System Certificate
- ISO 9001:2015 Quality Management System Certificate
- ISO 14001:2015 Environmental Management System Certificate
- AS/NZS 4801:2001 Occupational Health and Safety Management System Certificate

MEETING DETAILS

Water and Waste Standing Committee

Wednesday 10 February 2021

AUTHOR

Neville Bell

AUTHOR POSITION

Assets and Compliance Officer

5.2**DRINKING WATER BLUE-GREEN ALGAE MANAGEMENT PLAN****EXECUTIVE SUMMARY**

This report seeks the adoption of the revised Drinking Water Blue-Green Algae Management Plan to achieve the outcomes required by Council's Drinking Water Quality Management Plan and other statutory obligations to provide safe and reliable water.

OFFICER'S RECOMMENDATION

That the Committee recommend to Council to:

1. Adopt the Drinking Water Blue-Green Algae Management Plan (DWBGAMP).

BACKGROUND

Drinking water service providers are required under the Water Supply (Safety and Reliability) Act 2008 to manage the quality of drinking water to protect public health, including the management of any risks posed by Harmful Algal Blooms (HABs) – including the treatment of algae affected water used for drinking water supplies. The purpose of the Drinking Water Blue-Green Algae Management Plan is to assist Council with managing the water quality when environmental conditions are conducive to blue-green algae blooms. Prior to the development of the DWBGAMP there were no set guidelines for monitoring, response, roles and responsibilities. The current Australian Drinking Water Guidelines (ADWG) provide parameters and levels but no clear guideline on management during Algae Blooms. This document was developed initially with the assistance of City Water Technology and has been updated to meet the requirements of Council's formatting, style guide and current requirements of all the regulatory bodies. The references used for the update are as follows (also located in Attachment 1 under references):

- Water Directorate - Blue-Green Algae Management Protocols – 2014
- Queensland Water Directorate - Management Strategies for Cyanobacteria (blue-green algae): A Guide for Water Utilities – Research Report 74
- Queensland Government - Harmful algae - Queensland Government Response Plan
- Queensland Government - Harmful Algal Bloom Response Plan and Operational Procedures
- Australian Government National Health and Medical Research Council Natural Resource Management Ministerial Council
- Nation Water Quality Management Strategy, Australian Drinking Water Guidelines 6 2011, Version 3.5 Updated August 2018

IMPLICATIONS

Financial

There will be some operational cost increases to existing sample testing budgets but only in the event of a Blue-Green Algal Bloom. Staff training is expected to be carried out in house at no cost. Should there be difficulty with the training there may be a need to outsource and this will have a financial implication of minor costs.

Compliance

Council will have clear guidelines to follow during Algal Blooms in raw water supplies that enable Council to meet the current ADWG.

Benefits

Management of raw water quality and operational improvements.

CONSULTATION

Manager Operations and Maintenance

Governance

Executive Leadership Team

Director Water and Waste

BASIS FOR RECOMMENDATION

To provide safe and reliable water and to improve business processes within Council's Water and Waste Directorate by providing more appropriate and relevant operational monitoring and reporting.

ACTION ACCOUNTABILITY

Water and Wastewater Operations Manager and Assets and Compliance Officer to ensure the DWBGAMP guidelines are followed.

KEY MESSAGES

That Council has a clear and concise management plan for use during blue green-algae bloom events for water treatment and monitoring to provide safe and reliable water to its community.

Report prepared by:	Report authorised by:
NEVILLE BELL	GARY MURPHY
Assets and Compliance Officer	Director Water and Waste
Date: 20 January 2021	Date: 27 January 2021

ATTACHMENTS

- Attachment 1 – Drinking Water Blue-Green Algae Management Plan

REFERENCE DOCUMENT

- Nil



DRINKING WATER BLUE-GREEN ALGAE MANAGEMENT PLAN

Presented by: **Water and Waste**

Approval/Adoption/Endorsement Date: <Insert date> - <Insert resolution no.>

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INTRODUCTION

Blue-Green Algae (BGA), also known as cyanobacteria, become problematic for water treatment plants when their cell density dramatically increases because they are able to release toxins in the water which require special treatment to remove. In general, a cyanobacteria bloom is said to have occurred when the cell density is greater than 6,500 cells/mL

The purpose of this document is to provide a framework to assist Isaac Regional Council (IRC) management and operational staff in managing BGA outbreaks in raw water sources. This protocol is used to determine response levels and subsequent actions required following the detection of a BGA bloom.

SCOPE

The protocols outlined in this document apply to each of IRC's raw water sources. IRC operates 8 water supply systems, each with its own water source. These water supplies that are storage based may be owned and operated by Sunwater or IRC or the resources sector. Thus, a BGA risk arises from both the source water as well as storages in the supply systems:

- Carmila – shallow bores (2) adjacent to Carmila creek delivered through IRC infrastructure to the Carmila WTP. The bore field is replenished via a shallow weir upstream of the bores.
- Clermont – Theresa Creek Dam (TCD) owned and operated by IRC delivered through IRC infrastructure to the Clermont WTP.
- Dysart – Bingegang Weir on the Mackenzie River (operated by Sunwater) via Billington Mitsubishi Alliance (BMA's) Calvert's Dam and Dysart storage (onsite turkeys nest dam, offtake and supply infrastructure for all sources owned and operated by BMA). Raw water delivered to raw water storage tank at Dysart WTP.
- Glenden – Bowen River (offtake and supply infrastructure owned by Sunwater) via Newlands mine, owned and operated by Glencore. Raw water delivered through Glencore pipeline to the Glenden WTP.
- Middlemount – Bingegang Weir on the Mackenzie River (operated by Sunwater) via Tralee Dam (offtake and supply infrastructure owned and operated by Anglo American).
- Moranbah – Burdekin dam and/or Eungella dam (both dams are owned and operated by Sunwater) via Sunwater, BMA and IRC infrastructure to the Moranbah WTP.
- Nebo – IRC Nebo bores (6) drawing from the Nebo Aquifer and delivery to the Nebo WTP
- St Lawrence – IRC St Lawrence Creek Weir via IRC offtake infrastructure to the St Lawrence WTP.

Algae is unlikely to cause issues for Carmila or Nebo water sources as both these supplies use bore water. If, however, algal contamination is identified by customer complaints and subsequent laboratory analysis, the same response protocols can be applied as outlined in this management plan.

The protocols, roles and responsibilities outlined in this document apply to each of IRC's raw water sources as outlined above. They are to be implemented by IRC managers, coordinators and operations and maintenance staff nominated herein.

ROLES AND RESPONSIBILITIES

The roles and responsibilities of the various stakeholders for the IRC water supply systems are outlined in Table 1. Communication and cooperation between all parties is critical to ensure that drinking water quality and/or supply security is not compromised.

Table 1: Summary of Stakeholder Roles and Responsibilities

RESPONSIBILITIES	IRC	BMA	ANGLO AMERICIAN	GLENCORE	SUNWATER	DOH	DOR
Receive inquiries from the public	Y	Y	Y	Y	Y	Y	Y
Provide general advice	Y	N	N	N	N	Y	Y
Inspect the bloom	Y	Y	Y	Y	Y	Y	N
Analyse the bloom	Y	Y	Y	Y	Y	Y	N
Communicate the findings	Y	N	N	N	Y	Y	Y
Mitigation and management	Y	Y	Y	Y	Y	N	N

Isaac Regional Council

Drinking water service providers are required under the *Water Supply (Safety and Reliability) Act 2008* to manage the quality of drinking water to protect public health, including the management of any risks posed by Harmful Algal Blooms (HABs) – including the treatment of algae affected water used for drinking water supplies. IRC own and operate the Teresa Creek Dam which supplies the Clermont Township. IRC also own the St Lawrence Creek Weir that supplies St Lawrence Township and licenced bores that supply Carmila and Nebo Townships. In addition, water service providers provide:

- Routine monitoring of HAB's in supplemented freshwater systems under their control (e.g. reservoirs, weir pools, irrigation systems).
- Community and stakeholder information relating to their operations (e.g. signage, website, fact sheets, brochures).
- Management of public health risks associated with HABs in recreational lakes.

Under the *Sustainable Planning Act 2009*, Local Governments are also responsible for the planning and regulation of development activities to maintain local social, economic and environmental values. Also, IRC have the responsibility for local management of water quality issues as part of the *Environmental Protection Act 1994* where Local Government Development Application review and approval processes in line with the *Sustainable Planning Act 2009*.

Anglo American

Anglo American is the owner of the offtake and storage infrastructure that supply raw water to Middlemount. This infrastructure is maintained by Anglo American

Billington Mitsubishi Alliance (BMA)

BMA is the owner of the offtake and storage infrastructure that supply raw water to Dysart.

Glencore

Glencore is the owner of the offtake and storage infrastructure that supply raw water to Glenden.

Sunwater

Sunwater own and operate the Burdekin and Eungella storage dams which supply the Moranbah Township. Sunwater also owns and operates the Bingegang Weir storage on the Mackenzie River for supply to Dysart and Middlemount.

Mackay Regional Council Laboratory

Mackay Regional Council Laboratory receives all water samples and stores results within a data storage system called Monitor Pro. All samples unable to be measured for certain parameters are outsourced to other laboratories with the required capabilities. Alerts are provided via email indicating current level of alert to be adhered to.

Queensland Department of Health (DoH)

Public health risks associated with HABs in drinking water storages are to be managed by the drinking water service provider. The DoH or the relevant Public Health Unit may provide advice on assessing and managing the public health risk posed by a HAB in a drinking water storage and may take enforcement action under the *Public Health Act 2005* where the drinking water service provider fails to adequately manage the risk.

DoH Forensic and Scientific Services may provide analytical services for the identification and enumeration of HABs (primarily for drinking water storages) and the detection and quantification of HAB toxins (in fresh and marine waters).

In addition, DoH or the local Public Health Unit may provide the following:

- Advice to the managers of a drinking water storage, or a drinking water service provider drawing from a surface water affected by a HAB, on assessing and managing the associated public health risks.
- Advice to the relevant parties regarding the public health risks associated with eating fish, shellfish and crustaceans caught in waters affected by a HAB, or irrigating food crops with water affected by a HAB.

Department of Resources (DOR)

DOR is responsible under the *Water Act 2000* for the management of the State's non-tidal waters and the regulation of resource operation licence holders and water service providers. It is also the lead agency for the management of catchment resources such as land and vegetation. Through its responsibilities DOR provides the following services:

- Detection response measures, assessment and evaluation of HABs in un-supplemented freshwater systems.
- Advice to individuals, the community, stakeholders and other government agencies on issues related to the monitoring of and management of freshwater HABs.
- Community and stakeholder information (e.g. web site, fact sheets, brochures).

DOR is also responsible under the *Water Act* for drinking water service providers (such as local governments) who are responsible for ensuring public health is protected by managing water quality risks associated with HABs in their service in accordance with their approved Drinking Water Quality Management Plan (DWQMP) (as required under the *Water Supply (Safety and Reliability) Act 2008*).

If a drinking water service provider detects algal toxins above the Australian Drinking Water Guideline (ADWG) health guideline value in the treated drinking water or are concerned about their ability to manage the impacts of the HAB under the approved drinking water quality management plan, they must report the incident or event to the Queensland Water Supply Regulator (QWSR) within DOR. DoH is subsequently advised of these incidents.

Where issues related to HABs have not been identified and managed through the DWQMP and are relevant to the service being supplied, the drinking water service provider may, with approval, amend the DWQMP. Where a drinking water service provider has not adequately assessed and managed the risk associated with HABs, DOR may require an amendment to their DWQMP. If necessary, DOR can also direct a drinking water service provider to undertake particular measures to ensure the protection of public health.

RESPONSE PROTOCOLS

Prevention is better than treatment for the management of algal blooms. Effective preventative actions include catchment and source water management, reducing nutrient loading, and changing reservoir stratification and mixing.

Dam management (under IRC control) through silt removal, that harbour organics that can release algae, must be incorporated into maintenance programs as prevention measures.

Other key issues include protection of soils from erosion, public awareness of the effects of phosphorus-containing products, nutrient management strategies, water quality monitoring and the management of point and diffuse sources of nutrients.

Despite the use of preventative actions blooms may still occur. In order to minimise the impact of algal blooms on the community, the Drinking Water Blue-Green Algae Management Plan (DWBGAMP) includes actions to manage cyanobacteria blooms.

Identifying and Responding to a Blue-Green Algal Bloom

BGA blooms require a quick, well-planned and coordinated response to limit the risk of a negative impact on public health. Cooperation from all relevant stakeholders and an appropriate monitoring program are key to ensuring algal growth is identified early and bloom potential is mitigated where possible.

The different responses to algal blooms are based on the identification of algal type, counts and the presence of toxins. Where laboratory results are not available immediately, field assessments (such as visual inspection) will be useful to determine the possibility of risk associated with a potential bloom. Regular visual monitoring of raw water sources for algae is advisable particularly during high risk periods. Algal concentrations and distribution can change rapidly under favourable conditions and changes of wind direction so inspection may be necessary on a daily basis.

Testing for total algal levels are conducted weekly in raw water and if levels are detected ≥ 500 cells/mL algal toxins are then measured. Toxins in the treated water is conducted monthly at Clermont, Dysart, Glenden, Middlemount, St. Lawrence and Moranbah WTPs through Mackay Regional Council (MRC) NATA Laboratory. Council and are notified of any detections of cells (≥ 500 cells/mL) or toxins as soon as practicable.

Classification of Response Levels

ADWG recommends that water authorities use the following cyanobacteria cell density targets to determine the next course of action. Threshold cell counts are based on tracking worst case, potentially toxic *Microcystis aeruginosa* populations whereas biovolumes account for equivalent total concentrations of other cyanobacteria species.

1. DETECTION LEVEL: Low Alert

- ≥ 500 cells/mL (*M. aeruginosa*) or ≥ 0.05 mm³/L (total cyanobacteria biovolume)
This indicates the early stages of bloom development. Tastes and odours may be present in the water and regular inspection and testing should be commenced to monitor population growth and potential bloom development.

2. ALERT LEVEL 1: Medium Alert

- $\geq 2,000$ cells/mL (*M. aeruginosa*) or ≥ 0.2 mm³/L (total cyanobacteria biovolume)
This describes an established cyanobacterial population which may have localised high cell counts. A cell density in this range is expected to provide a buffer of 4-6 days before the ADWG value for toxin concentration could be exceeded (depending on growth activity and presence of potentially toxic species).

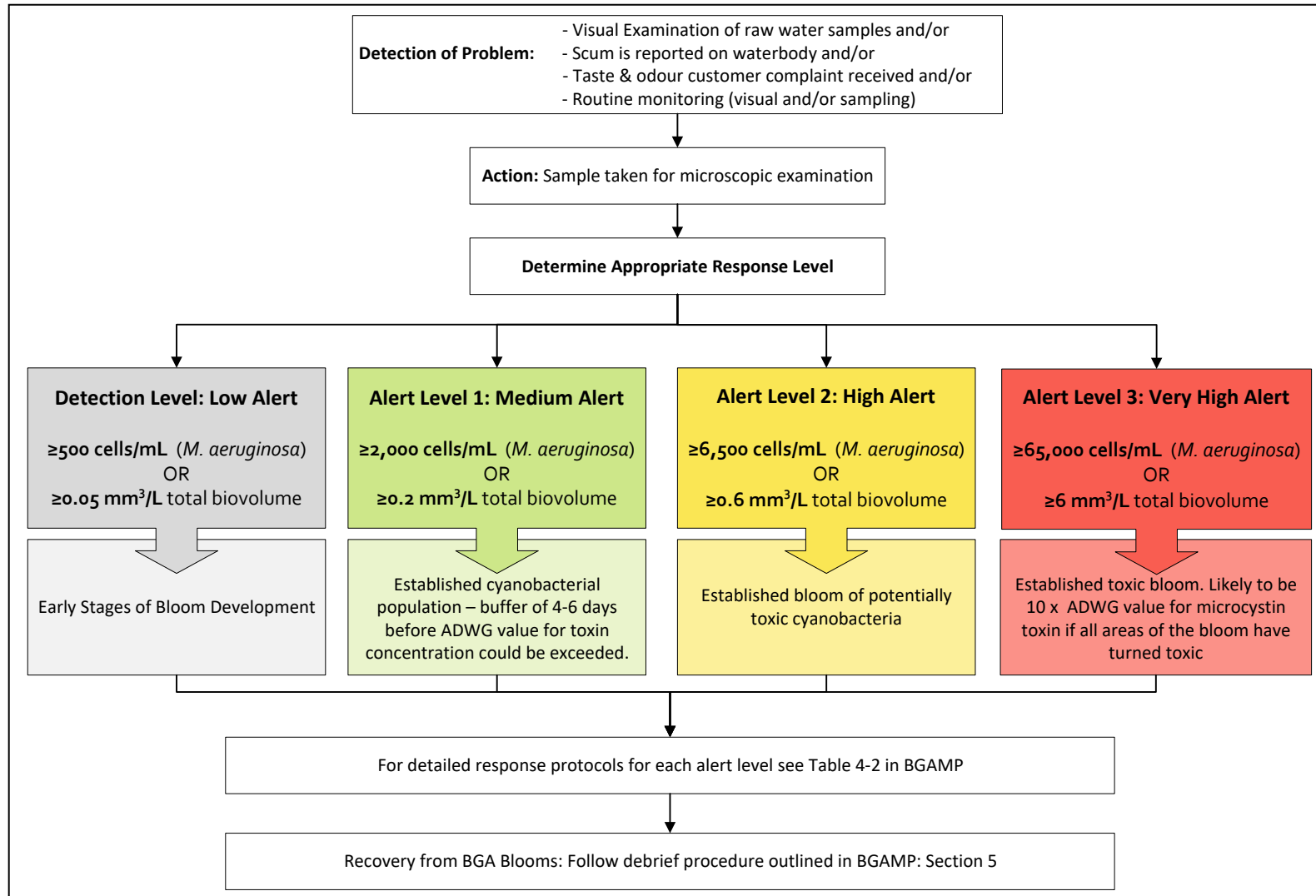
3. ALERT LEVEL 2: High Alert

- $\geq 6,500$ cells/mL (*M. aeruginosa*) or ≥ 0.6 mm³/L (total cyanobacteria biovolume)
These cell numbers indicate an established bloom of potentially toxic cyanobacteria.

4. ALERT LEVEL 3: Very High Alert

- $\geq 65,000$ cells/mL (*M. aeruginosa*) or ≥ 6 mm³/L (total cyanobacteria biovolume)
This describes an established toxic bloom and is likely to be 10 times the ADWG value for the microcystin toxin if all areas of the bloom have turned toxic. These conditions are indicative of a significant increase in the risk of adverse human health effects. If at this level treatment is insufficient and toxins are passing through to the treated water supply, a contingency water source may be required (e.g. alternate raw water source or delivery of tankered water).
Immediate notification of Health authorities is required if this has not already occurred at lower alert levels.

Response Level Flow Chart



The flowchart on the following page outlines the processes required to determine the correct BGA response level. The flowchart should be consulted each time new test results are received.

Bloom Response Plan Details

Table 2: Alert Level Response Protocols (Water Quality Research Australia, 2010)

LEVEL	THRESHOLD DEFINITION	RECOMMENDED ACTIONS	RESPONSIBLE PERSON(S)
Detection Level	LOW ALERT ≥500 cells/mL (<i>M. aeruginosa</i>) OR ≥0.05 mm ³ /L total biovolume	<ul style="list-style-type: none"> Retest to confirm detection Continue weekly sampling at offtake Regular visual inspection of water surface for scums adjacent to offtakes 	WTP Operator
		<ul style="list-style-type: none"> Notify the WTP Operator to increase visual inspection of water source to twice weekly Consider the need for sampling at other locations around the water source or upstream water storages Monitor biovolume/cell counts for changes in required response level Notify MO&M Water and Wastewater of algae detection and provide weekly status updates 	Water and Wastewater Supervisor/Process Engineer / Water and Waste Assets and Compliance Officer (A&CO)
		<ul style="list-style-type: none"> Notify IRC (Supervisors, Process Engineer, MO&M and A&CO) via an Exception notification when either threshold value is exceeded Continue weekly algae identification and cell counts and report results 	MRC Laboratory
Alert Level 1	MEDIUM ALERT ≥2,000 cells/mL (<i>M. aeruginosa</i>) OR ≥0.2 mm ³ /L total biovolume	<ul style="list-style-type: none"> Continue weekly sampling at offtake and add second sample from a representative location in source water 	WTP Operator
		<ul style="list-style-type: none"> Establish variability of the offtake sample over time Monitor biovolume/cell counts for changes in required response level Notify MO&M Water and Wastewater of Alert Level concentration 	Water and Wastewater Supervisor/ Process Engineer/ A&CO

LEVEL	THRESHOLD DEFINITION	RECOMMENDED ACTIONS	RESPONSIBLE PERSON(S)
		<ul style="list-style-type: none"> • Notify health authorities and agencies as appropriate • Decide on requirement for toxicity assessment or toxin monitoring • Liaise with BMA/Anglo-American/Glencore/Sunwater (if appropriate) to commence visual inspection and testing of upstream water storages owned and/or operated by external stakeholders. Remedial action should be taken if required (e.g. adjust draw-off level, destratification, biomanipulation, alternate sources, etc.) • Investigate cause of elevated algae levels – liaison with external stakeholders may be required 	<p>Manager Operations and Maintenance (MO&M)/Water and Wastewater A&CO</p>
		<ul style="list-style-type: none"> • Notify IRC (Supervisors, Process Engineer, MO&M and A&CO) via an Exception notification when either threshold value is exceeded (if not already notified for the same incident) • Continue weekly algae identification and cell counts and report results • Manage subcontracting of toxicity testing if required 	<p>MRC Laboratory</p>
<p>Alert Level 2</p>	<p>HIGH ALERT $\geq 6,500$ cells/mL (<i>M. aeruginosa</i>) OR ≥ 0.6 mm³/L total biovolume</p>	<ul style="list-style-type: none"> • Increase monitoring to twice weekly at offtake and a representative sample as per Level 1 • Begin weekly sampling for toxin monitoring in the raw and treated water • Increase visual inspection of water source to daily 	<p>WTP Operator</p>
		<ul style="list-style-type: none"> • Continue monitoring biovolume/cell counts for changes in required response level • Notify Manager Water and Wastewater of Alert Level concentration 	<p>Water and Wastewater Supervisor/Process Engineer/ A&CO</p>
		<ul style="list-style-type: none"> • Seek advice from health authorities on risk to public health, i.e. health risk assessment considering toxin monitoring data, sample type and variability, effectiveness of available treatment • Advise consumers that potentially toxic BGA levels are rising and water restrictions or alternate supplies may be enforced if necessary • If toxin monitoring (of treated water) is recommended by relevant health authorities, coordinate this with MRC for inclusion in analysis • Liaise with external stakeholders (if necessary) to implement remedial strategies to improve source water quality or change water source • Notify all relevant persons – CEO, Mayor etc. 	<p>Manager Operations and Maintenance (MO&M)/ Water and Wastewater A&CO/ Director Water and Waste</p>

LEVEL	THRESHOLD DEFINITION	RECOMMENDED ACTIONS	RESPONSIBLE PERSON(S)
		<ul style="list-style-type: none"> Notify IRC (Supervisors, Process Engineer, MO&M and A&CO) via an Exception notification when either threshold value is exceeded Perform twice weekly algae identification and cell counts and report results Perform algae identification and cell counts for additional sites as required Manage subcontracting of toxicity testing if required 	MRC Laboratory
Alert Level 3	VERY HIGH ALERT ≥65,000 cells/mL (<i>M. aeruginosa</i>) OR ≥6 mm ³ /L total biovolume	<ul style="list-style-type: none"> Continue monitoring of source water as per Level 2 	WTP Operator
		<ul style="list-style-type: none"> Notify relevant health authorities immediately for advice on risks to public health Assess effectiveness of available treatment and consider switching to an alternate water source for supply Advise consumers that potentially toxic BGA levels are rising and water restrictions or alternate supplies may be enforced if necessary (if not already done) Liaise with external stakeholders (if necessary) to implement remedial strategies to improve source water quality or change water source (if not already in progress) Notify all relevant persons – CEO, Mayor etc. 	Manager Operations and Maintenance (MO&M)/ Water and Wastewater A&CO/ Director Water and Waste
		<ul style="list-style-type: none"> Notify IRC (Supervisors, Process Engineer, MO&M and A&CO) via an Exception notification when either threshold value is exceeded Continue twice weekly algae and toxin testing and reporting as per Level 2 Perform weekly toxin monitoring in source and treated water if not already done Continue toxin monitoring after cell numbers significantly decline 	MRC Laboratory

Declining Cell Count

As the cell count and/or biovolume of a bloom declines, the response level may be lowered accordingly. To safely lower a response level, the following requirements must be met:

1. Raw water BGA samples must be within the limits of the lower response level for cell count and total biovolume **for 2 consecutive weeks**.
2. Toxicity testing (if conducted) must return a zero result **for 3 consecutive weeks**.

Algal cell and toxin levels can fluctuate rapidly given the right conditions, so it is necessary that sufficient time has passed to ensure any changes in concentrations have stabilised before reductions in response levels are made.

If the response level is being lowered to below the Detection Level, follow the recovery actions detailed in the Section below.

RECOVERY FROM BGA BLOOM

This section identifies the various steps that must be undertaken after an incident has occurred, such as reviewing the performance of staff and Protocols, restoration of public confidence and rectification of infrastructure.

Debrief

The information gathered during the investigation should be collated and reviewed with recommendations made for improving the incident process to:

- Investigate the cause of the incident.
- Evaluate the effectiveness of the response plan.
- Identify aspects of the response effort that worked well and areas for improvement.
- Note any additional issues that arose and may need to be considered further.

Investigate the Cause

The Supervisors, Process Engineer, MO&M and A&CO Water and Wastewater should investigate the cause of the incident. This will involve interviewing operational staff and external stakeholders to determine the source of the contamination, identify any inputs from human/industry activities (e.g. farming, mining, etc.) reason for contributing conditions.

Analysis environmental factors (such as air and water temperatures, rainfall, wind speed and direction) in the lead up to and during the incident should be conducted to identify any trends which may be used to recognise early warning signs for potential future events.

Review of Performance

The information gathered during the investigation should be collated and reviewed with recommendations made for improving the incident management plan and staff performance. A debrief meeting (workshop or phone conference) should be held to discuss the outcomes of the data review, assess the response protocols to acknowledge successful implementation by staff and identify any areas requiring improvement.

An action list of recommendations should be developed with timeframes and responsible persons assigned to each action. Recommendations may include staff training, capital works and/or operational changes.

Restoration of Public Confidence

Following an incident, media releases should be issued to inform consumers that the incident has ended. A summary of the actions taken to achieve this result and minimise the impact on consumers should be included to further help restore public confidence. Personal correspondence should also be sent to consumers that were significantly impacted by the incident.

Infrastructure Recovery

Any changes to infrastructure during the incident will need to be rectified once it has ended. Additional chemical dosing lines and mobile package chemical systems (if required) should be removed to restore the site to its original condition. Any warning signs or access restrictions placed in public areas should also be removed.

Debrief Report

A debrief report should be prepared following an incident as a record of the event and actions taken. The report should include:

- Event title/location, date(s) of event occurrence, date of debrief meeting
- List of meeting attendees
- Description of the event including the impact
- Summary of issues, actions taken, proposed course of action, persons responsible for follow up actions and timeframe for completion
- Distribution list – should include all meeting attendees and relevant stakeholders
- Appendices – should include testing reports and a timeline of the event

MONITORING

Regular monitoring is important to ensure that algal growth is identified early so that effective treatment strategies can be commenced to minimise the risk to public health. A range of parameters should be included in routine monitoring to track conditions which could lead to an algal event. The frequency and scope of sampling should be increased during bloom conditions to monitor algae growth and decline.

Monitoring Purposes and Parameters

Monitoring has a range of purposes according to the following categories:

- **Operational monitoring (O)** → used to assess WTP processes and equipment. Data used as triggers for immediate short-term corrective action to improve water quality. Not typically used to assess compliance with agreed levels of service.
- **Drinking Water Quality Monitoring (DWQ)** → verification of water quality in the distribution system and as supplied to the consumer (performance monitoring). Data used to assess compliance with agreed levels of service and regulations.
- **Monitoring of Consumer Satisfaction (CS)** → assessment of consumer comments and complaints, which can provide valuable information on potential problems that have not been identified by performance monitoring.
- **Investigative and Research Monitoring (I&R)** → strategic programs designed to increase understanding of a water supply system, to identify and characterise potential hazards, and to fill gaps in knowledge. Includes baseline and emergency response monitoring.

Water quality monitoring parameters recommended for inclusion in the DWBGAMP are shown in Table 3.

Table 3: Summary of Water Quality Monitoring Parameters for DWBGAMP

MONITORING PARAMETERS	RAW WATER	TREATED WATER	CRITICAL VALUES/ CONDITIONS
Nutrient levels	O, I&R	-	<ul style="list-style-type: none"> Phosphorus >0.35 µg/L promotes algae growth Nitrogen >1000 µg/L promotes algae growth Can be useful in locating pollution sources in catchment area
DO	O, I&R	-	<ul style="list-style-type: none"> >4 mg/L at all depths is recommended
Algae Count and Identification	O, I&R	O, DWQ	
pH	O, I&R	O, DWQ	<ul style="list-style-type: none"> pH >8.0-8.5 is linked to algae growth
Turbidity	O, I&R	O, DWQ	
Light attenuation (Secchi depth)	I&R	-	
Water Depth	I&R	-	<ul style="list-style-type: none"> Data required for modelling
Water Temperature	O, I&R	O	<ul style="list-style-type: none"> 20°C, or greater than 2°C stratification, promotes algae growth Data required for modelling
Total chlorophyll	I&R	O, DWQ	
Wind Speeds	I&R		<ul style="list-style-type: none"> Calm, non-turbulent conditions promote algae growth Data required for modelling
Odour and taste compounds	-	O, CS, DWQ	<ul style="list-style-type: none"> Varies according to compound and testing method
Algae Toxins	O, I&R	O, CS, DWQ	
WTP Flowrates	O	O	

Routine Monitoring

Routine monitoring of raw water sources should be conducted year-round. Monitoring should include:

- Weekly visual inspection of the water sources
- Monthly sampling for algal counts and identification

During high risk periods, such as late spring and summer, sampling for algal analysis should be conducted weekly.

An agreement should be made between IRC and the relevant owners and operators of raw water supply infrastructure for Dysart, Glenden, Middlemount and Moranbah WTPs detailing monitoring responsibilities, frequencies and notification protocols for privately owned offtakes and storages.

Bloom Monitoring

Once bloom conditions have been reached (Alert Level 2), monitoring should be increased to twice weekly at the offtake and a representative sample point (this may change depending on bloom location and wind conditions).

Visual and Odour Based Assessment

Visual and odour-based assessments are an important monitoring tool that can be used to identify the presence of algae before sampling results are available. These assessments should be performed by an operator trained to recognise the presence and types of algae at low concentrations. Even at very low concentrations BGA can produce earthy, musty and grassy odours, therefore careful odour assessment can detect the presence of algae before it is easily visible and before levels become dangerous. Algae colonies will typically form scums on the surface of the water source and give the water a green tinge as the bloom develops.

While conducting these assessments, the operator should note any likely contributors to algal growth conditions. These may include:

- Decomposing organic matter
- Stagnant waters
- Agricultural run-off
- Shallow and narrow areas

Where possible, action should be taken to minimise the impact of these hazards on the water source.

Sampling

It is important that the BGA cell counts measured are representative of the entire area. An effective sampling program should consider factors such as:

- Seasonal variations
- Weather conditions
- Equipment and staff availability
- Requirements of laboratory analysis

Sampling Procedure

Integrated depth sampling provides the most representative sample of a water source at the sampling location, however if equipment is not available surface samples can be collected. When sampling is being conducted, gloves should be worn at all times to avoid direct to skin contact with the algae.

Water sampling procedure:

- Avoid contact with the suspect water as acute skin and respiratory irritation can occur after short-term exposure to water containing cyanotoxins.
- Wear gloves and wash hands afterwards.
- Collect water in a watertight plastic or glass bottle with a wide mouth. A clean, disposable water bottle is suitable if no other containers are available.
- Clearly identify each sample container.
- Sample surface water where the bloom is most dense (100 millilitres is sufficient, no more than 500mL). Ensure sufficient space is left at the top of the container to allow mixing.
- Thoroughly wash the exterior of the bottle with clean water.

- Samples should reach the laboratory within 24 hours and be kept at approximately 4°C during transport (an ice brick and small esky is usually adequate).
- Do not freeze the water as algal cells may be damaged making identification difficult.

If possible, samples should be taken in the late afternoon will then be couriered to the MRC Laboratory for analysis. If required to enable accurate laboratory testing, samples should be preserved according to the protocols developed by MRC Laboratory.

BGA Identification

Samples will be analysed at the MRC Laboratory to determine algal cell counts and speciation. Upon detection of BGA in the sample, the relevant Water and Wastewater Operations Team Leader will be notified (the IRC Manager Water and Wastewater will also be notified directly if the Alert Level 3 threshold is breached) and a summary report issued outlining total and species cell counts.

BGA species can appear similar to harmless green algae species and may or may not be toxic so identification is necessary to determine the correct response protocol is implemented. If a bloom is detected by visual and odour assessment, the operator shall take a sample of the suspected outbreak for analysis by MRC.

Sample Variability

Cell counts determined from sampling can be highly variable. When collecting samples and reviewing cell count results, wind conditions, dispersion of colonies/scums and a variation allowance of ±20% for cell counts (already incorporated into the response level thresholds) should all be considered.

As a result of this variability, a declining cell count can only be confirmed after 2 consecutive weeks of cell count results in a lower response level. To minimise the effects of cell count variations on sampling, samples should be taken from the same location and at a similar time each day. Any adverse weather or site conditions at the time of sampling should be noted in the operator log sheet.

REFERENCES

ID	NAME
Water Directorate	Blue-Green Algae Management Protocols – 2014
Queensland Water Directorate	Blue Green Algae Management Protocols
Water Quality Research Australia	Management Strategies for Cyanobacteria (blue-green algae): A Guide for Water Utilities – Research Report 74
Queensland Government	Harmful algae – Queensland government response plan
Queensland Government	Harmful algal bloom response plan and operational procedures
Australian Government National Health and Medical Research Council Natural Resource Management Ministerial Council	Nation Water Quality Management Strategy, Australian Drinking Water Guidelines 6 2011, Version 3.5 Updated August 2018

APPENDIX A: BGA ALERT CONTACT LIST

ORGANISATION	CONTACT NAME	CONTACT DETAILS
IRC	Isaac Regional Council	watersewer.enquiry@isaac.qld.gov.au (07) 4846 3500 or 1300 ISAACS
BMA	Brett Garner (Moranbah & Dysart)	0417 712 009 or (07) 48858891
GLENCOREIELD	Brisbane Office	(07) 3833 8500
SUNWATER	Ray Benson (Moranbah) 0407 541 700 Jason Smith (Dysart) 0455 372 600 Main Office (Glenden) Jason Smith (Middlemount) 0455 372 600	Main Office contact (07) 3120 0000
MRC LABORATORY	Kimberly Giles 0475 835 373	(07) 49619042
QUEENSLAND HEALTH	Mackay	(07) 4885 5800
DOR	General enquiries	13QGOV (13 74 68)13QGOV13

MEETING DETAILS	Water and Waste Standing Committee Wednesday 10 February 2021
AUTHOR	Linda Roberts
AUTHOR POSITION	Manager Planning and Projects

5.3 EXTERNAL FUNDING OPPORTUNITIES – BUILDING BETTER REGIONS FUND (ROUND 5)

EXECUTIVE SUMMARY

This report identifies a number of candidate projects from the Water and Waste Directorate for Council’s consideration for submission to the Building Better Regions Fund (Round 5).

OFFICER’S RECOMMENDATION

That the Committee recommends that Council:

- 1. Considers the following list of projects, in conjunction with lists recommended by other Standing Committees, for inclusion in Council’s submission for Round 5 of the Building Better Regions Fund.**

TITLE	DESCRIPTION	ESTIMATE	COMMENT
CARAVAN DUMP POINTS	The townships of Moranbah and Middlemount currently have no facilities to allow for caravans to dispose of septic waste. This project is the installation of these facilities at each town. The location of each new facility has been identified with tender documents being.	\$80,000	Currently funded project this FY. Construction achievable within 12 weeks. Grant process may delay delivery awaiting application outcome.
DYSART STP ELECTRICAL/SCADA UPGRADE	New switchboard to service the plant and installation of PLC/SCADA network across the plant. This will allow a fully automated operation of the plant to improve quality and efficiency of the plant.	\$350,000	Currently being scoped, partially funded.
CLERMONT WTP – SECOND CLARIFIER	The existing clarifier is in poor condition and rehabilitation works are required. However, there is only 1 clarifier and so is not able to be taken offline as this will impact water production.	\$3,000,000	Identified in LTFP, multistage project over 2 years.
DYSART STP – SECOND ESD	There is limited storage capacity (40ML) of treated effluent. A water balance analysis has been completed demonstrating risk.	\$2,500,000	Multistage project design year 1 and construction year 2. \$1M contained in 10yr for FY22/23.

			Marginally uplift in ongoing opex costs.
MORANBAH CELL 2 DESIGN AND CONSTRUCUT	Master plan for landfill includes the construction of cell 2.	\$2,400,000	Timing of need is FY22/23 expenditure is over 2 years. Reasonably confident with planning work and scope. Currently included in LTFF.

BACKGROUND

There are two imminent sources of external funding that are relevant to a range of future Council projects. They are the Local Roads and Community Infrastructure Grant Phase 2 (LRCI) and the Building Better Regions Fund (Round 5) (BBRF5). The Executive Leadership Team has considered potential projects from all Directorates and has proposed that each Directorate which has project proposals, submits lists of candidate projects to their respective Standing Committees for initial consideration, prior to Council determining a consolidated whole-of-Council approved project list.

Local Roads and Community Infrastructure Grant Phase 2

There are no projects which meet the criteria for this funding opportunity and hence no projects are included for this funding consideration.

Building Better Regions Fund Round 5

The Australia government has opened round 5 of the Building Better Regions Fund (BBRF). It is a \$200M nationwide grant aimed at driving economic growth and building stronger regional communities. Notably the grant has \$100M isolated for tourism- related projects focussed on mitigating the economic impacts of COVID-19.

There are two funding streams available generally on a 50:50 basis – *Infrastructure Projects Stream* of new, upgraded or beneficial replacement of infrastructure (grants of \$20,000 to \$10 million); and *Community Investment Stream* for new or expanded events, strategic regional plans, leadership and capability strengthening activities that provide economic and social benefits (grants of \$5,000 to \$1 million). For remote areas and other demonstrated hardship, the grant component can be up to 75% for both streams. For small Community Investment Stream projects of \$20,000 or less, grant funding can be up to 100% of eligible project costs.

The Water and Waste Directorate has nominated projects in the Infrastructure streams only. Applications close on 5 March 2021 and involve a substantial amount of work and analysis to demonstrate the beneficial social and economic merits with credible evidence. Projects will be evaluated by the Federal Government on merit. There is no set limit per Council.

PROPOSED IDENTIFIED PROJECTS FOR BBRF LIST COMMUNITY INVESTMENT

Description	Estimate	Comment
None		

PROPOSED IDENTIFIED PROJECTS FOR BBRF LIST INFRASTRUCTURE

Description	Estimate	Comment
CARAVAN DUMP POINTS	\$80,000	Currently funded project this FY. Construction achievable within 12 weeks. Grant process may delay delivery awaiting application outcome.
DYSART STP ELECTRICAL/SCADA UPGRADE	\$350,000	Currently being scoped, partially funded.
CLERMONT WTP – SECOND CLARIFIER	\$3,000,000	Identified in LTFF, multistage project over 2 years. Would be some additional opex costs associated with second clarifier, however not significant.
DYSART STP – SECOND ESD	\$2,500,000	Multistage project design year 1 and construction year 2. \$1M contained in 10yr for FY22/23. Marginally uplift in ongoing opex costs.
MORANBAH CELL 2 DESIGN AND CONSTRUCT	\$2,400,000	Timing of need is FY22/23 expenditure is over 2 years. Reasonably confident with planning work and scope. Currently included in LTFF.
Total – Infrastructure Projects	\$8,330,000	
Council Contribution	\$4,165,000	
BBRF Contribution	\$4,165,000	

IMPLICATIONS

The BBRF is a 50/50 split so Council will need to fund 50% of all nominated projects. The current year project for the Dump Points has been fully funded so the 50% contribution of \$40K has already budgeted for. The other current project Dysart STP electrical/SCADA upgrade project has been allocated funding with delivery likely to occur into next Financial Year. Both of these projects would result in minimal operational costs.

The larger projects have been identified in the forward capital program, with the Moranbah Landfill Cell 2 project being most advanced. Current PAG submission for consideration. The Master Plan has established the need and timing of the requirement for Cell2. There will be a transferral of existing Cell operational costs to new Cell 2 when constructed. The 2-year period also allows for larger projects with a design lead in time to be submitted (i.e. design year 1 and construct year 2). The Clermont second clarifier, Dysart ESD additional storage,

CONSULTATION

Projects have been discussed with the Executive Leadership Team and the Water and Waste Leadership Team.

BASIS FOR RECOMMENDATION

The nominated projects are required by Council and fit the eligibility criteria for the respective funds.

ACTION ACCOUNTABILITY

Once approved the Director of Water and Waste is accountable for ensuring any projects submitted by Council and subsequently approved by the funding authority are delivered by respective managers, to the budgets and within the submitted timeframes.

KEY MESSAGES

Council in combination with the Queensland State Government and the Australian Federal government are investing in our communities to provide valuable infrastructure and enhance our regional communities.

Report Prepared By:	Report Authorised By:
LINDA ROBERTS	GARY MURPHY
Director Water and Waste	Director Water and Waste
Date: 2 February 2021	Date: 3 February 2021

ATTACHMENTS

Nil

REFERENCE DOCUMENT

Nil

MEETING DETAILS	Water and Waste Standing Committee Wednesday 10 February 2021
AUTHOR	Gary Murphy
AUTHOR POSITION	Director Water and Waste

6.1 WATER AND WASTE INFORMATION BULLETIN – FEBRUARY 2021

EXECUTIVE SUMMARY

The Water and Waste Directorate Information Bulletin for February 2021 is provided for review.

OFFICER'S RECOMMENDATION

That the Committee:

- 1. Note the Water and Waste Directorate Information Bulletin for February 2021.**

BACKGROUND

The attached Information Bulletin for February 2021 provides an operational update for review on the Water and Waste Directorate.

IMPLICATIONS

Any specific implications or risks will be outlined in the Information Bulletin.

CONSULTATION

Water and Waste Directorate Managers and Staff.

BASIS FOR RECOMMENDATION

This is an information only report.

ACTION ACCOUNTABILITY

Information only report.

KEY MESSAGES

Operational update to Elected Members.

Report prepared by:	Report authorised by:
GARY MURPHY	GARY MURPHY
Director Water and Waste	Director Water and Waste
Date: 3 February 2021	Date: 3 February 2021

ATTACHMENTS

- Attachment 1 – Water and Waste Information Bulletin – February 2021.

REFERENCE DOCUMENT

Nil

DATE: February 2021

WATER & WASTE

DIRECTORATE HIGHLIGHTS

- Cultural Leadership Program 28-29 January 2021 for W&W Leadership Team.
- Director Worker for a Day in Clermont 14 January 2021. Worker for a day involves visit to WTP, WWTP, Waste Management Facility, as well as time with Plumbers. Opportunity to better understand and appreciate the challenges that Operations and Maintenance staff encounter daily, and to see what they do and how they do it.
- Follow up on Theresa Creek Dam (TCD) GHD Comprehensive Inspection Report recommendations, in addition to reworking of key documents to meet Dam Safety Conditions.
- W&W closely monitors WHS Individual KPI Reporting on a monthly basis. An Excel spreadsheet has been created to track M3's – M5's completion of required monthly KPIs. Reminders are also set for each in their calendars. This system has been effective to improve overall scores, with W&W now averaging a score of 24 in 2020/21 as opposed to 8 in 2019. It also has increased our team's accountability.

Emerging Risks

- Additional enterprise risks identified during recent review of Risk Register. Risk Register to be updated and will be reported to Audit and Risk Committee
- CW202809 Moranbah Landfill Remediation – practical completion was scheduled for late December 2020. Delays being experienced. See commentary in Capital Works Update.
- Clermont Water Quality – ongoing challenges with disturbance to reticulation system causing dirty water events. May require mains cleaning again. See commentary below in Capital Works Update for Capricorn Street Reservoir recommissioning.

BUSINESS SERVICES

PREVIOUS MONTH'S ACHIEVEMENTS:

- The Business Services Department has welcomed two new job share Customer Administration Officers to the team to continue to provide prompt, professional service to our customers in line with our Water and Waste Customer Service Standards.
- January focused on the continued finalisation of water meter reading for the upcoming notices. The reading file has been prepared for printing, with notices scheduled to be mailed by 15 February 2021. There has been no change to Tier 1 and Tier 2 water consumption charges this financial year, however, Tier 3 water consumption has increased from \$1.80 to \$2.10.
- The Business Services team have finalised their 3-year Meter Reading Strategic Plan. The Plan contains 26 actions and projects to be completed over the next 3 years to ensure five key strategies are incorporated into Council's water meter reading functions, including:

1. Maintain and Develop Positive Relationships
2. Adopt a Continuous Improvement Philosophy
3. Invest in Education
4. Manage Our Resources
5. Stay True to Our Vision

FINANCIAL REPORT:

- Budget Pack 81000.
- Operating income for Septic Waste and Standpipe Water Sales is currently under budget and tracking to remain below budget for the 20/21 financial year. Adjustments have been made during Q2 budget review; however further investigation will be completed to understand trends.

DEVIATION FROM BUDGET AND POLICY:

Nil.

OPERATIONAL PLAN / BUSINESS PLAN – EXCEPTION REPORTING

PROJECT TITLE	COMMENTS
Implement Clermont Water Quality Response Plan and associated Communication Plan	Phase 1 of the Communications Plan is due to be completed February 2021. A schedule has been completed between W&W and BMC to determine timeframes for Phase 2, due for completion June 2021.
MiWater/Taggle system review and possible updates.	Strategic Plan has been endorsed by ELT.

NEXT MONTH'S PROGRAM:

- To comply with IMS certification, an external surveillance audit is undertaken annually. The next Water & Waste sites to be audited will be Moranbah, St Lawrence and Carmila Water Treatment Plants and St Lawrence, Carmila and Greenhill Waste Management Facilities. This audit is scheduled to be conducted in October 2021.

DEVELOPING INITIATIVES / ISSUES:

Water Restrictions

CURRENT & PROJECTED	LEVEL 1		LEVEL 2		LEVEL 3	
	Start Date	End Date	Start Date	End Date	Start Date	End Date
Middlemount	16/03/2019	18/11/2019	18/11/2019	10/01/2021	11/01/2021	
St Lawrence	10/09/2020	13/12/2020	14/12/2020			

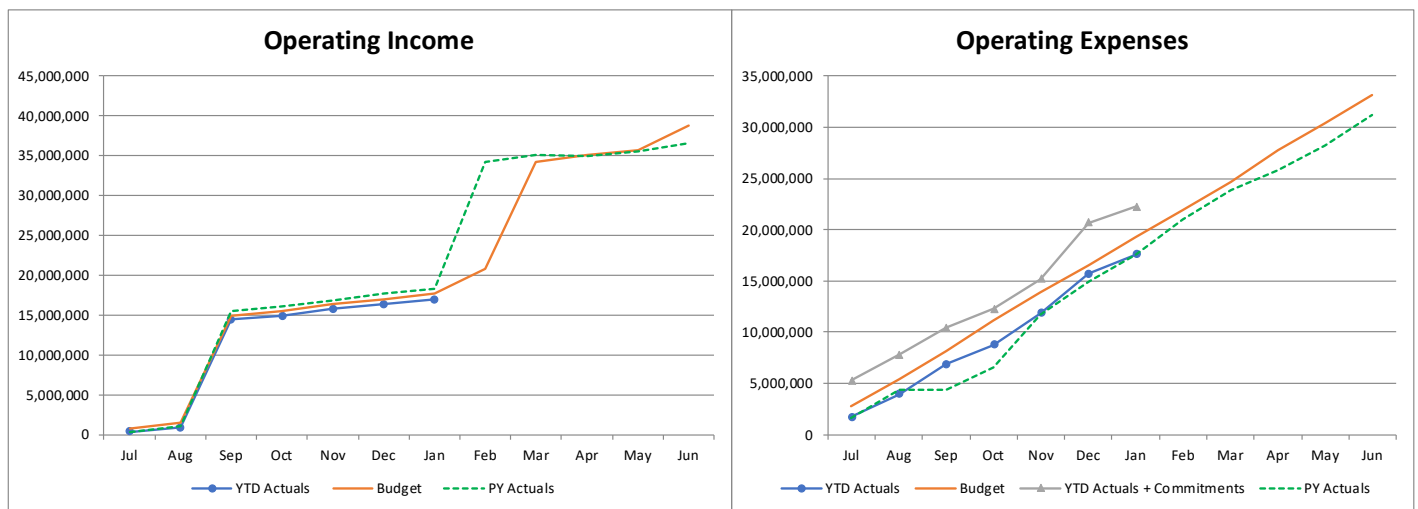
Standpipe Exemptions for use during Water Restrictions

APPROVED EXEMPTIONS	TYPE	AVERAGE WEEKLY REPORTED CONSUMPTION	REPORTED USAGE

External Consumer Middlemount Domestic Human Consumption 1080KL Providing to mine sites

WATER & WASTEWATER

FINANCIAL REPORT:



DEVIATION FROM BUDGET AND POLICY:

Q2 performance being assessed with Finance Business Partners and reported separately.

PREVIOUS MONTH'S ACHIEVEMENTS:

Strategy (i.e. C5)	Service Area	Description	Monthly Status Update	Annual Status Update
I5	Provision of safe and reliable water supply services – monitor performance and undertake remedial action where required	Incidence of unplanned interruptions – • < 70 per 1000 connections / year Total Water connection in IRC = 8479 Allowable target 20/21 – 593	29	111 (below target)
I5	Provision of safe and reliable water supply services – monitor performance and take remedial action where required	Water main breaks – • < 40 per 100 km / year Total Length of water main at IRC = 245 km Allowable target 20/21 – 98	38	107 (above target)
I5	Provision of safe and reliable water supply services –	Water quality complaints –	1	9

	monitor performance and take remedial action where required	<ul style="list-style-type: none"> < 20 per 1000 connections / year Total Water connection in IRC = 8479 Allowable target 20/21 – 170		(below target)
15	Provision of effective sewerage transport and treatment services – undertake / investigate – system condition and functionality, monitor performance and undertake remedial action where required	Wastewater Mains breaks and chokes – <ul style="list-style-type: none"> < 40 per 100 km / year Total Length of wastewater main at IRC = 202 km Allowable target 20/21 – 81	1	33 (below target)
15	Provision of effective sewerage transport and treatment services – undertake / investigate – system condition and functionality, monitor performance and undertake remedial action where required	Wastewater complaints – Overflow on property and odour <ul style="list-style-type: none"> < 15 per 1000 connections / year Total Wastewater connection in IRC = 7879 Allowable target 20/21 – 118	0	26 (below target)
15	Provision of safe and reliable water supply and effective sewerage transport and treatment services	Total Water and Sewer Complaints (any nature) – <ul style="list-style-type: none"> < 100 per 1000 connections / year Total Water connection in IRC = 8479 Allowable target 20/21 – 848	1	110 (below target)

PREVIOUS MONTH'S ISSUES:

Raw Water Sources for Isaac Regional Towns

The following diagram provides an update on raw water sources, water levels in dams, water used to date if applicable, and current water restrictions in place for each Isaac Regional town. Recent rains have seen the levels of most water source increase.



Glenden

Raw water for Glenden is provided from the Bowen River which can be refilled from Gattenvale off-stream storage and Eungella Dam.

- Newlands Coal Mine (Xstrata)

N/A

- Bowen River Weir **104%**

No Water Restrictions

Nebo

Nebo's raw water is supplied through six bores. The new water treatment plant and reservoir as part of the Nebo Water Supply Project have 2ML storage on site.

- See graph below for water levels in Bore 2

No Water Restrictions

Carmila

Raw water is supplied from two shallow bores located near the Carmila Ck approx 1km from the WTP.

- Water is flowing over the weir near the bore.

No Water Restrictions

Moranbah

Moranbah's raw water is supplied from two sources:

- Burdekin Dam through the Burdekin to Moranbah pipeline **100%**
- Eungella Dam through either BMA or SunWater's pipelines **82%**

Water used to date:	2019-2020	2020-2021
• BMA:	1824 ML	1557 ML
• Dyno:	50 ML	
• Stanmore:	467.8 ML	
• Sunwater:	251.5 ML	100 ML
• Pembroke:	94.4 ML	

No Water Restrictions

St Lawrence

St Lawrence's raw water is supplied through high lift pumps from the St Lawrence Creek approximately 500m upstream from the creek weir.

- **1.18 m** below weir level

Level 1 Water Restrictions

Clermont

Clermont's raw water is supplied from Theresa Creek Dam

- **.130 m below dam wall spillway**

No Water Restrictions

Dysart

Dysart's raw water is supplied from Bingegang Weir in the Mackenzie River which can be re-filled from Fairbairn Dam, through Bedford Weir.

- Bingegang Weir **49%**

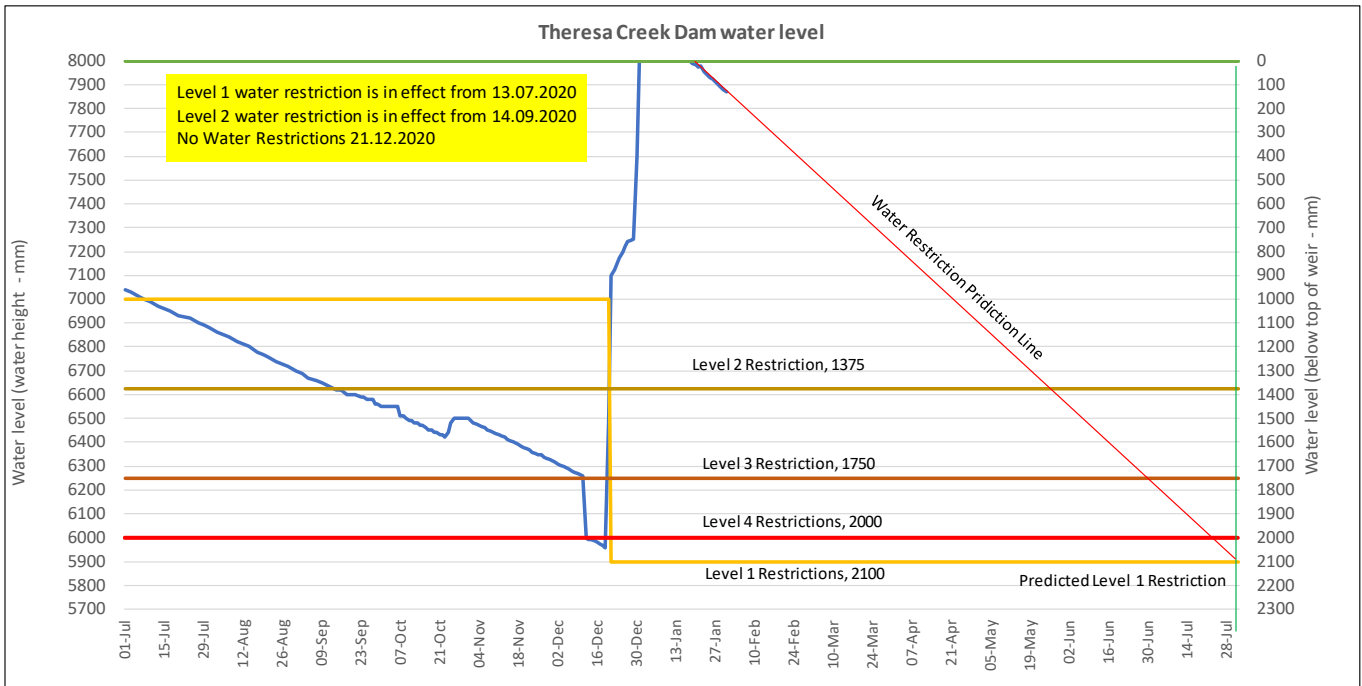
No Water Restrictions

Middlemount

Middlemount's raw water is supplied from the Bingegang Weir on the Mackenzie River approximately 60km away. The weir is can be re-filled from Fairbairn Dam through Bedford Weir.

- Bingegang Weir **49%**
- Fairbairn Dam **13%**
- Bedford Weir **100%**

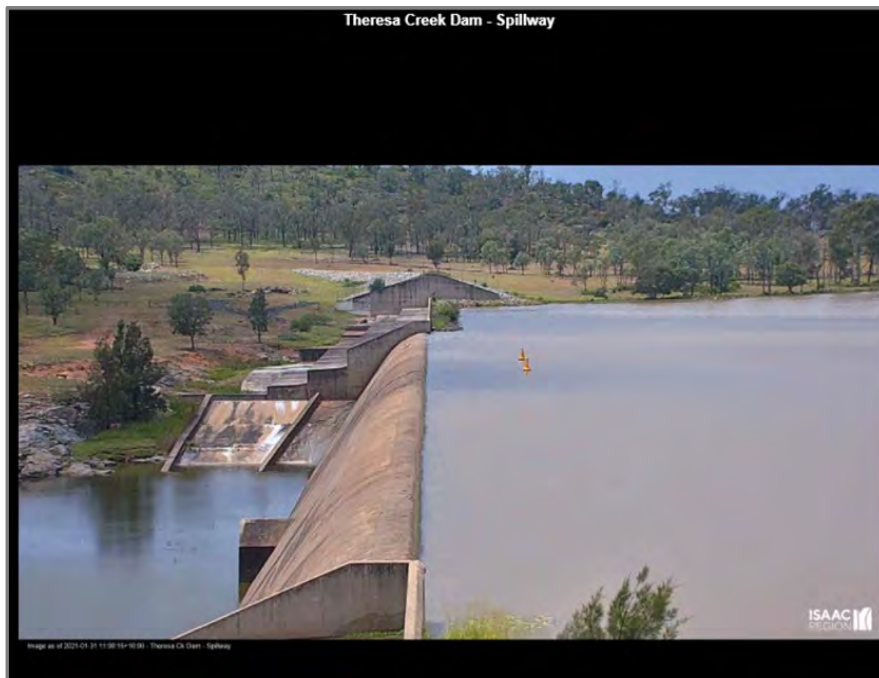
Level 3 Water Restrictions



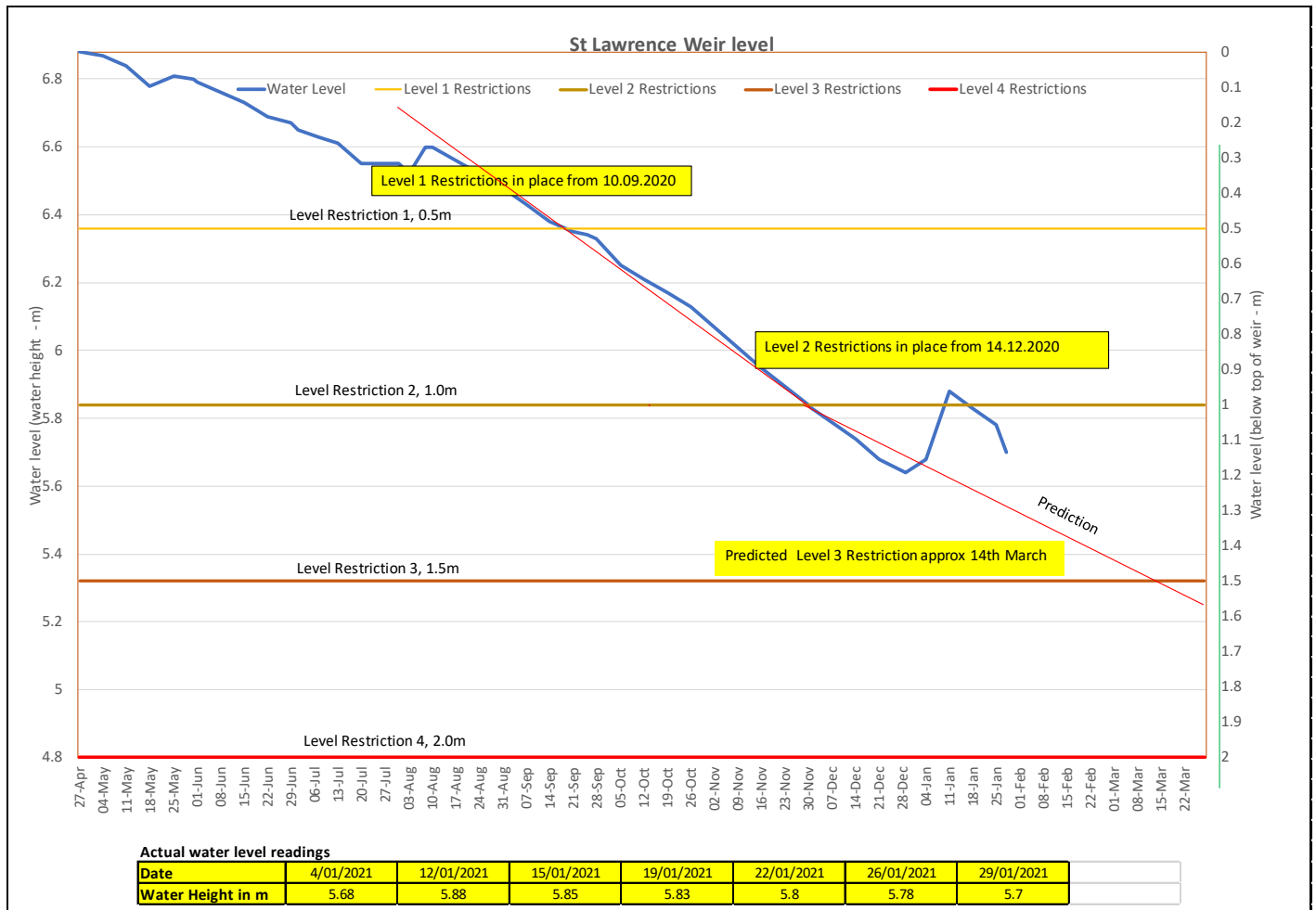
Actual water level readings

Date	3/01/2021	7/01/2021	11/01/2021	15/01/2021	19/01/2021	23/01/2021	28/01/2021	31/01/2021
Water Height in mm	8050	8050	8010	8040	7990	7955	7980	7870

Note: 25 mm rainfall recorded at Theresa Creek Dam catchment on during January.



Theresa Creek Dam – Spillway



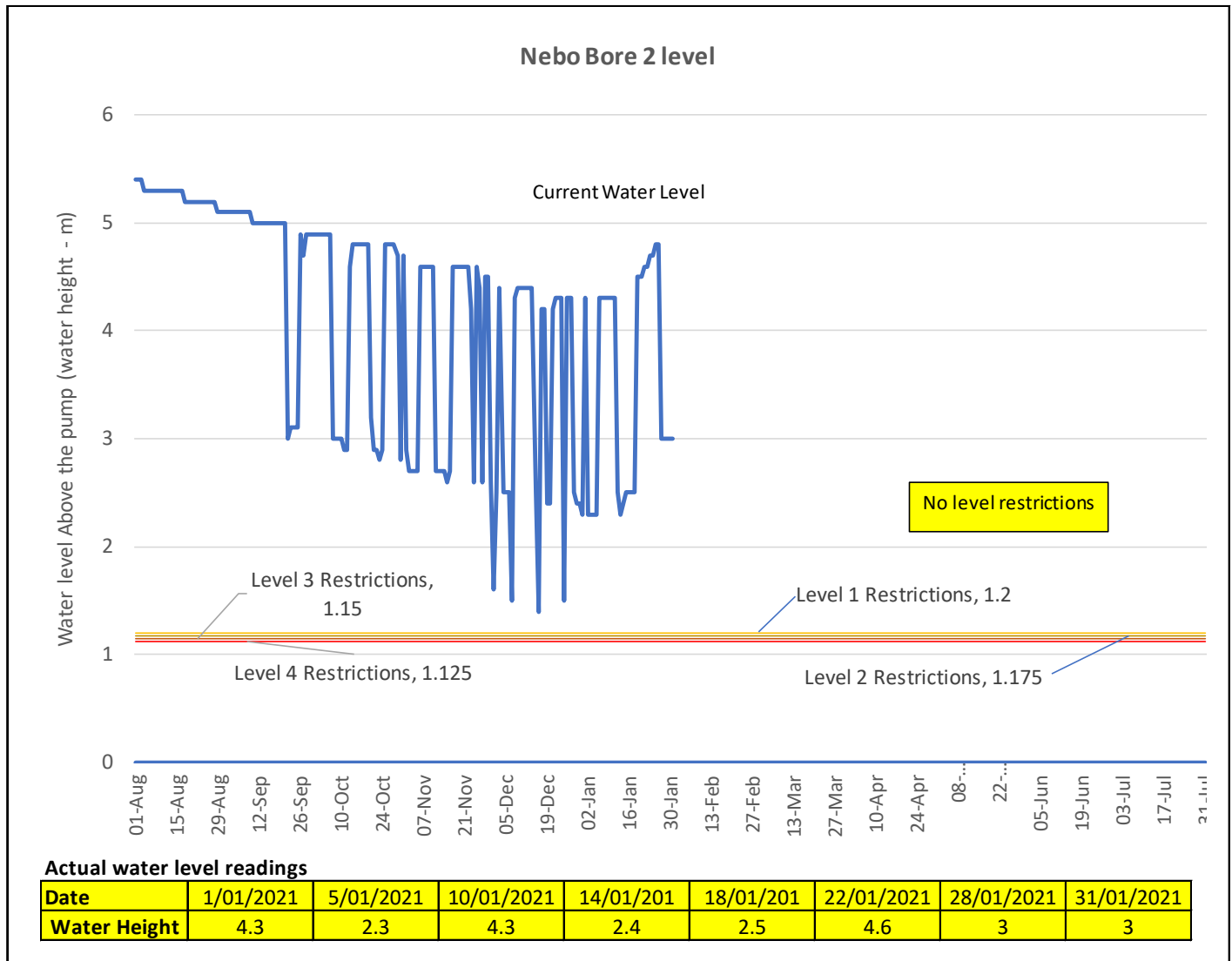
Note: 105mm of Rainfall recorded at St Lawrence during January.



St Lawrence Weir as of 28 January 2020



Carmila raw water creek photo from bore pumps as of 28 January 2021. Creek is flowing.



Compliance

The table below contains current statutory undertakings across all assets.

	TARGET DATE FOR COMPLETION	COMMENTS
Nebo WWTP TEP	Completion of the TEP is as per the notification provided by DES.	DES approved amendment to Transitional Environmental Program - TEP E-100018841. The amended TEP came into effect on 11 September 2020 and will remain in force until 31 December 2022. A Project Manager has been engaged to oversee the development of a solution to the EC exceedance issue. W&W will provide an investigation report with recommendations to DES.
Dysart ESD and WWTP EU	An EU extension has been granted to the 30/06/2021 when project works as described in schedule of works supplied to DES and	Waiting on quotations for audit of Dysart EU Scopes of Work for final close out. Balance Tank works to be finalised.

	a final audit has been supplied to the department.	
Formal Warning Moranbah Effluent Dam	A formal warning was received from the regulatory authority DES in relation to Moranbah Effluent Dam, by failing to submit the required dam reports by 1 December 2020.	W&W provided a letter of response to the Department on 27 January 2021. A report was also sent to meet the requirement – Moranbah Effluent Dams Inspection 2020 – 2020 Annual Inspection Report by GHD.

OPERATIONAL PLAN / BUSINESS PLAN – EXCEPTION REPORTING

NEXT MONTH'S PROGRAM:

Scheduled to Commence During Next Month

PROJECT NAME/ DESCRIPTION	SCHEDULED END DATE	COMMENTS/EXCEPTIONS
Nebo Aquifer water allocation increase	TBA	Running to schedule. Meeting held with Department of Resources Friday 29 January 2021 to discuss further data that may be required for application for water volume increase.
WWTP Site Based Management Plans	Feb 2021	Documents almost finalised and then to progress to approval process.
Compliance and Environmental Management Plan (CEMP)	Feb 2021	Further development required. Currently being reviewed by IMS Coordinator and Manager Business Services.
Clermont Sandy Creek Alluvium Water Licence	TBA	For water bores in Clermont. Discussions with Department regarding changing 2 monitoring bores to operational bores. There is a legal element and negotiations under way.

DEVELOPING INITIATIVES / ISSUES:

- Meetings will be held in February with all Recycled Water End Users. The meeting is to discuss improvements within the current system, i.e. allocations.

WASTE SERVICES

PREVIOUS MONTH'S ACHIEVEMENTS:

New Landfill Management Contracts

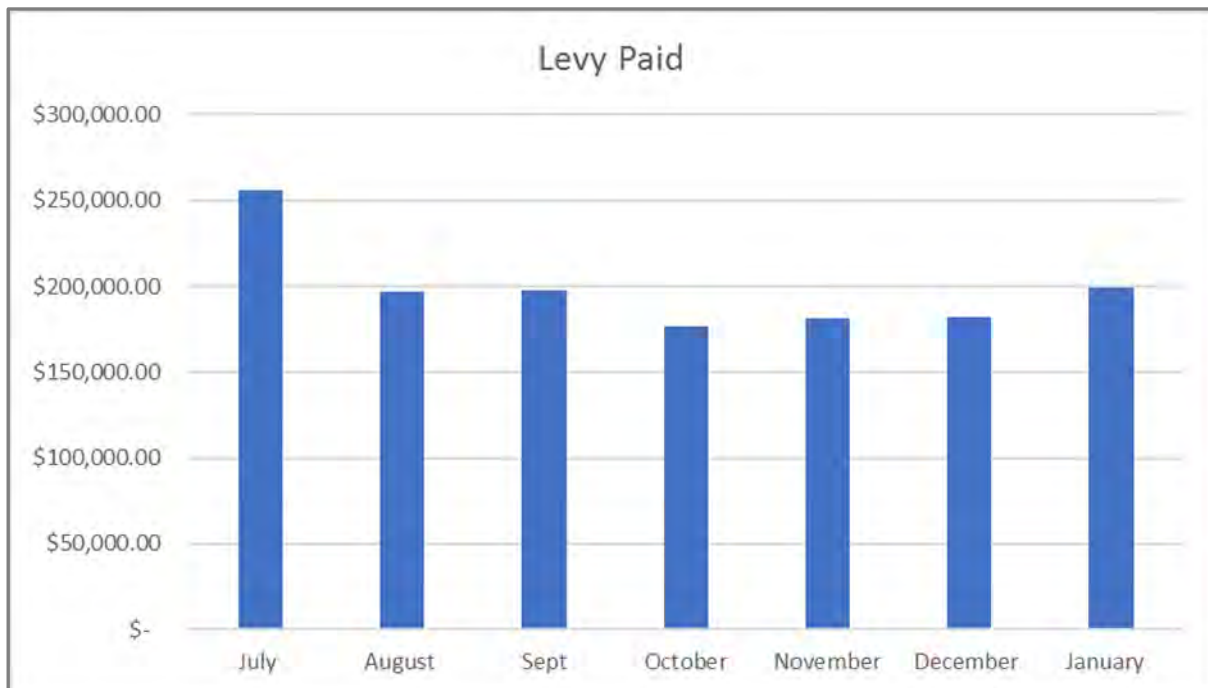
The first monthly meetings have taken place with both contractors. Now that Moranbah has been brought up to standard, some additional work is being carried out at Glenden, which had also deteriorated prior to the new contract.

Waste Levy Payments and Tonnage

The following diagram shows a comparison of the tonnage of waste being landfilled in Q1 and Q2 across a five-year period. This shows that, although Q1 produced more waste than most recent years, 2020-21 showed the lowest Q2 on record in terms of waste being landfilled.



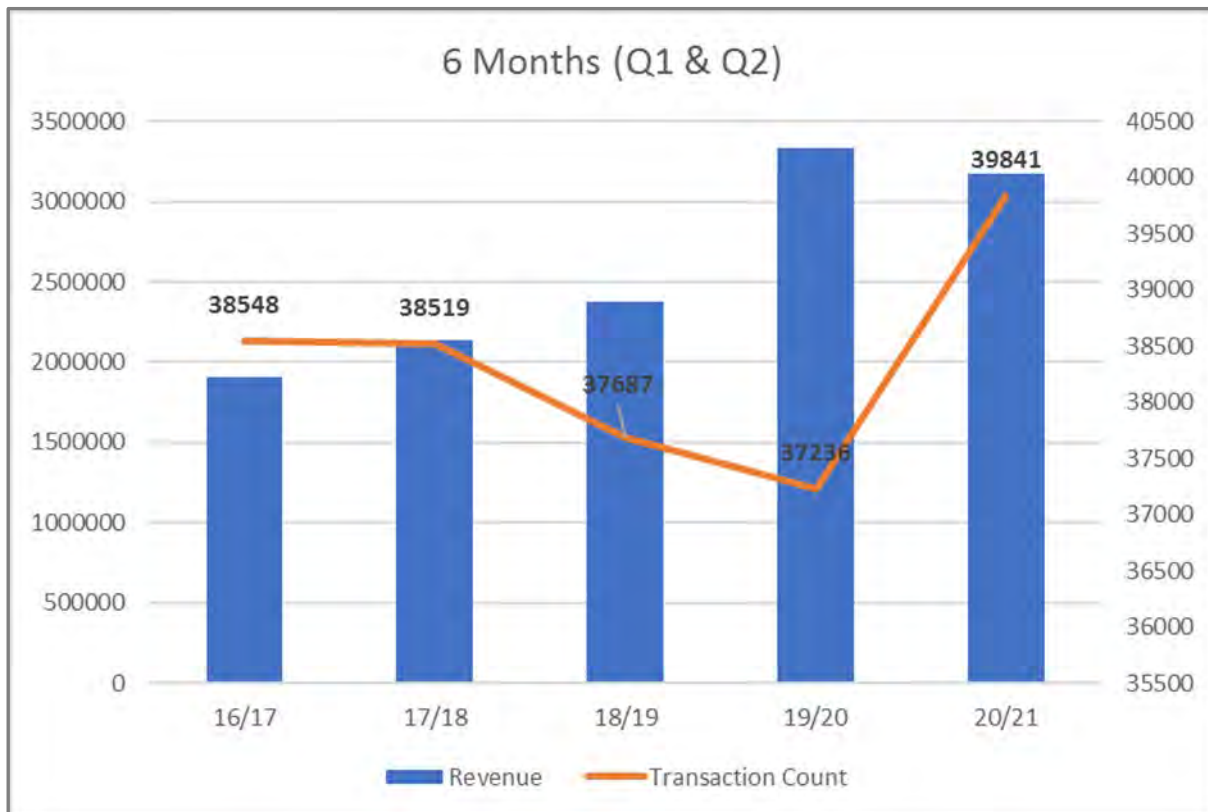
The following graph illustrates that July 2020 was exceptionally high whilst waste tonnage reduced in Q2. Despite these fluctuations the waste levy budget is on target overall.



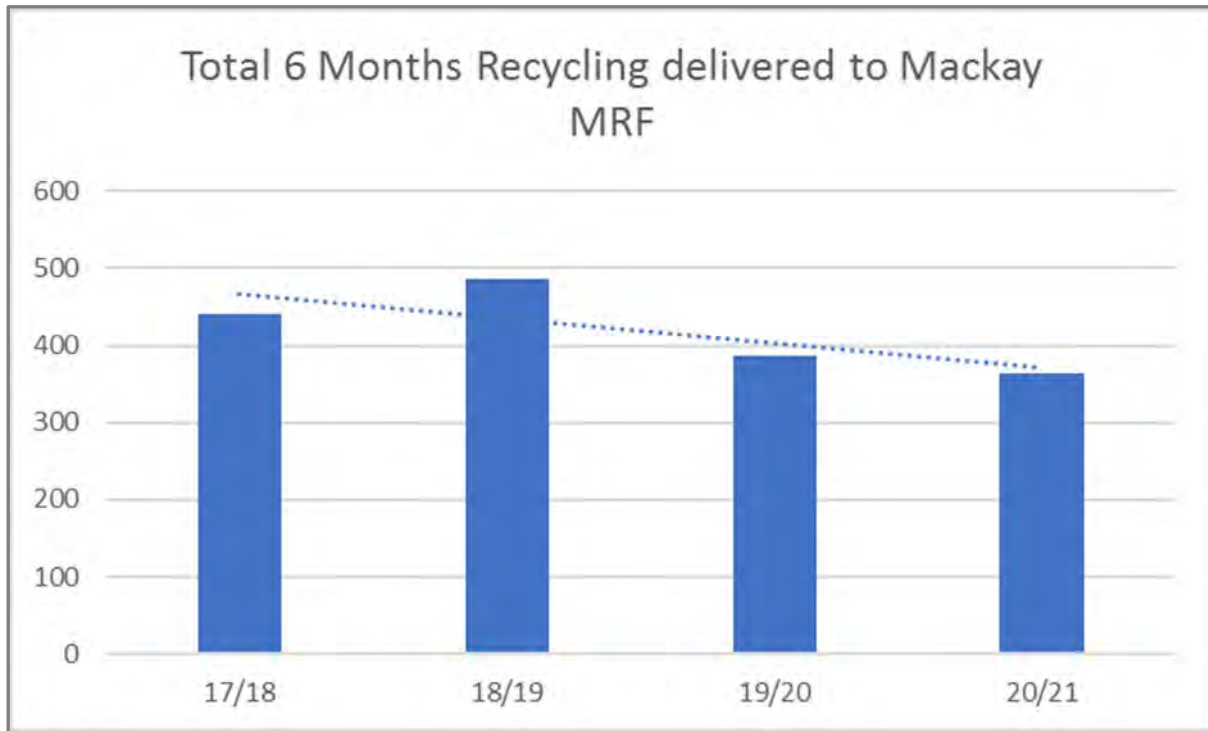
This graph also illustrates the degree to which monthly totals fluctuate.



A comparison of transactions over 5 years shows that revenue in the first half of 2020-21 is very similar to that in 2019-20 at just over \$3M, however the number of transactions shows an increase of 7% since last year and about 5% higher than the 5-year average. This would suggest that the proportion of transactions for which there is no charge is increasing.



The decrease in tonnage being collected via the yellow-top recycling service appeared to have levelled-off recently with figures for the first 6 months of the year, but the trend remains downwards since the introduction of the Container deposit scheme.



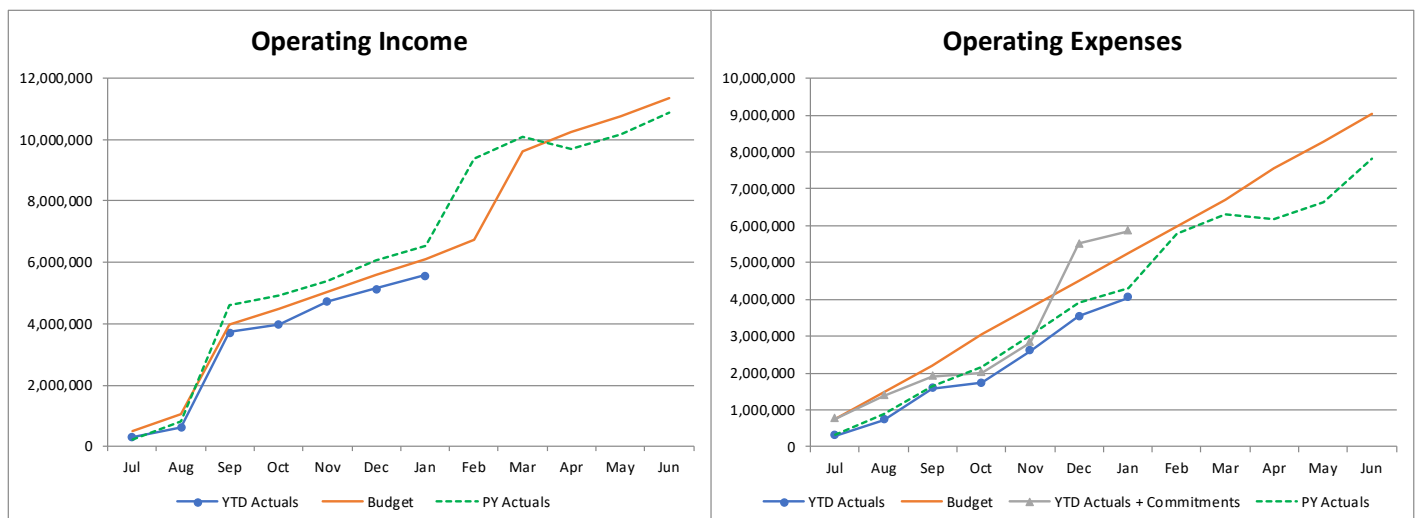
Waste Collection

Performance against rectifying missed bins has dipped, however the overall numbers of missed collections remains very low, with only 16 collections missed in January.

PREVIOUS MONTH'S ISSUES:

Not applicable.

FINANCIAL REPORT:



DEVIATION FROM BUDGET:

Q2 Review

- As anticipated, the new landfill contracts resulted in additional costs. The budget for the new contracts is \$1.04M. These costs have largely been offset by savings against several natural accounts, notably:

DESCRIPTION	NATURAL ACCOUNT	\$
Equipment Hire / Lease	7641	\$719,845
Agency Temp Staff	7633	\$172,280
Cleaning & Pest Control	7651	\$93,800

- The Refuse Collection Natural Account has also seen savings of \$254,730 in 2020-21.
- Revenue is on target for Q2; however, officers will monitor this closely. It is possible that the reduced tonnage noted above will lead to reduced income in the remainder of the financial year.

OPERATIONAL PLAN / BUSINESS PLAN – EXCEPTION REPORTING

Waste & Recycling Contract					
Number of missed services	Collection of Missed Service		Bin Repair / Replacements		
<10/5000 Services = less than 806 missed services for 6 Months	No of missed bins collected within 36 hours	90% within 36 hours of contractor being notified	No of requests	No of requests completed within 5 working days	90% within 5 working days of request
KPI Q1&Q2	195	180	92%	88	80
					91%

Waste and Recycling Performance					
Tonnes to Landfill (leviable)	Tonnes to RRA	Tonnes diverted via Kerbside Recycling	Tonnes sent off site for Sale or to processor	% of Waste diverted from Landfill	No of Kerbside Recycling Services - Presentation Rate
N/A	N/A	N/A	N/A	>25%	
KPI Q1&Q2	16042	3601	365	1050	19%
					61,292 = 45%

Compliance					
Compliance with Environmental Authority (EA)	Notice of scheduled site closures	Customer complaints non-price related	Nuisance complaints (odour/litter)		No of Transactions
Compliance with all elements of EA >95%	>7 days notice	Number of complaints / 1,000 transactions / site <10 / annum	Number of complaints / 1,000 transactions / site <20 / annum		N/A
KPI Q1&Q2	N/A	2	3	3	38,404 - 3% increase on Q1&Q2 2019

NEXT MONTH'S PROGRAM:

Scheduled to Commence During Next Month

Project Name/ Description	Scheduled End Date	Comments/Exceptions
Green Waste Tender	31 Mar 2021	
Annual Volumetric Survey	22 Feb 2021	

DEVELOPING INITIATIVES / ISSUES:

Waste Strategy

Work underway on Action Plan items including financial sustainability and landfill tenders.

PLANNING & PROJECT DELIVERY

PREVIOUS MONTH'S ACHIEVEMENTS:

Significant Projects Update:

CW202817 Dysart WWTP Balance Tank

The project is reaching completion with the tank erected, pumps installed, valves installed, pipework 99% complete, and electrical installations 80% completed. The tank grouting has been completed along with the first stage of sealing completed. The main remaining activities are final seal membrane for the tank, complete the electrical activity, testing and commissioning. The commissioning will involve filling the tank, testing the system, while cutting over the final pipework.

The project has had several delays, mainly due to the importing of the specialised tank panels from the UK. The commissioning of the tank and associated equipment is planning to occur in the first week of March and project completed 8 March (pending weather).

Figure 1: Balance Tank



Figure 2: New electrical switchboard for Balance Tank

Program Activities

- Qrt 2 review occurring with finalisation to council in coming weeks.
- PAG documents completed for review. Further refinement and updating will occur over the next 4 weeks.

PREVIOUS MONTH'S ISSUES:

CW182564 Capricorn Reservoir Project

Friday 22 January areas of Clermont experienced discoloured water which was the result of the attempted filling of Capricorn Street Reservoir. As the system at Capricorn Street Reservoir is a single pipe for filling and network use there was a heavy safety emphasis on ensuring that the water used for the disinfection could not enter the network. This was a very important factor as the water was super chlorinated to 50ppm. The normal human consumption level is between .5 & 1.5 PPM. The methodology developed ensured maximum pressure going into the reservoir guaranteeing that no super chlorinated water could reach residents. Unfortunately, the high velocity of the fill meant that the water network was stirred up and resulted in discoloured water.

Lessons learnt for this type of activity will be captured and added to the What was missed in the Risk Assessment was the possibility that the velocity of water required to keep the network safe could also cause a scouring effect and create a dirty water issue. Consideration is being given to the water network being cleaned, similar to the process completed in Feb/March 2019. This would remove the discolouration of the water without any loss of water.

In the process of filling the reservoir, a defect was detected on the new overflow pipe which was installed. This defect will need to be rectified prior to filling the reservoir and bringing it back online.

CW202809 Moranbah Landfill Remediation

The contractor is likely to be 4 months late in the delivery of this project. The delays have been caused by slow progress within the reshaping and cover stages due to construction issues. The contractor has been encouraged to improve their productivity. The Projects Team has sought legal advice sought to consider the ongoing management of risk for this contract.

Actuals for this project sits at 43% which represents the lag in productivity on site and it is impacting the performance overall for delivery.

FINANCIAL REPORT:

2020/21 CAPEX Program Cost Status Summary

The following is a report of the Water and Waste Capital Projects delivery highlighting:

- a. Progress
- b. Exceptions
- c. Deviations on the capital projects

As at 22 January 2021, Water and Wastewater actual expenditure totals \$4,193,063 representing 30% of annual approved budget (20-21 - \$14,031,875) and a total spend inclusive of tender commitments of \$7,993,224 which represents 56% of annual approved budget.

As at 22 January 2021, Waste Services actual expenditure totals \$2,405,461 representing 40.5% of annual approved budget (20-21 - \$5,925,687), and a total spend inclusive of tender commitments of \$4,768,561 which represents 80% of annual approved budget.

The combined Water & Waste actual expenditure totals \$6,598,622 representing 33% of annual approved budget (20-21 - \$20,093,605) and a total spend inclusive of tender commitments of \$12,761,786 representing 63.5% of annual approved budget.

EXPENDITURE SUMMARY

Water & Wastewater

Dec 2020

Jan 2021

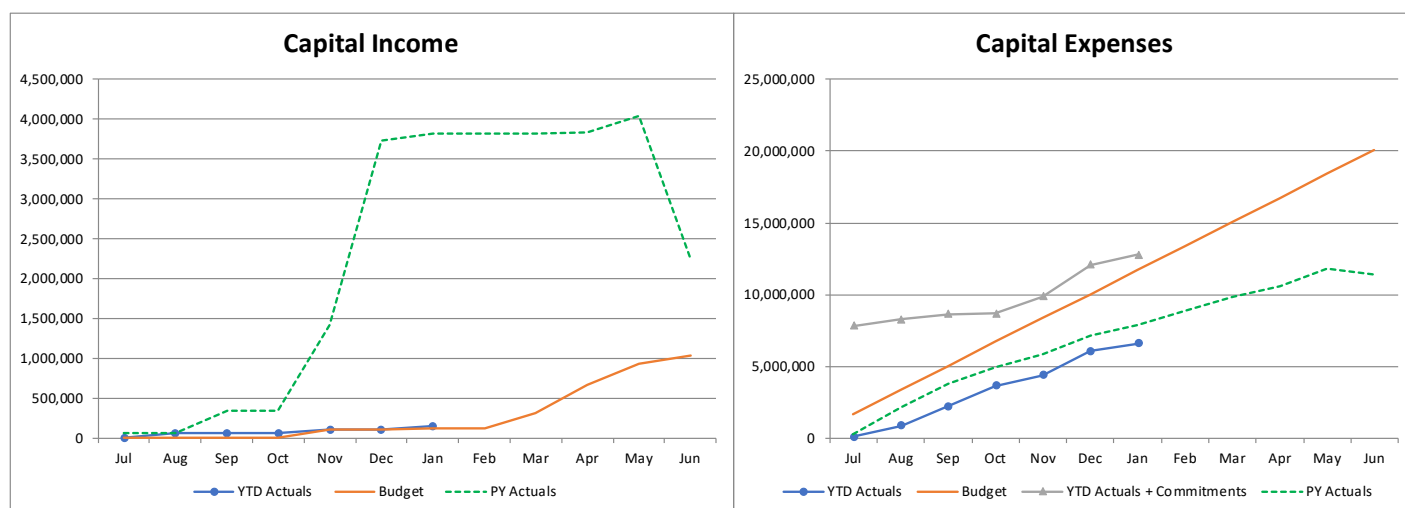
Actual CF plus 20/21 Program Expenditure to date	\$3,661,627	\$4,193,063
Actual Program Expenditure including Tender commitments to date	\$7,336,255	\$7,993,224

Waste

Actual CF plus 20/21 Program Expenditure to date	\$2,395,753	\$6,598,622
Actual Program Expenditure including Tender commitments to date	\$4,758,499	\$12,761,786

DEVIATION FROM BUDGET AND POLICY:

The above financial commentary includes all carry overs. The graph below tracks budget against actuals plus commitments.



OPERATIONAL PLAN / BUSINESS PLAN – EXCEPTION REPORTING

Strategy (i.e. C5)	Service Area	Description	Highlight/Exception, including explanation
I6	Effective and Efficient Capital Works Delivery	Implementation of effective project and contract management systems and procedures: <ul style="list-style-type: none"> >90% of capital program delivered to budget 	On target
		Implementation of effective project and contract management systems and procedures: <ul style="list-style-type: none"> >90% all subprograms in the W&W capital program is completed on time and in budget 	Monitor
		Undertaking condition evaluations of recycled water Quality:	On target

		<ul style="list-style-type: none"> Isaac Regional Recycled Water program completed and commissioned by 30 June 2020 	
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NEXT MONTH'S PROGRAM:

Capital Projects Update

CW Number	Project Name/ Description	Comments/Exceptions
CW182537	CORP Raw Water Remediation Works	Need to escalate this process through Department of Resources (DOR) for resolution.
CW182563	MMT WTP Reroof Clearwater Tanks 1 & 2	Back wash pump delivery has been delayed due to COVID project completion rescheduled for May 2021.
CW182564	CORP WTP Clearwater Tank Upgrades (Capricorn St Reservoir)	Replacement roof has been completed. Control valve and disinfection have been delayed until January.
CW182580	Old Failed Equipment (MBH WWTP Belt Press)	Process shed for the belt press has been fully erected, construction of the belt press equipment starting in January.
CW192730	CORP WTP Replace Old/Failed Equipment	CLM filters actuated valve replacements - project complete, As-built and O&M Manuals received early December 2020, PC Certificate to be issued to Roebucks. PDT Building works to be completed following completion of the 5ML Res project.
CW192733	CLM STP Upgrade Works	Chlorine Duplication project: Minor activities completed, with building works to commence ~ 19 January 2021, estimated completed April 2021.
CW202817	DYS-SN-Enforceable Undertaking	Balance Tank: Tank erected, and majority of civil works completed, Electrical work underway. Commissioning planned for 1st week March, Scheduled project completion date of 8 March (pending weather). Been delays with importing tank.

NEW CAPITAL WORKS PROJECTS (FY20/21)

CW212857	CAR Transfer Station – Retaining Wall	Planning and design review investigations underway, combined with Greenhill Transfer Station project. Preliminary investigations and designs have been previously undertaken by GHD and Premise with 3 options given for retaining walls. Anticipate works to go out for Tender / RFQ in February 2021.
CW212861	CORP Water Mains Replacement Program	Construction on East street began 26/01/2021. Materials on site. 70m pipe laid by 27/01/2021.
CW212862	GNH Transfer Station – Retaining Wall	Planning and design review investigations underway, combined with Carmila Transfer Station project. Preliminary investigations and designs have been previously undertaken by GHD and Premise with 3 options given for retaining walls. Anticipate works to go out for Tender / RFQ in February 2021.
CW212863	CORP Water Valve & Hydrant Repair/Replacement	Works completed to replace hydrants and install 2 x new valves along Goonyella Service Rd (Mansell Concrete, Tradelink). Planning in progress for continuation of prioritised items from 20/21 PAG list.

CW212864	CORP SN Main Relining Program	RFQ through Local Buy BUS270 closed 22/12/2020, only 2 x submissions received. Initial assessment of submissions complete with clarifications required by both respondents, final evaluation and recommendation is planned for 1st week of February, expect award to successful Contractor in Feb 2021 with works to be undertaken in CLM and MMT.
CW212865	CORP STP Replace Old/Failed Equipment	\$280k transferred to CW182580 for the installation of the MBH STP sludge belt press in Q1 review 20/21. MMT WWTP WRAS pumps replaced. GLN WWTP Inlet screen modified to suit industrial waste bins. \$2.5k balance funds to remain available for replacements as required during remaining 20/21 year.
CW212866	CORP - SPS Renewal Program	MBH SPS: Construction planned for February 2021. Electrical work begins mid-February 2021.
CW212867	CORP WTP Replace Old/Failed Equipment	Project planning and development commenced with input from Operations Supervisors, draft priority lists currently under development to shortlist projects based on risk. Replacement of Carmila WTP raw water bore pumps commenced. Replacement of actuated valves and water tower outlet valve to filter backwash planning in progress.
CW212868	CORP Telemetry Upgrades to WWTPs	To commence planning.
CW212869	CORP Potable Water Meter Install Parks & Recreation	Project planning and investigation into unmetered supplies in CLM in progress. Review of unmetered services completed in Clermont completed in preparation to develop project scope.
CW212870	CORP Telemetry Upgrades to WTPs	Project planning meeting held early December to discuss scope preference for GLN WTP SCADA installation. Project documents to be developed and advertised for RFQ through Local Buy BUS270 in 3rd Qtr with construction to be completed in Q4.
CW212875	Caravan Dump Points - MBH & MMT	RFQ planned to be called for in February 2021 for MMT & MBH. Both locations acceptable to Council.
CW212936	CORP – SN Manhole Rehabilitation	RFQ advertised to selected panel of suitable contractors in January, closing 2/02/2021 in anticipation of award in late February.
CW212939	CLM STP Lighting Rectification	RFQ closed 27/01/2021. To be evaluated.
CW212940	CLM WTP Quality Response Action Works	Lighting RFQ closed 27/01/2021. To be evaluated. 3ML inlet bend and clarifier bell mouth removal to be completed in February.
CW212941	DYS STP - Optimisation of Plant	Project planning underway with RFQ is being written. Expected RFQ to be issued in January and awarded late Feb.
CW212942	DYS WTP Waste Stream Return	Conducted site visit with contractor to finalised requirements, construction to commence late February.

DEVELOPING INITIATIVES / ISSUES:

- Recruitment for vacant Water and Sewer Planning Engineer role will occur February.

Clermont Water Quality Action Plan Update

There are several actions which Planning & Projects Team are responsible for. The below list contains the action and commentary on the action.

ACTION	COMMENTARY
Inline Analysers for WTP	This had been identified for delivery January 2021, there has been some delays. Currently evaluation of the tender is occurring with delivery to occur March/April.
Changes to the Clarifier Bell mouth and the 3 ML reservoir	PO has been issued to contractor with installation to occur by the end of February.
Lighting at WTP	Tenders have closed with evaluation to occur, delivery to occur March/April.

Report authorised by:

GARY MURPHY

Director Water and Waste

Date: 3 February 2021

ATTACHMENTS

- Confidential Attachment 1a – Water & Waste Capital Projects January 2020 / 2021 Fin Year

PAGES 64 TO 65 HAVE INTENTIONALLY BEEN REMOVED DUE TO CONFIDENTIAL REASONS