

5.9. MOSSMAN RIVER INTAKE - PROGRESS UPDATE

REPORT AUTHOR Jonathan Ward, Manager Water and Wastewater

MANAGER Rachel Brophy, Chief Executive Officer

DEPARTMENT Water and Wastewater

RECOMMENDATION

That Council notes the progress of the Mossman River intake project.

EXECUTIVE SUMMARY

This report provides Douglas Shire Council with a progress update on the implementation of the Mossman River intake. This key project forms part of a wider long-term strategy to secure the region's water supply into the future.

BACKGROUND

Since 2010, Douglas Shire Council (Council) has been assessing the water reliability and risk to its drinking water sources. As Council relies on run-of-river water sources, i.e. it does not have access to any impounded storage, and as population levels and consumption increase over time, there is an increased likelihood of more frequent and longer periods of water restrictions. In addition to this, increased climate variability brings a greater risk of more frequent restrictions.

The licenced extraction limit of the Rex Creek intake (4,800 ML /year) is forecast to be exceeded by 2025/26. Water availability at the Rex Creek intake is compromised during the drier months of the year by the requirement to reduce water extraction rates from the creek to comply with licence conditions. At the same time, more water is needed to sustain the communities' consumption levels.

COMMENTS

In 2018, Drumsara was selected as the preferred site to access the additional 2,000 ML /year reserved for town water usage in the Department of Regional Development, Resources and Water's (DRDMW) Mossman River catchment water plan. The primary factors contributing to the selection of the site were availability of water throughout the year, proximity to existing infrastructure and estimated construction cost.

A detailed design was completed in 2020, and an approvals management plan was commenced soon thereafter. The water allocation application process is underway with the DRDMW. Environmental, cultural heritage, stakeholder consultation and approvals process is underway. Land purchase discussions and negotiations are underway and finalisation of the design of the various components is also in progress.

To ensure project completion before the exceedance of the Rex Creek licence in 2026, the following key steps need to be implemented:

Table 1.

Task	Start	End
Land Purchase (both private and state-owned road reserve)	Dec 2022	Dec 2023
Approvals (incl. water allocation and DA)	Sep 2022	Sep 2023
Detailed Design, including:		
• UV disinfection upgrade at Mossman WTP	Dec 2022	Sep 2023
• Energy recovery turbine at Mossman WTP (incl. concept)	Dec 2022	Sep 2023
• Mossman River Intake and pipeline (design and documentation update)	Sep 2023	Dec 2023
Procurement	Dec 2023	Apr 2024
Construction	May 2024	May 2026

PROPOSAL

That Council notes the progress of the Mossman River intake project.

FINANCIAL/RESOURCE IMPLICATIONS

The table below shows the components of the project and their estimated cost.

Table 2.

Description	Stage Complete	Estimated Costs (\$)
Inception to date		503,215
Mossman River Intake	Detailed Design	8,000,000
Mossman WTP – UV Upgrade	Planning	4,100,000
Mossman WTP – Energy Recovery	Initiation	1,300,000
TOTAL		13,903,215

Table 3.

	Prior Years	2022/23	2023/24	2024/25	2025/26	Total (\$)
Estimated Project Cost	401,425	436,490	565,000	7,500,000	5,000,000	13,903,215
Budget *	401,425	436,490	0	0	0	837,915
Variance	0	0	(565,000)	(7,500,000)	(5,000,000)	(13,065,000)

* Budget includes 2022/23 budget review figures

Ideally, a significant proportion of the capital cost will be funded by government grants. Typically, under similar funding arrangements, Council has been required to fund 10% of the total project cost.

Should suitable grant funding opportunities not arise, Council will need to undertake additional borrowing to fund the project to ensure completion by 2026.

RISK MANAGEMENT IMPLICATIONS

Successful implementation of the project will secure the region's water supply, in conjunction with other demand management measures, for the next 30 years.

Should Council elect to 'do nothing', there is a risk of more frequent and severe water restrictions in the Mossman – Port Douglas water scheme. The annual volumetric limit of the Rex Creek extraction licence will be reached in 2025/26, requiring the implementation of permanent water restrictions as the resident population and visitor numbers grow.

SUSTAINABILITY IMPLICATIONS

Economic: Council will seek grant funding contributions from the State and Federal governments to offset the direct capital cost.

Environmental: An approvals management plan, including water allocation application, environmental and cultural heritage investigations is currently underway.

The consideration of an energy recovery turbine at the Mossman WTP site will contribute to a significant reduction in Council's operational costs at the site, should it be identified as a viable solution. It is also likely to benefit to any funding application as it should be viewed favourably from a sustainability perspective.

Social: The Mossman River intake project forms a cornerstone of Council's water security strategy and will ensure that customers enjoy clean potable drinking water beyond 2050.

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2019-2024 Initiatives:

Theme 3 - Leading Environmental Stewardship

Our visitors and residents deeply value the unparalleled environment in which we live. We recognise our responsibility in protecting and preserving our natural world for generations to come. We understand the strong link between the environment and the economy: they are interdependent. Douglas Shire will be at the forefront of environmental protection by developing strategies, setting policies, and working with all stakeholders to become the envy of and to inspire locations across Australia and the World.

Goal 3 - We will continue to build water infrastructure so that the Douglas Shire may enjoy water security and water quality.

Operational Plan 2022-2023 Actions:

Alternate water intake - Continuation of permit application processes for alternate water intake for Mossman/Port Douglas water scheme - forms part of the Douglas Shire water security strategy.

Water Education - Continuation / development of the water education program and resources to support messaging for the Douglas Shire water security strategy.

COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

Regulator	Council has a number of statutory obligations detailed in numerous regulations and legislative Acts. Council also makes local laws to ensure that the Shire is well governed. In fulfilling its role as regulator, Council will utilise an outcomes-based approach that balances the needs of the community with social and natural justice.
Service Provider	Council provides many services to the community from roads and waste services to libraries and recreational facilities. Services evolve over time and it is the Council's mission to ensure that these services are appropriate, delivered efficiently, and designed with the customer at the centre.

CONSULTATION

- Internal:**
- 26 April 2017 Ordinary Council Meeting
 - Council Resolution: To approve and progressively implement initiatives, including 'investigation work be continued to assess the suitability and viability of Proposed Site - Drumsara Quarry area on the Mossman River to be developed as the next potential source for the Mossman/Port Douglas system.
 - 19 June 2018 Special Budget Meeting
 - Council Resolution: That Council adopts the Operational Plan 2018 – 2019. Goal 2.1.2: Additional water extraction site designed and integrated into existing water infrastructure.
 - 23 October 2018 Ordinary Council Meeting
 - Council Resolution: Council resolves to adopt the Regional Water Supply Security Assessments report. (DNRME)
 - 30 June 2020 Ordinary Council Meeting
 - Council Resolution: That Council adopts the Operational Plan 2020-2021 as presented. Theme 3.1. Drumsara Intake. Progress the intake as a matter of urgency.
 - 18 May 2021 Councillor Workshop
 - Item 2.1 - Alternate water infrastructure update. Approvals management desktop study complete.
 - 8 June 2021 Special Council Meeting
 - Council Resolution: Council adopts the Operational Plan 2021-2022 as presented. Goal 3.3.1. Progress future water security solution for

secure water supply over dry season to alleviate current and future shortages. Most viable project is progressed to shovel ready stage to enable grant funding applications to commence.

28 June 2022 Ordinary Council Meeting

- Council Resolution: Council adopts the Operational Plan 2022-2023. Initiative 3.3.3 - Alternate water intake.
 - Initiate water licence application process
 - Initiate environmental and stakeholder approvals process
 - Modify detailed design prior to construction, if required.

16 August 2022 Councillor Workshop

- Douglas Shire Water Security Strategy Update (which included an update on the progress of the Mossman River intake project).

6 December 2022 Councillor Workshop

- Mossman River Intake – Progress Update.

External: Mossman Sugar Mill and other downstream water licence holders, if required
Department of Regional Development, Manufacturing and Water
Adjacent Landowner
Traditional Owners

COMMUNITY ENGAGEMENT

Will commence in more detail once detailed design complete

ATTACHMENTS

Nil