

Report 17.28
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Committee Council
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Water quality at Macaskill Lakes

1. Purpose

To seek approval of unbudgeted capital expenditure of \$3.32m for the implementation of Biological Activated Carbon (BAC) Filter Conversion at the Te Marua Water Treatment Plant in the 2016/17 financial year. This is to mitigate the risk to water quality at the bulk water storage Macaskill Lakes.

2. Background and comment

As has previously been reported to Council, in recent years there have been taste and odour complaints from algae-released Geosmin when the Te Marua Water Treatment Plant has been treating lake water. An investigation commenced in early 2016 to attempt to identify the source of this problem and to determine ways of treating or removing it. During these investigations additional algae, that had not been previously present, were found. Of particular concern are algae that live on the floor of both lakes and which can produce toxins under certain circumstances. We are advised by Wellington Water that an escalation in the algae situation could under some circumstances lead to water quality risks.

Wellington Water is recommending urgent mitigation to reduce the risk of impact on water quality. Extensive investigations on the management, removal and treatment have been conducted by Wellington Water with the assistance of external specialist advice. The outcome of this investigation and advice is a recommended approach to proceed with a BAC filter conversion at the Te Marua Water Treatment Plant.

Background information provided by Wellington Water, including an assessment of the risks, is attached as **Attachment 1**.

3. Financial implications

This mitigation expenditure is unbudgeted; it is not provided for in the Long Term Plan or in the 2016/17 Annual Plan.

Capital expenditure costs are estimated to be \$3.32 million, commencing in 2016/17 and potentially extending into 2017/18.

The additional routine monitoring regime for algae associated with toxin release is \$80,000 per annum, commencing once the filters are installed.

The water levy implications of this expenditure are currently factored into the draft 2017/18 Annual Plan.

It should be noted that if the toxin is detected, further monitoring costs of approximately \$200,000 per annum will be required. Additionally, there is a potential that further treatment measures may be needed to aid toxin removal.

Given the urgency and potential risk to water quality, it is recommended by Wellington Water and GWRC officers that Council approve this unbudgeted expenditure to enable the installation of the filters as soon as practicable.

4. Communication

The Council's decision will be communicated to Wellington Water.

5. The decision-making process and significance

The matter requiring decision in this report has been considered by officers against the requirements of Part 6 of the Local Government Act 2002 (the Act).

5.1 Significance of the decision

Officers have considered the significance of the matter, taking into account the Council's significance and engagement policy and decision-making guidelines. Officers recommend that the matter be considered to have medium significance.

While the Council is being asked to approve unbudgeted capital expenditure of \$3.32 million for the implementation of BAC Filter Conversion at the Te Marua Water Treatment Plant in 2016/17, the proposed capital expenditure will be used to ensure that the Council is able to supply pure water, which it is required to do under the Wellington Regional Water Board Act 1972.

5.2 The decision-making process

Officers have taken into account the principles set out in section 14 of the Act and the need to manage the Council's resources prudently, and the fact that a response to this matter is urgent

Officers have followed the process for making a decision of medium significance as set out in the Act.

5.3 Options

Advice from Wellington Water is that the installation of the proposed filters is the only way to practically address the algae issues and thus allay the potential risks to water quality arising from the algae.

5.4 Community views and preferences

Officers have also considered the need to take account of the community's views and preferences in relation to this matter.

6. Engagement

Due to the relative urgency of the decision, the legislative requirement to provide pure water and confidence that the people affected by the provision of water would want to receive water free from algae complications, officers have elected not to carry out engagement on this proposed decision.

Officers consider that this approach is appropriate given the circumstances.

7. Recommendations

That the Council:

1. **Receives** the report.
2. **Notes** the advice from Wellington Water that the additional algae in the Macaskill Lakes could produce toxins with an impact on water quality and that this risk should be mitigated by converting the filters at the Te Marua Water Treatment Plant to Biological Activated Carbon filters as soon as possible.
3. **Notes** that capital expenditure for the purchase and installation of the filters is \$3.32 million, and that this expenditure is not provided for in the Long Term Plan or the 2016/17 Annual Plan.
4. **Agrees** that the potential risk to water quality warrants urgent expenditure to provide for the immediate purchase and installation of the filters.
5. **Approves** capital expenditure of \$3.32 million in the 2016/17 financial year for the BAC filter conversion at Te Marua Water Treatment Plant.

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Attachment 1: Memo from Wellington Water – Te Marua Filter Conversion Funding