

Report 17.133
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Committee Council
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Provision of drinking water from Waterloo Treatment Plant

1. Purpose

To provide Council with an update on water quality matters at the Waterloo Treatment Plant and seek endorsement of on-going actions.

2. Background

Through Wellington Water GWRC provides a potable water supply to approximately 400,000 metropolitan Wellington residents and delivers around 140 million litres a day. Much of the water supply is already chlorinated, however, approximately 200,000 people receive water from the Waterloo Water Treatment Plant, sourced from the Waiwhetu aquifer, with approximately 70,000 people in Lower Hutt City receiving an unchlorinated supply.

A key outcome is safe and healthy water. GWRC is guided by Health Act 1956, supported by the Drinking Water Standards. The legislation provides that all water suppliers have duty to ensure their water is safe to drink and to take all practicable steps to comply with the standards. We are required, as are all water suppliers, to take a precautionary rather than a reactionary approach to the supply of drinking water.

3. What has happened

A positive *E.coli* result for water supplied from the Waterloo wellfield was recorded on 11 April 2017. This is the third of such results with the first being on 1 December 2016 and the second at the Naenae reservoir on 4 February 2017.

An increasing level of bacterial activity (measured as total coliforms at a number of supply points) was observed and it is considered that these two factors combined provide evidence that there is a decrease in the wellfield water quality from what has historically been very high.

A primary goal is to ensure that we take all practicable steps to protect public health and provide safe and healthy water and therefore the response on all three occasions was to immediately initiate chlorination of the supply to Lower Hutt City. With this latest event we consider that there is a significant risk to public health and chlorination will therefore continue at the Waterloo Water Treatment Plant until investigations to determine best long term options are completed.

In making this decision there has been close collaboration with Regional Public Health, which is satisfied with the approach and considers it very measured and responsible.

A briefing to Hutt City Council was held on 27 April 2017. Hutt City Council supported actions taken to date, including chlorination of the water supply, and the proposed investigations.

4. Investigations

While it's not yet clear what the source of the bacteria is, investigations are progressing to understand root cause and treatment options that will deliver safe and healthy water to the community.

This will be a co-ordinated investigation between Wellington Water, Hutt City Council and GWRC, with the investigations and outcomes anticipated to impact bulk supply from the Waterloo Treatment Plant, and the Lower Hutt City reticulation network.

4.1 Engaging with the consent holders

GWRC's Environmental Regulation department is leading work to communicate with bore and water permit consent holders in the Lower Hutt Ground water zone. Officers contacted all 12 water permit holders (across 18 bores) on Friday 21 April, advising them not to drink aquifer water from their bores. This group of permit holders includes industrial uses, golf courses (irrigation), the Department of Conservation on Matiu / Somes Island and two takes for water bottling which are not currently active. There are a further 303 operative bore permits in the area, and officers are forming a letter to go out to these permit holders.

It should be noted that of the 303 operative bores, 222 (73% of all consented bores) are for geotechnical investigations (often associated with building activity and changing land uses), and a further 58 are for groundwater monitoring. Officers consider the geotechnical bores likely present a limited

risk because they do not penetrate into the confined aquifer, and as such may not need to be the focus of our ongoing engagement.

4.2 Talking with other regions

The aquifer contamination issues are breaking new ground for GWRC. As such officers want to make sure GWRC's engagement with bore users can be usefully informed by experiences in other parts of New Zealand. Officers have already been in contact with Hawke's Bay Regional Council to understand how they have engaged with private bore owners in the face of the Havelock North water investigation. This exercise has been particularly helpful in understanding the sorts of technical and bore security issues GWRC would need to focus on - and related guidance, reporting and physical bore inspections. .

Officers are also engaging with the well-drilling industry, as an avenue for exchanging technical information and as an important contact with bore users; and are using the Department of Internal Affairs website on Havelock North investigation findings to help inform GWRC's approach.

4.3 Future consenting work

GWRC's work and learnings to date will also be used to inform future consenting for bore and water permits, particularly around areas such as bore construction and bore head security.

4.4 Science Investigations

GWRC's Environmental Science's Senior Hydrogeology Scientist is working closely with Earth In Mind Ltd (specialist hydrogeology consultants who are experts on the Hutt Aquifer System) to undertake hydrogeological modelling for the Hutt Aquifer System, specifically for the Waiwhetu Aquifer. The initial modelling work is designed to assist in identifying the source areas that are, or could potentially be, contributing water to the Waterloo Borefield and are therefore a potential source for contamination. This will allow us to provide other stakeholders (Wellington Water, HCC, and Regional Public Health) with a map of the areas of highest risk that can be used to help focus further investigations on specific potential contaminant sources or pathways.

At the same time as this modelling work is happening our Groundwater Quality scientist is collating water quality data from Wellington Water and GWRC databases for analysis. This will support a desktop analysis that may provide information on the type of the source of contamination based on changes in other water chemistry that may have been happening at the same time. These preliminary investigations are expected to take between one and two weeks to complete and then will likely lead into more detailed investigations in collaboration with Wellington Water.

5. Consideration of climate change

The matters requiring decision in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

5.1 Mitigation assessment

Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.

Officers recommend that the matters addressed by this paper will have no significant effect on climate change in the timeframe discussed.

5.2 Adaptation assessment

Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.

Officers recommend that climate change impacts have no direct relevance to the matters addressed by this paper in the timeframe discussed.

6. The decision-making process and significance

Officers recognise that the matters referenced in this report may have a high degree of importance to affected or interested parties.

The matters requiring decision in this report have been considered by officers against the requirements of Part 6 of the Local Government Act 2002 (the Act). Part 6 sets out the obligations of local authorities in relation to the making of decisions.

6.1 Significance of the decision

Part 6 requires Greater Wellington Regional Council to consider the significance of the decision. The term ‘significance’ has a statutory definition set out in the Act.

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

Officers do not consider that a formal record outlining consideration of the decision-making process is required in this instance.

6.2 Communication and engagement

Officers have set up a joint working party with Hutt City Council and Wellington Water on our communications approach with a set of agreed messages and key spokespeople for specific matters and topic expertise. From the outset the approach has been to provide clear communications on the issues to media, as well as content posted through all the relevant organisational websites, social media channels and call centres.

This proactive approach has generated substantial localised sharing of content and reporting and this will continue to update the community as new information becomes available.

It is envisaged that the communications working party, that has been successful to date, will continue to ensure joined-up and consistent messaging and activity.

7. **Recommendations**

That the Council:

1. ***Receives*** the report.
2. ***Notes*** the New Zealand drinking water legislation requires all water suppliers to take a precautionary rather than a reactionary approach to the supply of drinking water.
3. ***Notes*** that there is a record of positive *E.coli* results and an increasing trend in bacterial results in water sourced from the Waiwhetu aquifer.
4. ***Endorses*** chlorinated treatment of the Waiwhetu aquifer sourced water while investigations are carried out.
5. ***Requests*** officers to report back on a comprehensive planning response to the water quality issue.
6. ***Notes*** that there may be financial implications from the investigations and any proposed treatment options.

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