

Subject: Makauri Aquifer – Managed Aquifer Recharge Trial

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Report to ENVIRONMENTAL PLANNING & REGULATIONS Committee for noting

SUMMARY

A trial of Managed Aquifer Recharge (MAR) is being considered for the Makauri Aquifer, in order to identify whether this is a possible method to recharge the aquifer.

There has been substantial progress on the technical work required to support the resource consent application for the proposed trial to inject water from overflows from the Mangapoike Dams into the Makauri Aquifer.

At its 27 August meeting the Council approved the delegation of consent processing to Bay of Plenty Regional Council and also resolved to seek public notification of the consents. This is in order to both be transparent and provide a clear separation from the Regional Council arm of Gisborne District Council (GDC), who is the applicant. Independent Commissioners will be appointed should a hearing be required under the Resource Management Act.

Because of the risk of water from the dams being unavailable during the 2016 winter due to the El Niño induced predicted lower rainfall, investigation of the Waipaoa River as a potential water source for the trial is being undertaken.

Since last reporting a stakeholder reference group has been formed and this group has met twice. A public meeting attracted 40 attendees and this attracted social media attention as it was video cast. Meetings with iwi groups followed the public meeting. There are high levels of community interest, and in some cases concern.

This report provides an update on actions taken and on milestones that will be actioned over the coming summer.

RECOMMENDATIONS

That the Committee

1. receives the report



Dennis Crone
Team Leader Water Conservation



Kevin Strongman
Group Manager Environmental & Regulatory Services



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1. BACKGROUND

Due to declining levels in the Makauri Aquifer, Council in partnership with HortNZ, Leaderbrand, Wi Pere Trust and other community stakeholders has been investigating Managed Aquifer Recharge (MAR) for the Makauri Aquifer for the last two years. Early investigations were funded through EnviroLink and the Irrigation Acceleration Fund. These confirmed that MAR is a viable option for the Makauri Aquifer, and that a trial project was warranted.

2. DISCUSSION

Progress to date includes:

- The completion of the technical work to inform a resource consent application based on the use of water treated to drinking water standards;
- an Iwi consultation programme and report;
- a stakeholder reference group with Council, Iwi and stakeholder representatives has been formed;
- A public meeting and several other meetings with Iwi and individuals have been held. The public meeting was video linked via 'u-Tube' and there has been commentary and responses in the Gisborne Herald.

Because of the economic and environmental significance of the Makauri Aquifer, a high degree of scrutiny and interest in a trial is expected. At its meeting of 27 August the Council resolved that public notification of the resource consent application will be requested. With Council as the applicant, the Council has also delegated to Bay of Plenty Regional Council the processing of the resource consent and independent commissioners will be appointed to make decisions.

Availability of Mangapoike Dams Water for the Trial in 2016

An analysis of the likelihood of water being available from the Mangapoike Dams for the trial during 2016 has been undertaken. Currently New Zealand is in the grip of a strong El Niño and along with the cooler weather experienced over spring, a prolonged dry period is predicted by NIWA for the summer and autumn months; 100,000m³ of water is required for the trial.

Even without the risk of a prolonged El Niño induced dry period, based on trends from the last 15 years, and the cyclical patterns of winter dry periods, there is approximately a 50% chance that insufficient water will be available from the Mangapoike Dams for up to 90 days required for the trial to be run during the 2016 period.

The preference is to use the Waingake water as it is already chlorinated. Chlorinated water is needed to ensure the bore is not blocked during the injection process.

Waipaoa River as a Potential Source of Trial Water

This issue has been discussed at the Stakeholder Reference Group and as a result more detailed investigation is being undertaken into the Waipaoa River as a potential source of water for the trial. Although the preferred option is to use the cleanest water available – that from the Mangapoike Dams, if the trial is successful, then an ongoing MAR project would need to source water from the Waipaoa River as the only water source large enough. As a significant source of natural recharge to the aquifer, there are also positives to using Waipaoa River from a cultural perspective.

While the Waipaoa Augmentation Plant has been discounted as a possible source of water for the trial due to its very high cost, work is underway looking at the possibility of use of the existing infiltration gallery and treatment system at Kaiaponi Farms, which is currently used to produce relatively high quality water for irrigation. Further treatment, including chlorination would still be required for any MAR trial, but initial investigations indicate that this could be a cost effective option.

Timeline Going Forward

Because technical work to date has looked solely at the Mangapoike Dams/ treated water from Waingake for the trial, investigation of the Waipaoa River as a water source will add some time to the process. This will also allow for further communications and consultation with the community and iwi.

Undertaking technical work to investigate the Waipaoa River as a water source for the trial will require additional funding from the Eastland Community Trust and/or MPI and discussions are underway to pursue this funding.

At this stage it is likely that applications for resource consent would now be lodged in autumn 2016, with a view to drilling the bore in preparation for the trial at the end of 2016.

Once resource consents are lodged further scrutiny of the project can be addressed through the Resource Management Act process as individuals and groups will have the opportunity to submit in support or opposition to the project.

3. SIGNIFICANCE

This report does not contain any recommendations of significance as defined in Council's significance policy.

4. COMMUNITY OUTCOMES

Undertaking a trial Managed Aquifer Recharge contributes to Prosperous Tairāwhiti as the Makauri Aquifer is a significant contributor to the economic viability of horticulture on the Poverty Bay Flats. The project also contributes to an Environmentally Sustainable Tairāwhiti, as the Makauri Aquifer is a source of springs across the flats. Without recharge, the aquifer will continue to decline putting both these outcomes under threat.

5. STRATEGIC CHALLENGES

At this stage what is proposed is a trial and contributes to the Natural Resource Use Strategic Challenge. Careful monitoring and assessment of this will be part of any resource consent requirements, and the trial should give the Council a wealth of additional information about the extent and state of the aquifer, as well as an understanding of whether MAR is a viable option going forward.

6. POLICY

The MAR project has arisen out of the freshwater planning process, as it was through this that the extent of decline of the Makauri Aquifer became widely understood. There is policy support within the draft Freshwater Plan for projects like MAR, recognising that water storage is an important solution to meet both current and future needs for water.

7. LEVELS OF SERVICE

Undertaking a trial MAR in the Makauri Aquifer contributes to achieve water conservation levels of service which include efficient and effective management of our water resources.

8. FINANCIAL

The majority of the costs of the trial MAR will be met by external funding \$200,000 from Eastland Community Trust and \$250,000 from the Ministry of Primary Industries. Staff time and the costs of the resource consenting process have been provided for in the Long Term Plan.

9. LEGAL

At this stage there are no legal issues, however if the trial is successful, and a full MAR is desirable then a decision around legal entities and governance to take this forward will be required.

10. CONSULTATION

Iwi and all users of the Makauri Aquifer will need to be part of the consultation undertaken. There will be a wider interest from parts of the community. Consultation to date has included more than 10 meetings with groups including: the Freshwater Advisory group, water users, iwi land owning entities, iwi trusts, individuals and one public meeting. Articles in Conservation Quorum, Gisborne Herald and GDC website have also been provided. All technical papers are available on the GDC website. There has been increasing community interest in the trial and in some cases concern. Further communications and consultation is planned early next year prior to lodging of the resource consents. The Resource Management Act process will allow full public participation through submissions and the hearing before an independent and expert panel.