

Subject: Makauri Aquifer – Managed Aquifer Recharge

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Report to COUNCIL for decision

SUMMARY

Managed Aquifer Recharge (MAR) is being considered for the Makauri Aquifer in order to recharge the aquifer and potentially use it also for winter storage, thereby increasing water availability during the irrigation season on the Poverty Bay Flats. A partnership of community interests and Council applied for funding to the Eastland Community Trust for \$200,000 towards a pilot trial. This was successful, and an application has now been made to the Irrigation Acceleration Fund for the remaining \$201,000 required for the pilot.

Because the project is a trial, and because of the economic and environmental significance of the Makauri Aquifer, Council has agreed to manage the pilot. A project plan has been developed and Golder Associates have been engaged to undertake technical work towards the development of a resource consent application.

With Council as the applicant, an external party will undertake the resource consent processing and commissioners will be appointed to make decisions. It is expected that the resource consent will be publicly notified.

RECOMMENDATIONS

That the Council

1. receives the report
2. approves the uplift of the funding from Eastland Community Trust and Ministry for Primary Industries.



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1. BACKGROUND

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 pilot project was warranted.

2. DISCUSSION AND OPTIONS

Two options have been investigated – recharge through infiltration areas during winter, and direct injection of water into the aquifer via a bore.

A Masterate student has been investigating possible infiltration sites over the summer of 2014/2015; however it appears that because of the degree of modification of the Waipaoa River channel, and associated landuse, options are limited for this type of approach.

Direct recharge via a bore appears to be a viable option, with a bore located near the Waipaoa Augmentation Plant and water available from the Mangapoike Dams when they are full and spilling over.

A funding application to the Eastland Community Trust for 50% of the funds for a pilot has been successful and an application for the remaining 50% has now been made to the Irrigation Acceleration Fund.

There is also provision in the draft Long Term Plan for Council support for the pilot to cover the costs of resource consenting, staff time, and any monitoring or science work not covered by the funding applications.

Golder Associates, who have undertaken the technical work to date, have been engaged to undertake the technical work to inform a resource consent application. A project steering group with Council, iwi and stakeholder representatives, is in the process of being formed and will meet regularly to oversee the project. A communications plan is currently being prepared, and iwi consultation will need to be an important part of the process going forward.

It is expected that the technical work will be complete by early July 2015, and then Council will be in a position to draft a resource consent application.

Because of the economic and environmental significance of the Makauri Aquifer, a high degree of scrutiny and interest in a pilot is expected. Public notification of the resource consent application is assumed. With Council as the applicant, external processing of the resource consent will be undertaken and independent commissioners appointed to make decisions.

Should consent be granted, then the actual timing of the pilot MAR will depend on availability of water. Because of the very long dry summer, currently dam levels are very low; unless there is significant rain over winter, the trial may not be able to occur until winter 2016.

3. SIGNIFICANCE

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

4. COMMUNITY OUTCOMES

Undertaking a pilot 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 pilot 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 pilot 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 pilot 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 pilot MAR will be met by external funding \$200,000 each from Eastland Community Trust and the Irrigation Acceleration Fund. Staff time and the costs of the resource consenting process have been provided for in the draft Long Term Plan.

9. LEGAL

At this stage there are no legal issues, however if the pilot 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

A consultation and communications plan is being developed. Iwi and all users of the Makauri Aquifer will need to be part of the consultation undertaken. There will however be a wider interest from parts of the community.