
Survey results presented to council committee

Wynsley Wrigley

“A stark result.” That is one description offered for research that shows underground aquifers on the East Coast are very shallow, meaning careful management will be required to protect the water for future generations.

The research comes from a February aerial electromagnetic (AEM) survey of northern Tairāwhiti aquifers which covered areas around Wharekahika/Hicks Bay, Te Araroa, Waiapu and Tolaga Bay.

Representatives from Aqua Intel Aotearoa presented the preliminary results of the northern Tairāwhiti aquifer survey update to Gisborne District Council’s Sustainable Tairāwhiti Committee.

GNS Science hydrogeology and geophysics team leader Stewart Cameron told the committee the shallowness would place limits on the amount of water that might be available in the future.

Aquifer depths ranged from a high of 48m to just 5m, which was shallow compared to the rest of New Zealand.

The Heretaunga Plains in Hawke’s Bay recorded a depth of 300m while Aupouri Peninsula, near Ninety Mile Beach, ranged from a depth of 80-200m.



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name and address.

Stewart said he was surprised by the shallowness, which meant the water was more vulnerable to surface contamination by land use.

Having a good volume of water was “good to have”, but the important factor was how much new water was being recharged or replenished.

The volumes of water were probably quite low, said Cameron.

Aqua Intel Aotearoa programme director Jane Frances said the findings were a stark result but consistent with other information such as that

derived from drilling.

The water systems on the East Coast were not large.

East Coast water solutions would be more likely to be resolved from above-ground water storage, rather than aqua extraction, she said.

The report before councillors said much more work was needed to be done.

Detailed reports would be provided to inform the freshwater and catchment process under way.

The survey was part of a Government and Gisborne District Council-

funded scientific project.

Ngāti Porou supported the project, with the council providing the funding to undertake surveying on the East Coast.

The AEM survey involved flying over the land with a loop system suspended from a helicopter.

Transmitters on the loop send electromagnetic signals underground, and sensors measure the behaviour of the returning signals.

That provides data about resistivity of the ground that gives information about rock type, porosity, permeability, clay content, moisture content and other properties.

A helicopter flies over Tolaga Bay in February this year with aerial electromagnetic technology suspended beneath, picking up information about the aquifer below ground.