

MEDIA RELEASE FOR 4 APRIL 2022

Aerial surveying of Aupōuri aquifer confirmed for November 2022

Aerial electromagnetic (AEM) surveying of the Aupōuri aquifer will go ahead in November this year.

The Te Hiku Water Study project team, representing iwi, the community, landowners and councils, have confirmed arrangements for a combination of aerial surveying and drilling of groundwater bores to build a better picture of the aquifer and help identify the best ways to balance environmental protection, the increased demand for water, and events such as droughts.

AEM involves flying over the land with a loop system suspended from beneath a helicopter. Transmitters on the loop send electromagnetic signals underground, and sensors measure the behaviour of the returning signals. Similar to radar, this method allows us to 'see' what's under the ground by looking at and interpreting the way the signals return.

AEM is a safe and effective measurement tool that is used around the world and was most recently used in New Zealand in Hawke's Bay during 2020.

The surveying is predominantly funded by Aqua Intel Aotearoa (AIA), a collaboration between Kānoa (the delivery arm of the Provincial Growth Fund) and GNS Science. Co-funding is provided from Northland Regional Council, Far North District Council, Ngai Takoto, and Te Aupōuri. The surveying will be undertaken by specialists from SkyTEM Australia.

The project team had initially been aiming for aerial surveying to happen before winter, but SkyTEM is tied up completing other scheduled work that had been delayed by Covid-19 restrictions.

Conducting the aerial survey safely depends on settled weather conditions and so it is now booked for the coming summer.

Project team members will be able to answer questions from their community. The Northland-based project team members are Wallace Rivers (Ngai Takoto), Craig Wells (Ngai Takoto), Walter Wells (Ngati Kuri), Penetaui Kleskovich (Te Aupōuri), Stuart Otene (Te Rarawa), Wendy Thomas (landowner), Ian Broadhurst (landowner), Eric Wagener (Ratepayers Association), Susie Osbaldiston (Northland Regional Council) and Bill Lee (Far North District Council). The project team also includes Jane Frances and Ben Pasco from Aqua Intel Aotearoa and Chris Worts from GNS Science.

For more information visit the website <https://www.aquaintel.co.nz/> or email info@aquaintel.co.nz.

BACKGROUND INFORMATION

About AEM surveying

Aerial electromagnetic (AEM) surveying involves flying over the land with a loop system suspended from beneath a helicopter. Transmitters on the loop send electromagnetic signals underground, and sensors measure the behaviour of the returning signals. Similar to radar, this method allows us to 'see' what's under the ground by looking at and interpreting, the way the signals return.

AEM is a safe and effective measurement tool that is used around the world. You may see the helicopter flying overhead but you will not notice any impact from the electromagnetic signals.

The exact timing of the aerial surveying is yet to be confirmed, but it is expected to be in autumn, while the weather is still favourable. Low wind, little cloud and no heavy rain are the preferred conditions for aerial surveying.

About the aquifer

The Aupōuri aquifer is an area of natural underground water storage where water flows into the aquifer between rocks, sediment and shell beds. Water can be drawn from the aquifer, and it also flows out into surface water.

It lies approximately between Parengarenga Harbour, Rangaunu Harbour and Ahipara Bay but the full extent of the aquifer is one of the questions for the survey to answer.

This project aims to find out more about what the aquifer looks like (e.g. depth, extent, geology); how and where the aquifer is connected to wetlands, lakes and streams; identify the boundary between groundwater and seawater (e.g., risk areas for salt-water intrusion) and find out more about how groundwater recharges.

Knowing more about the Aupōuri aquifer will help identify the best ways to manage the aquifer, including balancing environmental protection, the increased demand for water, and events such as droughts.

Who's involved

The project idea came from the Te Hiku community and is now part of water studies in the Northland Region being conducted by Aqua Intel Aotearoa (AIA), a collaboration between Kānoa (the delivery arm of the Provincial Growth Fund) and GNS Science.

The project is being overseen by the Te Hiku Water Study Project Team, which includes representatives of iwi, landowners and local and regional councils. The Department of Conservation is collaborating with the study.

AIA is contracting an Australian-based AEM surveying company called SkyTEM to undertake the survey. SkyTEM Australia have undertaken similar work in Hawke's Bay and Waikato.

The \$3.3 million project is mainly funded through AIA. Co-funding is provided from Northland Regional Council, Far North District Council, Ngai Takoto, and Te Aupōuri.

Te Hiku Water Study project team

The members are

- Wallace Rivers (Ngai Takoto)
- Craig Wells (Ngai Takoto)
- Walter Wells (Ngati Kuri)
- Penetaui Kleskovich (Te Aupōuri)
- Stuart Otene (Te Rarawa)
- Wendy Thomas (landowner)
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- Eric Wagener (Ratepayers Association)
- Susie Osbaldiston (Northland Regional Council)
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