

Te Hiku Water Study

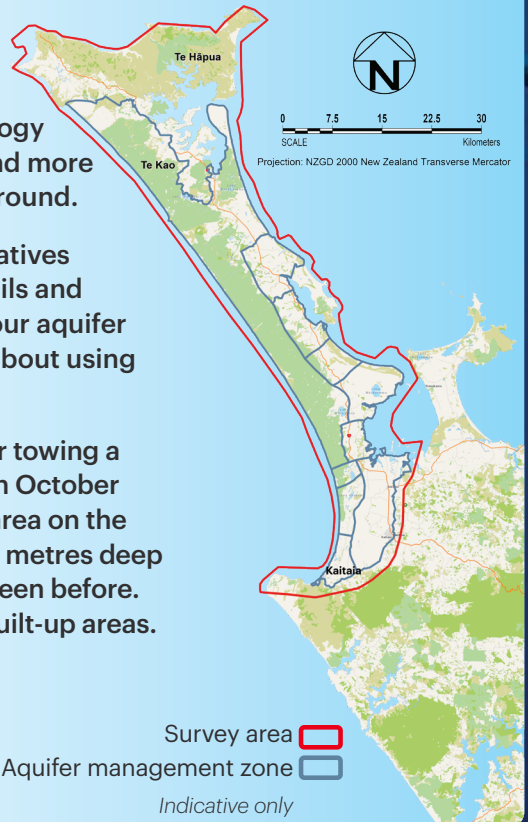
Aerial mapping of the Aupōuri aquifer

We're taking to the sky to understand our water better.

In Te Hiku, we're using the latest airborne electromagnetic technology (AEM) called SkyTEM to understand more about how water is stored underground.

Our iwi and community representatives are working with scientists, councils and government to learn more about our aquifer to help us make better decisions about using our water.

You may see a low-flying helicopter towing a large hoop hanging from a cable, in October and November. It will fly over the area on the map and 'scan' down to about 300 metres deep underground, where we've never seen before. We won't be flying over towns or built-up areas.



Tēna koutou katoa, Kua rite te wā me rere ngā painga I Te Hiku water study ki waenga tonu I te iwi whānui . Ahakoa pākehā , ahakoa māori e māturu mai ana te wai i te rangi, e pupū ana I te whenua hei painga mō tātou katoa. He nui tonu te werawera kua pau kia puta he taurira hou me pēhea rānei tēnei taonga arā ko te wai, e whakamahia mai ai kia hua ai te whenua kia ora ai te tangata.

Flight details

The helicopter will fly at 80-100 km/hr in parallel lines generally 200 – 300 m apart and at a height of approximately 100 m. The measurement instruments are suspended under the helicopter and will be about 30 – 50 m above the ground. The noise from the helicopter has been described as the equivalent to a truck going past on a motorway and lasts for around two to four minutes. The helicopter flies up and down in lines, so once it flies over, it will then return approximately 15 minutes later but be at least 200 m further away.

We will not be gathering data or information on anything above ground. While the helicopter will carry a camera this is only to guide the crew and no photos or video of your activities will be shared.

How does it work?

Transmitters on the loop under the helicopter send electromagnetic signals underground, and sensors measure the behaviour of the returning signals. Think of it as similar to radar, sending out and receiving signals.

The technology has been used commercially since 2004 to map large aquifer systems in countries including Denmark, Netherlands, India, USA, Canada and Australia.

The technology has previously been used in New Zealand, in the Waikato and Hawke's Bay.

Is it safe?

Yes, very safe. Because the helicopter is moving at high speed, there's very limited exposure to the electromagnetic signals. It's safer than watching a LCD or plasma TV or blow-drying your hair!

What about my animals?

The technology is safe to use above animals. Experience in other farming areas is that stock generally aren't disturbed much by the technology. In New Zealand the team has observed that horses moved to the other side of the paddock when the system came very near.

What will the information be used for?

The information gathered by the helicopter and loop will take some time to process and analyse. Once available, it will help guide decisions for environmental protection, economic growth and development, resource consents, water management, and water availability for the local community. It will be available to tangata whenua, councils and community groups, subject to agreed guidelines.



We want to assure you that these flights are not in any way used for compliance monitoring. We only want to know about water – not what you're doing on your property.

Who's involved?

The project is being undertaken by Aqua Intel Aotearoa, a partnership between GNS Science and Kānoa, funded by the Provincial Growth Fund. The work is overseen by the Te Hiku Water Study Project Team, which includes representatives of Ngai Takoto, Ngāti Kuri, Te Aupōuri and Te Rarawa iwi, landowners and ratepayers, as well as local and regional councils. The Department of Conservation is also collaborating with the study.

The SkyTEM data collection is being carried out by the international company SkyTEM in collaboration with the New Zealand helicopter company Heli A1.

Check out where we are flying

Helicopter flights start around 10 October and will continue for about six weeks. We will be sharing where we're flying each day on local Facebook pages and the website

www.aquaintel.co.nz/northland.

Get in touch

Please contact us if you have any questions or concerns about helicopter flights over your place. Let us know if you have an event you'd like us to avoid (eg a stock sale, wedding, hui) and we'll do our best to plan around it.

Email Aqua Intel Aotearoa info@aquaintel.co.nz, Contact us via the website www.aquaintel.co.nz or via our Facebook Aqua-Intel-Aotearoa page.

You can also contact the local project team members:

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