

Eye in the sky on the hunt for Alberta's hidden water

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That low-flying plane towing a radio transmitter may seem dangerously close to your rooftop, but it's actually looking for water beneath your feet.

The flights — which start today — are part of an Alberta Environment project to map underground

water sources around Edmonton in an effort to better protect both its quantity and quality.

"Alberta is growing and thriving, but with that growth comes increased pressure on our resources," Environment Minister Rob Renner said. "We're using the latest technology to obtain a clearer understanding of our groundwater so we can make better water-management decisions."

A twin-propeller airplane will tow a low-frequency radio transmitter that sends electromagnetic waves into the ground, department spokeswoman Carrie Sancarrier said. The waves will be absorbed by underground rock and water, and send information back to the plane, giving a measure of what type of material lies beneath the surface.

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SUPPLIED

A Casa 212 twin-propeller airplane equipped with a large radio transmitter will measure groundwater around the Edmonton area beginning today.

Harmless waves

WATER

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Underground water is usually found in porous spaces between rocks, said Steve Wallace, a groundwater policy specialist for Alberta Environment. From the kind of rock beneath the ground, it can be determined how much water is in the area.

The technique, called airborne geophysics, has been commonly used for mineral exploration, but only recently for underground water, Wallace said.

The electromagnetic waves are harmless and will not interfere with electronics. However, the transmitter has a range of less than 700 feet, requiring the plane to stay low. The flights are planned for just under 400 feet, whereas a typical passenger flight cruises at 35,000 feet.

The plane will not cruise directly over Edmonton or other heavily populated areas.

"The flights will leave from the Edmonton International Airport and go as far west as Drayton Valley and Spruce Grove, north to Redwater and south to Tofield," Sancartier said.

The outlying Edmonton area is a fine testing ground, Wallace said.

"Partly because, in the area between Edmonton and Calgary where there is a lot of development, there is greater pressure on groundwater resources," he said.

"We'd like to do the whole province. We did the Wabamun area two weeks ago, but right now we're focusing on the Edmonton-Calgary corridor because it's a data-rich area."

The flights will provide raw data that must be interpreted by the Alberta Geological Survey, a project partner.

The plane and pilots are from Fugro Airborne Surveys, a Dutch company with Alberta branches.

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