

Lake Geophysical Campaign GeoCogen La Broye

FAQ for people affected by the lake measurements on Lake Morat and Lake Neuchâtel

1. UNDERSTANDING THE OPERATIONS

What does a lake geophysical acquisition involve?

A boat tows an air pulse generator that releases short bursts of compressed air into the water. The resulting acoustic waves travel into the subsurface. Their echo is recorded by sensors temporarily placed on the lakebed.

The principle is similar to a medical ultrasound scan: the data collected is used to produce an image of the deep geological layers. No drilling is carried out.

Why carry out these measurements in Lake Neuchâtel and Lake Morat?

To obtain a continuous, high-quality image of the subsurface across the study area, measurements must also cover the areas beneath these two lakes. Without this data, significant areas would remain unknown, in particular beneath the Estavayer and Morat sectors.

Comparable studies have already been carried out in Switzerland, notably in the Geneva and Macolin regions.

When will operations take place and how long will they last?

These operations will take place during the day, in January for Lake Morat and in February for Lake Neuchâtel. It will take around a week to deploy the sensors, one to two weeks to carry out the measurements, and a week to retrieve the sensors. The boat will operate continuously during the day.

What area of the lakes will be affected by the acquisition operations?

The measurement area covers approximately 10 km² on Lake Morat and 10 km² on Lake Neuchâtel.

What equipment will be placed in the lake?

Lines of sensors will be temporarily deployed in certain areas of the lakes. Each line will be precisely located and tracked in real time. Equipment will be fitted with appropriate marking (buoys) where necessary to ensure the safety of navigation and other lake uses. All equipment will be removed at the end of operations.

2. WILDLIFE AND THE ENVIRONMENT

Do these operations pose a risk to lake wildlife?

No. The protection of lake wildlife is factored into the campaign's preparation. The schedule has been defined together with the competent cantonal authorities and in consultation with fishermen, to avoid the most sensitive spawning periods.

The measurements are subject to cantonal authorisations to ensure compliance with applicable standards and environmental protection.

Can the air pulse generators harm lake wildlife?

No, the equipment used is designed for use in lake environments. Its characteristics and conditions of use are reviewed by the competent authorities.

Precautionary measures are applied to limit exposure and disturbance to lake wildlife.

Could lake wildlife leave the area?

Some species may temporarily move away during the boat's passage or while the acoustic equipment is operating.

This movement is expected to stop once operations end. As the measures are temporary, no permanent change to habitats is expected.

Could the sensors damage the lakebed or spawning grounds?

Sensors are temporarily placed on the lakebed, without being dragged, and are held in place by an anchor. They are then fully retrieved.

Their installation and removal are organised to limit disturbance to the lakebed and the resuspension of sediment. Ecologically sensitive areas are taken into account when planning operations.

Will protected natural areas be affected?

Nature reserves, sensitive habitats and areas subject to protection measures are excluded from operations.

The boat's route and the position of equipment will be adjusted accordingly.

Will the measurements disturb the water or affect its quality?

No, no substances will be released into the lake. Placing and removing the sensors may cause a very localised, temporary resuspension of sediment. No lasting effect on water quality is expected.

3. FISHING AND EQUIPMENT

Will it still be possible to fish during operations?

Yes, fishing can generally continue during the campaign.

Temporary, localised restrictions may nonetheless be needed around the boat and equipment, for safety reasons.

Fishermen will be informed in advance of the areas concerned and the operations schedule.

Could fishing nets or gear be damaged?

Daily coordination with the fishermen concerned is planned to identify the most frequently used areas, local practices and any operational constraints.

Equipment locations and the operations schedule may be adjusted where necessary to limit the risk of entanglement. Fishermen will nonetheless need to observe any temporarily marked areas.

4. NAVIGATION & ACTIVITIES ON THE LAKES

Will I still be able to sail or take part in water sports (pleasure boating, kayaking, rowing, paddleboarding) during the acquisition operations?

Yes, navigation will remain open throughout the measurement period. Diving and other water sports can generally continue during the campaign.

Temporary, localised restrictions may nonetheless be needed around the boat and equipment, for safety reasons.

Do operations pose a risk to divers or people in the water?

Impact studies have identified no risk to fish and aquatic wildlife, which are protected by their physiology and natural avoidance reflexes. Humans in the water, being more sensitive to pressure changes, are nonetheless, as a precaution, subject to a minimum safety distance of 1,000 metres from the source boat throughout the lake operations.

The boat's position can be tracked in real time on the dedicated website.

5. FOLLOWING OPERATIONS / CONTACTING THE TEAM

How will people affected by these measurements be informed?

A few days before operations begin, the GTGI team will contact the fishermen concerned. Daily monitoring by the GTGI team is planned to coordinate fishing activities with those related to the geophysical measurements.

For other activities, we invite those concerned to identify the measurement areas and follow the progress of operations on the dedicated website.

Who should I contact with questions or comments?

You can contact the GTGI team in charge of operations via the hotline, available 24/7, on 079 536 43 21, or by email at permit-broye@gtgi.ch.

More information

Project owner:



www.swissgeoenergy.com

Geophysical operator:



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