

Frequently Asked Questions

What work is happening?

Seismic data is being collected (sometimes called “shooting seismic”) so geologists and geophysicists can better understand the layering of rocks below the surface. This data will help design an evaluation program for a potential Carbon Capture and Storage (CCS) project. Information about the proposed evaluation was presented to Haldimand County at Council in Committee on March 19, 2024.

What kind of seismic data is being collected?

There are two general types of seismic data collected on land – two dimensional (2D) and three dimensional (3D). For this evaluation, 2D seismic data will be collected, which is a series of lines that provide geologists with a picture or images of the layers of rock below ground.

Why is this data being collected?

In order to create accurate maps of the subsurface, geologists need information collected from wells and seismic data. Data can be purchased or licensed in areas with many existing wells and seismic data. However, in Haldimand County there is no existing seismic data available for purchase; data needs to be collected.

How do we collect the data?

For this 2D seismic program, data will be acquired using an energy source called a “Vibroseis truck”. Many small sensitive instruments called geophones will be used to record the energy reflected from the geological formations below back to the surface.

Where is the seismic data being collected?

Operations will almost entirely be along County roads in the southern part of Haldimand. At a few sites there will be requests for consent from private landowners for to access their properties. This access might be for both Vibroseis trucks and geophones, or geophones only.

Frequently Asked Questions

What does a seismic Vibroseis truck look like?

The Vibroseis trucks used are called a “mini-vibe,” which are designed for low impact in urban environments. The trucks will be driven along the road and stop about every 10 metres to lower a baseplate to the ground and shake for 60 seconds. Once complete, the baseplate is raised and truck is moved to the next location to repeat the process.



Will this cause any damage to roads or buildings?

Work is being done with Haldimand County to ensure the engineered load capacity of the roadway is not exceeded. Standard industry limits for vibration levels and dedicated monitoring equipment will ensure that vibrations will not result in damage to nearby buildings.

What about other infrastructure?

Work will be done with Haldimand County and the local community to identify any infrastructure near the seismic work. Appropriate mitigations will be applied based on the type of infrastructure.

Frequently Asked Questions

What do the recording instruments look like?

The recording instruments, called “geophones” or “nodes”, are small, extremely sensitive sensors that record tiny ground vibrations. They look like small plastic boxes, with a short (5 – 10 cm) spike on the bottom that is pushed into the soil.



What do the recording instruments do?

Each geophone continuously records the vibration of the ground, the precise time and location.

How long will you be taking seismic readings in the area?

It is anticipated that it will take approximately 10 days from start to finish, possibly less. Once complete, the geophones are retrieved and the information is downloaded for analysis.

What will this look like on the ground?

There will be a crew of approximately 40 people working on the data collection. First, the geophones are placed in the ground approximately every 5 metres in the areas we need readings. The mini-vibe trucks will stop every 10 metres to lower a baseplate to the ground and shake for 60 seconds. Once complete, the baseplate is raised and truck is moved to the next location to repeat the process. Once a section is complete, crews will retrieve the geophones and redeploy in the next zone.