September 11, 2018

Dear Cornell neighbor,

You may already have heard that the University is in the early stages of exploring an enhanced geothermal system that has the potential to sustainably heat our Ithaca campus by using the earth’s internal heat.

As reviewed at a community forum held in downtown Ithaca this past spring, plans for an “Earth Source Heat” demonstration project are underway. Cornell researchers are currently staging preliminary work on seismic measurements and geological characterization. This research includes seismic imaging, which involves the deployment of approximately 400 small self-recording geophones (nodes) and the operation of one vibroseis truck. The nodes and vibroseis truck are non-intrusive and have been used in this area before (photo attached).

Geophones are small, electronic receivers designed to pick up seismic vibrations below the earth’s surface. Data gathered by the geophones will allow researchers to gain a more accurate view of the rock formations beneath the surface. With the nodes in place, the truck travels along the survey route at a very slow pace, stopping every few yards or so to lower its pad and execute the sequence of vibrations, which takes less than one minute per location. Anyone close to the truck may hear or feel a slight vibration. Any traffic impacts will be minimal, similar to following a school bus or garbage truck.

The vibroseis truck will travel along roadways on Cornell property and in the towns of Ithaca and Dryden. While the University is only considering Cornell-owned land for a potential project site, it is necessary that we create a wide grid for testing to provide adequate imaging of existing rock formations. A provisional map of the survey routes is attached.

Cornell faculty and students will deploy the nodes along the survey routes beginning on or around Sept. 16. The vibroseis truck is scheduled to be on and near campus from Sept. 21-25. Cornell has briefed Tompkins County, Town of Dryden, Town of Ithaca and DEC pheasant farm staffers on this initiative, and will update them after this study.

This is an exciting period of discovery for Cornell and our surrounding communities. We’ll also be working with local public schools on this important research, and the possibilities for the region, nation and world.
Please let us know if you have any questions about this near-future work, and we’ll respond in quick order.

Thank you,

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Additional information can be found online at:
- earthsourceheat.cornell.edu
- news.cornell.edu – search “Earth Source Heat”

Vibroseis truck used for seismic testing on Warren Road in Ithaca, 2007.

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