

Clarington Transformer Station

Fact Sheet: PRIVATE WELL AND ON-SITE MONITORING

WHAT IS HYDRO ONE DOING TO ENSURE GROUNDWATER WILL NOT BE AFFECTED BY THE PROJECT?

Hydro One recognizes the importance of preserving clean and safe water our neighbours can rely upon. We understand there are concerns about the potential effects on water quality and quantity from the construction and operation of Clarington Transformer Station (TS).

To address outstanding concerns, Hydro One has implemented an on-site Groundwater and Surface Water Monitoring program to collect and analyze data before, during and at least two years after the construction of Clarington TS is complete. Private well monitoring is also offered for well owners within 1,200 metres of the transformer station.

WHAT IS THE PRIVATE WELL WATER MONITORING PROGRAM?

The program consists of collecting water quality and quantity data for private residential water wells within 1,200 metres of the station.

With permission from well owners, twice a year private well water quality samples are drawn from a raw water tap (prior to any treatment or filtration), where available. Water quality samples will be analyzed for various characteristics including the general chemistry of the water (e.g., pH level), turbidity (cloudiness of the water), metals, hydrocarbons and bacteria. Water levels are recorded using an automated well water level logger (pressure transducer) on an hourly basis throughout the duration of the monitoring program. Automated pressure transducers are installed in accessible wells by a licensed well contractor and removed at the end of the monitoring program.

The private well monitoring program is free of charge and is being conducted by Hydro One's consultant Stantec.

WHEN WILL I GET THE RESULTS OF MY PRIVATE WELL MONITORING?

Individual private well water results are provided in a letter (containing a summary of the water quality and quantity data collected) to each participating well owner following the sampling events.

HOW LONG WILL THIS PRIVATE WELL MONITORING PROGRAM BE IN PLACE?

In June 2014, Hydro One began offering Private Well Monitoring to homeowners living within 1,200 metres of the transformer station. The first water quality samplings for participants were collected beginning in July 2014 and will continue twice per year throughout the construction of Clarington TS and at least two years after its completion.

WHAT ELSE IS HYDRO ONE DOING TO ADDRESS MY WELL WATER CONCERNS?

Hydro One has provided the Municipality of Clarington with funding to select an independent third party hydrogeologist. This independent party is acting as a technical resource for the community and is available to review and explain monitoring reports produced by Hydro One's hydrogeological expert, Stantec, and discuss any questions the community may have. The contact information for the third party consultant can be requested from the Municipality of Clarington.

WHO CAN I GET IN TOUCH WITH IF I HAVE QUESTIONS ABOUT MY WELL SAMPLINGS OR WANT TO JOIN THE PROGRAM?

Questions related to the sampling and/or monitoring of private water wells, can be directed to Brant Gill, Senior Hydrogeologist, Stantec at (905) 415-6330 or Brant.Gill@Stantec.com.

IF I HAVE A QUESTION ABOUT THE ON-SITE GROUNDWATERING AND SURFACE WATER MONITORING, WHO DO I CALL?

All questions related to Hydro One’s on-site groundwater and surface water monitoring activities, can be directed to our project team at Community.Relations@HydroOne.com or 1-877-345-6799.

WHAT WILL HYDRO ONE COMMIT TO IF MY WELL IS IMPACTED DURING THE CONSTRUCTION AND OPERATION OF CLARINGTON TS?

Hydro One does not anticipate that the construction and operation of Clarington TS will negatively affect well water resources. However recognizing concerns raised by some members of the community, Hydro One and Stantec have developed a Well Interference Response Plan (WIRP). The WIRP describes the process that Hydro One and Stantec will follow for responding to well interference complaints, as well as the criteria for assessing and mitigating well interference complaints associated with the construction and operation of Clarington TS. In the event of a well interference complaint, each complaint will be dealt with individually and will include its own assessment, and potential monitoring and mitigation, if required. The WIRP is available on our website at www.HydroOne.com/Projects/Clarington.

Additionally, well owners will be notified immediately by Stantec should any health-related parameters exceed the Ontario Drinking Water Standards (ODWS) upon review of the results from their private well. In the highly unlikely event that well interference is found to have occurred as a result of the Clarington TS project, Hydro One has committed to providing a safe supply of drinking water to affected well owners.

WHAT ON-SITE MONITORING ACTIVITIES ARE TAKING PLACE?

As part of Hydro One’s on-site Groundwater and Surface Water Monitoring Program, wells have been installed at seven locations on the project site. The number of wells has increased overtime to allow for more collection of data. Each well was installed with automated well water level loggers (pressure transducers) to measure and record water level data on an hourly basis. Hydro One has collected water quality samples from wells fall 2013, and all seasons in 2014. The next scheduled monitoring event will take place on-site in the spring of 2015. Going forward, on-site monitoring will take place twice per year, and will be followed by the release of annual progress reports.

Hydro One has also installed drive-point piezometers in surface water features on three sides of the site (North, West and South).

Date/Season	GW Monitoring Activities
December (late Fall 2013)	<ul style="list-style-type: none">- Previous monitoring wells decommissioned- New nests of two wells installed at the N, E, S and W side of the TS location.- Water level loggers installed in all wells- SW piezometers installed in the N, S and W side of the TS- GW samples taken from majority of monitoring wells.

	<ul style="list-style-type: none"> - Samples could not be taken from some wells due to insufficient water volumes.
March (late Winter) 2014	<ul style="list-style-type: none"> - GW samples taken from monitoring wells. Some wells were not sampled due to frozen conditions - Data downloaded from water level loggers
May (Spring) 2014	<ul style="list-style-type: none"> - Collected GW samples from all wells and SW locations - Data downloaded from water level loggers and piezometers
August (Summer) 2014	<ul style="list-style-type: none"> - Collected GW samples from all wells and SW locations - Data downloaded from water level loggers and piezometers
September/October 2014	<ul style="list-style-type: none"> - Collected GW samples from all wells and SW locations - Data downloaded from water level loggers and piezometers - Test pits were completed at E side of TS location - New monitoring well nest (shallow and deep) installed near the station entrance - New shallow monitoring wells installed at east side of TS location to provide additional info for PTTW application
Post-Baseline Conditions Report	
November/December 2014	<ul style="list-style-type: none"> - Sampling and analysis continued according to recommendations in the BCR. This information is presented in an addendum to the BCR - New shallow and very deep (Thornccliffe depth) wells installed in the well nest near the station entrance
2015 – Two years after station completion	<ul style="list-style-type: none"> - Monitoring of GW and SW will continue as per the GSWMP - The GSWMP will be adapted based on results of the Program

More detailed information can be found in the Pre-Station Construction Groundwater and Surface Water Baseline Conditions Report on the Clarington TS project website at <http://www.hydroone.com/Projects/Clarington/Pages/ProjectResources.aspx>.