



## OVERVIEW

Vertex Environmental Inc. specializes in the design, implementation and optimization of remedial systems including multi-phase extraction (MPE) systems. Vertex staff designed, permitted, optimized and operated a MPE system in the Woodstock area for the containment and extraction of a mixed chlorinated solvent/petroleum hydrocarbon-impacted plume. The system was installed in a fill/glacial till near and underneath an operating commercial mall. The system was designed to handle a low flow of groundwater and high flow of vapour while responding to fluctuations in the water table. The treatment system consisted of an air stripper, particulate filter and activated carbon for both air and water.

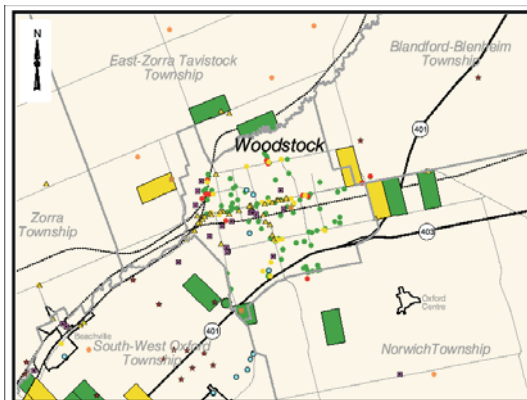
## COMPOUNDS TREATED

Compounds treated using the MPE system included:

- Petroleum hydrocarbons
  - Benzene
  - Toluene
  - Ethylbenzene
  - Xylenes
- Chlorinated ethenes
- Chlorinated ethanes
- MEK and acetone



The keys to the successful application of a MPE system is choosing the right combination of pumps and vacuums along with proper infrastructure to minimize leaks. The system was able to remove high dissolved masses of the compounds of concern while hydraulically containing the dissolved phase plume and mitigating impacts to downgradient residents. The MPE system also enhanced natural attenuation reactions occurring within the shallow impacted aquifer.



Vertex combines strong theoretical understanding with practical experience to properly plan and implement the right remedial program for your site. Selecting Vertex to undertake your remediation project allows you to access a wealth of experience and knowledge.