



### OVERVIEW

Vertex staff were retained to remediate a former fuel storage facility that was impacted by free product petroleum hydrocarbons. The hydrocarbons had a specific gravity less than water (i.e. LNAPL) and was characterized as being a mixture of diesel and gasoline. The free product was situated within a fractured limestone aquifer and was located within 500 m of a regional groundwater supply well.

### SCOPE OF WORK

- Acquired all relevant permits to complete the remediation program
- Complete a mass balance calculation to estimate volume of mobile and residue free product within subsurface
- Designed and optimized a free product removal program based on utilizing pneumatic skimmers



### THE VERTEX APPROACH

- Complete estimation of free product in ground
- Review water and product level relationship
- Install pneumatic skimmer array
- Conducted pilot scale testing evaluating efficiency of product removal within different fracture zones
- Optimized placement of skimmers depending on seasonal fluctuations in water level
- Evaluated low vacuum enhancement to improve extraction rates on seasonal fluctuations in water level

### OUTCOME

- Greater than 600 L of product removed over a 6-month time frame
- Worked with consultant to design and implement a comprehensive remedial plan
- Nearby residents not impacted