

## TCE Plume in Antrim County

- The origin of the Trichloroethylene (TCE) was the Wickes Manufacturing operations in Mancelona in the 1940's and 1950's. TCE was used as a degreasing solvent and Wickes disposed of its spent TCE in shallow pits, and has been migrating in a northwesterly direction. This is an abandoned site. TCE is classified as a human carcinogen by the U.S. Environmental Protection Agency.
- Since the time of disposal of the TCE, an underground plume of contamination has developed heading northwest. It is now 6.5 miles long and 1.5 miles wide. Migration rate is approximately 350 to 400 feet per year. This TCE plume is the largest in Michigan, and one of the largest in the U.S.
- Contamination of residential well water has occurred from Mancelona to Shanty Creeks' Schuss Village. Michigan State grant money has been used to test private wells, drill test wells to monitor the plume, conduct ground water studies, and provide bottled water to citizens affected.
- Because of this contamination, the Mancelona Area Water & Sewer Authority (MAWSA) was formed in 2001 to provide safe drinking water through a municipal system to replace private wells. MAWSA has been drawing water from the east of Mancelona and from the Cedar River Well Field, which is located in the path of the migrating TCE plume. Through a proactive plan developed through the ACUTE stakeholders consensus building approach, appropriated funds can be spent more efficiently, instead of a piece-meal reactive approach, which would be expected to save the State of Michigan approximately 20% on construction.
- Results of a State-funded preliminary engineering study have successfully developed a recommendation for upgrading the public water system that includes the reduction of rate of pumping water from the Cedar River Well Field from 600 to 100 gallons per minute, and the installation of a new well field east of Mancelona. This solution will assure safe clean drinking water for MAWSA customers now and in the foreseeable future.
- When finished, this comprehensive plan will include a new water storage facility at the Cedar River Well Field, a new well field up gradient of the TCE Plume, new water mains to connect the Shanty Creek/Summit Village areas to the existing public water system, and new water mains in front of properties in those areas affected by the TCE plume. Implementing this plan will provide clean drinking water to all existing MASWA users now and into the foreseeable future, including those in locations in the path of the migrating plume.
- ACUTE is currently working with DEQ senior management and several viable sources within the State to obtain funds to install these improvements in the current public water system starting in fall of 2014. In addition to upgrading the public water system, ACUTE is also exploring various options for remediating portions of the TCE plume, which initially will involve bench-scale testing.

→ Additional information is available on DEQ's Website: [bizhost-c5.mactec.biz/wickes/](http://bizhost-c5.mactec.biz/wickes/)  
and on Three Lakes Association's Website; [www.3lakes.com](http://www.3lakes.com)



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