

WATER QUALITY IN AMISH COUNTRY

About 10 years ago in Exton, Pennsylvania, a developer wanted to put a community water system instead of individual wells for each home. The water quality needed to be checked in order to go forward with the project. However, it was found that there was contamination in the water, discovered by the Pennsylvania Department of Environmental Protection (DEP). Trichloroethylene (TCE) was in the groundwater; TCE is a widely used industrial solvent which is also known to be a human carcinogen. In order to solve this problem, HDPE pipe would be used in a horizontal directional drilling.

HDPE pipe is the number one material for trenchless construction. The pipe is high flexibility, has a tight bending radius, high impact resistance, high ductility, as well as the longest fatigue life. It is strong, durable, light-weight, and does not use much energy to fabricate. In addition to these features, the pipe can be added all at once making the installation process much easier than other pipes. The pipe is ecologically friendly and protects the water from contamination and the TCE that was originally in this area's system. This makes HDPE the preferred material for this project.



Replacing pipes with HDPE pipes in Pennsylvania Amish Country

The \$20-million-plus project requires the wells, water tower, and a treatment plant and nearly 10 miles of HDPE to deliver fresh, non-contaminated, water to approximately 450 homes and businesses. The project would use 52,000 feet of HDPE pipe with more than 200 valves and 69 fire hydrants and would be able to be on site within three weeks. The HDPE pipe also allowed the system to be installed through horizontal directional drilling (HDD) along Old Philadelphia Pike (PA 340), Newport Road (PA 772), Queen Road, Hatville Road, Field Crest Lane and Harvest Drive, a local township road. An HDD installation can provide initial cost savings up to 50% over open-cut. The longest HDD pull was around 800 feet drill shot for the 12-in.-diameter HDPE pipe.

With all of these benefits, the HDPE pipe, which studies shown can withstand 100 years, can serve Pennsylvania Amish communities with non-contamination, potable water for years to come.



Source: <https://www.wwdmag.com/pipeline-rehabilitation/water-quality-amish-country>