

CASE STUDY

First Permitted **Advanced Enviro-Septic** System in Lapeer County, MI

Lapeer, MI

SYSTEM SPECIFICATIONS

450 GPD Wastewater Treatment System

INSTALLATION DATE

Summer 2021

PRODUCTS

Advanced Enviro-Septic® (AES) combined treatment and dispersal system

OWNER

Timbergate Construction, Lapeer, MI

DISTRIBUTOR

Diamond Precast, Burton, MI

INSTALLER

D&D Excavating, Lapeer, MI

DESCRIPTION

Builders of a three-bedroom home in Lapeer County, Michigan, needed a wastewater treatment solution that could be installed on a sloping site and leave the maximum possible land available for the owner's horses. The 450 GPD system designed is the first Advanced Enviro-Septic (AES) combined treatment and dispersal system to be permitted and installed in Lapeer County.

In Michigan, local county or district health departments determine wastewater treatment system sizing and systems in Lapeer County typically utilize large above-grade mounds which compromise the use of available land and require large amounts of sand fill to be trucked to the sites.



Due to treatment capabilities of the AES combined treatment and dispersal system, the system was permitted at only 25 percent of a standard mound system typical for a three-bedroom home. The clay loam limiting layer on the site was 12 inches below existing grade and the required distance to the limiting layer in Lapeer County is 18 inches. The topsoil was left in place and scarified across a 20-foot-wide x 72-foot-long area and six inches of sand fill was placed and stabilized on the existing grade. The 1,500 square foot AES system features three 70-foot rows of AES installed on top of the sand at 24 inches on center. There is six inches of 2NS sand beneath the conduits which are backfilled with 2NS sand to three inches above the pipe. A sand extension on the downslope side extends to the edge of the scarified area to create a basal area large enough to hydraulically accept the treated effluent.



The installation provided an opportunity for the contractor and area health officials to learn about the AES product and how it is installed. The system blends in naturally with the site grading, eliminating the large hump associated with traditional mound systems and provided ample room on site for the owner's horses.

