

Washington County, Devola and Oak Grove Unsewered Areas

Sewers are needed in Devola and Oak Grove.

Concerns with Home Sewage Systems

In the Devola and Oak Grove areas of Washington County, home sewage treatment systems include on-lot leach bed or trench systems, off-lot discharging systems and dry well systems. On-lot systems rely on the surrounding soils to treat the liquids that enter the leach field. If soils are not favorable for treatment, streams or ground water may be contaminated. Off-lot discharging systems are designed to discharge into ditches or streams. If the systems are not properly maintained, streams and ground water may be contaminated with partially treated wastewater. Typical dry well systems involve a septic tank connected to a seepage pit surrounded by gravel. The waste entering the seepage pit does not interact with sufficient soils to be treated. Dry well systems can allow under-treated wastewater to contaminate ground water and were banned in Ohio in 2010.

If septic systems are far apart and the proper soils are present, the wastewater may be properly treated. In some situations, like in Devola, septic systems are present in high numbers on small lots and contribute to elevated levels of nitrate in ground water. Replacing failing septic systems in Devola is not a viable option due to the soil conditions, small lots and high density of homes.

History

In late 2009, the Putnam Community Water Association (PCWA) drilled a monitoring well which found multiple samples of high nitrates in drinking water provided to Devola residents. The Washington County General Health District's Board of Health requested assistance from Ohio EPA to alleviate the public health nuisance. Residents of Devola were drinking water contaminated with nitrates, which can cause methemoglobinemia, also known as "blue baby syndrome" in infants. Ohio EPA determined Devola's failing septic systems were the source of the nitrates in Devola and surrounding areas. In 2011, the PCWA determined the quickest solution to ensure safe drinking water was to install a reverse osmosis treatment system to remove the nitrates from the drinking water. At the same time, Washington County commissioners agreed to install sewers to address the source of the nitrates, because the reverse osmosis system does not stop or clean the ground water pollution caused by the home sewage systems.

Ohio EPA Ground Water and Stream Studies

In summer 2010, Ohio EPA performed an in-depth study to determine the source of the nitrate pollution found in the PCWA monitoring well. Ohio EPA bored many study wells at various depths throughout the Devola area. The study wells were sampled for general ground water components, nitrates and other associated pollutants. The study determined the unsewered areas of Devola were contributing to the high concentration of nitrates found in the PCWA well. The 2010 study and additional ground water and stream sampling in 2016 identified the home sewage systems in the Devola area as the primary contributors to the high nitrate levels. Agricultural areas and the sewer portions of Devola are not the primary source of nitrates (Figure 1). Sewering the Devola area will address the contamination at its source, as the high number of failing systems on small lots rules out upgrading or replacing the failing systems to address the contamination problem. Results from the 2010 and 2016 studies are available here: epa.ohio.gov/Portals/35/documents/Devola_03-16-2017.pdf.

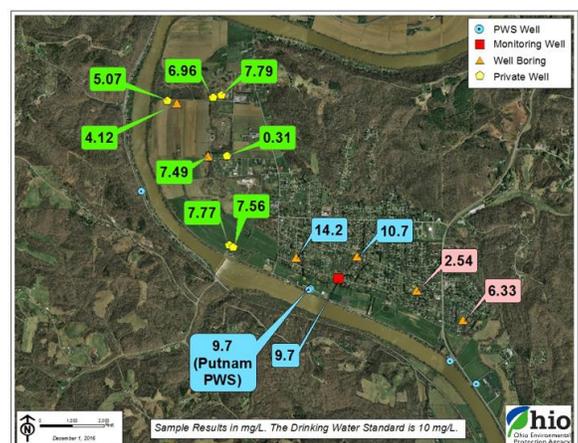


Figure 1. Ground water sampling results for nitrate, 2016. Results above 10 mg/L exceed the drinking water standard, and can lead to health-related issues if consumed. Values in green are from a predominantly agricultural area, the values in blue are from the unsewered portion of Devola, and the values in red are from the sewer portion of Devola.

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In 2016, Ohio EPA also looked at Oak Grove and determined the unsewered area of Oak Grove is causing elevated levels of nitrates in the ground water. This pollution is, however, being intercepted by industrial wells in the Oak Grove area.

Enforcement case

In 2012, the Washington County Commissioners signed an enforcement agreement with Ohio EPA to develop and implement a plan to sewer the unsewered portion of Devola within two years. In May 2015, Ohio EPA proposed a modified enforcement agreement to sewer the Devola area in phases. The Washington County Commissioners rejected the new agreement and Ohio EPA performed the 2016 study detailed above to address questions raised by the Commissioners. The 2016 study confirmed the results of the 2010 study: the unsewered area of Devola is polluting the ground water used by the PCWA drinking water system. In February 2017, Ohio EPA again offered the Washington County Commissioners an enforcement agreement to sewer the Devola area in phases; the commissioners rejected the offer. Ohio EPA has referred the case to the Ohio Attorney General's office for enforcement.

Costs Associated with the Proposed Sanitary Sewer Project

In 2013, the Washington County Commissioners provided cost estimates for sewerage Devola and the estimated annual costs per household was \$816 (approximately \$68/month). Actual costs to homeowners would depend on: the construction cost of the sewer project, treatment costs and the amount and types of grants and loans received for the project. Financing may be available through grants and loans from agencies including Ohio EPA, Ohio Water Development Authority, Ohio Public Works Commission, Appalachian Regional Commission and USDA Rural Development. The Washington County Commissioners were previously awarded \$1.4 million through grants and loans to sewer the Devola area, but forfeited the funding by not moving forward with sewerage the area.

Contact

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